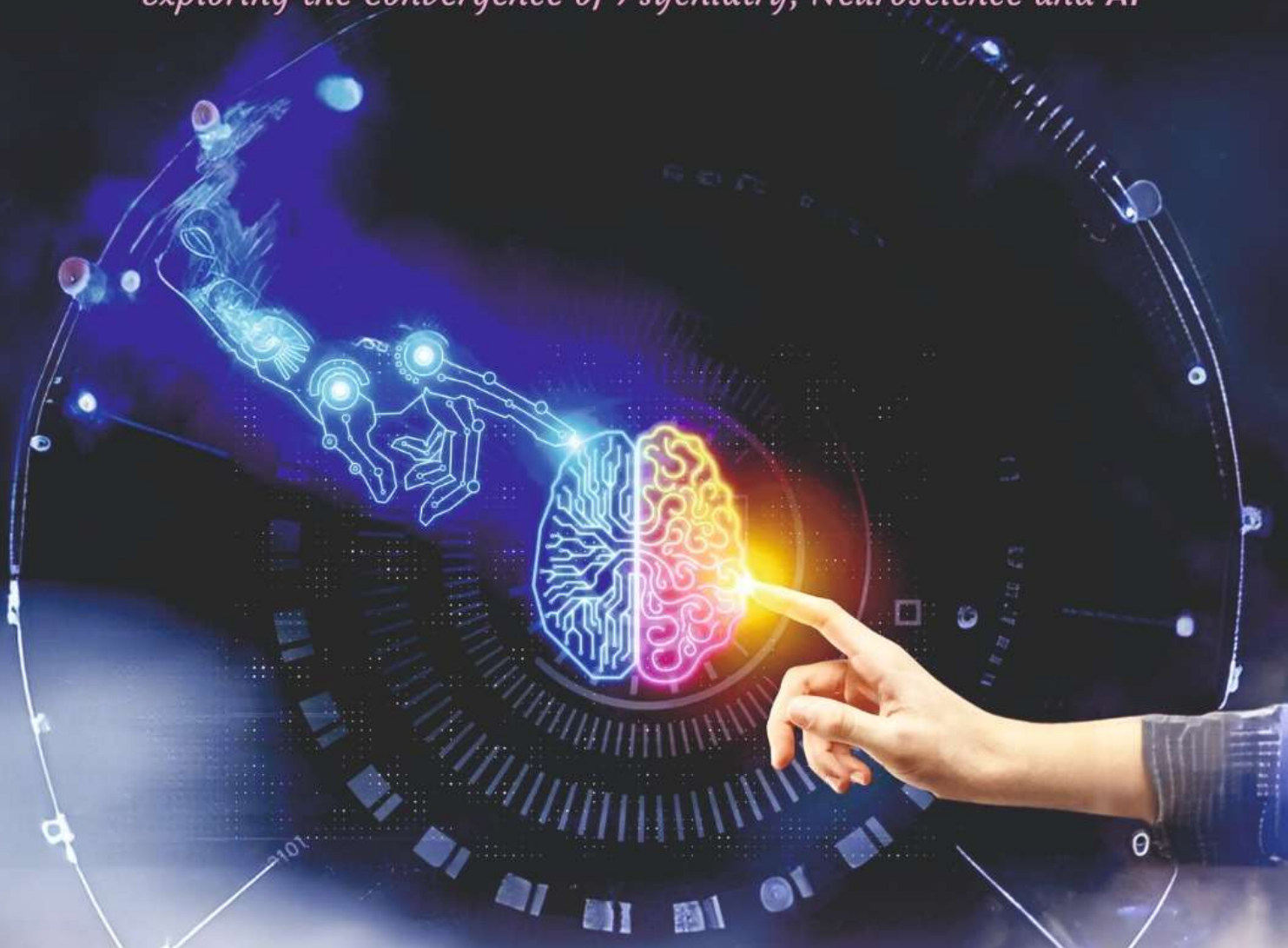
16th International Congress on Psychopharmacology & Child and Adolescent Psychopharmacology / Psychotherapy

April 23rd-26th,2025

Sueno Deluxe Belek, Antalya / Türkiye

Innovations at the Intersection:
Exploring the Convergence of Psychiatry, Neuroscience and AI



www.psychopharmacology2025.org

SCIENTIFIC SECRETARIAT
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SCIENTIFIC PROGRAM

23rd April 2025, Wednesday

14:30-15:00
15:00-16:00

HALL 1

OPENING CEREMONY
Congress Presidents' Speeches
Kemal Sayar Mücahit Öztürk Eric Vermetten

KEYNOTE SPEECH
Moderator:
Andrew Greenshaw
Beyond the Clinic: Rethinking Mental Health Access, From Stigma to Support Through Digital Solutions Anil Thapliyal

16:00-16:30 *COFFEE BREAK*

16:30-18:00

HALL 1

SYMPOSIA ORAL SESSION-1
New Directions in Psychiatry
Moderators: Andrew Greenshaw Anil Thapliyal

Measurement-based Care in Psychiatry
Rakesh Jetly

New Frontiers in Trauma Therapy: Technology, Networks, and Transformations
Eric Vermetten

HALL 2

SYMPOSIA ORAL SESSION-2
Neurobiology of ADHD
Moderator: Ayşe Sakallı Kani

Neurobiology of ADHD Across The Lifespan: From Basic Research Towards Clinical Applications Barbara Franke

Head Heart and Hormones: ADHD in Women, Hormonal Mood Changes Across The Lifespan, & The Female Heart
Sandra Kooij (Online)

HALL 3

SYMPOSIA ORAL SESSION-3
The Problem of Adherence to Treatment in Psychiatry: How Can Psychotherapy and Drug Therapies be Integrated?
Moderators: Kazım Yazıcı
Hakan Türkçapar

The Problem of Adherence to Treatment in Psychiatry as a Problematic
Kazım Yazıcı

Psychotherapies in Drug Adherence. Psychotherapy and Drug Use Together
Selçuk Aslan

	Drug Therapy and Cognitive Behavioral Therapy *Hakan Türkçapar*
	Drug Therapy and Psychodynamic Therapy *Serhat Çıtak*
	HALL 4
	SYMPOSIA ORAL SESSION-4 *Diagnostic and Therapeutic Challenges of Complex Post- Traumatic Stress Disorder* *Moderators:* *İbrahim Gündoğmuş Mehtap Arslan*
	Historical Background and Clinical Features of Complex PTSD *Esra Yalım*
	Diagnosis and Treatment of Complex PTSD *İbrahim Gündoğmuş*
	The Relationship Between Complex PTSD and Borderline Personality Disorder *Eda Uçar*
	The Relationship Between Complex PTSD and Childhood Trauma *Esra Öksüz*
	HALL 5
	SYMPOSIA ORAL SESSION-5 *AI in Psychiatry: From Foundations to Practice* *Moderator: Esra Pamukçu*
	Statistical Foundations and Probability Theory *Esra Pamukçu*
	AI Techniques and Clinical Applications *Azad Asaf*
	Accessing Knowledge: Literature Review and AI Research Insights *Hakan Balıbey*
	HALL 7
	MEET THE EXPERT-1 *Intervention to Autism Spectrum Disorders* *Aynur Görmez*
	18:00-18:30 *COFFEE BREAK* 18:30-20:00
	HALL 1
	SYMPOSIA ORAL SESSION-6 *From Researches to Clinic in Neuroscience* *Moderators: Feyza Arıcıoğlu Ali Saffet Gönül*
	The Role of Oxytocin in Bipolar Disorder: from Animal Model to Postmortem Human Brain Study *Ai-min Bao*
	Initial Myelination in the Central Nervous System *Jiming Kong*
	Synaptic Regulation of GABAergic Transmission by Neuregulin 1 and Its Receptor Erbb4, Both Risk Genes of Major Depression *Lin Mei*

HALL 2

DOUBLE CONFERENCE-1

Moderator: Kazım Yazıcı

Where Does Psychiatry Come from, Where is it Going, Where Should it Go?
Hakan Türkçapar, Kemal Sayar

HALL 3

SYMPOSIA ORAL SESSION-7

Artificial Intelligence in Psychiatry: Current Research and Future Perspectives

Moderators: Koray Karabekiroğlu
Esra Pamukçu

Integration of Artificial Intelligence into Psychiatric Research: A Roadmap for Innovation
Hakan Balıbey

Deep Learning Research in Psychiatry: New Horizons in Diagnosis
Naheeda Arslan

The Future of AI Research in Psychiatry: From Challenges to Solutions
Azad Asaf

HALL 4

SYMPOSIA ORAL SESSION-8

From Striving for Slim to Fighting for Survival: The Reality of Anorexia Nervosa

Moderator: Yasir Şafak

Epidemiology and Diagnosis of Anorexia Nervosa
İbrahim Gündoğmuş

Current Pharmacological Treatments For Anorexia Nervosa
Hasan Ünver

Psychotherapeutic Approaches in Anorexia Nervosa
Kübra Özcan Çetin

Other Treatment Modalities in Anorexia Nervosa
Mehmet Rıdvan Varlı

HALL 5

SYMPOSIA ORAL SESSION-9

Abnormal Myelination and Synaptic Pruning from Childhood to Adulthood: How Can Clinical Implications be Treated?

Moderator: Yavuz Selvi

Abnormal Myelination in Autism and ADHD and it's Clinical Implications
Esad Tezcan

Sleep Problems in Children as a Reflection of Synaptic Pruning and Treatment Approaches
Hasan Ali Güler

How Do Traumatic Experiences Affect Myelination and Synaptic Pruning?
What Are the Clinical Implications?
Fatih Ekici

The Relationship Between Mood Disorders and Abnormal Myelination and Synaptic Pruning: The Role of Circadian Rhythm
Rukiye Tekdemir

HALL 6

WORKSHOP-1
Moderator: Tayyip Kadak

Psychiatric Follow-up Process After Forensic Evaluation of Sexual Abuse Cases
Selma Tural Hesapçıoğlu

HALL 7

COURSE-1
Recognizing and Managing ADHD in Adulthood
Umut Mert Aksoy, Ali Kandeğer

24th April 2025, Thursday

08:30-09:30

HALL 1

SESSION OF STARS - 1
Moderator: Alperen Bıkmazer

HALL 2

SESSION OF STARS - 2
Moderator: Uğur Tekin

HALL 3

SESSION OF STARS - 3
Moderator: Caner Mutlu

HALL 4

SESSION OF STARS - 4
Moderator: Selma Tural Hesapçıoğlu

HALL 5

SESSION OF STARS - 5
Moderator: M. Tayyip Kadak

HALL 6

ORAL PRESENTATIONS SESSION-1
Moderator: Tuncay Sandıkçı

HALL 7

ORAL PRESENTATIONS SESSION-2
Moderator: Şaziye Senem Başgül

HALL 8

ORAL PRESENTATIONS SESSION-3
Moderator: Erdoğdu Akça

09:30-11:00

HALL 1

SYMPOSIA ORAL SESSION-10

Exploring the Synergy of New Pharmacological and Non- pharmacological Interventions in Mental Health

Moderators: Li Kuang Xin-min Li

Long-Lasting Effects of Low-Dose Psilocybin Therapy on Depression- Like Behaviors and Neurobiological Pathways

Yanbo Zhang

Efficacy of Dialectical Behavior Therapy on Depressed Adolescents in the Partial Hospital Programs: An Experimental Study in China

Wang Wo

Transcranial Alternating Current Stimulation (tacs) in Concert with Pharmacotherapy for Adolescents with First-episode, Drug-naïve Depressive Disorder

Su Hong

HALL 2

PLENARY LECTURE -1

Moderator: Vahdet Görmez

Diagnostic Difficulties and Differential Diagnosis in Childhood Mood Disorders

Mücahit Öztürk

HALL 3

SYMPOSIA ORAL SESSION-11

Contemporary Psychiatric Research: Innovative Approaches from Migration to Psychiatric Practice

Moderators: Mihriban Heval Özgen

Giorgi Sikharulidze

The Neuroscience of Migration: Impact on Brain Function and Psychiatric Outcomes
Mihriban Heval Özgen

Identifying Distinct Cognitive Subgroups in Bipolar Disorder: A Cluster Analysis

Michail Kalfas

Day Clinic Psychiatry in Georgia: Comprehensive Care for Mental Wellness

Giorgi Sikharulidze

HALL 4

DOUBLE CONFERENCE-2

Beyond Antipsychotics: New Frontiers in Schizophrenia Treatment

Moderators: Köksal Alptekin Kazım Yazıcı

Treating Schizophrenia Beyond Antipsychotics

Ali Saffet Gönül

Contrary View: Is Psychosis Treatment Possible Without Antipsychotics?

Özcan Uzun

HALL 5

SYMPOSIA ORAL SESSION-12

Current Neuropsychiatric Treatment Approaches in Consultation Liaison Psychiatry

Moderators: Ömer Yanartaş Aynur Görmez

	Psychiatric Disorders and Current Treatment Approach in HIV Cases *Ömer Yanartaş*
	Current Treatment Approach in Psycho Oncology *Fatma Büşra Parlakkaya Yıldız*
	Current Approaches in Obesity *Rümeysa Yeni Elbay*
	Psychiatric Disorders and Current Treatment Approaches in Chronic Pain Cases *Ece Ilgın*
	HALL 6
	SYMPOSIA ORAL SESSION-13 *Artificial Intelligence and Psychiatry* *Moderators: Çiçek Hocaoğlu Mesut Yıldız*
	Artificial Intelligence and Psychiatric Diseases *Kader Semra Karataş*
	Artificial Intelligence and Treatment and Course of Psychiatric Diseases *Merve Akkuş*
	Artificial Intelligence and Child- adolescent Psychiatry *Hande Okumuş*
	Artificial Intelligence Ethics and Judicial Processes *Süheyla Aliustaoğlu*
	HALL 7
	WORKSHOP-2A *ACT Foundations: Connecting with Values for A Meaningful Life* *Moderator: Hasan T. Karatepe*
	Hasan T. Karatepe Zülal Çelik *Sema Nur Keskin*
	HALL 8
	MEET THE EXPERT-2 *Strategies for The Use of Long- acting Injectable Antipsychotic Agents in Specific Groups* *Moderator: Ayşe Nur İnce Kenar*
	The Use of Long-acting Injectable Antipsychotics in Comorbid Chronic Diseases *Ayşe Nur İnce Kenar*
	The Use of Long-acting Injectable Antipsychotics in Elderly Patients *Selin Balki Tekin*
	11:00-11:30 *COFFEE BREAK* 11:30-12:30
	HALL 1
	SATELLITE SYMPOSIUM-1 *ohnson & Johnson* *Moderator: Kültegin Ögel* *SPRAVATO®(Esketamine) Nasal Spray for Treatment-Resistant Major Depressive Disorder* *Bora Baskak*

	12:30-13:30 *LUNCH* 13:30-14:45 *Poster Presentations Session-1*
	HALL 1
	PLENARY LECTURE -6 *Moderators: Aynur Görmez* *Ayşe Kurtulmuş Çalış*
	Circadian and Seasonal Factors - Relevant to Bipolar Disorder and Schizophrenia? *Digby Quested*
	HALL 2
	DOUBLE CONFERENCE-3 *Mood Disorders: In the First Quarter of Millennium and Future* *Moderators: Murad Atmaca Okan Çalıyurt*
	Skillful Management of Bipolar Depression in the First Quarter of Millennium *Ayşegül Yıldız*
	Future Treatments of Mood Disorders *Allan Young*
	HALL 3
	SYMPOSIA ORAL SESSION-31 *New Biological and Psychosocial Approaches in Psychiatry* *Moderators: Ali Saffet Gönül* *Lut Tamam*
	Therapeutic Potential of Targeting the Nr2e3/Tet2 Pathway for Depression *Xingshun Xu*
	The Precise Diagnosis and Treatment for Depressive Disorder *Zhijun Zhang*
	Two Neuroanatomical Biotypes of Schizophrenia Identified by Using Machine Learning on Brain MR Images from 11,260 Individuals *Yuchao Jiang*
	HALL 4
	SYMPOSIA ORAL SESSION-32 *Inpatient Treatment Practices in Child and Adolescent Mental Health Units in Turkey* *Moderator: Caner Mutlu*
	Inpatient Treatment Practices in the Child and Adolescent Unit of Bakırköy Mental Health and Neurological Diseases Hospital *Alper Alnak*
	Inpatient Treatment Practices in Child and Adolescent Substance Abuse Treatment Center *Damla Kasap Üstündağ*
	Treatment Practices in the High- security Forensic Psychiatry Adolescent Unit *Seda Bozduman Çelebi*
	HALL 5

SYMPOSIA ORAL SESSION-33

Advancing Child Psychiatry with Event-related Potentials (ERP): From Diagnosis to Preventive Interventions

Moderator: Ayşegül Efe

The Use of Event-related Potentials (ERP) in Child Psychiatry: Its Role in the Diagnosis of Neurodevelopmental Disorders

Nazlı Merve Korkmaz

Assessment of Cognitive Processes Using ERP: Attention, Memory, and Language Development

Ayşe Selma Yenen Menderes

Investigation of Emotional and Social Cognition with ERP: Evaluation of Empathy, Face Recognition, and Social Cues in Children and Adolescents

Makbule Esen Öksüzoğlu

The Use of ERP for Early Risk Detection in Children: Preventive Interventions and Promising Approaches

Nagihan Özer

HALL 6

SYMPOSIA ORAL SESSION-34

A Multidimensional View of The Concept of Involuntary Celibacy (incel)

Moderator: Erol Göka

What Is The Concept of Incel? Yesterday and Today

Seda Kiraz

The Psychodynamic Aspect of The Incel Concept

Işık Batuhan Çakmak

The Association of Incel Concept with Psychiatric Disorders

Mehtap Eroğlu

The Violent Dimension and Judicial Aspect of The Incel Concept

Şahin Gürkan

HALL 8

SYMPOSIA ORAL SESSION-35

Symptomatology and Neurobiology of Obsessive- compulsive Disorder: From Mechanisms to Intervention

Moderators: Alpay Ateş

Evrim Özkorumak Karagüzel

Symptom Dimensions and Neurobiological Functions of OCD

Evrim Özkorumak Karagüzel

Symptoms and Digital Interventions: Artificial Intelligence- supported Neurobiological Approaches

Emel Uysal

Is TMS An Alternative to Drug Therapy in the Treatment of OCD, or Is It An Option That Strengthens The Physician's Hand in Treatment?

Alpay Ateş

14:45-15:00 *COFFEE BREAK*

15:00-16:00

SATELLITE SYMPOSIUM - 4

SANOVEL

In Which Cases and When Should We Use Lurasidone?

Lurasidone: From Science to Clinical Practice in New Generation Antipsychotic Treatment

Mesut Çetin

	In Which Cases and When Should We Use Lurasidone? *Köksal Alptekin*
	16:00-16:15 *COFFEE BREAK* 16:15-17:30
	HALL 1
	DOUBLE CONFERENCE-4 *Moderators: Mesut Yıldız* *Ayşe Kurtulmuş Çalış*
	Schizophrenic Autism *Kazım Yazıcı*
	Schizo-Obsessive Disorder *Kemal Sayar*
	HALL 2
	SYMPOSIA ORAL SESSION-36 *Personalized Medicine in Psychiatry: The Role of Pharmacogenetics* *Moderator: Mesut Çetin*
	SNaPshot for Basic Concepts of Pharmacogenetics *Feyza Arıcıoğlu*
	Personalized Medicine and Pharmacogenetics in Psychiatric Practice, with Case Examples *Adnan Çoban*
	HALL 3
	MEET THE EXPERT-7 *Gambling and Gaming Concerns in Developing Youth – Intervention and Treatment* *Marc Potenza*
	HALL 4
	SYMPOSIA ORAL SESSION-37 *Multidimensional Approach to Guanfacine Treatment* *Moderator:* *Ömer Faruk Akça*
	An Overview of Guanfacine Treatment *Hasibe Ağır*
	Use of Guanfacine in Physical and Psychiatric Comorbid Conditions Accompanying Attention Deficit Hyperactivity Disorder in Children and Adolescents *Hurşit Ferahkaya*
	Combined Use of Guanfacine Treatment with Other Psychotropic Drugs in Children and Adolescents *Fatma Coşkun*
	The Place of Guanfacine in the Treatment of Psychiatric Disorders in Adulthood *Eda Ferahkaya*
	HALL 5
	SYMPOSIA ORAL SESSION-38 *Catatonia in Child and Adolescent Psychiatry* *Moderator: Şahin Bodur*

	Catatonia in Child and Adolescent Psychiatry: From History to Present *Burçin Özlem Ateş*
	Catatonia in Child and Adolescent Schizophrenia *Halenur Teke*
	Catatonia in Child and Adolescent Depression and Bipolar Disorder *Hazal Selin Soyugür*
	Catatonia in Autism Spectrum Disorder *Cansel Azizağaoğlu*
	HALL 6
	SYMPOSIA ORAL SESSION-39 *Minds Gazing at Screens: The Effects of The Digital Age on The Mind* *Moderators: Erol Göka* *Hasan Turan Karatepe*
	Restructuring Individuals and Society in A Digitalized World *Ayşe Gülden Kaya*
	Real Effects of The Virtual World: Emotions, Impulses, and Behaviors *Ayşe Merve Akçay*
	Next-generation Executive Functions: The Cognitive Impacts of The Digital World *Tuğçe Turan*
	Childhood in Front of Screens: The Psychological Effects of *Technological Games on Children* *Merve Okuyucu*
	HALL 7
	SYMPOSIA ORAL SESSION-40 *Time and Mind: The Effect of Biological Rhythm on Mental Health* *Moderators:* *Pınar Güzel Özdemir Zülal Çelik*
	Circadian Rhythm and Bipolar Disorders *Pınar Güzel Özdemir*
	Circadian Rhythm and Dementia *Harun Yetkin*
	Circadian Rhythm and Attention Deficit and Hyperactivity Disorder *Ece Erkal*
	Circadian Rhythm and Schizophrenia *Özge Bebek İrem*
	HALL 8
	COURSE-4A *Moderator: Ali Saffet Gönül* *Artificial Intelligence, Neuroimaging and Pharmacology: A Roadmap for The Future of Psychiatry* *Andrei Irimia*
	17:30-17:45 *COFFEE BREAK* 17:45-18:45

HALL 1

PLENARY LECTURE-7

Moderators: Xin Min Li Kültegin Ögel

Unstoppable - Generative-ai Based Technology Apps as

Essential Assistive Technology for Assessment and Treatment for Disorders of Mental Health and Addictions

Andrew Greenshaw

HALL 2

PLENARY LECTURE-8

Moderators: Mesut Yıldız Hasan T. Karatepe

Polipolar Disorder: Breaking the Binary Limits of Bipolarity Kürşat Altınbaş

HALL 3

WORKSHOP-6

Adolescent Interpersonal Psychology

Adolescent Interpersonal Psychology

Fang Liu

HALL 4

SYMPOSIA ORAL SESSION-41

Psychosis-like Experiences in Adolescents

Moderator: Uğur Tekin

Psychosis-like Experiences in Adolescents and Clinical Properties

Özge Parlak Gözükara

Pedictors and Prognosis of Psychosis-like Experiences in Adolescents

Betül Damla Demirel Demirbaş

The Relationship Between Psychosis Risk Syndromes and Psychosis-like Experiences in Adolescents

Ecem Özer Çakır

HALL 5

MEET THE EXPERT-8

Moderator: Mahmut Cem Tarakçıoğlu

Approach to Emergency Cases in Child and Adolescent Psychiatry Caner Mutlu

HALL 6

SYMPOSIA ORAL SESSION-42

Asperger's Syndrome Still Exists

Moderator: Arif Önder

Asperger Syndrome from The Past to The Present

Arif Önder

Mental Health Issues in Children and Adolescents with Asperger Syndrome

Berhan Akdağ

Asperger Syndrome and Theory of Mind

Hilal Yazıcı Kopuz

Sensory Integration for Children and Adolescents with Asperger Syndrome

Özge Gizli Çoban

HALL 7

MEET THE EXPERT-9

Intervention Strategies in Early Psychosis

Ayşe Kurtulmuş Çalış

HALL 8

COURSE-4B

Moderator: Ali Saffet Gönül

Artificial Intelligence, Neuroimaging and Pharmacology: A Roadmap for The Future of Psychiatry

Andrei Irimia

18:45-19:00 *COFFEE BREAK*

19:00-20:15

HALL 1

PLENARY LECTURE-9 / Via

Zoom

Moderators: Kemal Sayar Erol Göka

Psychology, Selfhood and Human Flourishing in the 21st Century
Muhammad U. Faruque (ONLINE)

HALL 2

SYMPOSIA ORAL SESSION-43

The Concept of Psychological Resilience and it's Outstanding Aspects about Child and Adolescent Psychiatry

Moderator: Olcay Şenay
An Overview of the Concept of Psychological Resilience
Olcay Şenay

Post-Trauma Journey: The Interplay of Post-Traumatic Stress Disorder, Psychological Resilience, and Post-Traumatic Growth
Rana Selin Küçükardalı

Attention Deficit Hyperactivity Disorder and Resilience: Unpacking the Interplay of Strenghts and Vulnerabilities
Zeynep Gültekin Taş

The Digital Spiral: The Relationship Between Problematic Technology Use and Psychological Resilience

Şükrücan Kocabaş

HALL 3

SYMPOSIA ORAL SESSION-44

Artificial Intelligence in Child Psychiatry: Opportunities and Challenges
Moderator: Hurşit Ferahkaya
Artificial Intelligence in Child Psychiatry: Diagnosis, Treatment, and Clinical Decision Support Systems
Müge Mutlu

Risk Prediction and Early Intervention in Psychiatric Disorders with Artificial Intelligence: Toward Preventive Mental Health

Ayşegül Tuğba Hira Selen

Digital Psychiatric Biomarkers: The Future Tools for Diagnosis and Treatment

Gizem Kuru

Artificial Intelligence and Ethical Boundaries in Child Psychiatry: Privacy, Security, and Patient Rights

İrem Cihanyurdu Erdem

HALL 4

SYMPOSIA ORAL SESSION-45

Addressing The Unspoken: Management of Sexual Side Effects Related to Psychotropic Drugs

Moderators:

İbrahim Gündoğmuş Mehmet Güneş

Management of Sexual Side Effects Related to Antipsychotics Hasan Ünver

Management of Sexual Side Effects Related to Antidepressants
Mehmet Rıdvan Varlı

Management of Sexual Side Effects Related to Mood Stabilizers
Hüseyin Uçar

Management of Sexual Side Effects Related to Other Psychotropics

Kübra Özcan Çetin

HALL 5

SYMPOSIA ORAL SESSION-46

New Hopes in Psychopharmacological Treatment

Moderators:

Pınar Güzel Özdemir Betül Uyar

New Hope in Schizophrenia Treatment 'karxt' Doğancan Sönmez

Transdermal Scopolamine' in the Treatment of Resistant Depression
Ebru Çiftçi

'pimavanserin' for The Treatment of Insomnia Associated with Post- traumatic Stress Disorder
Çağdaş Hünkar Yeloğlu

A New Hope in the Treatment of Delirium in Terminally Ill Patients: 'transdermal Blonanserin Patch

İbrahim Halil Akbaş

HALL 7

MEET THE EXPERT-10

Moderator: Caner Mutlu

Psychological Assessment and Interdisciplinary Approach in Children and Adolescents
Şaziye Senem Başgül

21:00-21:30 Award Ceremony

26th April 2025, Saturday

09:30-11:00

HALL 1

SYMPOSIA ORAL SESSION-47

At the Boundaries of Reality: Psychotic-Like Experiences in Adolescents and New Horizons Opened by Neuroscience

Moderators: Alpay Ateş Esra Çöp

The Neurobiological Basis of Psychotic- Like Experiences in Adolescents

Müge Mutlu

Methods for Identifying Psychotic-Like Experiences Using Neuroimaging and Artificial Intelligence

Begüm Kırmızı

	Early Intervention and Treatment Approaches in the light of Neuroscience *Duygu Bilgili Can*
	HALL 2
	SYMPOSIA ORAL SESSION-48 *OCD in Its Prominent Aspects: A Biopsychosocial Approach* *Moderator: Zeynep Gültekin Taş* *Neurocognitive Functions in OCD* *Omca Güney*
	The Role of Complement Proteins in the Etiology of OCD *Duygu Zirekli Erdem*
	OCD and Parental Attitudes *Zeynep Gültekin Taş*
	Differences Between Metacognitive Processes in Autogenous and Reactive OCD *Asude Zülal Çetin*
	HALL 3
	SYMPOSIA ORAL SESSION-49 *Is The Eartquake Still Hurting? A Hatay Example* *Moderators: Seda Aybüke Sarı Betül Uyar* *Psychological Interventions in the Acute Post-earthquake Period in the Hatay Sample* *Sena Küçükhazar*
	Psychological Pathologies Emerging After The Earthquake and Predisposing Factors *Hülya Alkan*
	Positive Changes After The Earthquake: Post Traumatic Growth *Ertan Yılmaz*
	Child and Adolescent Mental Health After The Earthquake, Common Psychopathologies and Post Traumatic Growth *Seda Aybüke Sarı*
	HALL 4
	SYMPOSIA ORAL SESSION-50 *New Developments in the Diagnosis and Treatment of Schizophrenia* *Moderators: Köksal Alptekin Seda Kiraz* *New Treatment Approaches in Acute Psychotic Crisis of Schizophrenia* *İlknur Kiraz Avcı*
	What Is The Role of Cholinergic Neurotransmission in Schizophrenia Symptoms? *Ulaş Korkmaz*
	Management of Weight, Metabolic Syndrome and Diabetes in Patients with Schizophrenia *Esra Yalım*
	Exploring The Connection Between Schizophrenia and Alzheimer's *Müberra Kulu*
	HALL 5

	SYMPOSIA ORAL SESSION-51 *Little-known Issues in Sleep-wake Disorders* *Moderators: Yavuz Selvi* *Kader Semra Karataş* *Could NREM Be A Biomarker for Parasomnias?* *Ezgi Cellat*
	Relationship Between Sleep, Diet and Glucose Metabolism *İbrahim Sefa Güleç*
	Microbiota-gut-brain Axis in Sleep Disorders *Aslı Enzel Koç*
	Sleep and Immune System *Sema Çağal*
	HALL 6
	MEET THE EXPERT-11 *Will I Never Get off, Doctor?* *Antidepressant Withdrawal Syndromes?* *Erdoğdu Akça*
	HALL 7
	RATIONAL DRUG USE SYMPOSIUM *Moderators: İsmail Ak* *Ömer Yanartaş* *Gökhan Ünal*
	11:00-11:15 COFFEE BREAK 11:15-12:45
	HALL 1
	SYMPOSIA ORAL SESSION-52 *Cognitive Functions in Childhood Psychiatric Disorders: What Do Neural Cognition and Social Cognition Tell Us?* *Moderator: Caner Mutlu* *Cognitive Functions in Childhood Anxiety Disorders: What Do Neural Cognition and Social Cognition Tell Us?* *Hande Şirin*
	Cognitive Functions in Childhood Major Depression: What Do Neural Cognition and Social Cognition Tell Us? *Ayşe Sena Yüksel Anık*
	Cognitive Functions in Early-onset Bipolar Affective Disorders: What Do Neural Cognition and Social Cognition Tell Us? *Celal Yeşilkaya*
	Cognitive Functions in Childhood *Neurodevelopmental Disorders: What Do Neural Cognition and Social Cognition Tell Us?* *Neslişah Gür Kurcaloğlu*

HALL 2

SYMPOSIA ORAL SESSION-53

Citicoline in Psychiatric Treatments

Moderator: Mustafa Kurt

The Role of Citicoline in Adult Psychiatric Disorders - Part I Mustafa Kurt

The Role of Citicoline in Adult Psychiatric Disorders - Part II
Ali Taşdemir

The Role of Citicoline in Childhood Psychiatric Disorders

Mehtap Eroğlu

HALL 3

SYMPOSIA ORAL SESSION-54

How Is Sleep Affected as The World Changes? : An Overview of Association Between Developing Technology and Sleep

Moderator: Ebru Turan

Understanding Sleep and Sleep Disorders

Ömer Varış

Effects of Technology and Screen Use on Sleep

Yeşim Savaşcı

Effects of Artificial Light at Night on Sleep

Ebru Turan

HALL 4

SYMPOSIA ORAL SESSION-55

New Current-cyber Problems in Children and Adolescents

Moderator: Arif Önder

Cyber Security and Cyberbullying

Emine Esra Varkal Toprak

Technology Addiction

Gökçe Kırlı Öcal

Sharenting

Ezgi Mutlu Akar

Combating Fear of Missing Out (FoMO)

Sema Öznur Tek

HALL 5

SYMPOSIA ORAL SESSION-56

ADHD in the Digital Age: Technology Addiction as A New Risk

Moderator: Uğur Tekin

Attention in the Shadow of Screens in the Digital Age: The Relationship Between ADHD and Technology Addiction

Uğur Tekin

The Role of Family and School: Links and Barriers Between ADHD and Technology Addiction

Aslı Begüm Can

ADHD in the Digital World: Finding Balance and Creating Solutions

Pınar Algedik

	HALL 6
	SYMPOSIA ORAL SESSION-57 *The Journey of Sound: Auditory Processing Challenges and Interventions Across Disorders* *Moderator:* *Meryem Nur Gençtürk* *The Journey of Sound: Auditory Processing Mechanisms in Brain Functioning* *Ümmügülsüm Gündoğdu*
	In Getting Lost: Auditory Perception Difficulties in ADHD *Meryem Nur Gençtürk*
	Understanding Sounds, Grasping Information: Auditory Processing in Children with Specific Learning Disabilities *Çağla Develi Tekbıyık*
	Hearing or Understanding? Auditory Processing Disorder Diagnostic Criteria and Assessment Processes *Sümeyye Sarıbaş Akmehmet*
	Catch Sounds: Therapy and Intervention Approaches in Auditory Processing Disorder *Atakan Demirbağ*
	HALL 7
	SYMPOSIA ORAL SESSION-58 *Psychiatric Disorders and Neuroinflammation* *Moderators: Özcan Uzun Ali Erdoğan* *Mood Disorders and Neuroinflammation* *Sercan Karabulut*
	Psychotic Disorders and Neuroinflammation *Büşra Başer Özkoç*
	Other Psychiatric Disorders and Neuroinflammation *Ümmü Nur Kaya Tan*
	12:45-13:00 Closing Remarks

ORAL PRESENTATION PROGRAM

24th April 2025, Thursday
***Session of Stars-1**
HALL 1 / 08:30 - 09:33
Moderator: Alperen Bıkmazer

S.N.	Time	Abst. Nu.	Title	Presenter
1	08:30-08:38	**OA392**	Suça Sürüklenen Erkek Çocuklarda Sosyal Biliş, Empati ve Katı-duyarsız Özelliklerin Şiddet Eğilimine Etkisi	**Emine Apaydın**
2	08:38-08:45	**OA428**	Parental Alienation Syndrome in Custody Cases: A Clinical Assessment Based on Gardner's Criteria	**Hicran Doğru**
3	08:45-08:53	**OA288**	The Role of Serum Vitamin B12 in Adolescent Anxiety and Depression: A Preliminary Study	**Merve Okuyucu**
4	08:53-09:01	**OA276**	Investigation of Adolescents with Internet Gaming Disorder and Problematic Internet Use and Those With Substance Use Disorder in Terms of Attachment and Emotion Regulation Skills	**Gülcan Akyol Tekfiliz**
5	09:01-09:09	**OA72**	The diagnostic relationship between suicide attempts and parasuicidal behaviors in child psychiatry inpatients hospitalized following suicide attempts	**Mehmet Sezgin**
6	09:09-09:18	**OA105**	The Relationship Between Parental Body Satisfaction And Parental Attitudes With Body Image, Self-Esteem, And Social- Emotional Behavioral Problems In Adolescents	**Aybala Nur Balık**
7	09:18-09:26	**OA108**	Relationship Between Suicide Risk And Uncertainty Intolerance Levels, Emotion Regulation Strategies, Parental Attitudes In Adolescents	**Tuba Sürücü**
8	09:26-09:34	**OA125**	Post-Weaning Social Isolation Stress Leads to Behavioral Impairments: A Focus on the Alterations of the Hippocampus and Prefrontal Cortex	**Gülsen Çelebi**

24th April 2025, Thursday
***Session of Stars-2**
HALL 2 / 08:30 - 09:25
Moderator: Uğur Tekin

S.N.	Time	Abst. Nu.	Title	Presenter
1	08:30-08:38	**OA187**	Are environmental conditions and access to resources related to children's brain and cognitive development?	**Neslihan Yildiz Ozhan**
2	08:38-08:45	**OA312**	Emergency Psychiatric Intervention: Evaluation of Patients Referred for Psychiatric Hospitalization in the Pediatric Emergency Department	**Çağla Develi Tekbıyık**
3	08:45-08:53	**OA338**	Catatonia in Child and Adolescent Psychiatry: A Case Report and Treatment Approach	**Berfin Merve Gören**
4	08:53-09:01	**OA388**	Evaluation of Clinical Characteristics of Adolescents with Repeated Visits to the Pediatric Psychiatry Emergency Department of Marmara University	**Kevser Nursaçan**
5	09:01-09:09	**OA393**	The Role of Guanfacine in Neurodevelopmental Disorders and Clinical Implications	**Zeynep İrem Erbasan**
6	09:09-09:18	**OA404**	"Sociodemographic Characteristics and Diagnostic Profiles of Patients in a Child and Adolescent Psychiatry Inpatient Unit"	**Eslem Ozturk Gul**
7	09:18-09:26	**OA114**	The Impact of Sleep Problems on Executive Function in Boys with ADHD: A Comparative Study	**Mustafa Tolga Tunagur**
8	09:26-09:34	**OA69**	Retrospective Analysis of Long-Acting Injectable Antipsychotics in Bipolar Disorder: Preliminary Findings	**Elif Merve Kurt Tunagur**

24th April 2025, Thursday
***Session of Stars-3**
HALL 3 / 08:30 - 09:25
Moderator: Caner Mutlu

S.N.	Time	Abst. Nu.	Title	Presenter
1	08:30-08:38	**OA219**	Evaluation Of Slow Cognitive Tempo Symptoms, Psychological Flexibility Levels and Executive Functions in Adolescents with Attention Deficity And Hyperactivity Disorder	**Gizem Buket Yayla Coşgun**
2	08:38-08:45	**OA223**	An Eye-Tracking Study: Comparison of Neuropsychological Profiles and Reading Performance of Children with Attention Deficit Hyperactivity Disorder and Dyslexia	**Mehmet Ali Donbaloğlu**
3	08:45-08:53	**OA270**	Investigation of the Relationship Between Sleep Disturbances, Chronotype, and Functionality in the Restrictive ADHD Phenotype	**Hande Emine Sabah Barış**
4	08:53-09:01	**OA290**	Relationship Between Somatic Symptoms, Alexithymia, and Autistic Traits in Adolescents Diagnosed with Attention Deficit Hyperactivity Disorder	**Esra Akman Ayidağa**
5	09:01-09:09	**OA328**	Pharmacological Treatment of Preschool ADHD: A 12-Year Retrospective Study on Efficacy and Side Effects	**İrem Damla Çimen**
6	09:09-09:18	**OA371**	Perceived Social Support, Marital Satisfaction and Quality of Life Levels and Related Factors in Parents of Children with Attention Deficit and Hyperactivity Disorder	**Damla Kasap Üstündağ**
7	09:18-09:26	**OA400**	Assessment of Auditory Processing and Executive Functions in Adolescents with Attention Deficit Hyperactivity Disorder, Predominantly Inattentive Presentation	**Gizem Pehlivan Çoruhlu**
8	09:26-09:34	**OA325**	The Effect Of Emotion Regulation Difficulties On The Treatmnet Of Internalizing Disorders In Adolescent	**Yaren Özgü Akın Soyupek**

24th April 2025, Thursday
***Session of Stars-4**
HALL 4 / 08:30 - 09:25
Moderator: Selma Tural Hesapçıoğlu

S.N.	Time	Abst. Nu.	Title	Presenter
1	08:30-08:38	**OA341**	Sex Differences and Seasonal Variations in Suicidal Behavior Among Adolescents: Exploring Inflammatory Markers and Suicidal Methods	**Yağmur Ersoy**
2	08:38-08:45	**OA419**	Evaluation of the Child and Adolescent Psychiatric Inpatient Consultations	**Döne Kübra Yılmaz**
3	08:45-08:53	**OA323**	Study of Current Inflammation Indices in Children With General Developmental Delay: A case-control study	**Merve Sema Arslan**
4	08:53-09:01	**OA90**	Evaluation of the immune system in Autism Spectrum Disorder	**Ayfer Karabulut**
5	09:01-09:09	**OA139**	The Relationship Between Symptom Severity and Primary Caregiver/ Parental Temperament and Attachment in Preschool Children Diagnosed with Autism Spectrum Disorder	**Hanife Parlak Aslan**
6	09:09-09:18	**OA331**	The Effect of Anxiety on Social Competence in Children with Autism Spectrum Disorder (ASD): Evidence from a clinical study of 3- to 6-year-olds	**Aylin Esen**
7	09:18-09:26	**OA359**	The Impact of Serum Vitamin D and B12 Levels on Disorder Severity in Autism Spectrum Disorder	**Orgül Yıldız Özşan**

24th April 2025, Thursday
***Session of Stars-5**
HALL 5 / 08:30 - 09:25
Moderator: M. Tayyip Kadak

S.N.	Time	Abst. Nu.	Title	Presenter
1	08:30-08:38	**OA370**	The Relationship between the Start of Treatment and Clinical Psychopathology in First-Episode Psychosis	**Damla Kasap Üstündağ**
2	08:38-08:45	**OA255**	Understanding the Dual Impact: How Earthquakes and Migration Affect the Psychological Well-being of Preschool Children	**Nisa Didem Zengin**
3	08:45-08:53	**OA399**	Investigation of Grazing Behaviour and Self-Compassion in Adolescents According to Gender Differences	**Mehmet Akif Cansız**
4	08:53-09:01	**OA261**	Comparison of Temperament Traits and Insight Levels Between Schizophrenia Patients With and Without a Criminal History	**Batuhan Çakmak**
5	09:01-09:09	**OA112**	Comparison of the Severity of Autistic Features in Panic Disorder Patients with Retrospective Disease Severity Course	**Yunus Akkeçili**
6	09:09-09:18	**OA248**	The mediating role of psychological resilience in the relationship between perceived parenting Styles and social anxiety in adults	**Mustafa Batuhan Kurtoğlu**

24th April 2025, Thursday
ORAL PRESENTATIONS SESSION-1
HALL 6 / 08:30 - 09:33
Moderator: Tuncay Sandıkçı

S.N.	Time	Abst. Nu.	Title	Presenter
1	08:30-08:38	**OA56**	Functional Variations Across Domains in Adolescents with ADHD: Predictors and Subdomain-Specific Findings	**Hande Kırışman Keleş**
2	08:38-08:45	**OA224**	Psychometric properties and validation of the Turkish version of the Depression Anxiety Stress Scale for Youth (DASS-Y)	**Ayşegül Demir Çevirici**
3	08:45-08:53	**OA160**	Investigation of the Relationship Between Smartphone Addiction and Empathy and Aggression Levels of Children with Attention-Deficit Hyperactivity Disorder and Their Mothers	**Melike Kevser Gül**
4	08:53-09:01	**OA408**	The Relationship Between Internet Gaming Disorder and Chronotype and Sleep Problems in Adolescents	**Serdar Karatoprak**
5	09:01-09:09	**OA191**	The Impact of Chronotype on Anhedonia, Impulsivity, and Eating Behavior in Medical Students	**Burak Okumus**
6	09:09-09:18	**OA208**	The impact of loneliness, peer relationships, and perceived parental attitudes on smartphone addiction in adolescents diagnosed with attention deficit hyperactivity disorder	**Çağla Boztepe**
7	09:18-09:26	**OA318**	Examining the mediating role of emotion regulation in the relationship between suicide attempts in adolescents, adverse life events, and parental emotional availability	**Hilal Fındık**
8	09:26-09:34	**OA320**	Pediatric Hemato-oncology Patients from Psychiatric Perspective: Consultation Processes and Outcomes	**Hasibe Ağır**
9	09:34-09:42	**OA456**	Reliability and Validity of the Turkish Version of the Infant-Toddler Checklist	**Esra Akman Ayidağa**

24th April 2025, Thursday
ORAL PRESENTATIONS SESSION-2
HALL 7 / 08:30 - 09:33
Moderator: Şaziye Senem Başgül

S.N.	Time	Abst. Nu.	Title	Presenter
1	08:30-08:38	**OA411**	Evaluation of the relation between peripheral inflammatory parameters and the suicide probability in adolescents with suicide attempts	**Serdar Karatoprak**
2	08:38-08:45	**OA406**	Assessment of parental attachment and early maladaptive schemas in juvenile boy offenders in Turkiye; a case-control study	**Serdar Karatoprak**
3	08:45-08:53	**OA268**	What Are the Levels and Interactions of Neuroligin-1, Neuroligin-3, and Inflammatory Cytokines (IL-6, IL-8) in Children Diagnosed with Autism Spectrum Disorder?	**Kübra Kılınç**
4	08:53-09:01	**OA295**	Systemic Inflammation in Autism Spectrum Disorder: Evaluation of SII and SIRI Biomarkers	**Kübra Kılınç**
5	09:01-09:09	**OA339**	The relationship between hyperfocus and executive functions in adolescents diagnosed with Attention Deficit Hyperactivity Disorder (ADHD)	**Gözde Durmuş Hazır**
6	09:09-09:18	**OA342**	The Relationship Between Hyperfocus Phenomenon and Autistic Traits in Adolescents Diagnosed with Attention Deficit Hyperactivity Disorder (ADHD)	**Ebru Işık**
7	09:18-09:26	**OA38**	Translating a Subtyping Neurobiomarker into Precision Neuromodulation for Youths with a Major Depressive Episode: A Double-Blind, Randomized Controlled Trial	**Yao Xiao**
8	09:26-09:34	**OA116**	Sociodemographic Characteristics And Psychiatric Assessment Of Children And Adolescents Evaluated Under Health Precautions	**Öznur Adıgüzel Akman**
9	09:34-09:42	**OA353**	The Effect of Somatic Symptoms on Relapse Risk in Depression	**Aslı Ceren Hınç**
10	09:42-09:50	**OA410**	Effect of COVID-19 Pandemic on Clinical Follow-Up in Children and Adolescents with Anxiety Disorders	**Taha Çağrıhan Karaboğa**

24th April 2025, Thursday
ORAL PRESENTATIONS SESSION-3
HALL 8 / 08:30 - 09:33
Moderator: Erdoğdu Akça

S.N.	Time	Abst. Nu.	Title	Presenter
1	08:30-08:38	**OA81**	Perfectionism, Rumination And Memory in Obsessive-Compulsive Disorder Patients	**Meltem Puşuroğlu**
2	08:38-08:45	**OA128**	The mediating role of impulsivity in the relationship between childhood traumas and disease severity in patients with OCD	**Esra Yalım**
3	08:45-08:53	**OA297**	Clinical and Laboratory Parameters in Bipolar Disorder Patients Using Lithium and Valproic Acid: A Retrospective Comparison	**Zuhal Koç Apaydın**
4	08:53-09:01	**OA4**	Association between HERC2 (rs12913832 polymorphism) gene coding light eye color and schizophrenia	**Selin Balki Tekin**
5	09:01-09:09	**OA73**	Stick the Needle into Yourself Before You Thrust the Packing-Needle into Others: Bibliometric Analysis of the Stigmatizing Term 'Schizophrenic'	**Dilek Örüm**
6	09:09-09:18	**OA92**	Treatment Profiles and Associated Factors of Patients Diagnosed with Schizophrenia and Schizoaffective Disorder	**Büşra Uçar Bostan**
7	09:18-09:26	**OA336**	The Relationship Between Medication Adherence and Insight, Clinical Symptom Severity, and Attitudes Toward Psychiatric Services in Patients with Psychotic Disorders	**Elif Nur Donbaloğlu**
8	09:26-09:34	**OA434**	Investigation of Retinal Layers Thicknesses in Schizophrenia Patients and Comparison with Healthy Siblings and Control Group	**Kardelen Akbal Bağcı**
9	09:34-09:42	**OA436**	From Traditional Scales to Artificial Intelligence: Large Language Models in Psychometric Assessment	**Azad Asaf**

25th April 2025, Friday
***Session of Stars-6**
HALL 1 / 08:30 - 09:33
Moderator: Rümeysa Yeni Elbay

S.N.	Time	Abst. Nu.	Title	Presenter
1	08:30-08:38	**OA46**	Association of Methamphetamine Use Disorder and Methamphetamine-induced Psychosis with Minor Physical Abnormalities	**Zehra Kabakçı**
2	08:38-08:45	**OA301**	The Relationship Between Social Media Use, Psychological Well-Being, and Quality of Life in Medical School Students	**Sinem Çetin Demirtaş**
3	08:45-08:53	**OA16**	Calcium Pathway Dysregulation in Sex-Specific Differences of Age of Onset in Bipolar Disorder and Schizophrenia: A Transcriptomic and Machine Learning Approach	**Sara Sadat Aghabozorg Afjeh**
4	08:53-09:01	**OA89**	The relationship between difficulties in emotion regulation and impulsivity among gun license applicants	**İlknur Kiraz Avcı**
5	09:01-09:09	**OA79**	The Effect of Electroconvulsive Therapy on Inflammation Markers and Clinical Symptoms in Depression Patients	**Merve Ceylan Çörek**
6	09:09-09:18	**OA86**	Factors Associated with Suicide Attempts in Individuals with Major Depressive Disorder: A Preliminary Study	**Ayşe Ergüner**
7	09:18-09:26	**OA236**	Serum Neuropeptıde Y Levels In Medıcatıon-Free Patıents Wıth Major Depressıon: Relatıonshıp Wıth Gender And Duratıon Of The Dısease	**Didem Şule Erdem**
8	09:26-09:34	**OA360**	The Effect of BRAP on Liver-brain Axis of Alcohol Use Disorder	**I Chun Chen**

25th April 2025, Friday
***Session of Stars-7**
HALL 2 / 08:30 - 09:33
Moderator: Gökhan Ünal

S.N.	Time	Abst. Nu.	Title	Presenter
1	08:30-08:38	**OA250**	Serum Neurofilament Polypeptide Levels and Their Effects on Cognitive Functions in Patients with Bipolar Disorder	**Elif Nur Donbaloğlu**
2	08:38-08:45	**OA299**	Peripheral Immune Cell Markers as Predictors of Electroconvulsive Theraphy Response	**Rabia Rakan**
3	08:45-08:53	**OA379**	Evaluation of NLR (neutrophil/lymphocyte ratio) and PLR (platelet/lymphocyte ratio) as inflammatory markers of drug-naive first episode mania:A retrospective study	**Oğuzhan Arat**
4	08:53-09:01	**OA394**	Is the therapeutic effect of vortioxetine mediated through hypothalamic neurogenesis in a rat model of experimental depression?	**Merve Akkuş**
5	09:01-09:09	**OA93**	Ladies First! A Signifcant Difference in Recovery Speed among Various Psychiatric Disorders	**Merve Setenay Gürbüz**
6	09:09-09:18	**OA50**	Investigation of Superoxide Dismutase-1 (SOD1) +35A/C (exon3/intron3) and 50 bp Insertion/Deletion Polymorphisms in Cannabis and Synthetic Cannabinoid Use Disorder	**Hasan Mervan Aytac**
7	09:18-09:26	**OA94**	Association of VKORC1 G-1639A polymorphism with neuropsychiatric diseases	**Ayşe Döndü**
8	09:26-09:34	**OA326**	The effects of parental attitudes on cognitive distortions and self-esteem in 12-18 years old adolescents diagnosed with obsessive compulsive disorder	**Zeynep Gültekin Taş**

25th April 2025, Friday
***Session of Stars-8**
HALL 3 / 08:30 - 09:33
Moderator: Yasir Şafak

S.N.	Time	Abst. Nu.	Title	Presenter
1	08:30-08:38	**OA337**	Creative Thinking and Brain Regions with rs&dw MRI: Multimodal Connectivity Analysis	**Gozde Colak**
2	08:38-08:45	**OA244**	Sociodemographic and Clinical Characteristics of Patients Followed in a City Hospital OCD Outpatient Clinic, A Retrospective Analysis	**Berra Öztürk**
3	08:45-08:53	**OA423**	PEERS-GY: Adaptation and Effectiveness Study of the Social Skills Program for Young Adults with Autism Spectrum Disorder	**Hüseyin Şehit Burhan**
4	08:53-09:01	**OA206**	Retrospective Analysis of Antidepressant Use and Its Association with Gastrointestinal Bleeding in Emergency Department Patients	**Tayfun Özbek**
5	09:01-09:09	**OA291**	Side Effects Of Antidepressant Medications: A 3-Month Prospective Study	**Aslı Kazgan Kılıçaslan**
6	09:09-09:18	**OA107**	Effect of Accelerated Repetitive Transcranial Magnetic Stimulation in Mild Neurocognitive Impairment	**Selim Çiftcioğlu**
7	09:18-09:26	**OA130**	Efficacy and Safety of an Accelerated Deep TMS Protocol Targeting DMPFC with a Double-Cone Coil in Treatment-Resistant Depression	**Ali Tarık Altunç**
8	09:26-09:34	**OA207**	Investigation of the Effects of Depression and Anxiety on Sleep Quality in Patients Under Hemodialysis Treatment: A single center experience in Turkey	**Doğancan Sönmez**
9	09:34-09:42	**OA234**	Investigation of the Effects of Agomelatine on Lipopolysaccharide-Induced Inflammation in a Microglial Cell Line	**Elif Beyzanur Polat**

25th April 2025, Friday
***Session of Stars-9**
HALL 4 / 08:30 - 09:33
Moderator: Ömer Yanartaş

S.N.	Time	Abst. Nu.	Title	Presenter
1	08:30-08:38	**OA247**	Assessing Pain Threshold and Tolerance in Patients Referred to a Psychiatry Clinic: Preliminary Findings from Istanbul Medeniyet University Goztepe Hospital	**Elif Çetintaş**
2	08:38-08:45	**OA20**	Examınatıon of The Relatıonshıp Between Clınıcal Features and Obesıty in People wıth Severe Psychiatric Illnesses	**Ayşe Köksal**
3	08:45-08:53	**OA32**	Adherence to treatment and associated factors in individuals residing in nursing homes and receiving long-acting injectable antipsychotic therapy	**Munevver Tunckal**
4	08:53-09:01	**OA36**	Evaluation of the delusional contents (poor me/bad me) and self-esteem in patients with psychotic disorder and their impact on internalized stigma	**Işık Batuhan Çakmak**
5	09:01-09:09	**OA41**	Side Effects of Antipsychotic Drugs: A Qualitative Study	**Pelin Göksel**
6	09:09-09:18	**OA71**	Audit of the mention of menopause and related factors in psychiatric outpatient assessments of women with psychosis: Insights from a UK Tertiary Service	**Bedirhan Şenol**
7	09:18-09:26	**OA375**	Triglyceride-Glucose Index and Atherogenic Plasma Index as Cardiovascular Disease Risk Indicators in Patients With Schizophrenia and Their Relationship With Clinical Parameters	**Aslıhan Senarya**
8	09:26-09:34	**OA262**	The Effects of a Ketogenic Diet on Neuroinflammation and Hippocampal Autophagy in Rats with Induced Post-Traumatic Stress Disorder	**Sena Karaca**
9	09:34-09:42	**OA412**	The effects of prenatal carbamazepine exposure on behavioural functions in three different stages of development in rats	**Mehmet Bozkurt**

25th April 2025, Friday
ORAL PRESENTATIONS SESSION-4
HALL 5 / 08:30 - 09:33
Moderator: Tuncay Sandıkçı

S.N.	Time	Abst. Nu.	Title	Presenter
1	08:30-08:38	**OA51**	Trends in Early Intervention for Autism Spectrum Disorder: An Analysis of 2019-2024 ÇÖZGER Data	**Özlem Doğan**
2	08:38-08:45	**OA198**	Investigation of post-traumatic growth and quality of life in those who left the disaster area following the February 6 earthquakes 18 months after the earthquake	**Esra Aslan**
3	08:45-08:53	**OA225**	Does Maternal Vitamin and Omega-3 Fatty Acid Intake During Pregnancy and the Prepartum Period Impact Symptoms of Attention Deficit Hyperactivity Disorder and Behavioral Issues in Children Aged 3-6 Years?	**Emine Esra Varkal Toprak**
4	08:53-09:01	**OA52**	The Efficacy of Methylphenidate Use in Children Diagnosed with Attention Deficit Hyperactivity Disorder with Emotional Impulsivity Symptoms	**Saliha Baykal**
5	09:01-09:09	**OA421**	Evaluating the Clinical Utility and Tolerability of Brexpiprazole in Child and Adolescent Psychiatry: A Retrospective Case Series	**Fevzi Tuna Ocakoglu**
6	09:09-09:18	**OA277**	Comparison of Suicide and Non-Suicidal Self-Injury Behaviors with Sleep in Adolescents Diagnosed with Depressive Disorder	**Tuğçe Turan**
7	09:18-09:26	**OA95**	Sociodemographic and Clinical Characteristics of Cases Evaluated for Criminal Responsibility in a High Security Forensic Psychiatry Clinic	**Kamil Mert Angın**
8	09:26-09:34	**OA195**	The Impact of Comorbid Learning Disorders on Problematic Technology Use in Youth with ADHD: A Cross-Sectional Study	**Şükrücan Kocabaş**
9	09:34-09:42	**OA433**	The Relationship Between Type D Personality Features And Social Anxiety Among Individuals With Alcohol And Substance Use Didorders	**Sakine Aktaş**

25th April 2025, Friday
ORAL PRESENTATIONS SESSION-5
HALL 6 / 08:30 - 09:33
Moderator: Ayşe Sakallı Kani

S.N.	Time	Abst. Nu.	Title	Presenter
1	08:30-08:38	**OA88**	Investigation of Substance Use, Shame, Guilt, and Readiness for Change in Patients Followed at the Probation Clinic	**Gamze Zengin İspir**
2	08:38-08:45	**OA111**	Systemic Immune Inflammation Index and Systemic Inflammatory Response Index as Indicators of Inflammation in Patients with Methamphetamine Use Disorder	**Fadime Şimşek**
3	08:45-08:53	**OA149**	Trends in Substance Use Disorders: A Retrospective Analysis of Outpatient Data from a University Hospital in Turkey (2018–2023)	**Ibrahim Sungur**
4	08:53-09:01	**OA161**	Investigation of Psychological Factors Associated with Craving in Patients with Alcohol Use Disorder	**Bahar Uslu Terzioğlu**
5	09:01-09:09	**OA308**	Sociodemographic And Clinical Factors Associated With Compulsory Hospitalizations In Addiction	**İlknur Gündoğdu**
6	09:09-09:18	**OA367**	Methamphetamine Use Disorder and Inflammation and Cognitive Impairment	**Toultse Gioventikli**
7	09:18-09:26	**OA380**	The effects of hospitalization type, clinical features and addiction severity on treatment motivation in substance use disorder	**Mustafa Kurt**
8	09:26-09:34	**OA49**	Cognitive impairments, depression and quality of life 1 year after COVID-19 hospital discharge	**Elif Burcu Ersungur Çelik**
9	09:34-09:42	**OA153**	Neurodevelopmental Disorders in the Digital Age: The Role Of ChatGPT for Parents and Professionals	**Ebru Turan**

25th April 2025, Friday
ORAL PRESENTATIONS SESSION-6
HALL 7 / 08:30 - 09:41
Moderator: Büşra Yıldız Parlakkaya

S.N.	Time	Abst. Nu.	Title	Presenter
1	08:30-08:38	OA98	Comparison of Women's Pain Beliefs and Cognitive Flexibility with Their Depression and Anxiety Levels and Their Effects on Pregnancy: Pre-Study	**Veysel Doğan**
2	08:38-08:45	OA265	Do the recovery subdomains differ over the follow-up period?	**Pelin Taş**
3	08:45-08:53	OA417	Comparison of Attention Deficit Hyperactivity Disorder in Preoperative Psychological Evaluations of Bariatric Surgery	**Nagehan Coteli**
4	08:53-09:01	OA61	The Role of Metacognition, Ruminative Thought, and Anxiety in the Formation of Suicidal Ideas in Major Depression Patient	**Talha Ağaç**
5	09:01-09:09	OA78	The Interplay Between Premenstrual Syndrome, Impulsivity, and Couple Dynamics: Insights from Women Attending Psychiatry Clinics	**Caner Yeşiloğlu**
6	09:09-09:18	OA109	The relationship between internalized stigma and psychopathology severity, resilience, and inflammation in patients with bipolar disorder	**Aykut Karahan**
7	09:18-09:26	OA233	The Relationship Between Impulsivity, Theory of Mind Dysfunction, and Medication Adherence in Bipolar Disorder	**Hasan Ünver**
8	09:26-09:34	OA437	Therapeutic Potential of Targeting the Nr2e3/Tet2 Pathway for Depression	**Xiaohua Ma**

25th April 2025, Friday
ORAL PRESENTATIONS SESSION-7
HALL 8 / 08:30 - 09:33
Moderator: Mehtap Arslan

S.N.	Time	Abst. Nu.	Title	Presenter
1	08:30-08:38	**OA293**	Post-Traumatic Stress Symptoms And Tobacco Addiction In Disaster-Affected Communities	**Şeyma Şehlikoğlu**
2	08:38-08:45	**OA368**	The role of İntolerance of uncertainty and attitudes toward psychological help seeking as a mediator on post-traumatic growth in COVID-19 Survivors	**Sakine Aktaş**
3	08:45-08:53	**OA389**	Turkish Version of Moral Injury Event Scale (MIES)	**Sema Nur Keskin**
4	08:53-09:01	**OA7**	Emotional Eating and Adult Separation Anxiety in Bariatric Surgery Candidates	**Fatma Gül Helvacı Çelik**
5	09:01-09:09	**OA166**	Alexithymia predicts weight loss success in obese women: no mediating role of depression	**Ezgi Sıla Ahi Üstün**
6	09:09-09:18	**OA202**	Effects of Acute Liver Failure on Brain-derived Neurotrophic Factor and Anxiety-like Behaviors	**Koray Hamza Cihan**
7	09:18-09:26	**OA203**	Investigation of Medicinal Plants Used in Mental Health in Villages of Bursa and Balıkesir	**Yasin Hazer**
8	09:26-09:34	**OA395**	The Effect of Second-Generation Long-Acting Injectable Antipsychotic Treatment on Hospitalization and Number of Episodes in Patients Diagnosed with Bipolar Disorder: A Mirror-Image Study	**Hamdi Yılmaz**
9	09:34-09:42	**OA183**	Comparison of Auditory Performance of Children with Attention Deficit Hyperactivity Disorder to a Healthy Control Group	**Rukiye Çolak Sivri**
10	09:42-09:50	**OA460**	Embryonically Derived Dorsal Dentate Granule Neurons Regulate BDNF Expression, Adult Hippocampal Neurogenesis, and Anxiety-Like Behaviors	**Wen-Cheng Xiong**

POSTER PRESENTATION PROGRAM

PLASMA-1
24th April 2025, Thursday
12:30 - 13:30
Moderator: Uğur Tekin

S.N.	Time	Abst. Nu.	Title	Presenter
1	12:30-12:35	***PA168**	Anxiety Induced by Dalfampridine: The First Case Report in the Literature	**Merve Gül Açıkgöz**
2	12:35-12:40	***PA214**	Lithium-Induced Hyperthyroidism in a Patient with Bipolar Disorder	**Merve Kaynak**
3	12:40-12:45	***PA266**	Comparison of the Severity of Autistic Features Between Obsessive Compulsive Disorder, Panic Disorder and Healthy Controls	**Yunus Akkeçeli**
4	12:45-12:50	**PA197**	"A Diagnosis Overlooked in Patients Presenting with Psychotic Symptoms: Frontotemporal Dementia – A Case Report"	**Öykü Zaimoğulları**
5	12:50-12:55	**PA272**	The impact of untreated Selective Mutism and Obsessive Compulsive Disorder on the life of a 14 year-old girl	**Gultakĩn Huseynli**
6	12:55-13:00	**PA366**	Understanding Spesific Phobias: A Case Study on Ombrophobia	**Ece Akgün**
7	13:00-13:05	**PA374**	Visual Hallucination Associated with Sertraline: a Case Report	**Damla Kasap Üstündağ**
8	13:05-13:10	**PA372**	Use of Guanfacine in a Case with Autism Spectrum Disorder and Comorbid Attention Deficit Hyperactivity Disorder	**Damla Kasap Üstündağ**
9	13:10-13:15	**PA143**	Cognitive Disengagement Syndrome in The Differential Diagnosis: A Case Report	**Yeşim Savaşcı**
10	13:15-13:20	**PA156**	Accompanying Catatonia in an Adolescent Girl with Lyme Antibody Positivity: a case report	**Dilara Dervişoğlu**
11	13:20-13:25	**PA222**	Pediatric Catatonia: A Case Series	**Ezgi Mutlu Akar**

PLASMA-2
24th April 2025, Thursday
12:30 - 13:30
Moderator: Burak Doğangün

S.N.	Time	Abst. Nu.	Title	Presenter
1	12:30-12:35	**PA132**	A Rare Presentation of PANS: Sudden-Onset Hoarding Behavior and Neuropsychiatric Symptoms in a Child	**Fatma Naz Akarca**
2	12:35-12:40	**PA246**	Clinical Improvement in an 11-Year-Old Girl with ADHD Following Diagnosis and Treatment of Graves' Disease: A Case Report	**Selçuk Özkan**
3	12:40-12:45	**PA100**	Neuroleptic Malignant Syndrome in a 14-Year-Old Girl: A Case Report	**Selçuk Özkan**
4	12:45-12:50	**PA378**	A Case of Stuttering Due to Methylphenidate Treatment	**Hasibe Özlem Pekmez**
5	12:50-12:55	**PA424**	Differentiation between autism spectrum disorder and selective mutism accompanied by stereotypes: A case report	**Neslişah Gür Kurçaloğlu**
6	12:55-13:00	**PA396**	Treatment approach in a child with growth hormone deficiency and attention deficit hyperactivity disorder; A case report	**Neslişah Gür Kurçaloğlu**
7	13:00-13:05	**PA303**	Bipolar Disorder in a Patient with Cerebral Palsy and Intellectual Disability	**Ayşe Eylül Özel Gümüş**
8	13:05-13:10	**PA335**	Manic symptoms in the follow-up of an inpatient with an acute psychotic episode: a male adolescent case report	**Aygül Tikit**
9	13:10-13:15	**PA383**	Acute Dystonia Associated with Fluoxetine in an 11-year-old Male Patient	**Elif Burcu Şimşek**

PLASMA-3
24th April 2025, Thursday
12:30 - 13:30
Moderator: Caner Mutlu

S.N.	Time	Abst. Nu.	Title	Presenter
1	12:30-12:35	**PA381**	Self-Injurious Behaviors and Severe Intellectual Disability in a Patient with Osteoporosis-Pseudoglioma Syndrome: Clinical Challenges and Pharmacological Approach	**Merve Maraşoglu**
2	12:35-12:40	**PA327**	Synkinesis in a case of intellectual disability	**Furkan Doğan**
3	12:40-12:45	**PA267**	Acute Catatonia in Female Adolescent Successfully Treated with Lorazepam: A Case Report	**Merve Gül Ertekin**
4	12:45-12:50	**PA99**	Autistic Features and Epilepsy in a Case with a Heterozygous ZSWIM6 Mutation	**Dicle Coşkun**
5	12:50-12:55	**PA155**	Clinical Course and Phenotypic Variability of Autism in Twins with Similar Genetic and Environmental Influences: A Case Report	**Fatma Bilge Kılıç Özihtiyar**
6	12:55-13:00	**PA231**	Importance of Differential Diagnosis in a Case of Autism Spectrum Disorder with Intense Behavioral Issues	**Mustafa Akhoroz**
7	13:00-13:05	**PA358**	Autism spectrum disorder in Noonan syndrome	**Cansel Azizağaoğlu**
8	13:05-13:10	**PA435**	The Cognitive Enhancer Effect of Citicoline and Its Nootropic Combinations on Healthy Rats: A Popular Supplement as Cognitive Booster	**Beyza Bağçovan**
9	13:10-13:15	**PA439**	The Beneficial Effect of Celecoxib against Repetitive Behaviors in Valproic Acid Model of Autism in Rats	**Beyza Bağçovan**

PLASMA-4
24th April 2025, Thursday
12:30 - 13:30
Moderator: Vahdet Görmez

S.N.	Time	Abst. Nu.	Title	Presenter
1	12:30-12:35	**PA53**	Divergent Psychotropic Treatment Responses in Monozygotic Twins Diagnosed with ADHD: A Case Report	**Özlem Doğan**
2	12:35-12:40	**PA60**	Improvement of Stuttering with Methylphenidate Treatment in a 10-Year-Old Boy: A Case Report	**Canan Çalkar Özhan**
3	12:40-12:45	**PA67**	Is Clozapine Effective in Tardive Dyskinesia; A Case Report with Bardet Biedl Syndrome and Intellectual Disability	**Esra Doğan Elmas**
4	12:45-12:50	**PA137**	A Case of Late-Onset Oculogyric Crisis in an Adolescent Patient with Autism Spectrum Disorder	**Hanife Parlak Aslan**
5	12:50-12:55	**PA138**	Serotonin Syndrome Associated with Polypharmacy: A Case Report	**Hanife Parlak Aslan**
6	12:55-13:00	**PA334**	Stuttering And Adhd Treated With Atomoxetine	**Ahmet Kırmacı**
7	13:00-13:05	**PA63**	Misophonia Characteristics and Responses to Drug Treatment in Children and Adolescents: A Case Series	**İrem Damla Çimen**
8	13:05-13:10	**PA240**	Treatment of Depression Associated with Mitochondrial Cytopathy with Sertraline: An Adolescent Case Report	**Burçin Özlem Ateş**
9	13:10-13:15	**PA256**	Adverse Cutaneous Drug Reaction Due To Possible Lorazepam In a 12-Year-Old Patient With Hunter Syndrome	**Munise Aksoy**
10	13:15-13:20	**PA304**	Obsessive-Compulsive Disorder Following Montelukast Use: A Case Report	**Munise Aksoy**

PLASMA-5
24th April 2025, Thursday
12:30 - 13:30
Moderator: Mesut Yıldız

S.N.	Time	Abst. Nu.	Title	Presenter
1	12:30-12:35	**PA310**	Risperidone induced tardive dyskinesia in an adolescent with intellectual disability	**F. Özlem Çiftçi**
2	12:35-12:40	**PA319**	A Case Report: Resolution of Parasomnia with Sertraline Treatment in a Patient with Obsessive-Compulsive Disorder	**Ayşegül Tuğba Hıra Selen**
3	12:40-12:45	**PA362**	N-acetylcysteine treatment in two adolescent patients diagnosed with trichotillomania	**Özlem Zeynep Gültekin**
4	12:45-12:50	**PA373**	The Use of Lurasidone Treatment in Adolescents with Bipolar Disorder Depressive Episode Diagnosis Followed in Inpatient Care Unit	**Ipek Aksakal**
5	12:50-12:55	**PA376**	Lurasidone Use for Bipolar Depression in Adolescent Patients: 2 Case Reports	**Merve Mergen**
6	12:55-13:00	**PA409**	Exacerbation of Psychotic Symptoms After Switching from Oral Risperidone to Paliperidone Palmitate: A Case Report	**Ayşe Göksu Ses**
7	13:00-13:05	**PA426**	Agomelatine as an Adjunct Treatment in Adolescent Bipolar Disorder: A Three-Case Series Addressing Sleep and Depression	**Fevzi Tuna Ocakoglu**
8	13:05-13:10	**PA430**	A male adolescent who attempted suicide with high dose long-acting methylphenidate	**Selçuk Özkan**
9	13:10-13:15	**PA390**	A Case of Asperger's Syndrome with Emotional Dysregulation and Binge Eating Aslı Ceren Hınç	**Aslı Ceren Hınç**

PLASMA-6
24th April 2025, Thursday
12:30 - 13:30
Moderator: Selma Tural Hesapçıoğlu

S.N.	Time	Abst. Nu.	Title	Presenter
1	12:30-12:35	**PA241**	Munchausen Syndrome Mimicking Autism Spectrum Disorder: A Case Report	**Melis Çelebi Erkılıç**
2	12:35-12:40	**PA344**	Sertraline induced remission of Gardner-Diamond Syndrome in an adolescent girl:A case report	**Özkan Şen**
3	12:40-12:45	**PA58**	Olanzapine-Induced Obsessive-Compulsive Disorder in a Patient with Psychotic Disorder	**Dila Elif Sema Mert Kılıç**
4	12:45-12:50	**PA120**	Diagnosis of Niemann-Pick Type C in a Case of Treatment-Resistant Psychotic Disorder: A Case Report	**Ayşe Sena Yaşar Yılmaz**
5	12:50-12:55	**PA242**	Treatment of Catatonia in a Patient with Autism Spectrum Disorder: A Case Report	**Batuhan Er**
6	12:55-13:00	**PA269**	Turkish Validity and reliability of prodromal questionnaire-brief version (PQ-B) among adolescent clinical population	**Uğur Karabağ**
7	13:00-13:05	**PA333**	Acute Psychosis in an Adolescent Diagnosed with Multiple Sclerosis: A Case Report	**Cansu Adıgüzel**
8	13:05-13:10	**PA354**	Drug Resistance Secondary to Treatment in Schizophrenia: A Case Report	**Beyza Nur Top**
9	13:10-13:15	**PA205**	Assessing the Efficacy of Guanfacine in Treating Tourette Syndrome: A Promising New Option in Turkey	**Ümmühan Büyükkal**
10	13:15-13:20	**PA218**	Persistent Sneezing Case: Clinical Presentation, Differential Diagnosis, and Treatment Recommendations in a Patient Presenting to a Child and Adolescent Psychiatry Outpatient Clinic	**Ceylin Köksal**
11	13:20-13:25	**PA258**	Cetirizine-Induced Tics Disorder: A Case Report	**Orgül Yıldız Özşan**

PLASMA-1
25th April 2025, Friday
12:30 - 13:30
Moderator: Aynur Görmez

S.N.	Time	Abst. Nu.	Title	Presenter
1	12:30-12:35	**PA117**	Depressive Symptoms Preceding MS Attack: A Case Presentation	**Fulya Bakır**
2	12:35-12:40	**PA264**	Treatment Approach and Guanfacine Use in Tourette Syndrome and ADHD Comorbidity	**Bahri Erdi Tanış**
3	12:40-12:45	**PA163**	Venous Thromboembolism Developing Due to Antipsychotic Drug Use in Adolescents: A Case Report	**Muhammed Talha Güçlü**
4	12:45-12:50	**PA254**	A Neglected Diagnosis Misophonia:A Case Report	**Çiçek Hocaoğlu**
5	12:50-12:55	**PA413**	What is Media Hoarding? A Case Report	**Çiçek Hocaoğlu**
6	12:55-13:00	**PA237**	A Case Report of Wernicke-Korsakoff Syndrome: Rarely Co-occurring Clinical Findings and MRI Features in a Patient with Chronic Alcohol Use	**Emek Esra Şahinbaş**
7	13:00-13:05	**PA401**	The Dopaminergic Gamble: Pramipexole-Associated Pathological Gambling in a Patient with Restless Legs Syndrome	**Dilan Karaçam**
8	13:05-13:10	**PA434**	The Anxiolytic Effect of V. Officinalis Based Herbal Supplement in Subchronic Restrain Stress Model of Rats	**Burcu Gül Akkoç**
8	13:10-13:15	**PA457**	Management Of Negative Symptoms İn A Schizophrenia Patient	**Berfu Ünal Nural**

PLASMA-2
25th April 2025, Friday
12:30 - 13:30
Moderator: Hasan Turan Karatepe

S.N.	Time	Abst. Nu.	Title	Presenter
1	12:30-12:35	**PA199**	Beyond Depression: A Case of Progressive Non-Fluent Aphasia in Psychiatric Practice	**Merve Özyıldırım**
2	12:35-12:40	**PA431**	Diaper Fetishism a Case Report	**Özlem Akçay Ciner**
3	12:40-12:45	**PA429**	A Pregnant Patient with Swallowing Phobia: A Case Report	**Özlem Akçay Ciner**
4	12:45-12:50	**PA243**	A Case of Manic Episode Induced After “Subconciousness Cleaning” with Hypnosis	**Eda Öztürk**
5	12:50-12:55	**PA355**	Co-diagnosis of Prader-Willi Syndrome and Bipolar Affective Disorder	**Ozan Doğaç Keleş**
6	12:55-13:00	**PA204**	Lycanthropy Induced by Iatrogenic Effects: A Case Report of Dissociation	**Merve Gül Açıkgöz**
7	13:00-13:05	**PA343**	Managing Zar Syndrome in a Cross-Cultural Context: A Case Report	**Ece Naz Başarır**
8	13:05-13:10	**PA124**	Non-convulsive Status Epilepticus After First Electroconvulsive Therapy Session: A Case Report	**Ali Tarık Altunç**
9	13:10-13:15	**PA96**	Isodicentric X chromosome mutation with a diagnosis of trichotillomania	**Dünya Gözde Çapar**
10	13:15-13:20	**PA144**	Mental contamination: OCD or psychosis?, A Case Report	**Berra Öztürk**

PLASMA-3
25th April 2025, Friday
12:30 - 13:30
Moderator: Şengül İlkay

S.N.	Time	Abst. Nu.	Title	Presenter
1	12:30-12:35	**PA309**	THE FEAR OF INABILITY TO FILL THE VOID, The Comorbidity of Depressive Symptoms and Hoarding Disorder: A Case Report	**Gizem Karakoyun**
2	12:35-12:40	**PA37**	A case of double incontinence associated with Paliperidone palmitate treatment	**Eda Nur Küçük**
3	12:40-12:45	**PA180**	Glioblastoma Multiforme in a Patient with Depression: Multidisciplinary Management of a Case	**Sena Akpolat**
4	12:45-12:50	**PA83**	Quetiapine-Induced Retrograde Ejaculation in a Young Male with Bipolar Disorder: A Rare Case and Management Approach	**Burcu Yatkın**
5	12:50-12:55	**PA184**	Manic episode induced by escitalopram treatment: A case report	**Merve Çavdar Toraman**
6	12:55-13:00	**PA229**	Restless Legs Syndrome Induced by Aripiprazole Discontinuation in a Patient with Generalized Anxiety Disorder: A Case Report	**Zehra Kabakçı**
7	13:00-13:05	**PA289**	Case of Catatonia Associated With Sudden Discontinuation of Clozapine	**Gözde Bolu**
8	13:05-13:10	**PA332**	Recognizing Serotonin syndrome: A case report	**Ahmet Torun**
9	13:10-13:15	**PA386**	Cefuroxime Induced Isolated Visual Hallucinations In An Elderly Patient: A Case Report	**Deniz Demir Koç**
10	13:15-13:20	**PA416**	Cabergoline Induced Manic Episode with Psychotic Features: A Case Report	**Kader Semra Karataş**
11	13:20-13:25	**PA145**	Catatonia associated with tuberculous meningitis: A case report	**Ahmet Torun**
12	13:25-13:30	**PA345**	Aripiprazole-Induced Persistent Hiccups: A Case Report on Uncommon Adverse Effects	**Şeyma Demirkıran**

PLASMA-4
25th April 2025, Friday
12:30 - 13:30
Moderator: Zülal Çelik

S.N.	Time	Abst. Nu.	Title	Presenter
1	12:30-12:35	**PA217**	Acute Pancreatitis Possibly Associated with Paroxetine: A Case Report	**Lala Mammadlı**
2	12:35-12:40	**PA405**	Parkinson's Disease: A Diagnosis to Keep in Mind in Geriatric Depression Patients	**Zeynep Hilal Hayit**
3	12:40-12:45	**PA64**	The Role of Willingness to Experience Unpleasant Thoughts in Exposure and Response Prevention Therapy for Obsessive-Compulsive Disorder: A Case Report	**Hilmi Ertuğ Baki**
4	12:45-12:50	**PA402**	AI-Powered Sexual Therapy: A New Frontier in Couples' Emotional and Intimate Well-Being	**Ummuhan Ozkal**
5	12:50-12:55	**PA178**	Apremilast-Induced Psychotic Episode in Psoriasis	**Seda Kiraz**
6	12:55-13:00	**PA74**	Neuroleptic malignant syndrome due to clozapine withdrawal in a patient with schizophrenia: A case report	**Mustafa Karaağaç**
7	13:00-13:05	**PA84**	A Complex Case of Schizophrenia: Reevaluating Strategies for Treatment Resistance	**İlke Artun Bingöl**
8	13:05-13:10	**PA135**	The Long-Term Psychiatric Consequences of Traumatic Brain Injury: A Case of Schizophrenia and Dementia	**Mustafa Kaan Keleş**
9	13:10-13:15	**PA176**	Buerger's Disease and Psychosis: A Case Report on Their Co-occurrence	**Pınar Dumancı**
10	13:15-13:20	**PA54**	A Case of Foreign Accent Syndrome Responding to Clozapine	**Serra Nur Erdem**
11	13:20-13:25	**PA185**	A Treatment-Resistant Case of Fregoli with Methamphetamine Psychosis	**Zehra Kabakçı**
12	13:25-13:30	**PA201**	Cotard Syndrome: A Rare Case	**Esra Aslan**

PLASMA-5 25th April 2025, Friday 12:30 - 13:30 Moderator: Büşra Parlakkaya Yıldız				
S.N.	**Time**	**Abst. Nu.**	**Title**	**Presenter**
1	12:30-12:35	**PA212**	From Scabies to Psychosis: A Diagnostic Journey in Delusional Parasitosis	**Merve Özyıldırım**
2	12:35-12:40	**PA226**	Autoimmune Encephalitis or Postpartum Psychosis? A Diagnostic Challenge in a Postpartum Case	**Sıla İnel**
3	12:40-12:45	**PA238**	Possible Psychosis Developed Following Intraarticular Steroid Injection: A Case Report	**Emek Esra Şahinbaş**
4	12:45-12:50	**PA245**	Psychotic Relapse and Self-Destructive Behavior Following Clozapine Dose Reduction in a Schizophrenia Patient with Long-Term Remission: A Case Report	**Aybüke Nihal Dik**
5	12:50-12:55	**PA348**	Seizure After ECT: Tardive Seizure or Epilepsy?, A Case Report	**Hilal Büşra Keskin**
6	12:55-13:00	**PA351**	Usher Syndrome Type 3 in a Patient with Treatment-Resistant Psychosis: A Case Report	**İrem Büşra Yılmaz**
7	13:00-13:05	**PA364**	Postictal Psychiosis	**Yiğit Şahbal**
8	13:05-13:10	**PA403**	Choreiform Clues: Unmasking Huntington's Disease in a Patient with Treatment-Resistant Schizophrenia	**Hatice Kübra Mete**
9	13:10-13:15	**PA317**	Response to lurasidone treatment in an adolescent with a depressive episode of bipolar disorder	**Ahmet Esat Semiz**
10	13:15-13:20	**PA129**	Factors Associated with the Development of Side Effects in Methylphenidate Treatment	**Hakan Kayış**
11	13:20-13:25	**PA316**	A Case Series on Guanfacine Use for ADHD Treatment in Zonguldak: Clinical Outcomes and Insights	**Hakan Kayış**
12	13:25-13:30	**PA438**	The Cognitive Outputs of Chronic AlCl3 Administration in Rats: A potantial Alzheimer Model for Preclinical Researches	**Aybüke Tırpancı**

PLASMA-6 25th April 2025, Friday 12:30 - 13:30 Moderator: Gökhan Ünal				
S.N.	**Time**	**Abst. Nu.**	**Title**	**Presenter**
1	12:30-12:35	**PA65**	Serotonin and Effort-Based Decision-Making: Dissociating Behavioral Effects of 8-OH-DPAT and PCPA	**Aleš Stuchlík**
2	12:35-12:40	**PA66**	PV+ Optogenetic Stimulation Rescues Navigational Flexibility in an Acute MK801 Mouse Model of Schizophrenia	**Aleš Stuchlík**
3	12:40-12:45	**PA427**	Atomoxetine-Related Urinary Retention in a Pediatric Patient: A Case Report	**Zeynep Kübra Kurt**
4	12:45-12:50	**PA228**	Dose-Dependent Spontaneous Ejaculation with Duloxetine – A Case Report:	**Kübra Özcan Çetin**
5	12:50-12:55	**PA259**	Bupropion Associated Tic Disorder: A Case Report:	**Kübra Özcan Çetin**
6	12:55-13:00	**PA260**	Sulpiride-Induced Urinary Retention: A Case Report	**Mehmet Rıdvan Varlı**
7	13:00-13:05	**PA210**	Erythematous Reaction-Induced by Fluoxetine: A Case Report	**Mehmet Rıdvan Varlı**
8	13:05-13:10	**PA456**	Clonazepam in the treatment of Catatonia in a 12-Year-Old Child: Case Report	**Emine Büşra Doğu**
9	13:10-13:15	**PA466**	After 25 Years of Exprience: What We Know About Escitolopram?	**Gözde Çolak**

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Contents

Scientific Program **3**

Contents **30**

Outstanding Research Award Nominees Brief Reports **31**

Oral and Poster Research Presentations **236**

Oral Research Presentations **237**

Poster Research Presentations **330**

Award Nominated Poster Presentation **478**

Symposia Presentations **485**

Author Index **681**

Outstanding Research Award Nominees Brief Reports

0020 - Examination of The Relationship Between Clinical Features and Obesity in People With Severe Psychiatric Illnesses

Ayşe Köksal[1]

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Objective: People with severe psychiatric illnesses (SPI) are more likely to have overweight or to develop obesity, compared to people who don‘t have a mental disorders (1). Patients with severe psychiatric illnesses have been estimated to have 2–3 fold higher mortality rates and a 20% shorter life expectancy compared to the general population, with increased mortality from cardiovascular disease being a major contributor (2). Obesity in adults is defined as a body mass index (BMI) > 30 kg/m2 (body weight in kg divided by height in meters squared) and is one of the strongest modifiable risk factors for cardiometabolic diseases (3). Over the past two decades, numerous studies have shown that obesity is associated with increased inflammation, oxidative stress, HPA abnormalities, neurotransmitter imbalances, mitochondrial dysfunction and a faster functional and cognitive decline in major psychiatric disorders (4). The aim of this study was to determine the frequency of obesity in SPI people diagnosed with psychotic disorders and bipolar disorders. At the same time it is to examine whether there is relationships between clinical features of these disorders and the presence of obesity in people with these disorders.

Methods: The research was conducted on patients who were previously diagnosed with bipolar disorders (BD) and psychotic disorders (PD) (schizophrenia, schizoaffective disorder, schizophreniform disorder and brief psychotic disorder) according to DSM-5 by psychiatrists. Individuals included in the study were under regular follow-up and were prescribed medication at a state hospital. The inclusion criteria for the study were being between 18-60 years of age, accepting to participate in the study, and having a diagnosis of BD or PD. The exclusion criteria for the study were having a history of mental retardation, major neurological disorder or organic mental disorder, and being pregnant or breastfeeding. Ninety patients were taken into the study. The psychiatrist conducting the study examined the patients' mental status and took their anamnesis. The clinical characteristics of the patients were completed by examining the patient's history and hospital records. A sociodemographic data form was utilised for data collection. All applications performed in this study were carried out in accordance with the ethical standards of the institutional and/or national research committee and the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The study was initiated with the approval of the Health Sciences University Kanuni Training and Research Hospital Clinical Research Ethics Committee numbered 23618724 and dated 2023/31 and official permission from the hospital administration. The research data were analyzed by being transferred to the statistical software "SPSS (Statistical Package for Social Sciences) for Windows 26.0 (SPSS Inc, Chicago, IL)". The patients in the study were divided into BD and PD groups and their data were compared. In addition, the patients were divided into two groups according to their BMI values: BMI < 30 and BMI ≥ 30, and their characteristics were compared.

Results: A total of 90 patients were included in our study, 65 of whom had bipolar disorder (BD) and 25 had psychotic disorder (PD). There were 35 (53%) female patients and 30 (47%) male patients in the BD group. There were 8 (32%) female patients and 17 (68%) male patients in the PD group. When the BD and PD groups were compared in terms of marital status, 22 individuals were single, 35 were married, and 8 were divorced/widowed in the BD group. In the PD group, 19 individuals were single, 3 were married, and 3 were divorced/widowed. Additionally, a significant difference was found between the groups (p 0.001). Again, when the living situation was examined between the BD and PD groups, 37 people in the BD group were living with their partners while 4 people in the PD group were living with their partners. There was a statistically significant difference (p 0.001). When the BD and PD groups were compared in terms of substance use, 1 person in the BD group was using substances, while 5 people in the PD group were using substances. Again, the difference was statistically significant (p 0.003). It was determined that 8 people in the BD group and 1 person in the PD group attempted suicide (0,023). It is known that the antipsychotics with the highest metabolic side effects are olanzapine-clozapine-quetiapine (OCQ). The number of patients receiving OCQ in the BD group was 39, while in the PD group it was 8, and there was a statistically significant difference (0.017).

In this study, it was determined that the number of normal weight patients was 7. In addition, the number of overweight people in the patient group was 31, the number of grade 1 obese was 28, the number of grade 2 obese

0301 - The Relationship Between Social Media Use, Psychological Well-Being, and Quality of Life in Medical School Students

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Background And Aım: Psychological well-being is a concept that includes elements such as individuals having a positive mood, enjoying life, and being able to cope with stress. Quality of life is a measure that expresses how satisfied a person is with their life by evaluating the individual's physical and mental health, social relationships, and environmental factors in their life comprehensively. This study will investigate the effects of social media use on psychological well-being, quality of life, and academic success of medical school students. We hypothesize that academic success will decrease in students with high social media use due to low psychological well-being and quality of life.
Methods: This study was conducted on 84 volunteer students aged 18-25 studying at Çukurova University Faculty of Medicine. Exclusion criteria were determined as having a psychiatric disease, not being in remission with current psychiatric treatment, and not using active social media. The study was conducted using a cross-sectional design. In the study's data collection process, sociodemographic data form, Bergen Social Media Addiction Scale, Psychological Well-Being Scale, World Health Organization Quality of Life Scale-Short Form (WHOQOL-BREF), and Pittsburgh Sleep Quality Scale were used. The average score of the last internship completed by the participants in the medical school was used to assess academic success. After collecting the data, the relationships between social media use and psychological well-being, quality of life, and academic success were evaluated using Pearson correlation analysis.
Results: Although no significant differences were found between male and female students in terms of many variables, it was observed that the final internship scores of females were statistically significantly higher than those of males ($p = 0.005$). Females tended to have lower physical health scores among the quality of life subscales, but this difference was insignificant ($p = 0.119$). No significant difference was found between the genders in terms of psychological well-being and social media addiction scores. In addition, positive significant correlations were found between the World Health Organization Quality of Life Scale subscales and the Psychological Well-being Scale ($p < 0.01$). Negative correlations were observed between social media addiction and the physical health and psychological health dimensions of quality of life ($p < 0.05$). No significant difference was observed between the female and male participants regarding sleep quality.
Conclusions: This study reveals a complex relationship between medical students' quality of life, psychological well-being levels, and social media usage. The fact that female students had higher final internship scores than male students suggests that gender may affect academic success. However, the negative effects of social media addiction on quality of life and sleep quality emphasize the importance of individual and social measures in combating this addiction. The intense stress and psychological burden seen, especially in medical students, indicate the necessity of supportive programs to increase psychological well-being. Comprehensive intervention programs must be planned to regulate social media usage habits, increase sleep quality, and support quality of life. These results provide an important reference for understanding the effects of social media addiction and lifestyle factors among young adults and developing remedial strategies.

Keywords: academic success, medical students, psychological well-being, sleep quality, social media usage

was 20 and the number of grade 3 obese was 4. BMI in the BD group was 30.9 ± 5.3, while BMI in the PD group was 33.1 ± 6.5. In the study, 38 out of 90 patients were found to have BMI<30 and 52 were found to have BMI ≥ 30, and the patients were grouped accordingly. In the BMI < 30 group, the number of women was 24 and the number of men was 14. In the BMI ≥ 30 group, the number of women was 19 and the number of men was 33. The difference was statistically significant (0.013). When the BMI<30 and BMI ≥ 30 groups were compared in terms of their diagnoses, there were 32 BD patients and 6 PD patients in the BMI<30 group. There were 33 BD and 19 PD patients in the BMI ≥ 30 group (p 0.030).

Discussion: Our study examined the sociodemographic data, clinical features of the diseases, alcohol-substance and cigarette use, and weight-BMI measurements of patients using antipsychotics. When the BD and PD groups were compared, it was observed that the PD group had a statistically significant longer disease duration. In addition, it is seen that a majority of the PD group is statistically significantly more likely to single and living with their families. However, despite this, the weight measurements and BMI values of the individuals in the PD group are higher, although not statistically significant. With these findings, it can be said that the long duration of the disease in the PD group negatively affects the lives of these individuals, may disrupt daily life activities and may have detrimental effects on metabolic values. Again, when the BMI < 30 group is compared with the BMI ≥ 30 group, each statistically significant, it is seen that the rate of patients diagnosed with PD is higher in the BMI ≥ 30 group, the years of education are higher in the BMI < 30 group, and the number of depressive episodes is higher in the BMI < 30 group. In previous studies, a positive relationship was found between depressive symptoms or the number of depressive episodes and BMI. This difference between our study and the literature may be due to the fact that the majority of patients in our study were in the BD group.

Based on the data of this study, we can say that the obesity rate has increased in the patient group, and the patients' education, marriage and working life have been negatively affected. It is known that psychotic disorders and mood disorders are serious psychiatric illnesses and negatively affect life. The data of this study also supports previous studies.

Table 1: Sociodemographic and Clinical Variables of Bipolar Disorder (BD) and Bipolar Psychotic Disorders (PD)

	BD (n=65)	PD (n= 25)	p
Sex			
Female	35 (53%)	8 (32%)	0.063
Male	30 (47%)	17(68%)	
Marital Status			
Single	22 (33%)	19 (76%)	
Married	35 (53%)	3 (12%)	**0.001**
Divorced or Widowed	8 (14%)	3 (12%)	
Living situation			
Living with Parents	25 (38%)	12 (48%)	0,654
Living **w**ith Partner	37 (56%)	4 (16%)	**0.001**
Single	2 (4%)	8 (32%)	**0.000**
In a Nursing Home	1 (2%)	1 (4%)	0,502
Smoking	34 (52%)	16 (6%)	0,317
Alcohol Use	4 (6%)	3 (12%)	0,374
Substance use	1 (1%)	5 (20%)	**0.003**
Comorbidity of Psychiatric Disorder	11 (16%)	5 (20%)	0.732
Suicide Attempt	8 (12%)	1 (4%)	**0,023**
Olanzapin+klozapin ketiapin	39 (60%)	8 (32%)	**0.017**

* p <0.05. Data are expressed and mean ± standard deviation or (%).

Table 1 continued: Sociodemographic and Clinical Variables of Bipolar Disorder (BD) and Bipolar Psychotic Disorders (PD)

	BD (n=65)	PD (n=25)	p
Age (years)	40.1 ± 11.02	43.5 ± 11	0,197
Education (years)	10.2 ± 3.9	9.5 ± 2.6	0.327
Duration of disorder	14.9 ± 8.8	28.7 ± 11.4	**0,000**
Number of Episodes	4.6 ± 2.6	6.2 ± 4.1	0.079
Weight	86.9 ± 20.2	94.1 ± 19.6	0.135
Body Mass Index	30.9 ± 5.3	33.1 ± 6.5	0.107

* p <0.05. Data are expressed and mean ± standard deviation or (%).

Table 2: Sociodemographic and Clinical Variables of BMI<30 and BMI ≥ 30

	BMI<30 (n=38)	BMI ≥ 30 (n= 52)	p
Sex			
Female	24 (63%)	19 (36%)	**0,013**
Male	14 (37%)	33 (64%)	
Disorder			
Bipolar Disorder	32 (84%)	33 (63%)	**0,030**
Psychotic Disorder	6 (16%)	19 (37%)	
Marital Status			
Single	18 (47%)	23 (44%)	
Married	14 (36%)	24 (46%)	0,553
Divorced or Widowed	6 (17%)	5 (10%)	
Living situation			
Living with Parents	15 (39%)	22 (42%)	0,962
Living with Partner	16 (42%)	25 (48%)	0,574
Single	6 (15%)	4 (7%)	0,227
In a Nursing Home	1 (4%)	1 (3%)	0,822
Smoking	19 (50%)	31 (59%)	0,365
Alcohol Use	1 (4%)	6 (11%)	0,097
Substance use	1 (4%)	5 (9%)	0.160
Comorbidity of Psychiatric Disorder	5 (13%)	11 (21%)	0.327
Suicide Attempt	3 (7%)	5 (9%)	0,776
Olanzapin+klozapin ketiapin	22 (57%)	25 (48%)	0.357
Age (years)	41.1 ± 12.4	41.1 ± 10	0,980
Education (years)	10.9 ± 3.5	9.3 ± 3.5	**0.040**
Duration of disorder	16.9 ± 10.6	20.1 ± 11.8	0.192
Number of Episodes	4.8 ± 2.9	5.2 ± 3.3	0.547
Depressive Episode,	1.3 ± 1 .1	0.5 ± 0.9	**0.001**
Body Mass Index	30.9 ± 5.3	33.1 ± 6.5	0.107

* p <0.05. Data are expressed and mean ± standard deviation or (%).

References:

1) Mazereel V, Detraux J and Vancampfort D et. al. Impact of Psychotropic Medication Effects on Obesity and the Metabolic Syndrome in People With Serious Mental Illness. Front Endocrinol (Lausanne). 2020 Oct 9:11:573479

2) Chouinard VA, Pingali SM and Chouinard G et al. Factors associated with overweight and obesity in schizophrenia, schizoaffective and bipolar disorders. Psychiatry Res. 2016 Mar 30:237:304-10.

3) Chao AM, Wadden TA, Berkowitz IR. Obesity in Adolescents with Psychiatric Disorders. Curr Psychiatry Rep. 2019 Jan 19;21(1):3

4) Gálvez JF, Sanches M and Bauer IE et al. Premorbid obesity and metabolic disturbances as promising clinical targets for the prevention and early screening of bipolar disorder. Med Hypotheses. 2015 Apr;84(4):285-93

0036 - Evaluation of The Delusional Contents (Poor Me/Bad Me) and Self-Esteem in Patients With Psychotic Disorder and Their Impact on Internalized Stigma

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Introduction

According to the model proposed by Trower and Chadwick (1995), persecutory delusions can be classified into *Poor-Me (PM)* and *Bad-Me (BM)* subtypes. Individuals with PM paranoia perceive themselves as victims and others as malevolent, whereas those with BM paranoia view themselves as inherently bad and believe others justifiably intend to punish them [1]. This model suggests that the *sense of deservedness* associated with delusions predicts self-esteem and the severity of depressive symptoms. While PM paranoia is linked to higher self-esteem and lower guilt, BM paranoia is associated with lower self-esteem, increased anxiety, and greater depressive symptom severity.

Stigma is a crucial factor influencing the course and prognosis of psychotic disorders, affecting insight, help-seeking behaviors, medication adherence, and suicide risk [2]. The PM-BM distinction may be relevant to internalized stigma, as both involve cognitive biases related to social perception. Individuals with BM delusions may perceive stigma as deserved, reinforcing negative self-perceptions. However, no studies have specifically examined the relationship between paranoia type and internalized stigma.

This study aims to investigate the association between the PM-BM distinction and internalized stigma in individuals with persecutory delusions. Additionally, depressive symptom severity, self-esteem, and social support will be assessed to explore their role in this relationship. The study will also examine which specific components of internalized stigma—such as *alienation*, *stereotype endorsement*, and *perceived discrimination*—are most closely associated with paranoia type.

Methods

This study was conducted between April 1 and June 15, 2018, at the Psychiatry Outpatient Clinic of Ankara University Faculty of Medicine. The sample included 56 patients aged 18-65 who were diagnosed with schizophrenia, schizophreniform disorder, schizoaffective disorder, or delusional disorder according to DSM-5 criteria and exhibited persecutory delusions. Patients with intellectual disability, pervasive developmental disorders, substance dependence, or psychotic disorders due to medical conditions were excluded.

Procedure

After obtaining informed consent, data collection was conducted through face-to-face interviews. Participants completed a sociodemographic data form, the Rosenberg Self-Esteem Scale (RSES), the Internalized Stigma of Mental Illness Scale (ISMI), the Beck Depression Inventory (BDI), and the Multidimensional Scale of Perceived Social Support (MSPSS). Ethical approval was obtained from the Ankara University Ethics Committee (March 22, 2018; Approval No: 56786525-050.04.04/20012).

Assessment of Persecutory Delusions: Patients were categorized as *Bad-Me (BM)* or *Poor-Me (PM)* according to Trower and Chadwick‘s (1995) classification. A psychiatrist assessed each participant‘s dominant persecutory delusion and assigned them to the appropriate category.

Measures: BDI: A 21-item self-report scale measuring depressive symptom severity. ISMI: A 29-item scale assessing internalized stigma across five subdomains: *alienation*, *stereotype endorsement*, *perceived discrimination*, *social withdrawal*, and *stigma resistance*. MSPSS: Measures perceived social support from family, friends, and significant others. RSES: Assesses self-esteem through a 10-item self-report measure.

Statistical Analysis

Data were analyzed using SPSS 21. Normality was assessed using the Kolmogorov-Smirnov test. Between-group comparisons were performed using the Independent Samples t-test, Chi-square test, and Mann-Whitney U test, depending on data distribution. The impact of paranoia type, depression severity, social support, and self-esteem on stigma perception was analyzed using Multivariate Analysis of Variance (MANOVA).

Results

Participants were categorized based on the nature of their persecutory delusions. Among all participants, 33 (60%) were classified as *Poor-Me (PM)* and 14 (25.5%) as *Bad-Me (BM)*. Additionally, 7 cases (12.7%) were labeled as "neither," and 1 case (1.8%) was marked as "unsure." There were no significant differences between the PM and BM groups in terms of age, gender, education level, or marital status (Table 1).

When comparing PM and BM groups on the *ISMI*, BM individuals exhibited significantly higher alienation scores and lower resistance to stigma scores compared to the PM group (Table 2). Additionally, depression severity, self-esteem, and perceived social support levels were compared between the two groups (Table 3).

Correlation analyses revealed a significant negative relationship between self-esteem and ISMI subscales, including *alienation* (r=-0.38, p=0.007), *perceived discrimination* (r=-0.35, p=0.015), *stereotype endorsement* (r=-0.33, p=0.02), and *social withdrawal* (r=-0.43, p=0.002). A significant negative correlation was also found between self-esteem and overall ISMI scores (r=-0.43, p=0.002) as well as depression severity (r=-0.3, p=0.03). Furthermore, self-esteem was positively correlated with *family support* (r=0.32, p=0.03), but no significant relationship was found between self-esteem and other social support subscales.

BDI scores showed a significant positive correlation with ISMI *alienation* (r=0.37, p=0.001), *perceived discrimination* (r=0.35, p=0.01), *stereotype endorsement* (r=0.42, p=0.003), *social withdrawal* (r=0.40, p=0.006), and overall ISMI scores (r=0.42, p=0.003). However, no significant association was observed between depression and perceived social support scores.

Multivariate analysis of variance was conducted to assess the impact of paranoia type, self-esteem, depression severity, and perceived social support on stigma perception. Paranoia type had a significant effect on stigma perception [Wilk‘s Lambda = 0.64, F(38,5) = 4.31, p=0.003, ηp^2 = 0.36]. However, the previously observed correlations between self-esteem, depression, social support, and stigma perception lost statistical significance in the multivariate model.

Discussion

The proportional distribution of *Poor-Me (PM)* and *Bad-Me (BM)* delusions in this study aligns with previous research, with no significant differences found between groups in terms of age, gender, education, or marital status [3]. The consistency of these findings across different cultural contexts suggests that PM dominance may be a generalizable feature of psychosis.

Contrary to some theoretical models, no significant difference in self-esteem was found between the PM and BM groups. The relationship between persecutory delusions and self-esteem remains inconclusive in the literature. Bentall et al. proposed that persecutory delusions develop as a defense mechanism in response to perceived threats, where discrepancies between ideal and actual self-concepts trigger external attributions [4]. In contrast, Freeman et al. argued that persecutory delusions reflect low self-esteem and emotional distress rather than serving as a defensive response [5]. More recent studies suggest that BM delusions are associated with fluctuating self-esteem rather than stable low self-esteem [6].

Consistent with prior findings, BM individuals in this study reported higher levels of depressive symptoms than PM individuals. According to the cognitive model of depression, negative self-perceptions, pessimistic thinking styles, and a sense of personal inadequacy contribute to depressive symptoms. BM individuals, who perceive themselves as deserving punishment, may experience greater depressive symptom severity due to this belief. In contrast, the lower depressive symptoms observed in PM individuals suggest that PM-type paranoia may function as a psychological defense mechanism, helping individuals cope with distressing emotions [7].

A significant negative correlation was found between self-esteem and internalized stigma, including *alienation*, *perceived discrimination*, *stereotype endorsement*, and *social withdrawal*. This aligns with previous findings, but the direction of causality remains unclear—low self-esteem may increase the perception of stigma, or internalized stigma may erode self-esteem over time [8]. Interestingly, while BM individuals exhibited greater depressive symptom severity, no significant difference in self-esteem was found between PM and BM groups. This discrepancy suggests that factors other than self-esteem may contribute to the observed differences in depressive symptoms. Given that depressive symptoms can manifest without a corresponding decline in self-esteem, this pattern may resemble a grief-like process in BM individuals.

This study found that BM individuals had higher alienation scores and lower resistance to stigma scores than PM individuals, a novel finding in the literature. These results support the hypothesis that paranoia type influences internalized stigma in schizophrenia. Higher alienation scores in BM individuals suggest that they feel more socially isolated, ashamed, and disconnected from society. In contrast, PM individuals, who believe they do not deserve mistreatment, may maintain a stronger belief in their social acceptability. Lower resistance to stigma in BM individuals further suggests a greater tendency to accept rather than challenge negative societal attitudes.

Paranoia type was the only variable that significantly influenced stigma perception in multivariate analyses [Wilk‘s Lambda = 0.64, $F(38,5) = 4.31$, $p = 0.003$, $\eta p^2 = 0.36$]. When paranoia type was included in the model, the effects of self-esteem, depression severity, and perceived social support on stigma perception diminished. This finding highlights the clinical importance of assessing delusional content in schizophrenia, as BM delusions are associated with greater stigma perception, which in turn is linked to lower treatment adherence, higher suicide risk, and increased hospitalization rates [9].

Limitations

This study has several limitations. First, the sample size, particularly for the BM group, was relatively small. Second, as a cross-sectional study, it cannot establish causality between variables. Third, paranoia typology is primarily based on the relationship between self and others rather than self-esteem alone. The measures used to assess self-esteem do not fully capture the complex dynamics of self-other relationships. Additionally, the role of unmeasured factors such as attributional biases and social cognitive deficits cannot be ruled out.

Conclusion

The complex interplay between persecutory delusions, self-esteem, depression, and internalized stigma warrants further investigation. Understanding these relationships is crucial for developing targeted interventions in schizophrenia. This study emphasizes the clinical significance of assessing delusional content, as paranoia typology may provide valuable insights into prognosis, risk assessment, and treatment planning.

Keywords: Psychotic disorders, delusions, self concept, stereotyping

References

[1] Trower P, Chadwick P. Pathways to Defence of the Self: A Theory of Two Types of Paranoia. Clinical Psychology Science and Practice 1995; 2:263–278 doi: 10.1111/J.1468-2850.1995.TB00044.X

[2] Goffman E. Stigma; Notes on The Management Of Spoiled Identity. Oxford University Press; 1963, pp.1-168

[3] Morris E, Milner P, Trower P, Peters E. Clinical presentation, and early care relationships in ‗poor-me‘ and ‗bad-me‘ paranoia. Br J Health Psychol 2011; 50:211–216 doi: 10.1348/014466510X525498

[4] Bentall RP, Kinderman P, Kaney S. The self, attributional processes and abnormal beliefs: Towards a model of persecutory delusions. Behav Res Ther 1994; 32:331–341 doi: 10.1016/0005-7967(94)90131-7

[5] Freeman D, Garety PA, Kuipers E. Persecutory delusions: developing the understanding of belief maintenance and emotional distress. Psychol Med 2001; 31:1293–1306 doi: 10.1017/S003329170100455X

[6] Melo SS, Taylor JL, Bentall RP. Poor me versus bad me paranoia and the instability of persecutory ideation. Psychol. Psychother.: Theory Res. Pract. 2006; 79:271–287 doi: 10.1348/147608305X52856

[7] Nakamura M, Hayakawa T, Okamura A, Kohigashi M, Fukui K, Narumoto J. Defensive function of persecutory delusion and discrepancy between explicit and implicit self-esteem in schizophrenia: study using the Brief Implicit Association Test. Neuropsychiatr Dis Treat 2014; 11:33–40 doi: 10.2147/NDT.S73906

[8] Xu ZY, Zu S, Xiang YT, Wang N, Guo ZH, Kilbourne AM, Brabban A, Kingdon D, Li ZJ. Associations of self-esteem, dysfunctional beliefs and coping style with depression in patients with schizophrenia: A preliminary survey. Psychiatry Res 2013; 209:340–345 doi: 10.1016/j.psychres.2013.02.012

[9] Touriño R. Suicidal risk, hopelessness and depression in patients with schizophrenia and internalized stigma. Actas Esp Psiquiatr 2018; 46:33–41

Tables

Table 1. Comparison of Sociodemographic Characteristics Between PM and BM Groups

	PM (N=33)	**BM (N=14)**	
Sex(F/M)	7/26	3/11	Z=-0.02, p=1.00
Age (years) (mean±SD)	40.06±10.50	38.8±12.76	T=0.36, p=0.72
Education (years) (mean±SD)	11.22±3.64	12.08±3.25	T=-0.74, p=0.46
Employment (employed/nemployed)	15/18	7/7	Z=-0.30, p=0.80
Marital status (married/not married)	11/22	3/11	Z=-0.15, p=0.87

F: Female, M: Male, SD: Standard Deviation

Table 2. Comparison of ISMI Total and Subscale Scores Between PM and BM Groups

	ZB (N=33)	KB (N=14)	
Alienation (mean±SD)	13.58±3.25	17.14±4.20	T=-3.16, p=0.003*
Percieved Discrimination (mean±SD)	11.88±2.43	12.86±3.97	T=-1.03, p=0.30
Social Withdrawal (mean±SD)	14.79±3.24	15.85±5.27	T=-0.85, p=0.39
Stereotype Endorsement (mean±SD)	15.30±2.87	16.64±4.98	T=-1.16, p=0.25
Stigma Resistance (mean±SD)	11.98±1.92	10.43±3.20	T=2.05, p=0.046*
Stigmatization Total Score (mean±SD)	43.58±9.93	52.07±15.95	T=-2.21, p=0.032*

ISMI: Internalized Stigma of Mental Illness

Table 3. Comparison of Depressive Symptom Severity, Self-Esteem, and Perceived Social Support Between PM and BM

	PM (N=33)	BM (N=14)	
Rosenberg Self-Esteem Scale (mean±SD)	16.55±5.58	16.00±4.94	T=0.32, p=0.75
BDI Total [median (min-max)]	4 (1-5)	5 (1-5)	Z=-2.27, p=0.02*
MSPSS Friend Support (mean±SS)	24.63±8.26	21.78±12.63	T=0.91, p= 0.36
MSPSS Significant others [median (min-max)]	37.97 (16-50)	34 (11-50)	Z=-1.58, p= 0.11
MSPSS Family Support [median (min-max)]	49 (49-10)	50.5 (7-61)	Z=-0.13, p=0.89
MSPSS Total (mean±SS)	109.35±23.15	100.42±34.07	T=1.04, p=0.30

BDI = Beck Depression Inventory, MSPSS = Multidimensional Scale of Perceived Social Support, * = Statistically significant, min = minimum, max = maximum

0050 - Investigation of Superoxide Dismutase-1 *(SOD1)* +35A/C (exon3/intron3) and 50 bp Insertion/Deletion Polymorphisms in Cannabis and Synthetic Cannabinoid Use Disorder

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Objective:

Substance use disorder (SUD) is a multifaceted condition defined by compulsive drug-seeking behavior and hazardous use, often leading to adverse consequences such as social dysfunction and pharmacological effects. Twin and family linkage studies suggest that the heritability of SUD susceptibility is around 50%, emphasizing the role of genetic and environmental interactions in shaping risk. Additionally, a previous meta-analysis of twin studies reported notable heritability estimates for lifetime cannabis use, with rates of 40% in females and 48% in males (1). SOD represents the most essential family of cellular defense enzymes in the body, playing a crucial role in counteracting oxidative stress, particularly by targeting the superoxide anion. In mammals, three distinct isoforms of SOD have been identified: SOD1 (copper-zinc SOD), SOD2, and SOD3. SOD1 is primarily found in the cytosol and contains copper and zinc within its catalytic center. Its primary function is to neutralize reactive oxygen species (ROS) within the mitochondrial respiratory chain. The *SOD1* gene is located on chromosome 21q22 and consists of five exons and four introns. Numerous genetic variations have been identified in the *SOD1* gene, including a 50 bp insertion/deletion (Ins/Del) polymorphism in the promoter region, located 1684 bp upstream of the ATG start codon. Although this polymorphism has been found not to be associated with the risk of bipolar disorder or schizophrenia, it is linked to the age of onset of these disorders (2, 3).

The +35A/C (rs2234694) polymorphism in the *SOD1* gene has been previously investigated in connection with various clinical conditions, such as acne vulgaris, age-related macular degeneration, chronic gastritis, inflammatory bowel disease, primary open-angle glaucoma, and type 2 diabetes mellitus (4). However, to the best of our knowledge, no studies have examined the association of the *SOD1* 50 bp insertion/deletion (Ins/Del) or +35A/C polymorphisms with SUD. We hypothesize that the +35A/C (exon3/intron3) and the 50 bp insertion/deletion polymorphisms may be associated with CUD/SCUD. Therefore, we aimed to investigate their potential role in susceptibility to CUD/SCUD as well as their possible effects on clinical characteristics.

Methods:

This case-control study included 212 individuals diagnosed with CUD/SCUD (44 with CUD and 148 with SCUD) and 150 age- and gender-matched participants without SUD. Patients with CUD/SCUD were consecutively recruited from Bakirkoy Mazhar Osman Mental Health and Neurology Training and Research Hospital between May 2019 and January 2020. The control group, consisting of individuals without any medical or psychiatric diagnoses, was selected from the same geographic region—the European side of Istanbul. The study received ethical approval from the Clinical Research Ethics Committee of the Istanbul Faculty of Medicine (2019/87). All participants were provided with detailed information about the study‘s purpose, methodology, and procedures, and written informed consent was obtained from each participant.

The *SOD1* gene rs2234694 variant was analyzed using the PCR-RFLP method. DNA samples were amplified under appropriate PCR conditions for the *SOD1* gene rs2234694 variant. The restriction endonuclease HhaI enzyme was used for digestion. The digestion products were separated by gel electrophoresis, and genotyping was performed under UV light. The AA genotype exhibited a 278 bp band, the AC genotype showed 278, 207, and 71 bp bands, while the CC genotype displayed 207 and 71 bp bands. The *SOD1* gene 50 bp Ins/Del variant was

assessed using PCR amplification with specific primers. The PCR products were separated on a 3.5% agarose gel electrophoresis and visualized under ultraviolet light. The Ins/Del allele produced 297 and 247 bp bands, the Ins/Ins allele showed a 297 bp band, and the Del/Del allele exhibited a 247 bp band.

Statistical analyses were performed using IBM SPSS version 21.0 (IBM Corp., released in 2012; Armonk, NY, USA). Comparisons of the *SOD1* +35A/C (exon3/intron3) and the 50 bp insertion/deletion (Ins/Del) polymorphisms between CUD/SCUD patients and healthy controls were conducted using Fisher‘s exact test or Pearson‘s chi-square test. Additionally, clinical parameters of the patients based on genotype distributions were analyzed using Fisher‘s exact test, Pearson‘s chi-square test, or Mann-Whitney U Test.

Results:

Our results revealed significant differences in the distribution of the 50 bp insertion/deletion (Ins/Del) polymorphism of the *SOD1* gene between CUD/SCUD patients and the healthy control group. Specifically, the frequency of the homozygous I/I genotype was significantly lower in CUD/SCUD patients than in the control group. In contrast, no statistically significant differences were observed in the genotype and allele frequencies of the +35A/C (exon 3/intron 3) polymorphism between the two groups (Table 1).

However, when comparing clinical parameters—including age of substance use onset, duration of disorder, polysubstance abuse, inpatient treatment, violent behavior, suicide attempts, psychotic symptoms, family history, and frequency of substance use—based on the distribution of the 50 bp insertion/deletion (Ins/Del) polymorphism (I/I vs. I/D, D/D) (Table 2) and the +35A/C (exon 3/intron 3) polymorphism (AA vs. AC, CC) of the *SOD1* gene (Table 3), no significant correlation was found between these genetic polymorphisms and clinical characteristics in CUD/SCUD patients.

Discussion:

In this study, while no significant relationship was observed between the +35A/C (exon 3/intron 3) polymorphism and CUD/SCUD, we found that the 50 bp insertion/deletion (Ins/Del) polymorphism of the *SOD1* gene appears to be associated with CUD/SCUD in the Turkish cohort. The frequency of the homozygous I/I genotype of the 50 bp insertion/deletion (Ins/Del) polymorphism was significantly lower in CUD/SCUD patients than in the control group, which may allow us to speculate that individuals with the I/I genotype could be at a lower risk for developing CUD/SCUD.

The 50 bp insertion/deletion (Ins/Del) polymorphism is linked to decreased promoter activity of the gene, an effect attributed to the Del allele, which may consequently influence ROS detoxification levels. Given the strong interaction between ROS and DNA, this polymorphism could significantly contribute to individual variations in genome integrity maintenance (5). When we reviewed the literature on this subject, very few studies have examined the 50 bp insertion/deletion (Ins/Del) polymorphism in psychiatric patient groups. It has been reported that, although this polymorphism is not associated with the risk of bipolar disorder type 1, it is associated with the age of onset of the disorder. The age of onset was significantly lower for the Del/Del genotype compared to the ‗Ins/Ins + Ins/Del‘ genotypes (3). In a similar study conducted by the same team with schizophrenia patients, no association was found between the 50 bp insertion/deletion (Ins/Del) polymorphism and schizophrenia . However, the age of onset of schizophrenia was significantly lower in carriers of the Del allele compared to those with the Ins/Ins genotype (2).

In our study, parallel to the findings in the literature, the frequency of the homozygous I/I genotype of the 50 bp insertion/deletion (Ins/Del) polymorphism was significantly lower in CUD/SCUD patients than in the control group. Having the ―Del‖ allele puts individuals at a disadvantage in terms of being diagnosed with CUD/SCUD. There could be several reasons for this; this polymorphism in the promoter region of the *SOD1* gene may affect ROS detoxification levels. The ―Del‖ allele, by reducing the promoter activity of the *SOD1* gene, could lead to an increase in oxidative stress within the cell. Oxidative stress can cause cellular damage, DNA breaks, and genetic impairments. In individuals who use substances, an increase in such oxidative stress may lead to dysfunctions in cellular activities in brain structures and neurological changes, thereby increasing the risk of developing a higher sensitivity to the substance and the potential for addiction. Again, in individuals carrying the del allele, genetic and epigenetic changes may have occurred due to the disruption of cellular detoxification mechanisms. Such changes

could also affect gene expression in dopamine and other neurotransmitter pathways, thereby increasing the risk of developing addiction.

Our study's strength lies in being the first to investigate the association between the *SOD1* 50 bp insertion/deletion (Ins/Del) or +35A/C polymorphisms and SUD. Additionally, since both CUD/SCUD patients and healthy participants were recruited from the same area, the European side of Istanbul, our findings hold greater value. However, despite these strengths, there are several limitations. The first limitation is the small sample size, which may reduce statistical power. Furthermore, the inability to examine serum SOD1 levels prevented us from observing the effect of the polymorphisms on SOD1 levels. In conclusion, although no significant association was found between the +35A/C (exon3/intron3) polymorphism and CUD/SCUD, the 50 bp insertion/deletion (Ins/Del) polymorphism in the *SOD1* gene appears to be linked to CUD/SCUD in the Turkish cohort. These results suggest that the 50 bp Ins/Del polymorphism could serve as a useful biomarker for identifying susceptibility to substance use. Additionally, it may play a role in preventing CUD/SCUD. Further validation of these findings across different ethnic groups will help deepen our understanding of the relationship between these polymorphisms and CUD/SCUD, potentially enhancing the development of more effective behavioral or pharmacological treatments for CUD/SCUD.

References:

1. Oyaci Y, Aytac HM, Pasin O, Cetinay Aydin P, Pehlivan S. Detection of altered methylation of MB-COMT promotor and DRD2 gene in cannabinoid or synthetic cannabinoid use disorder regarding gene variants and clinical parameters. Journal of addictive diseases. 2021;39(4):526-36.
2. Mirsadraee N, Saadat M. Association between a 50bp Ins/Del polymorphism at the promoter region of the superoxide dismutase-1 and age of onset of schizophrenia. EXCLI journal. 2019;18:204.
3. Kordestanian N, Saadat M. A 50-bp Ins/Del polymorphism at the promoter region of the superoxide dismutase-1 and bipolar disorder type 1. Nordic journal of psychiatry. 2017;71(8):570-3.
4. Yukcu F, Akcılar R, Namdar ND, Sevinc SK, Utku SA. Investigation of the Effects of SOD1+ 35A/C and GPx-3+ 1494A/G Gene Polymorphisms in Patients With Acne Vulgaris. Journal of Clinical Practice & Research. 2024;46(2).
5. Gallegos-Arreola M, Ramírez-Hernández M, Figuera L, Zúñiga-González G, Puebla-Pérez A. The rs2234694 and 50 bp Insertion/Deletion polymorphisms of the SOD1 gene are associated with breast cancer risk in a Mexican population. European Review for Medical & Pharmacological Sciences. 2020;24(15).

Tables:

Table 1. Comparison of frequencies of *SOD1* gene variants between patients with CUD/SCUD and healthy controls.

	Genotype	CUD/SCUD	Healthy Control	OR Exp (B)	95% CI	p
		n= [a] (%)	n=150 (%)			
***SOD1* rs2234694**	**AA**	202 (95.3)	143 (95.3)	1.011	0.376-2.720	1.000[&]
	AC	10 (4.7)	6 (4)	1.188	0.422-3.343	0.801[&]
	CC	0 (0)	1 (0.7)	0.993	0.980-1.006	0.414[&]
***SOD1* Ins/Del**	**I/I**	147 (69.3)	117 (79.3)	1.697	1.038-2.774	**0.040***
	I/D	61 (28.8)	30 (20)	1.616	0.982-2.660	0.065*
	D/D	4 (1.9)	1 (0.7)	2.865	0.317-25.896	0.408[&]

[a]n=212; * OR (95%CI) was adjusted by age and sex; [&]Fisher's Exact Test,

Table 2: Comparison of Clinical Parameters of Patients due to the *SOD1* Ins/Del Genotypes (I/I) /(I/D-D/D).

Genotype		*SOD1* Ins/Del		OR Exp (B)	95% CI	p*
		I/I n=147 (%)	I/D-D/D n=65 (%)			
Psychotic Symptom	yes	87 (59.2)	32 (49.2)	0.669	0.372-1.203	0.230
Attempted Suicide	yes	45 (30.6)	19 (29.2)	0.936	0.494-1.774	0.873
Violent Behavior	yes	81 (55.1)	33 (50.8)	0.840	0.468-1.508	0.654
Family History	yes	66 (44.9)	32 (49.2)	1.190	0.633-2.136	0.654
Inpatient Treatment	yes	110 (74.8)	49 (75.4)	1.030	0.524-2.026	1.000
Polysubstance Abuse	yes	63 (42.9)	30 (46.2)	1.143	0.635-2.055	0.656
Continuous use	yes	72 (49)	40 (61.5)	0.600	0.331-1.088	0.102
						p
		I/I n=147 (%)	I/D-D/D n=65 (%)			
		mean±SD	mean±SD			
Age of onset		17.3 ± 3.57	16.8 ± 3.76			0.467[#]
Duration of disorder		9.72 ± 5.37	9 ± 5.11			0.316[#]

* OR (95%CI) was adjusted by age and sex; [#] Mann-Whitney U Test

Table 3: Comparison of Clinical Parameters of Patients due to the *SOD1* rs2234694 Genotypes (AA) /(AC-CC).

Genotype		*SOD1* rs2234694		OR Exp (B)	95% CI	p[&]
		AA n=202 (%)	AC-CC n=10 (%)			
Psychotic Symptom	yes	113 (56)	6 (60)	0.846	0.232-3.091	1.000
Attempted Suicide	yes	61 (30)	3 (30)	1.009	0.253-4.034	1.000
Violent Behavior	yes	107 (53)	7 (70)	0.483	0.121-1.920	0.346
Family History	yes	95 (47)	3 (30)	2.072	0.521-8.238	0.346
Inpatient Treatment	yes	153 (76)	6 (60)	2.082	0.564-7.680	0.272
Polysubstance Abuse	yes	89 (46)	4 (40)	1.181	0.323-4.315	1.000
Continuous use	yes	106 (53)	6 (60)	1.358	0.372-4.960	0.752
						p
		AA n=202 (%)	AC-CC n=10 (%)			
		mean±SD	mean±SD			
Age of onset		16.88 ± 3.45	18.50 ± 6.16			0.888[#]
Duration of disorder		9.37 ± 5.2	12.20 ± 6.42			0.633[#]

[&]Fisher's Exact Test; [#] Mann-Whitney U Test

0063 - Misophonia Characteristics and Responses to Drug Treatment in Children and Adolescents: A Case Series

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Objective:

Misophonia is a recently recognized condition characterized by reactions such as irritation, anger, or disgust when faced with specific and repetitive stimuli. The most disturbing trigger sounds reported by people with misophonia are most often mouth or nasal sounds produced by other people and are more disturbing when produced by familiar people such as family members. The most frequently disturbed sounds are reported as chewing, lip smacking, food crunching, slurping, sniffing, pen clicking, brake noise, silverware clinking, finger tapping. In addition to feelings of discomfort and anger, people with misophonia have also reported physical signs and symptoms such as tachycardia, tachypnea, dyspnea, dry mouth, sweating, a feeling of pressure in the chest, arms, and head, and muscle tension (1).Misophonia can cause significant distress as well as significant functional loss.

There are few studies on the prevalence of misophonia. In a study conducted by Wu on 483 university students in the USA, the prevalence of misophonia was determined as 20% (2). In a study conducted by Zhou on 415 university students in China, it was stated that 27.1% of the participants were affected by misophonia (3). There is no full consistency in terms of the relationship between misophonia and gender. Although some studies reported that there was no significant difference between genders, there are also studies indicating that it is more common in women. In most studies, it was reported that the onset of the disease was in childhood and early adolescence and the average age of onset was 13 (1).

There has been limited research on the basic pathology and clinical correlates of misophonia. Misophonia has not been classified as a clinical disorder and is not included as a diagnostic title in DSM-V or ICD-11. Therefore, there is no standardization in diagnostic criteria or treatment, which reduces the awareness of both clinicians and patients about this condition. There are few studies and case reports on the drug treatment of misophonia, and the drug treatments applied are often aimed at diagnoses found in addition to misophonia. The number of studies reported in the child-adolescent age group in the literature is quite low. Robinson et al. reported 12 cases of children/adolescents with tic disorders and misophonia (4). Pharmacotherapy was tried in half of the cases, and positive results were reported in 5 of them, especially after the use of aripiprazole and/or sertraline. Therapeutic approach; cognitive behavioral therapy, exposure and response prevention, and/or behavior management, and while some patients benefited from treatment for tics and misophonic symptoms, others did not.

There are limited studies in the literature on the effectiveness of pharmacological treatments for misophonia, especially in children/adolescents. Misophonia is a disorder that can begin in childhood and adolescence, and early diagnosis and treatment will be beneficial in terms of the chronicity and prognosis of the disease. It is important to conduct more research on this subject, which has been examined in a limited number of studies. The aim of this study is to examine the characteristics of this disorder in 10 children/adolescents who are followed up with the diagnosis of misophonia, which is increasingly seen in child and adolescent psychiatry clinics, and to discuss the treatment process.

Method:

Ten cases diagnosed with misophonia and treated medically at the Kocaeli University Child and Adolescent Psychiatry outpatient clinics between 2022 and 2024 were included in the case report.

The sociodemographic characteristics of children/adolescents, the characteristics of misophonia disorder and their responses to drug treatments, comorbidities, family relationships and psychiatric features in the family were retrospectively scanned from the files.

In addition, the Amsterdam Misophonia Scale, Misophonia Symptom List, Misophonia Symptom Form and the Turkish adaptation of the Misophonia Scale scores applied to the cases were retrospectively scanned and compared.This study has the approval of the Kocaeli University Faculty of Medicine Ethics Committee dated March 27, 2023 and numbered 2023/79.

Results:

Of the 10 cases whose files were evaluated, 8 were female and 2 were male. The age range was between 8-17 and the average age was 13,4. There was a family history of misophonia in 4 cases and a family history of any psychiatric illness in 8 cases. There was an additional psychiatric illness in 6 cases. In 9 of the 10 cases, avoidance behaviors such as leaving the environment, eating alone, and not entering crowded places accompanied the cases. In 3 of the 10 cases, there was physical aggression when angry, in 4 verbal aggression, and in 4 behavioral reactions such as wearing headphones were present. In 9 of the 10 cases, there was anger, and in 2, there was anxiety and disgust. In 4 of the 10 cases, physical symptoms such as nausea and dizziness accompanied the cases when exposed to disturbing sounds.

Five of the cases were using fluoxetine, three were using sertraline, and two were using atomoxetine. The most commonly used drugs in the cases were antidepressants. The symptoms of eight cases improved with the use of fluoxetine and sertraline. It was observed that the symptoms of misophonia remained at the same level or partially decreased in two people using atomoxetine. Four of the ten cases diagnosed with misophonia were diagnosed with attention deficit hyperactivity disorder (ADHD), while two were diagnosed with social phobia.

Discussion:

In this study, the sociodemographic characteristics of 10 children and adolescents, 2 male and 8 female, diagnosed with misophonia, the characteristics of misophonia disorder and their responses to drug treatments initiated during the treatment process, comorbidities accompanying the diagnosis of misophonia, family relationships and psychiatric characteristics in the family, and scale scores were examined.

There is no clear data on gender distribution in the studies conducted; however, in our study, it is seen that the female gender is at the forefront. The most frequently disturbed sounds in the literature are reported as chewing, mouth smacking, food crunching... In our study, it is also noteworthy that all cases are disturbed by the mouth smacking sound, similar to the literature information. It has been reported by people with misophonia that disturbing trigger sounds are perceived as more disturbing when produced by familiar people, such as family members, rather than strangers (5). In the current 10 cases, it was determined that disturbing sounds made by family members in particular caused more behavioral and emotional reactions. In a study investigating the relationship between misophonia and obsessive compulsive disorder (OCD), anxiety and depressive symptoms, it was stated that there were strong relationships, and also the relationship between misophonia and angry outbursts was highlighted (2).

Misophonia was evaluated as an expression of repressed anger. In our study, 3 out of 10 cases had physical aggression when angry, 4 had verbal aggression, and 4 had behavioral reactions such as wearing headphones. 9 out of 10 cases had anger, 2 had anxiety and disgust. 4 out of 10 cases diagnosed with misophonia were diagnosed with ADHD, and 2 were diagnosed with social phobia.

Studies have shown that misophonia has a chronic course and is associated with problems in family relationships (1,5). In our study, it is noteworthy that misophonia findings have a chronic course in all cases; and that family relationships are weak in 8 cases. There is also limited information on misophonia treatment. It has been stated that cognitive behavioral therapy (CBT), exposure and response prevention, cognitive restructuring, awareness and acceptance-based therapies and coping methods may have positive results in treatment (6).

Although antidepressants are the most commonly used in pharmacological treatment, there is not enough research on pharmacological treatment (6). In our study, selective serotonin reuptake inhibitors (SSRI) type drugs were preferred in the treatment of the cases. A decrease in misophonia symptoms was observed in patients using antidepressants containing fluoxetine and sertraline as active ingredients.

As a result, misophonia is a disorder that can start in childhood and adolescence, and early diagnosis and treatment will be beneficial in terms of the chronicity of the disease and its prognosis. It is important to conduct more

research on this subject, which has been examined in a limited number of studies. Therefore, we think that it is important to emphasize misophonia disorder in children and adolescents and discuss the treatment processes in our case presentation.

Keywords: Misophonia, sertraline, fluoxetine, psychiatric disease.

References:

1) Schroder, A., Vulink, N., & Denys, D. (2013). Misophonia:Diagnostic criteria for a new psychiatric disorder. PLoS One, 8, e54706.

2) Wu MS, Lewin AB, Murphy TK, Storch EA (2014) Misophonia: incidence, phenomenology, and clinical correlates in an undergraduate student sample. J Clin Psychol, 70:994-1007.

3) Zhou, X., Wu, M. S., & Storch, E. A. (2017). Misophonia symptoms among Chinese university students: Incidence, associated impairment, and clinical correlates. *Journal of Obsessive-Compulsive and Related Disorders, 14,* 7–12.

4) Robinson S, Hedderly T, Conte G, Malik O, Cardona F. Misophonia in children with tiC disorders:a case series. J Dev Behav Pediatr. 2018;39(6):516–522.

5) Cavanna AE (2014) What is misophonia and how can we treat it? Expert Rev Neurother, 14:357-359.

6) Schneider RL, Arch JJ. Letter to the editor: potential treatment targets for misophonia. Gen Hosp Psychiatry 2015; 37:370-371.

0069 - Retrospective Analysis of Long-Acting Injectable Antipsychotics in Bipolar Disorder: Preliminary Findings

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Background and objective

Bipolar disorder (BD) is a chronic mental health condition characterized by recurrent episodes of mania and depression, significantly impairing individuals' quality of life, functionality, and overall well-being. Effective management of BD is crucial to reducing the burden on patients, caregivers, and healthcare systems. Despite advancements in pharmacological and therapeutic interventions, relapse and disease exacerbations remain common, often leading to repeated hospitalizations, frequent emergency visits, and extended periods of hospitalization. These factors underscore the need for treatment strategies that promote long-term stability and adherence [1].

Long-acting injectable (LAI) antipsychotics have emerged as a promising option for managing bipolar disorder [2]. Unlike oral medications, LAIs offer the advantage of sustained medication delivery, thereby improving adherence and reducing the risk of relapse associated with missed doses. Evidence from prior studies has suggested that LAIs may play a significant role in reducing the frequency and severity of disease exacerbations in BD patients [3]. However, there remains a gap in understanding the comprehensive impact of LAIs on healthcare utilization metrics, such as hospitalizations, emergency visits, and the cumulative burden of hospitalization days [4].

This study aims to evaluate the efficacy of LAIs in bipolar disorder management by comparing key clinical and healthcare outcomes pre- and post-treatment with LAI. Specifically, it examines changes in the number of hospitalizations, emergency visits, days of hospitalization, and the frequency of disease exacerbations (manic or depressive episodes). By analyzing these parameters, this study seeks to contribute valuable insights into the potential benefits of LAIs in improving disease course and reducing healthcare burdens for bipolar disorder patients.

Based on existing literature and clinical observations, it is hypothesized that implementing LAI antipsychotics will result in significant reductions in hospitalizations, emergency visits, hospitalization days, and the frequency of disease exacerbations.

Methods

In our study, retrospective medical records of patients who applied to Sakarya Community Mental Health Center of Sakarya Education and Research Hospital and used long-acting antipsychotic injections between October 2023 and September 2024 were examined. Individuals with bipolar disorder according to DSM-5 criteria (American Psychiatric Association, 2013) and who used long-acting antipsychotic injections for one year or more were included in the study. Patients who did not meet the inclusion criteria and had missing data were excluded from the study.

Information on the sociodemographic characteristics of the patients included in the study, number of hospitalizations and hoospitalization days, attacks of illness, long-acting antipsychotic treatment and the type, dose and duration of other medications given together with long-acting antipsychotics were obtained from their medical records. In addition, data recorded as mirror images in the period before and after the date long-acting antipsychotics were compared.

The study was conducted in accordance with the 1964 Helsinki Declaration and its later amendments. The study was approved by the Sakarya University Faculty of Medicine Ethics Committee. Data were analyzed with IBM SPSS Statistics 27.0 (IBM Corp. Released 2020. IBM SPSS Statistics for Windows, Version 27.0. Armonk, NY: IBM Corp.). Descriptive statistics were applied for continuous variables. Means with standard deviations and medians with interquartile ranges are presented when appropriate. Frequencies and percentages are presented for categorical variables. Wilcoxon signed-rank tests were used for comparisons between treatment durations before and after initiation of LAI antipsychotics. A value of $p < 0.05$ was considered significant.

Results

The study included 29 cases diagnosed with bipolar disorder who were using long-acting injectable antipsychotics. The mean age of the participants was 39.1±9.6 years, and the mean duration of illness follow-up was 14.8±8.5 years. Additionally, the mean age at the initiation of LAI antipsychotics was 36.0±8.9 years, and the average duration of LAI antipsychotic use was 2.6±1.7 years. Among the participants, 44.8% (n=13) were male, 55.2% (n=16) were female, and 65.5% (n=19) were unmarried. Furthermore, 11 cases (37.9%) were receiving paliperidone palmitate injections, while 18 cases (62.1%) were receiving aripiprazole injections. The sociodemographic characteristics of the patients are presented in Table 1.

Table 1. Descriptive data

Variables	**Descriptive statistics**
	Mean±SD (n=29)
Age, year	39.1±9.6
Duration of disorder follow-up, year	14.8±8.5
Age of LAI onset, year	36.0±8.9
Duration of LAI	2.6±1.7
Total number of hospitalizations[a]	4.4±3.2
Total number of hospitalization days[a]	107.1±70.9
	n (%)
Gender	
Male	13 (44.8)
Female	16 (55.2)
Education	
Primary	15 (51.7)
High school	7 (24.1)
Undergraduate	7 (24.1)
Marital status	
Unmarried	19 (65.5)
Married	10 (34.5)
LAI antipsychotics	
Paliperidone palmitate	11 (37.9)
Aripiprazole	18 (62.1)

[a]Since receiving the diagnosis of the disorder, SD: Standart deviation, LAI: Long-acting injectable.

The mirror images of patients diagnosed with bipolar disorder before and after LAI were compared and presented in Table 2. The number of hospitalizations (p=.009), emergency department visits (p=0.17), attacks of illness (p=.004), and hospitalization days (p=.003) significantly decreased after the injection compared to before LAI antipsychotics.

Table 2. Comparison of clinical variables before and after injection (n=29)

Variables	Mean±SD	Median	Z[a]	*p*
Number of hospitalizations before LAI	1.69±1.63	1.0	-2.624	**.009**
Number of hospitalizations after LAI	0.63±1.27	0.0		
Emergency visits before LAI	0.86±1.25	0.0	-2.388	**.017**
Emergency visits after LAI	0.31±1.00	0.0		
Attacks of illness before LAI	1.69±1.58	1.0	-2.858	**.004**
Attacks of illness after LAI	0.52±1.21	0.0		
Number of hospitalization days before LAI	46.00±55.07	21.0	-3.007	**.003**
Number of hospitalization days after LAI	9.90±23.22	0.0		

SD: Standart deviation, LAI: Long-acting injection
[a]Wilcoxon signed-rank test

Discussion

The findings of this retrospective study highlight the potential benefits of long-acting injectable antipsychotics in the management of bipolar disorder. Overall, the data demonstrated significant improvements in key clinical and healthcare metrics, including reductions in the number of hospitalizations, emergency visits, attacks of illness, and hospitalization days after the initiation of LAIs. These outcomes underscore the effectiveness of LAIs in promoting stability and reducing disease exacerbations, aligning with existing literature emphasizing the importance of adherence in managing chronic mental health conditions like BD.

Recent studies emphasize that the use of long-acting antipsychotics in bipolar disorder is associated with a reduction in variables such as the number of hospitalizations, emergency visits, hospitalization days, and frequency of illness episodes. Additionally, research has suggested that different long-acting antipsychotics may exhibit varying levels of effectiveness [5, 6]. These findings may be influenced by factors such as individual variations in treatment response, the pharmacological profiles of the medications, or differences in the severity of illness between the subgroups. Further research is warranted to better understand the mechanisms underlying these differences and to identify patient characteristics that predict optimal responses to specific LAIs.

The study also sheds light on the broader implications of LAI use in healthcare systems. By reducing hospitalizations and emergency visits, LAIs can alleviate the economic and resource burden associated with frequent care episodes [7]. These benefits not only improve patient outcomes but also support more efficient healthcare delivery.

However, several limitations must be considered when interpreting the findings. First, the retrospective design of the study may introduce selection bias and limit causal inferences. Additionally, the small sample size and single-center scope may constrain the generalizability of the results. Future studies with larger, more diverse populations and prospective designs are needed to validate these findings and explore long-term outcomes.

In conclusion, this study provides valuable insights into the role of LAIs in improving the management of bipolar disorder. The observed reductions in hospitalizations, emergency visits, and illness exacerbations highlight their potential as a critical component of maintenance therapy. Moving forward, personalized approaches to LAI selection and implementation, informed by patient characteristics and treatment history, could further enhance their efficacy and impact.

References

1. Yatham, L.N., et al., *Canadian Network for Mood and Anxiety Treatments (CANMAT) and International Society for Bipolar Disorders (ISBD) 2018 guidelines for the management of patients with bipolar disorder.* Bipolar Disord, 2018. 20(2): p. 97-170.
2. Keramatian, K., T. Chakrabarty, and L.N. Yatham, *Long-Acting Injectable Second-Generation/Atypical Antipsychotics for the Management of Bipolar Disorder: A Systematic Review.* CNS Drugs, 2019. 33(5): p. 431-456.
3. Pacchiarotti, I., et al., *Long-acting injectable antipsychotics (LAIs) for maintenance treatment of bipolar and schizoaffective disorders: A systematic review.* Eur Neuropsychopharmacol, 2019. 29(4): p. 457-470.
4. Lin, D., et al., *Real-World Evidence of the Clinical and Economic Impact of Long-Acting Injectable Versus Oral Antipsychotics Among Patients with Schizophrenia in the United States: A Systematic Review and Meta-Analysis.* CNS Drugs, 2021. 35(5): p. 469-481.
5. Bartoli, F., et al., *Effect of long-acting injectable antipsychotics on emergency department visits and hospital admissions in people with bipolar disorder: A retrospective mirror-image analysis from the Northern Milan Area Cohort (NOMIAC) study.* J Affect Disord, 2022. 318: p. 88-93.
6. García-Carmona, J.A., et al., *Comparative effectiveness of long-acting injectable antipsychotics in a large naturalistic cohort across two European centers: Findings from the long-acting injectable antipsychotics collaborative (LAICO) study.* Neuroscience Applied, 2022. 1: p. 100111.
7. Bartoli, F., et al., *Long-acting injectable antipsychotics for the treatment of bipolar disorder: evidence from mirror-image studies.* Ther Adv Psychopharmacol, 2023. 13: p. 20451253231163682.

0071 - Audit of the Mention of Menopause and Related Factors in Psychiatric Outpatient Assessments of Women With Psychosis: Insights From a UK Tertiary Service

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Objective

Menopause is a natural biological process associated with the gradual end of menstrual cycles and a woman‘s reproductive years, typically occurring between the ages of 45 and 55. This transition is associated with a decline in ovarian function, leading to reduced estrogen levels and a range of physical and psychological changes [1].

Estrogen is known for its neuroprotective properties and plays a key role in mood regulation, cognitive function, and emotional stability. Hence, changes in estrogen levels during menopause may increase the susceptibility to mood disorders, anxiety, and psychotic episodes.

For women who already suffer from pre-existing mental illness, menopause may be even more challenging, as a menopause-related exacerbation of psychiatric symptoms can occur. For example, in those already diagnosed with schizophrenia or other psychotic disorders, menopause can lead to a worsening of psychotic symptoms, as well as cognitive difficulties, mood dysregulation, and a higher risk of relapse [2]. In addition, many women with psychotic conditions will be prescribed antipsychotics, some of which can induce hyperprolactinemia, which in turn may contribute to reducing estrogen levels.

Moreover, it is not clear whether menopause is considered in the routine psychiatric care of women with pre-existing severe mental illnesses, including psychosis. For example, it is still unknown how frequently menopause is considered during psychiatric evaluations, if and how menopausal status influences psychotropic medication choice and what treatments for menopause are considered [3]. Addressing critical phases like the menopause transition in an informed manner may hold the potential to improve quality of life and psychiatric presentation and deserves further study.

Therefore, with the present audit, we aimed to investigate:

-How frequently menopause and menopause treatment were mentioned, directly or indirectly, in outpatient assessments reports of women with psychosis referred to a UK tertiary national service for people with complex and difficult to treat psychoses.

-Whether there was a relationship between mention of menopause in the outpatient reports and women's age, sociodemographic characteristics, type and dosage of antipsychotic medications.

Methods:

Team members conducted a retrospective audit of outpatient assessment reports from January 2019 to April 2024 at the South London and Maudsley NHS Foundation Trust National Psychosis Service (NPS), the tertiary referral center for complex psychosis. The assessment reports summarize information provided by the referring team, alongside a detailed medical/psychiatric history, mental state examination and collateral history if available and give itemized recommendations for care management.

This audit was restricted to reports produced for female patients aged 40–60 years at the time of assessment as this age range includes the menopausal transition period and accounts for cases of early menopause and is inclusive of different ethnic groups who may experience menopause earlier than Caucasian women.

To identify instances in which menopause was discussed, directly or indirectly, in the reports, we systematically searched for relevant terms, including —menopause,” —menopausal,” —period,” —menstrual,” —HRT,” —hormone,”

―LḤ‟ and ―FSH‟ If any of these terms appeared in the report, and after checking the context around that term it was evident that the service user's menstrual and menopausal status had been considered, we categorized menopause as having been mentioned.

For the full dataset of reports, we recorded sociodemographic characteristics, including age, ethnicity, and psychiatric diagnosis formulated by the referring team, along with the below:

1. The overall proportion of reports in which menopause was mentioned.
2. For reports where menopause was mentioned, we assessed:

    A. Whether the mention of menopausal status was attributed to the discussion with the referring team, indicating their awareness of the matter.

    B. Whether menopausal status was mentioned in the NPS recommendations to the referring team, indicating NPS awareness of the topic.

    C. Whether the mention of menopausal status was a combination of point A and B above, reflecting both the referring team and NPS awareness of the matter.

Antipsychotic medications in the reports were those described at the time of the assessment. They were categorized into five groups based on their prolactin sparing/raising properties:

1. Prolactin (PRL)-raising,
2. PRL-sparing with low-dose (below 7 mg olanzapine-equivalent) PRL-raising APs,
3. PRL-raising with adjunctive aripiprazole,
4. PRL-sparing only, and
5. No antipsychotic treatment.

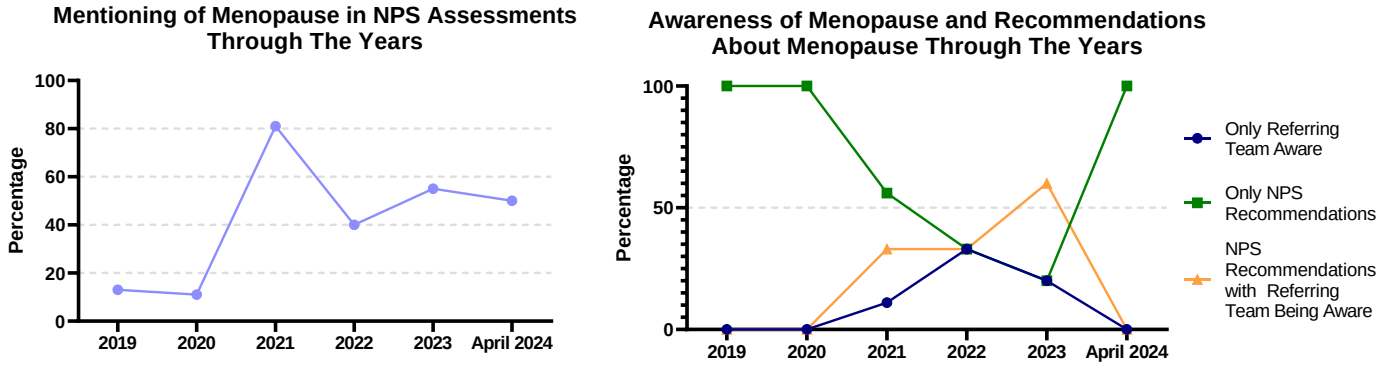
All antipsychotic doses were standardized to olanzapine-equivalent doses [4].

We calculated ethnicity distribution and psychiatric diagnosis in the total sample, and compared these in women with and without mention of menopause using Mann-Whitney tests. We also explored whether mention of the menopausal status by the referring team was associated with the choice of specific antipsychotics and their dose.

Results

Out of 61 outpatient assessments conducted between 2019 and 2024, menopause was mentioned overall in 39% of assessment reports (n=24). Among these, in 17% of reports (n=4), only the referring team demonstrated awareness of menopause, in 50% of reports (n=12) only the NPS demonstrated awareness of the menopause in their recommendations, while in 33% of cases (n=8) both the NPS and the referring team showed menopause awareness.

Over time, NPS outpatient assessments reports (Figure 1) showed changes in the rates of menopause mentions, as well as in the referring team's or/and NPS awareness of menopausal status. The total mention of menopause in assessments (Fig 1a) started just over 10%, peaked in 2021 at 80% and then had a plateau at around 50% in the following years. In cases where menopause was mentioned, there was a shift toward greater awareness among referring teams (increasing from 0% to approximately 20% through the years). The NPS continued to provide further recommendations even when referring teams were already aware of menopause (Fig 1b).



The chart on the left illustrates the change in the mention of menopause in outpatient assessments over the years. The chart on the right represents cases where menopause was mentioned and by which team (referring team, NPS or both). Of note, there were only 2 reports in 2024 (the last case analyzed was in April 2024), so data from this year are incomplete.

A summary of sociodemographic characteristics, antipsychotic preferences, and doses across the three groups is provided in Table 1.

Table 1. Sociodemographic characteristics of the patients and antipsychotic choices and doses

	Total cases (n=61)	**Individuals with Menopause Mentioned (n=24)**	**Individuals without Mention of menopause (n=37)**	**Statistics (Menopause mentioned or not)**
Age (Years)				
Mean ± SD	47.7 ± 5.6	48.2 ± 4.8	47.3 ± 6.2	p>0.05
Ethnicities (n, % out of column total) [d]				all p>0.05
Caucasian	37 (61)	13 (54)	24 (64)	
Black	15 (25)	7 (29)	8 (21)	
Asian	2 (3)	0 (0)	2 (6)	
Middle Eastern	2 (3)	1 (4)	1 (3)	
Not Specified	5 (8)	3 (13)	2 (6)	
Psychiatric Diagnoses (n, % out of column total)				all p>0.05
Schizophrenia	32 (53)	9 (38)	23 (62)	
Schizoaffective Disorder	24 (39)	12 (50)	12 (32)	
Bipolar Disorder	3 (5)	2 (8)	1 (3)	
Other	2 (3)	1 (4)	1 (3)	
Antipsychotic Medications (mg) [a]	**Total patients (n=61)**	**Referring team aware of the menopause (n=12)**	**Referring team unaware of the menopause (n=49)**	**Statistics (Aware of menopause or not aware)**
Olanzapine equivalents Mean ± SD	34.4 ± 31.3 [b]	24.64 ± 11.2	35.5 ± 34.2 [b]	p>0.05
Antipsychotic choice (n, % out of column total)				all p>0.05
PRL Raising	27 (44)	4 (37)	23 (47)	
PRL Raising with Aripiprazole	4 (7)	0 (0)	4 (8)	
PRL Sparing with Low Dose PRL Raising	4 (7)	2 (13)	2 (4)	
PRL Sparing	24 (39)	6 (50)	18 (37)	
No Antipsychotics	2 (3)	0 (0)	2 (4)	

[a] The equivalent dose of olanzapine [b] Calculated by excluding 2 and 1 patients who were not on antipsychotics, respectively

The majority of patients in the total sample (over 50%) were Caucasian, and the ethnicity distribution was not different between cases with and without menopause mention, as shown in the table. Regarding psychiatric diagnoses, schizoaffective disorder was the most frequent diagnosis among cases where menopause was mentioned, but no statistical difference was found with cases without mention.

Antipsychotic dosing in the total sample of women assessed was generally elevated, with a mean olanzapine equivalent dose of 33.4 mg, well above the threshold for high-dose antipsychotic use (defined as doses over 20 mg). In cases where the referring team was aware of menopause, the mean antipsychotic dose was lower at 24 mg and PRL-sparing antipsychotics were the most frequently selected type. However, awareness of menopause by the referring team did not result in a statistically significant difference in either the mean antipsychotic dose or the type of antipsychotic selected compared with women whose referring team was unaware of menopausal status.

Discussion

To our knowledge, this is one of the first works producing data on the assessment of menopausal status in women with psychosis within UK NHS mental health services. We found that menopause mentions in NPS outpatient assessments reports increased in the last 5 years, although for approximately 50% of women there is still no mention of menopausal status. When menopause was mentioned, this was predominantly in the tertiary service recommendations.

These data align with other studies in different patient populations [5], and highlight the need for systematic consideration of menopause in psychiatric care.

Ethnicity did not influence whether menopause was considered by either the referring team or the NPS. This is encouraging in view of other studies reporting that women from ethnic minorities were diagnosed with menopause later than white women and HRT uptake was lower for them. Given that some minority ethnic groups experience menopause earlier, it is crucial that they are screened in a timely manner to ensure they receive appropriate care without delay or disadvantage.

In terms of psychiatric diagnoses, the proportion of women with affective disorders was 58% in cases where menopause was mentioned, compared to 35% in cases where it was not. Conversely, schizophrenia was more common in the non-mention group. A potential explanation could be that women with affective psychoses may be more likely to report menopausal symptoms than those with schizophrenia, where paranoid, negative or cognitive, symptoms could inhibit disclosure, and which is more frequently associated with interoceptive challenges. However, there is no direct evidence to support this hypothesis, which should be explored by future studies.

Similarly, we found no statistically significant difference in antipsychotic doses based on menopausal awareness. The more frequent use of prolactin-sparing antipsychotics in these cases may reflect clinicians being more cautious when aware of menstrual or menopausal status. Alternatively, it is possible that a clearer assessment of menstrual status was only feasible for women already on prolactin-sparing medications, without the confounding effect of hyperprolactinemia-induced amenorrhea. Overall, it is important for clinicians to consider prescribing prolactin-sparing antipsychotics in alignment with menstrual status.

Overall, considering menopause in patients with psychotic symptoms may be critical, noting that women with schizophrenia often experience an increase in symptom severity after age 40 and a reduce response to antipsychotic medications. Knowledge of menopause status should inform both physical health (e.g., increased risk of cardiovascular diseases and osteoporosis) and mental health management. Hormone replacement therapy and psychosocial support can be potential interventions for managing symptoms and improving the quality of life of this population of women.

Keywords: Menopause, mental health, outpatient assessment, psychosis, women

References

[1] Davis SR, Pinkerton JA, Santoro N, Simoncini T. Menopause—Biology, consequences, supportive care, and therapeutic options. Cell 2023;186:4038–58.

[2] Sommer IE, Brand BA, Gangadin S, Tanskanen A, Tiihonen J, Taipale H. Women with Schizophrenia-Spectrum Disorders After Menopause: A Vulnerable Group for Relapse. Schizophr Bull 2023;49:136–43. https://doi.org/10.1093/SCHBUL/SBAC139.

[3] Kulkarni J, Gurvich C, Mu E, Molloy G, Lovell S, Mansberg G, et al. Menopause depression: Under recognised and poorly treated. Australian and New Zealand Journal of Psychiatry 2024.

[4] McAdam MKT, Baldessarini RJ, Murphy AL, Gardner DM. Second International Consensus Study of Antipsychotic Dosing (ICSAD-2). J Psychopharmacol 2023;37:982.

[5] Martin-Key NA, Funnell EL, Spadaro B, Bahn S. Perceptions of healthcare provision throughout the menopause in the UK: a mixed-methods study. Npj Women‘s Health 2023 1:1 2023;1:1–10.

0072 - The Diagnostic Relationship Between Suicide Attempts and Parasuicidal Behaviors in Child Psychiatry Inpatients Hospitalized Following Suicide Attempts

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Abstract

Introduction: Psychiatric disorders often begin in childhood and adolescence, with a 13-21% prevalence in adolescents. [1-2] Studies indicate that suicide is a leading cause of emergency admissions, with a prevalence of 3-11%. Risk factors include psychiatric illness, family conflict, past suicide attempts, abuse, and substance use, with drug overdose being the most common method. [3]

In Turkey, the limited availability of inpatient child psychiatry services results in insufficient clinical experience and research. Studies show that only one-fourth of psychiatric emergency cases require hospitalization, with major depressive disorder, anxiety disorders, and behavioral disorders being the most common diagnoses in adolescents with suicide attempts. [4-5]

This study aims to investigate the diagnostic associations of suicide attempts and para-suicidal behaviors, focusing on non-suicidal self-injury (NSSI), personality traits, and psychiatric comorbidities.

Inpatient psychiatric services for children and adolescents in Turkey are limited, resulting in restricted clinical experience and research in this field. The Child and Adolescent Psychiatry Unit at Prof. Dr. Süleyman Yalçın City Hospital, established in February 2022, plays a crucial role in addressing this gap by providing inpatient care and contributing to scientific knowledge.

Suicide risk is one of the primary reasons for hospitalization in adolescent psychiatry, often accompanied by para-suicidal behaviors and other psychiatric disorders. Understanding the severity, recurrence, and diagnostic associations of suicidal and non-suicidal self-injury (NSSI) is essential for effective treatment planning.

This study aims to evaluate the psychiatric characteristics and diagnostic associations of adolescents hospitalized for suicide attempts, focusing on the role of NSSI history, personality traits, and comorbid psychiatric disorders in clinical outcomes.

Methods: This retrospective study analyzed the medical records and archived files of 135 adolescent female patients hospitalized for suicide attempts at Göztepe Prof. Dr. Süleyman Yalçın City Hospital between February 2022 and October 2023. Data were extracted from hospital records and clinician reports at admission and discharge.

Psychiatric diagnoses were determined based on consistent clinical impressions formed during hospitalization. A sociodemographic form was used to collect data on suicide attempt characteristics, history of self-harm, psychiatric and family history, and psychotropic medication use.

Patients completed three self-report scales upon admission:

- Children‘s Depression Inventory (CDI)
- Beck Hopelessness Scale (BHS)
- Beck Suicidal Ideation Scale (BSI)

Based on self-injury history, patients were categorized into suicidal and suicidal + non-suicidal groups. The study aimed to examine the associations between suicide attempts, para-suicidal behaviors, and psychiatric diagnoses.

Results: The study included 135 female patients (mean age: 16.06 ± 1.12 years). A psychiatric history was present in 95.6% of patients, and 82.0% had a history of psychotropic medication use. The suicidal group comprised 93 patients (68.9%), while the suicidal + non-suicidal group included 42 patients (31.1%).

Compared to the suicidal group, the suicidal + non-suicidal group had:

• Higher rates of prior psychiatric hospitalization (38.1% vs. 15.1%, p = .003)

• A greater history of non-suicidal self-injury (NSSI) (97.6% vs. 58.4%, p < .001)

• More frequent Axis-II personality traits (72.5% vs. 47%, p = .008)

• Higher prevalence of bulimia nervosa (12.2% vs. 2.2%, p = .031)

• Higher scores on the Beck Suicidal Ideation Scale‘s "Suicidal Desire" subscale (4.17 ± 1.66 vs. 3.09 ± 1.89, p = .030)

Logistic regression analysis identified a history of prior NSSI as a significant predictor of suicidality (p = .015).

Conclusion: Due to the limited number of inpatient child psychiatry services in Turkey, clinical experience and research in this field remain restricted. Identifying suicide risk factors is essential for suicide prevention and improving treatment strategies.

This study provides valuable data on a high-risk adolescent population, highlighting the complex and severe clinical profiles of patients with a history of both suicidal and non-suicidal self-injury (NSSI). These patients exhibit higher rates of past NSSI and personality disorder traits, emphasizing the importance of detailed assessment of self-harm history and comorbid psychiatric diagnoses in treatment planning.

Future research should focus on developing preventive and targeted interventions for this high-risk group to enhance clinical outcomes and reduce suicide attempts among adolescents.

Keywords: child and adolescent psychiatry, inpatient unit, non-suicidal self-injury, para-suicidal behaviour, suicide attempt

References

[1] Kessler RC, Chiu WT, Demler O, Merikangas KR, Walters EE. Prevalence, severity, and comorbidity of twelve-month DSM-IV disorders in the National Comorbidity Survey Replication (NCS-R). Arch GenPsychiatry 2005; 62:617-627.

[2] Costello EJ, Mustillo S, Erkanli A, Keeler G, Angold A. Prevalence and development of psychiatric disorders in childhood and adolescence. Arch Gen Psychiatry 2003; 60:837-844.

[3] Dodig-Curkovic K, Curkovic M, Radic J, Degmecic D. Suicidal behavior and suicide among children and adolescents- risk factors and epidemiological characteristics. Cool Antropol. 2010;;34:771-777.

[4] Coşkun M. Çocuk ve ergen psikiyatrisinde acil durumlar: In Akay A, Ercan E (editors) Çocuk ve Ergen Ruh Sağlığı ve Hastalıkları. Ankara: HYB basım yayın, 2016;545-573.

[5] Özge Gizli Çoban, Mehmet Emre Gül, Arif Önder. Evaluation of Children and Adolescents Admitted to Emergency Service with Suicide Attempt

0086 - Factors Associated with Suicide Attempts in Individuals with Major Depressive Disorder: A Preliminary Study

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Abstract

BACKGROUND AND AIM: Suicide is becoming a significant public health issue worldwide, with its prevalence steadily increasing. Major depressive disorder (MDD) is the most common mental disorder associated with an elevated risk of suicide. Moreover, identifying the factors influencing recurrent suicide attempts appears to be critical for risk assessment and early intervention efforts. The aim of this study is to examine the effects of factors such as experiences of sexual abuse, traumatic losses, gender, history of psychiatric hospitalization, and psychotherapy history on the number of suicides attempts and to evaluate their relationship with depression levels individuals followed up with a diagnosis of MDD.

METHODS: This preliminary study was conducted on 60 participants followed up with a diagnosis of MDD in the Psychiatry Unit of İzmir City Hospital using a retrospective medical record review method. The reviewed records included sociodemographic data, history of sexual abuse, traumatic loss, history of psychiatric hospitalization and psychotherapy, suicide attempts, and Hamilton Depression Scale scores.

RESULTS: Among the participants, 60% (n = 36) had more than one suicide attempt. Individuals with a history of sexual abuse were found to have a higher likelihood of multiple suicide attempts, and similarly, those who experienced traumatic loss also showed a higher likelihood of multiple suicide attempts. Significant associations were identified between gender and the frequency of suicide attempts, as well as between gender and a history of sexual abuse. Women were more likely to have multiple suicide attempts and a history of sexual abuse. Individuals with non-recurrent suicide attempts had a higher rate of having a history of psychotherapy. Those with a history of psychiatric hospitalization were more likely to have multiple suicide attempts compared to those without such a history. Moreover, individuals with multiple suicide attempts had higher depression scores, whereas those with a history of psychotherapy had lower depression scores.

CONCLUSIONS: The findings of this study highlight the multifaceted nature of suicide attempts and their associations with various factors such as a history of sexual abuse, traumatic loss, gender, psychiatric hospitalization, and psychotherapy. Individuals with a history of sexual abuse or traumatic loss were found to be at higher risk for multiple suicide attempts, highlighting the importance of interventions targeting these experiences. Furthermore, the high rates of suicide attempts and sexual abuse among women point to a potential connection, emphasizing the need for strengthened policies to prevent sexual abuse and expanded early intervention programs for traumatic experiences. The findings also indicate that individuals with recurrent suicide attempts exhibit more severe depressive symptoms, while psychotherapy plays a protective role in alleviating these symptoms. Similarly, a history of psychiatric hospitalization was associated with an increased risk of multiple suicide attempts. This suggests that recurrent suicide attempts may require more intensive psychiatric care and psychological and therapeutic interventions. Overall, these findings underscore the importance of early detection, close monitoring, and tailored interventions for individuals at risk. Additionally, further research with larger samples is needed to understand the mechanisms underlying these relationships and to develop effective intervention strategies.

Keywords: Suicide Attempts, Major Depressive Disorder, Sexual Abuse, Traumatic Loss, Psychiatric Hospitalization, Psychotherapy

BACKGROUND AND AIM

Major Depressive Disorder (MDD) is a prevalent psychiatric disorder that significantly impacts individuals' quality of life and is strongly associated with an increased risk of suicide. Suicide constitutes the 10th leading cause of death worldwide, accounting for approximately 1.5% of all fatalities (1). The risk of suicide is most commonly linked to psychiatric disorders, with studies indicating that 25% of individuals who die by suicide had prior contact

with mental health services (1). Mood disorders, particularly MDD, represent a major risk factor for suicidal behavior. Research findings suggest that 15-20% of individuals diagnosed with MDD attempt suicide at least once during their lifetime.

The present study aims to investigate the impact of various factors, including a history of sexual abuse, traumatic losses, gender, past psychiatric hospitalizations, and history of psychotherapy, on the frequency of suicide attempts. Additionally, it seeks to examine the relationship between these factors and depression severity in individuals diagnosed with MDD.

A study examining the clinical characteristics, comorbid psychiatric disorders, and psychosocial risk factors among MDD patients with a history of suicide attempts demonstrated a strong association between depression severity, levels of hopelessness, previous suicide attempts, and current suicidal ideation (2). In light of these findings, the importance of early intervention programs and evidence-based therapeutic approaches, particularly Cognitive Behavioral Therapy (CBT), is underscored in mitigating suicide risk among individuals with MDD.

Exposure to sexual abuse during childhood and adolescence has long-term psychological consequences for individuals. The literature indicates an increased prevalence of MDD and suicidal behaviors among individuals with a history of sexual trauma. A study examining depression severity, suicidal ideation, psychotherapy access, and self-esteem levels among 273 female participants with a history of sexual trauma found that individuals who experienced early-life sexual trauma exhibited significantly higher levels of depression, lower self-esteem, and an increased likelihood of developing suicidal thoughts (3).Furthermore, the study revealed that individuals who received psychotherapy support had lower levels of depression and a reduced incidence of suicide attempts.

The aim of this study is to examine the effects of factors such as a history of sexual abuse, traumatic losses, gender, past psychiatric hospitalizations, and history of psychotherapy on the number of suicide attempts and to evaluate the relationship between these factors and depression severity in individuals diagnosed with MDD.

Method

This study retrospectively analyzed sociodemographic data, history of sexual abuse, traumatic losses, psychiatric hospitalization and psychotherapy history, suicide attempts, and clinical data, as well as Hamilton Depression Rating Scale (HDRS) scores of 60 inpatients diagnosed with MDD who were receiving treatment at İzmir City Hospital between May 1, 2024, and December 1, 2024.

Written informed consent was obtained from the patients and their relatives at the time of hospitalization. Ethical approval for the study was granted by the Non-Interventional Clinical Research Ethics Committee of İzmir City Hospital (Approval No: 2024/11).

1. Sociodemographic and Clinical Data Form

The sociodemographic and clinical data form, developed by the researcher, includes information on age, gender, marital status, educational level, psychotropic medication use, history of psychiatric hospitalization, number of previous suicide attempts, history of psychotherapy, and history of trauma (categorized into three subtypes: physical, emotional, and sexual trauma). Additionally, it assesses history of traumatic loss/bereavement, alcohol use, and psychoactive substance use. The data were obtained retrospectively based on this form.

2. Hamilton Depression Rating Scale (HDRS)

The Hamilton Depression Rating Scale (HDRS) was developed to measure the severity of depressive symptoms. The validity and reliability study of the Turkish version was conducted by Akdemir et al. (4). The scale consists of 17 items, scored on a range of 0-4 or 0-2, with higher scores indicating greater severity of depressive symptoms. The HDRS was administered by a clinician within the first week of hospitalization, and the obtained scores were analyzed as part of the study.

3. Statistical Analysis

For categorical variables, the Chi-square (χ^2) test was used, while independent samples t-test was employed to examine group differences in depression scores. The skewness and kurtosis values for the Hamilton Depression Rating Scale (HDRS) were calculated as -0.248 and -0.737, respectively. Since these values fall within the

acceptable range of -2 to +2, the assumption of normal distribution is supported. Additionally, the z-scores for the HDRS ranged between -2.125 and 1.914. As these values fall within the acceptable range of -3 to +3, it indicates that no outliers were present in the dataset and confirms the assumption of normal distribution.

Results

Participants who had never attempted suicide or had only one prior suicide attempt (n = 24) were compared with those who had multiple suicide attempts (n = 36), who constituted 60% of the total sample. This comparison aimed to examine potential differences between individuals with a single or no suicide attempt and those with repeated suicide attempts, as well as to evaluate whether this distinction is associated with increased risk factors or underlying psychological variables.

A significant relationship was found between the history of sexual abuse and the frequency of suicide attempts ($\chi^2(1, N=60) = 4.05$, $p = .044$). It was observed that individuals with a history of sexual abuse were more likely to have multiple suicide attempts (See Figure 1).

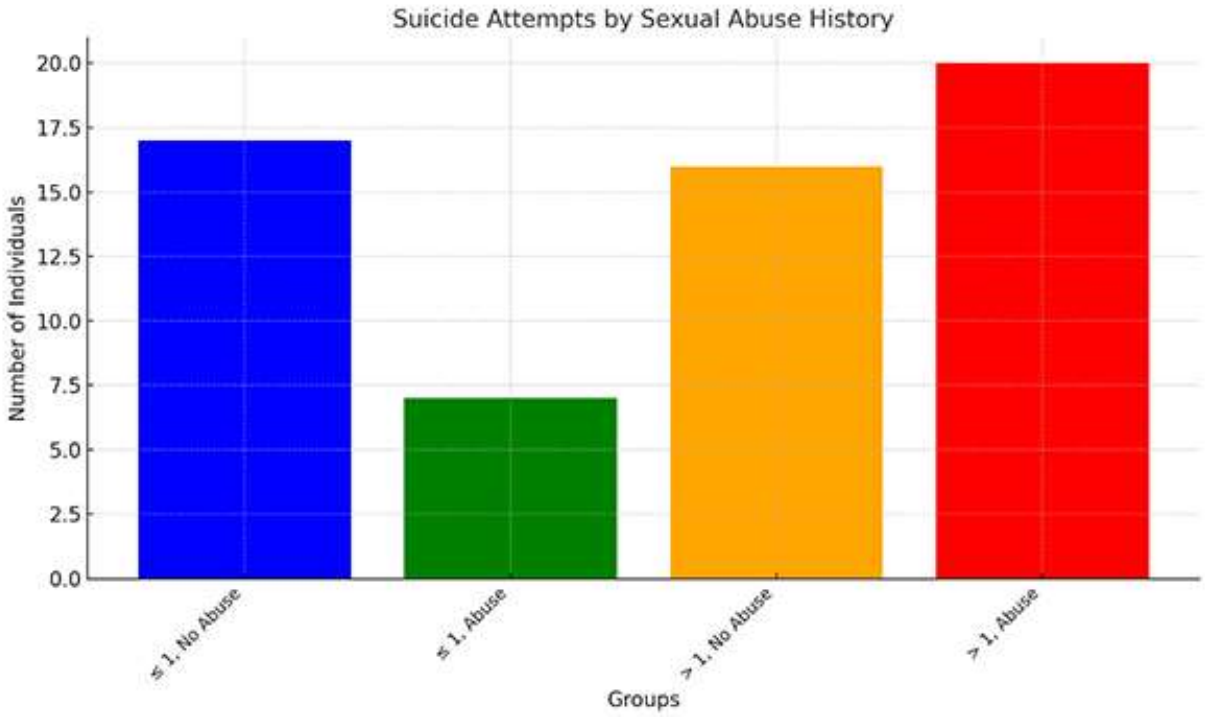


Figure 1. Relationship Between Suicide Attempts and History of Sexual Trauma

Note: **Blue: ≤ 1 suicide attempt, no history of sexual abuse. Green: ≤ 1 suicide attempt, history of sexual abuse present. Orange: > 1 suicide attempt, no history of sexual abuse. Red: > 1 suicide attempt, history of sexual abuse present.**

According to the chi-square test results, the rate of individuals with a history of psychotherapy was higher among those with a single suicide attempt ($\chi^2 = 4.318$, $p = 0.038$).

Additionally, there was a significant relationship between gender and the frequency of suicide attempts ($\chi^2 = 4.571$, $p = 0.033$). The percentage of individuals with multiple suicide attempts was higher among women. The results are summarized in Figure 2.

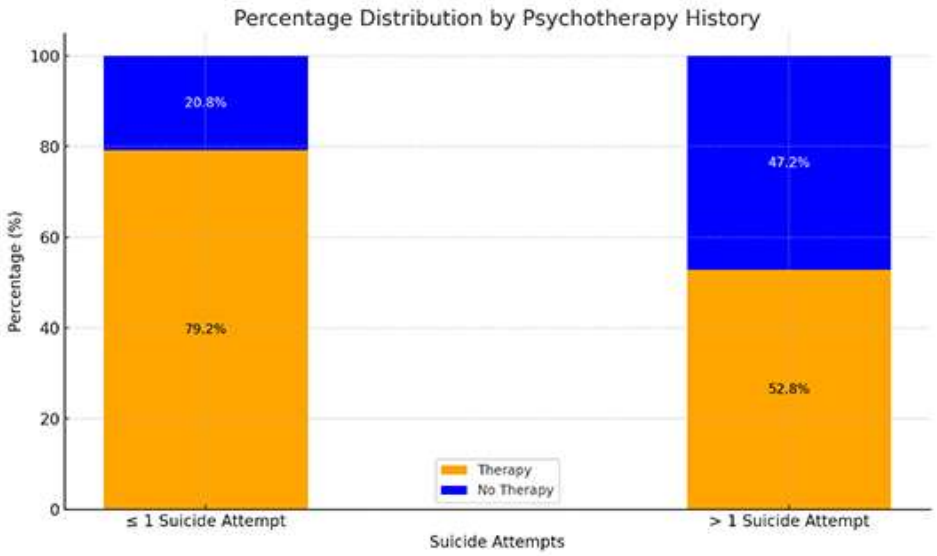


Figure 2. Distribution of Suicide Attempts Based on Psychotherapy History

Moreover, the significant association between gender and history of sexual abuse ($\chi^2 = 10.823$, $p = 0.001$) indicates that women are more likely to have a history of sexual abuse compared to men (See Figure 3).

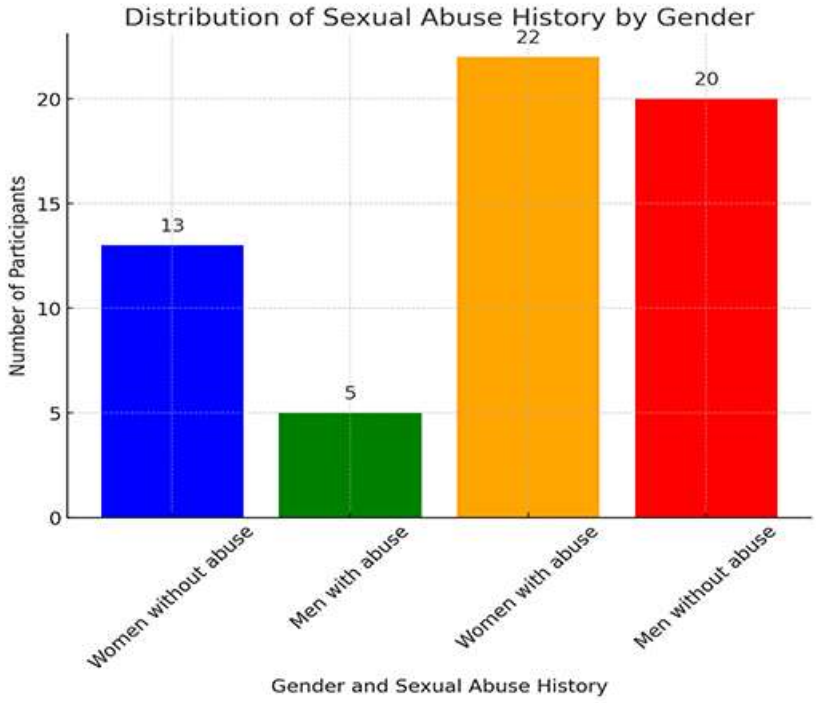


Figure 3. Distribution of Sexual Abuse History by Gender

Similarly, a significant relationship was found between experiencing traumatic loss and the frequency of suicide attempts ($\chi^2(1, N=60) = 4.60$, $p = .032$). The rate of multiple suicide attempts was higher among individuals who had experienced traumatic loss compared to those who had not. The results are presented in the graph in Figure 4.

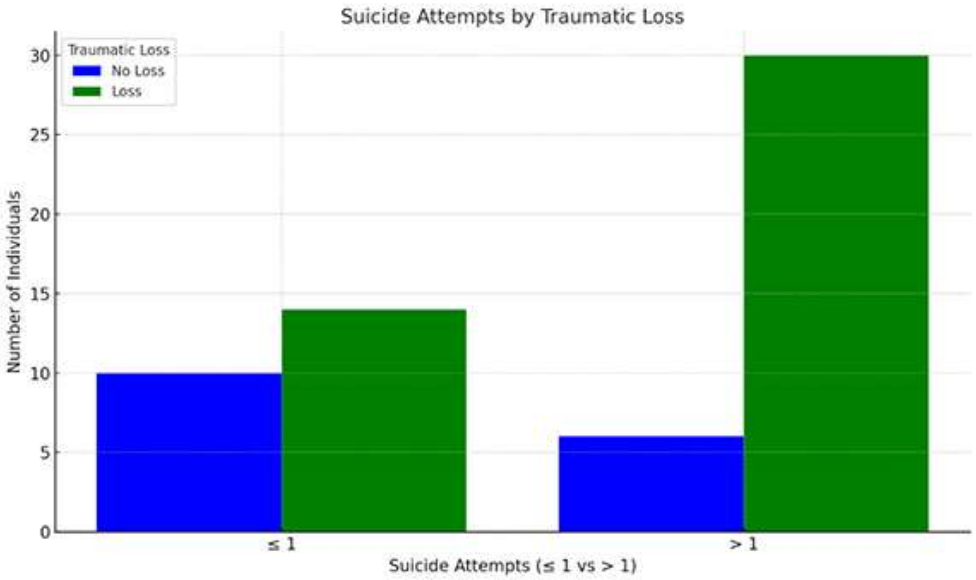


Figure 4. Suicide Attempt and Traumatic Loss

A significant relationship was found between the frequency of suicide attempts and psychiatric hospitalization status ($\chi^2(1, N=60) = 6.465$, $p = .011$). Individuals with a history of psychiatric hospitalization had a significantly higher likelihood of multiple suicide attempts compared to those without hospitalization (See Figure 5).

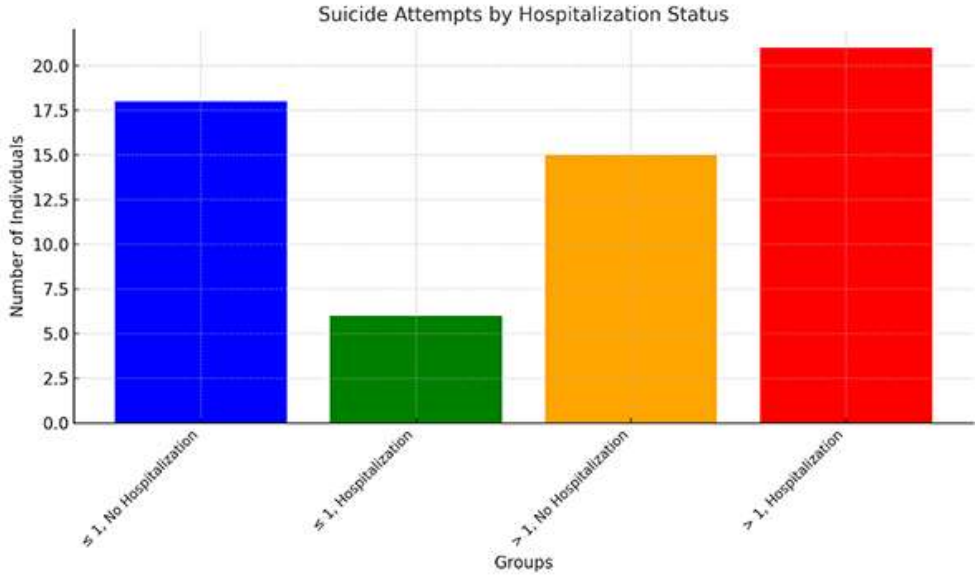


Figure 5. Suicide Attempt and Psychiatric Hospitalization

Note: Blue: ≤ 1 suicide attempt, no hospitalization. Green: ≤ 1 suicide attempt, with hospitalization. Orange: > 1 suicide attempt, no hospitalization. Red: > 1 suicide attempt, with hospitalization.

Depression scores significantly differed based on the number of suicide attempts ($t(38.68) = -2.053$, $p = .047$) and psychotherapy history ($t(58) = -2.601$, $p = .012$). Individuals with multiple suicide attempts had higher HRS scores, whereas those with a history of psychotherapy had lower HRS scores (See Figure 6).

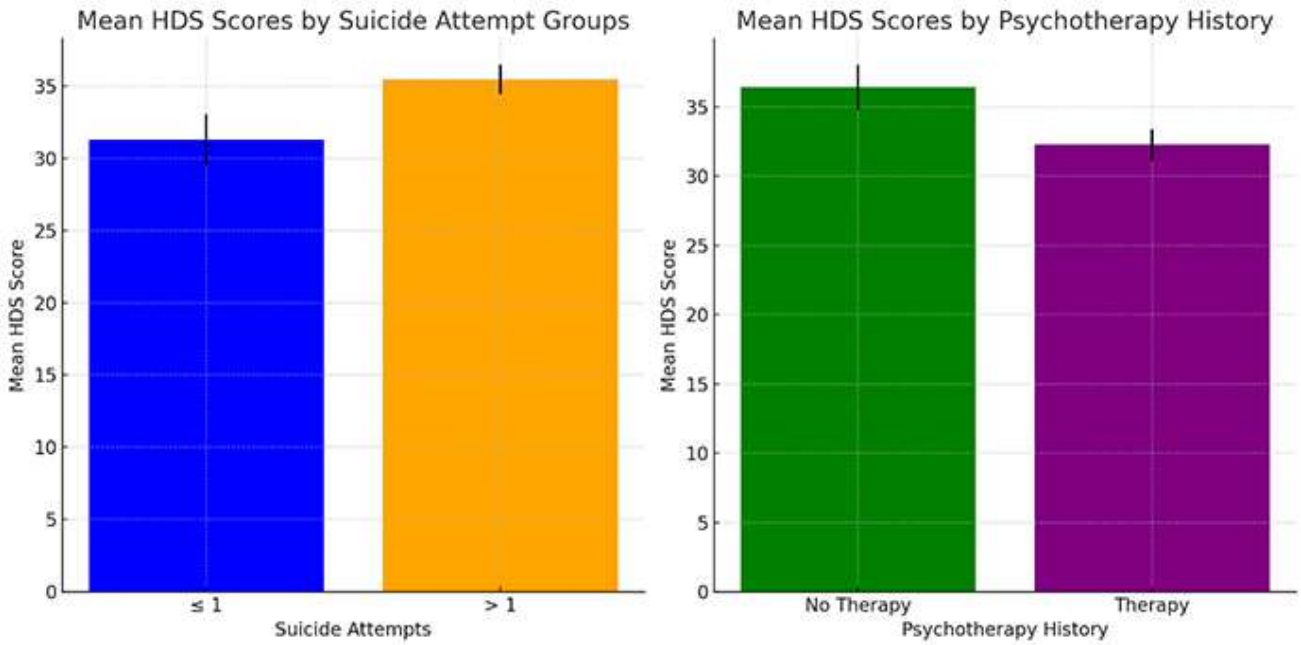


Figure 6. Relationship Between Suicide Attempt, Psychotherapy History and HRS Score

Discussion

Suicidal behaviors have been increasing worldwide over the years and are now recognized as a global public health issue (5). As indicated in the literature, suicidal ideation and previous suicide attempts serve as significant predictors of heightened suicide risk (6,7). In alignment with existing research, our study also identified a positive association between the severity of depressive symptoms and the frequency of suicide attempts.

Some studies have found no significant gender differences in suicidal behaviors (8,9), while others have reported that women exhibit higher levels of suicidal ideation than men (10,11). Conversely, some studies suggest that men experience more suicidal thoughts than women (12,13). In our study, we found that the rate of repeated suicide attempts was higher among women.

Additionally, previous research has indicated that hospitalized patients with a history of suicide attempts are at a higher risk of future suicidal behaviors (14). In our study, the higher prevalence of suicide attempts among individuals with multiple hospitalization histories suggests that these individuals may be at increased suicide risk and that repeated suicide attempts may require more intensive intervention. Psychotherapy can serve as both a preventive and therapeutic intervention for individuals who have attempted suicide or experience suicidal thoughts. Through crisis intervention, therapists can assist individuals in developing strategies to cope with suicidal ideation.

A prospective study involving 36 participants examined the impact of psychosocial interventions and cognitive-behavioral therapy (CBT) on suicidal behaviors. Findings indicated that participants who received CBT exhibited a lower recurrence of suicidal behaviors compared to those in the control group (15). Consistent with the existing literature, our study found that a history of psychotherapeutic interventions was associated with a reduced likelihood of repeated suicidal behaviors.

Furthermore, a meta-analysis comprising 47 studies investigating the relationship between early sexual abuse and suicidal behaviors found that childhood sexual abuse was consistently associated with an increased risk of suicide (16).

In alignment with the existing literature, our study identified a higher prevalence of multiple suicide attempts among individuals with a history of sexual abuse. Individuals with a history of sexual abuse or traumatic loss

appear to be at an elevated risk for repeated suicide attempts, underscoring the necessity of targeted interventions addressing these experiences. Additionally, the potential association between the higher prevalence of suicide attempts among women and the increased rate of sexual abuse highlights the interconnection between these variables.

In this regard, strengthening policies aimed at preventing sexual abuse and expanding early intervention programs for individuals with traumatic experiences are of critical importance. The complexity of the bereavement process can contribute to the development of depression and suicidal behaviors. A study evaluating suicide risk factors among 167 individuals with a history of suicide attempts reported a higher prevalence of suicidal behaviors and experiences of loss among women (17). Consistent with these findings, our study also determined that individuals who had experienced traumatic loss were more likely to have multiple suicide attempts.

The findings also highlight that depressive symptoms are more severe, particularly among individuals with recurrent suicide attempts, and underscore the protective role of psychotherapy in alleviating depressive symptoms. Similarly, a history of psychiatric hospitalization has been associated with an increased risk of multiple suicide attempts. This finding suggests that recurrent suicide attempts may necessitate more intensive psychiatric and therapeutic interventions.

Our study underscores the critical importance of conducting comprehensive suicide risk assessments for all patients receiving inpatient treatment in psychiatric clinics. Additionally, it highlights the necessity of early diagnosis, rigorous monitoring, and individualized interventions for patients at risk. However, to gain a deeper understanding of the underlying mechanisms contributing to suicide risk and to develop effective intervention strategies, further research with larger sample sizes is required.

References

1.Windfuhr, K., & Kapur, N. (2011). Suicide and mental illness: A clinical review of 15 years of findings from the UK National Confidential Inquiry into Suicide. *British Medical Bulletin, 100*(1), 101-121.

2.Angst, J., Angst, F., & Stassen, H. H. (1999). Suicide risk in patients with major depressive disorder. *Journal of Clinical Psychiatry, 60*(2), 57-62.

3.Kucharska, J. (2017). Sexual and non-sexual trauma, depression, and self-esteem in a sample of Polish women: A cross-sectional study. *Clinical Psychology & Psychotherapy*, *24*(1), 186-194.

4.Akdemir, A., Dönbak Örsel, S., Dağ, İ., Türkçapar, M. H., İşcan, N., & Özbay, H. (1996). Validity, reliability, and clinical use of the Hamilton Depression Rating Scale (HDRS). *3P Journal, 4*, 251-259. [In Turkish]

5.Fowler, J. C. (2012). Suicide risk assessment in clinical practice: Pragmatic guidelines for imperfect assessments. *Psychotherapy, 49*(1), 81-90.

6.Beghi, M., & Rosenbaum, J. F. (2010). Risk factors for fatal and nonfatal repetition of suicide attempts: A critical appraisal. *Current Opinion in Psychiatry, 23*, 349-355.

7.Phillips, M. R., Yang, G., Zhang, Y., Wang, L., Ji, H., & Zhou, M. (2002). Risk factors for suicide in China: A national case-control psychological autopsy study. *The Lancet, 360*, 1728-1736.

8.Langhinrichsen-Rohling, J., Arata, C., Bowers, D., O'Brien, N., & Morgan, A. (2004). Suicidal behavior, negative affect, gender, and self-reported delinquency in college students. *Suicide and Life-Threatening Behavior, 34*(3), 255-267.

9.Thomas, H. V., Crawford, M., Meltzer, H., & Lewis, G. (2002). Thinking life is not worth living. *Social Psychiatry and Psychiatric Epidemiology, 37*, 351-356.

10.Molina, J. A., & Duarte, R. (2006). Risk determinants of suicide attempts among adolescents. *American Journal of Economics and Sociology, 65*(2), 407-434.

11.Whetstone, L. M., Morrissey, S. L., & Cummings, D. M. (2007). Children at risk: The association between perceived weight status and suicidal thoughts and attempts in middle school youth. *Journal of School Health, 77*(2), 59-66.

12.Harriss, L., Hawton, K., & Zahl, D. (2005). Value of measuring suicidal intent in the assessment of people attending hospital following self-poisoning or self-injury. *British Journal of Psychiatry, 186*, 60-66.

13.Kumar, C. T. S., Mohan, R., Ranjith, G., & Chandrasekaran, R. (2006). Gender differences in medically serious suicide attempts: A study from South India. *Psychiatry Research, 144*, 79-86.

14.Sabancıoğulları, S., Avcı, D., Doğan, S., Kelleci, M., & Ata, E. (2015). Suicide probability and influencing factors in inpatients of a psychiatric clinic. *Anatolian Journal of Psychiatry, 16*(3). [In Turkish]

15.Brown, G. K., Ten Have, T., Henriques, G. R., Xie, S. X., Hollander, J. E., & Beck, A. T. (2005). Cognitive therapy for the prevention of suicide attempts: A randomized controlled trial. *JAMA, 294*(5), 563-570.

16.Ng, Q. X., Yong, B. Z. J., Ho, C. Y. X., Lim, D. Y., & Yeo, W. S. (2018). Early life sexual abuse is associated with increased suicide attempts: An updated meta-analysis. *Journal of Psychiatric Research, 99*, 129-141.

17.Özgüven, H. D., Soykan, Ç., & Haran, S. (2003). Problematic areas and triggers in suicide attempts. *Crisis Journal, 11*(1), 13-24. [In Turkish]

0093 - Ladies First! A Signifcant Difference in Recovery Speed Among Various Psychiatric Disorders

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Objective

The healing process has several components including relief of the distress (symptom reduction), better health (cure of disease or disease management), and/or better quality of life. Most of the psychiatric disorders have different prevalences among men and women. However, studies on whether the recovery speed and rates differ between genders are lacking. Hence, here we aimed to investigate the recovery speed and rates among different genders in various psycihatric conditions.

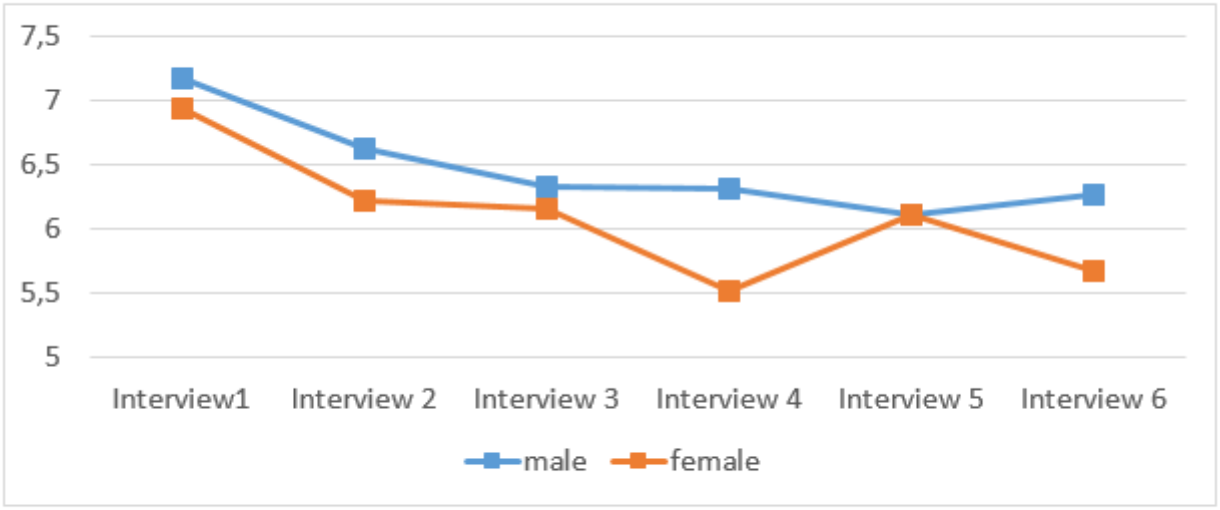
Methods

A total of 162 male and 158 male patients admitted to Moodist Hospital outpatient clinic between October 2024-December 2024 are included The patients had various psychiatric disorders including alcohol and substance use disorders, depressive disorders, Obsessive compulsive disorders,anxiety disorders, mood disorders and psychotic disorders.. MOI (Moodist Outcome Inventory) is applied to all patients during a 6 session follow up. MOI is a likert type, self report scale. Well-being, Mental State, Relationships and Participation in life-Taking responsibility aspects are evaluated in terms of the recovery process. Each item is scored between 0-4 points.

Results

Total MOI scores showed no differences between two genders suggesting a similar recovery rate (P>0,05) (Figure 1).

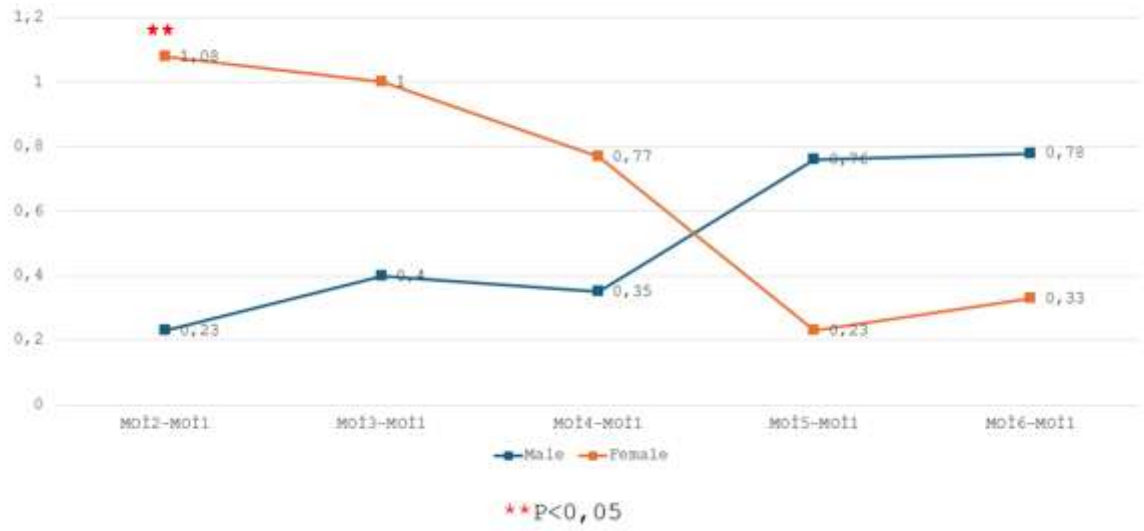
Figure1: MOI Total Scores by Gender



P>0,05

However, female patients had a statistically significant faster recovery period than male patients (P<0,05) (Figure 2).

Figure2: Recovery Rates by Gender



Discussion

The relationship between the clinician and the patient is known to effect the healing process. In literature, it is found that although men and women generally endorsed similar levels of psychosocial recovery, they may experience reflective and introspective healing processes differently.

One possible reason for this difference may result from the fact that women are more likely to feel, express, and derive psychological benefits from gratitude compared to men which may cause a faster establishment of the therapeutic bond.

So, similarly all patients in our study had similar recovery rates regardless of the psychiatric disorder type but female patients reached recovery faster suggesting a different gender based mechanism throughout the healing process.

A relatively small group of patients without specific disorder discrimination and lack of definite determinants explaining the reason for the rapid response rate in female patient group can be considered as our limitations. More detailed studies in larger groups investigating the reason of recovery speed are needed in order to establish certain results.

References

Di Blasi Z, Harkness E, Ernst E, Georgiou A, and Kleijnen J. Influence of context effects on health outcomes: a systematic review. *Lancet.* (2001) 357:757–62. doi: 10.1016/S0140-6736(00)04169-6

Kelley JM, Kraft-Todd G, Schapira L, Kossowsky J, and Riess H. The influence of the patient-clinician relationship on healthcare outcomes: a systematic review and metaanalysis of randomized controlled trials. *PLoS ONE.* (2014) 9:e94207. doi: 10.1371/journal.pone.0094207

Howe LC, Leibowitz KA, and Crum AJ. When your doctor "Gets It" and "Gets You": the critical role of competence and warmth in the patient-provider interaction. *Front Psychiatry.* (2019) 10:475. doi: 10.3389/fpsyt.2019.00475

Kashdan TB, Mishra A, Breen WE, Froh JJ. Gender differences in gratitude: Examining appraisals, narratives, the willingness to express emotions, and changes in psychological needs. *J Pers* 2009;77:691–730.

Luna, María José, et al. "Gender differences in psycho-social-spiritual healing." *Journal of Women's Health* 28.11 (2019): 1513-1521.

0094 - Association of *VKORC1* G-1639A Polymorphism With Neuropsychiatric Diseases: A Preliminary Study

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Introduction

Vitamin K is in the group of fat-soluble vitamins and was discovered in 1943 by Danish scientist Henrick Dam, who won the Nobel Prize for his studies on this vitamin[1, 2]. It is named 'Vitamin K', taking the first letter of the German word meaning 'Coagulation'. In initial studies, it was determined that it is an essential cofactor for the production of proteins involved in the regulation of blood clotting homeostasis and calcium metabolism in the human body [2]. Today, vitamin K is thought to be associated with osteoporosis, vascular calcification, osteoarthritis, diabetes, glycemic control, cancer and cardiovascular diseases [1-8]. In recent years, it has been observed that it has a role in the Central Nervous System (CNS), and its deficiency may cause the development and/or progression of dementia (Alzheimer type) and cognitive performance disorders[9].

Vitamin K is found in nature as K1 (phylloquinone), K2 (menaquinone) and as a synthetic analogue, K3 (menadione) [1, 10, 11]. The K2 form is produced by some animals, can be found in various fermented foods, and can occur from other forms of vitamin K in humans. The phylloquinone form is designated 'K', while the menaquinone form is designated 'MK-n'. The letter 'n' refers to the number of unsaturated isoprene units in the side chain. The length of the MK-n side chain can extend up to 65 carbons. For this reason, subgroups of the menaquinone form vary from MK-4 to MK-10 [1, 10].

Vitamin K serves as a cofactor in many biochemical pathways. The most important of these are vitamin K-dependent carboxylation reactions [8]. Vitamin K is required for γ-glutamyl carboxylation of all vitamin K-dependent proteins. The enzyme that catalyzes the conversion of glutamic acid (Glu) to γ-carboxyglutamic acid (Gla) is carboxylase, and this reaction facilitates the binding of calcium to vitamin K-dependent proteins. Hydroquinone, the reduced form of vitamin K, is involved in enzymatic carboxylation reactions[8, 10]. The main proteins dependent on vitamin K are hepatic coagulation proteins (Factor II-prothrombin-,VII, IX, is growth arrest specific protein 6 (Gas-6), which is involved in processes such as antiapoptotic, mitogenic and myelination[9, 12, 13].

In order for vitamin K to continue its cofactor function, the quinone form must be reduced to the quinol form. This transformation occurs with the vitamin K epoxide reductase complex subunit 1 enzyme (VKORC1). As a result, the VKORC1 gene plays a key role in maintaining the cofactor function of vitamin K [9].

In recent years, studies showing that vitamin K is involved in sphingolipid metabolism and brain physiology through the vitamin K-dependent Gas-6 protein, which protects nerve cells from β-amyloid (Aβ) or oxidative stress-induced neuronal apoptosis, have gained importance [14]. Sphingolipids have a polar structure and are found in the structure of the CNS cell membrane, and they play a role in neuronal differentiation and proliferation. Low vitamin K intake or low blood concentrations are associated with decreased cognitive performance or Alzheimer's Disease (AD) [9, 15].

Identification of modifiable risk factors and alleviating or eliminating the pathology by taking precautions have become important in the treatment of neuropsychiatric diseases. In our study, we aimed to determine the relationship between the VKORC1 G-1639A polymorphism, which causes a decrease in the biogenesis of vitamin K, which plays an important role as a cofactor, and the sociodemographic and clinical characteristics of patients with Schizophrenia, Bipolar disorder and Alzheimer's type dementia, and to produce information that can be used as a basis for further studies.

Methods

Subjects

We recruited a total of 200 volunteers with schizoprenia (n = 40), bipolar disorder (n = 40), alzheimer type dementia (n = 40) and without any neuropsychiatric disorder (n = 80) diagnosed at Aydin State Hospital. Each participant signed the informed consent form. The study was approved by Ethics Committee of Aydın Adnan Menderes University Non-Interventional Clinical Research and was carried out in full compliance with the Declaration of Helsinki.

Genomic DNA isolation

DNA isolation was performed from peripheral blood samples taken from volunteers using the HighPure PCR Template Preparation Kit (Roche Diagnostics) commercial kit, following the manufacturer's instructions. The concentration and purity of the isolated DNA samples were determined by measuring their absorbance at 260 and 280 nm wavelengths with the Multiskan SkyHigh Microplate Spectrophotometer (Thermo Scientific) device.

Genotyping of *VKORC1 G-1639A*

Real-time PCR assay for VKORC1 was performed on the Cobas z (Roche) instrument using Light Mix® for the detection of VKORC1 G1639A (TIB MOLBIOL GmbH, Berlin, Germany) according to the manufacturer's protocol. Wild-type VKORC1 G1639 exhibited a melting temperature of 52.6°C in channel 640. VKORC1 1639A allele variant exhibited a melting temperature of 61.3°C in channel 640.

Data Analysis

SPSS version 25.0 was used for data analysis. The Kolmogorov-Smirnov test was performed to determine whether the data followed a normal distribution and to assess whether parametric or non-parametric statistical analysis was required. One-way analysis of variance (ANOVA) was used to evaluate group differences for continuous variables, while the χ^2 test was applied for categorical variables. A p-value of <0.05 was considered statistically significant.

Results

The genotype and haplotype distributions of the VKORC1 G-1639A polymorphism were compared between case and control groups using the χ^2 test. To estimate risk, odds ratios (OR) and 95% confidence intervals (CI) were calculated based on four inheritance models: codominant, dominant, recessive, and overdominant. In the codominant and dominant models, the G/G genotype was used as the reference. For the recessive model, the G/G and G/A genotypes were used as the reference, and for the overdominant model, the G/G and A/A genotypes served as the reference.As evident from both the ratios and statistical analysis, the frequency of the homozygous A allele in patients with schizophrenia is twice as high as in controls. These findings represent preliminary data, and further analysis on Alzheimer's disease and bipolar disorder is currently ongoing.

Conclusions: Homozygous A allele of the VKORC1 G-1639A polymorphism has been observed at higher frequencies in patients with schizophrenia compared to controls, suggesting a potential genetic link between vitamin K metabolism and psychiatric disorders.

Identifying modifiable risk factors and understanding their contributions to the development of neuropsychiatric conditions is critical for advancing therapeutic strategies. This study aims to investigate the relationship between the VKORC1 G-1639A polymorphism and sociodemographic and clinical characteristics in patients with schizophrenia, bipolar disorder, and Alzheimer's-type dementia. By elucidating these associations, we seek to provide foundational data for future research and potential interventions targeting vitamin K metabolism as a modifiable factor in the treatment of these disorders.

References

[1] S.M. Plaza, L. ND, The anticancer effects of vitamin K, Alternative medicine review 8 (2003) 303-318.

[2] G.K. Schwalfenberg, Vitamins K1 and K2: The Emerging Group of Vitamins Required for Human Health, J Nutr Metab 2017 (2017) 6254836.

[3] J. Iwamoto, Vitamin K(2) therapy for postmenopausal osteoporosis, Nutrients 6 (2014) 1971-1980.

[4] A. Siltari, H. Vapaatalo, Vascular calcification, vitamin K and warfarin therapy–possible or plausible connection?, Basic & Clinical Pharmacology & Toxicology 122 (2018) 19-24.

[5] M.K. Shea, S.B. Kritchevsky, F.-C. Hsu, M. Nevitt, S.L. Booth, C.K. Kwoh, T.E. McAlindon, C. Vermeer, N. Drummen, T.B. Harris, The association between vitamin K status and knee osteoarthritis features in older adults: the Health, Aging and Body Composition Study, Osteoarthritis and cartilage 23 (2015) 370-378.

[6] S. Dahlberg, J. Ede, U. Schott, Vitamin K and cancer, Scand J Clin Lab Invest 77 (2017) 555-567.

[7] A.J. van Ballegooijen, J.W. Beulens, The Role of Vitamin K Status in Cardiovascular Health: Evidence from Observational and Clinical Studies, Curr Nutr Rep 6 (2017) 197-205.

[8] G. Suna, A. Ayaz, K vitamininin Kardiyovasküler Sağlık Üzerine Etkisi: Güncel Yaklaşımlar, Beslenme ve Diyet Dergisi 45 (2017) 61-69.

[9] L. Alisi, R. Cao, C. De Angelis, A. Cafolla, F. Caramia, G. Cartocci, A. Librando, M. Fiorelli, The relationships between vitamin K and cognition: a review of current evidence, Frontiers in neurology 10 (2019) 416803.

[10] J. DiNicolantonio, J. Bhutani, J. O'Keefe, The health benefits of vitamin K. Open Heart 2: e000300, 2015.

[11] P. Alam, S.K. Chaturvedi, M.K. Siddiqi, R.K. Rajpoot, M.R. Ajmal, M. Zaman, R.H. Khan, Vitamin k3 inhibits protein aggregation: Implication in the treatment of amyloid diseases, Sci Rep 6 (2016) 26759.

[12] M.S. El Asmar, J.J. Naoum, E.J. Arbid, Vitamin k dependent proteins and the role of vitamin k2 in the modulation of vascular calcification: a review, Oman Med J 29 (2014) 172-177.

[13] M. Shiraki, N. Tsugawa, T. Okano, Recent advances in vitamin K-dependent Gla-containing proteins and vitamin K nutrition, Osteoporosis and Sarcopenia 1 (2015) 22-38.

[14] M. Fenech, Vitamins Associated with Brain Aging, Mild Cognitive Impairment, and Alzheimer Disease: Biomarkers, Epidemiological and Experimental Evidence, Plausible Mechanisms, and Knowledge Gaps, Adv Nutr 8 (2017) 958-970.

[15] N. Presse, B. Shatenstein, M.-J. Kergoat, G. Ferland, Low vitamin K intakes in community-dwelling elders at an early stage of Alzheimer's disease, Journal of the American Dietetic Association 108 (2008) 2095-2099.

0112 - Autistic Traits and The Longitudinal Course of Panic Disorder: A Retrospective Study

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Objective

Milder autistic traits (mild cognitive impairments and mild language impairments) in family members of individuals with autism were considered to reflect an intermediate phenotype or to be an endophenotype for autism. Later on, this situation was started to be defined as the Broad Autism Phenotype (BAP) (3,4,5,6). However, given that autism is still considered to be a condition mainly associated with child health due to the early onset of the autism spectrum, subthreshold autistic features or milder clinical forms of ASD may be under-recognised in adulthood and may silently worsen the course of other comorbid disorders (7,8).

In recent years, there has been an increasing focus on the study of BAP characteristics in various psychiatric disorders, including social anxiety disorder, obsessive-compulsive disorder, bipolar disorder, and borderline personality disorder (8,9,10,11). This research has delved into the impact of these characteristics on the manifestation of these diseases.

In consideration of the elements that may overlap with autistic traits, including agoraphobia, other avoidance behaviours, differences in introceptive and other senses, and social-cognitive distortions observed in Panic Disorder (PD), the potential impact of BAP effects on PD is a subject that merits investigation.

The objective of this study was to ascertain the severity of autistic traits in PD participants using the Autism Spectrum Questionnaire (AQ) and to examine the relationship between the severity of autistic traits likely to be observed and the severity of disorder and treatment responses according to retrospective measurements of disorder severity through patient records.

Methods

Study Design

Patients admitted to the Psychiatry outpatient clinic of Dinar State Hospital with a diagnosis of PD are administered the Panic Disorder Severity Scale (PDSS) at the time of their initial admission. Treatment responses are evaluated on the PDSS in the first month of control interviews, and recorded in the patient files.

In the context of a longitudinal study conducted at the psychiatry outpatient clinic of Dinar State Hospital, a particular focus was placed on a subset of patients diagnosed with PD who had been admitted within the previous six months and demonstrated a consistent adherence to their follow-up appointments. Within this cohort, the Autism Spectrum Questionnaire (AQ) and PDSS scales were utilised as diagnostic tools. Patients who had not been admitted to an external centre or received psychotropic treatment (or psychotherapy) other than their current treatment within the last 1 year, and who agreed to participate in the study at the 6th month control visits, were included in the study. Once a sufficient number of participants had been obtained, a comparison was made of the sociodemographic data, such as age, gender, education level, family history, total and sub-scores of the AQ scale and PBSQ scores obtained at the first, 1st and 6th month visits.

Participants were selected based on the following inclusion criteria: Age between 18 and 65 years, Provision of informed consent, Regular attendance (within the last six months) at Dinar State Hospital's psychiatry clinic, Meeting DSM-5 criteria for PD in the last six months. Exclusion criteria included: History or current diagnosis of psychotic disorder, bipolar disorder, or alcohol/substance use disorder, Cognitive impairments preventing completion of the scales (e.g., dementia, intellectual disability).

Statistical Analysis

All statistical analyses were carried out using IBM SPSS (25) package programme. Bonferroni correction was applied for main effects in repeated variance analyses. For all analyses, the results were considered significant at 0.05 alpha level and the effect size was reported as partial eta square.

In all parametric analyses, Skewness and Kurtosis values were examined to ensure normal distribution and outlier analysis was applied where normality was not present. Another assumption, Greenhouse-Geisser correction, which is a conservative correction, was applied under conditions where sphericity was violated and the results are reported. The comparison of the scale data was carried out as analysis of variance (ANOVA) for repeated measures.

Results

Sociodemographic Data

In this study, 51 participants diagnosed with panic disorder were selected from the outpatient psychiatry clinic of Dinar State Hospital. The selection criteria included meeting the criteria for enrolment over the previous six months and maintaining regular follow-up attendance. The participants were invited to take part in the study during the sixth-month follow-up visits. Informed consent documents were obtained from the volunteers who participated in the study. Ethics committee approval of this study was obtained from AFSÜ Ethics Committee on 13.12.2024 with meeting number 2024/11.

The mean age of the 51 participants who consented to participate in the study was 42.20 years. The distribution of participants by gender was as follows: 19 were male and 32 were female. The mean duration of education was 9.61 years, and 19 of the participants had a family history of psychiatric disorder (see Table 1).

Table 1.

Age (SD)	42,20 (10,02)
Gender (Male)	**19/51**
Education Level (SD)	9,61 (3,69)
Family history	**19/51**

Scale Data

In the PDSS evaluations administered to the participants, an average total score of 21.6 (agoraphobia 2.78) was observed at the initial application; an average total score of 1 2.20 (agoraphobia 1.61) at the 1st month controls; and received an average total score of 3.90 (agoraphobia 0.59) at the 6th month controls (See Table 2).

Table 2. PDSS Data (Agoraphobia)

	0. month	1. month	6. month
PDSS	**21,61(4,10)**	**12,20(5,70)**	**3,90 (4,36)**
(Agoraphobia)	2,78(0,87)	1,61 (0,91)	0,59 (0,75)

The average total score of the AQ administered to the participants was 22.61, and the average scores of the subscale evaluations were 4.67 for Attention Shifting, 5.35 for Attention to Detail, 4.71 for Social Cognition, 3.25 for Communication, and 4.67 for Imagination (See Table 3).

Table 3. AQ Total and Subscores (SD)

Total	Attention Shifting	**Attention to Detail**	Social Skill	**Communication**	Imagination
22,61 (6,64)	4,67 (2,67)	**5,35 (1,74)**	4,71 (2,16)	**3,25 (1,74)**	4,67 (1,40)

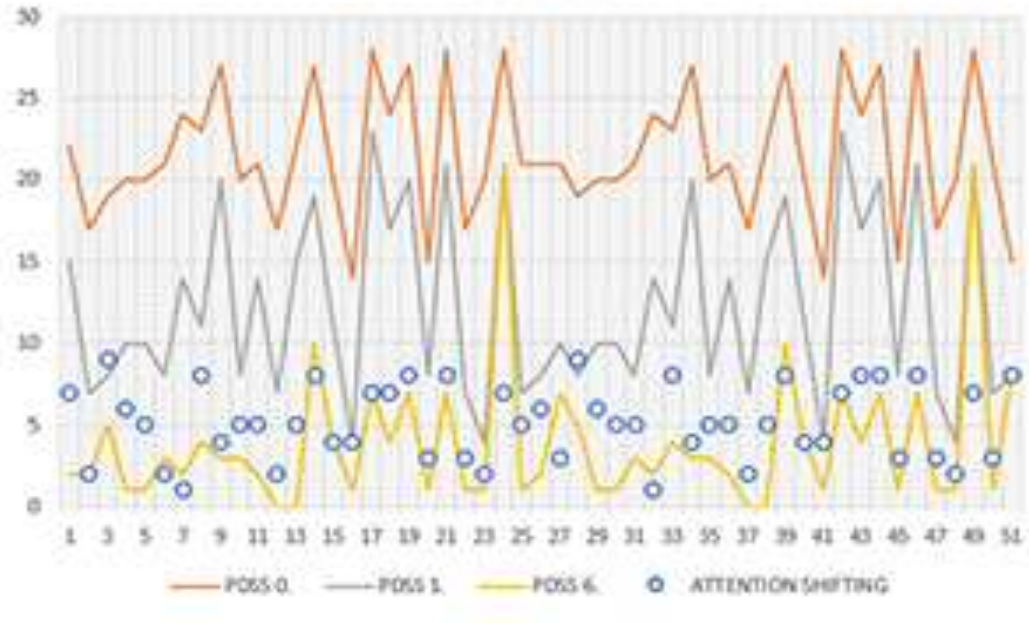
PDSS Data and Analysis

In the repeated measures ANOVA analyses, it was evident that the linear change of the PDSS total scores in three time periods was statistically significant ($F(1,49)=104.628$, $p<.001$, $\eta p2=.681$).

A significant relationship was identified between the linear change in PDSS total scores over three time periods and the AQ Attention Shifting subscores of the participants ($F(1,49)=4.375$, $p=.042$, $\eta p2=.090$)(See Figure 1).

However, no significant correlation was found between the linear change of the PBSS total scores in three time periods and the participants' AQ Total and Imagination, Attention to Detail, Communication, Social Skills subscores ($F's<2.278$, $p's>0.126$).

FIGURE 1.



Agoraphobia Sub-score Analysis

In the repeated measures ANOVA analyses, it was observed that the linear change of the PDSS Agoraphobia sub-scores in three time periods was statistically significant ($F(1,49)=44.375$, $p<.001$, $\eta p2=.475$).

The linear change of agoraphobia sub-scores in three time periods and the participants' AQ Total ($F(1,49)=4.606$, $p=.037$, $\eta p2=.095$) and Communication ($F(1,49)=4.453$, $p=.041$, $\eta p2=.092$), Attention to Detail ($F(1,49)=4.253$, $p=.045$, $\eta p2=.088$), and Attention Shifting ($F(1,49)=7.192$, $p=.010$, $\eta p2=.140$).

No significant correlation was found between the linear change of the Agoraphobia scores in three time periods and the participants' Imagination and Social Skills sub-scores ($F's<1.791$, $p's>0.181$).

Discuission

The analyses revealed a significant correlation between PD severity at baseline, three months, and six months, and the severity of autistic traits in the domain of attention shifting. This suggests that autistic traits may be identifiable in individuals with PD and that their severity could influence treatment response.

Statistically significant findings were also observed in the relationship between linear changes in agoraphobia severity and autistic traits. A significant correlation was found between the degree of improvement in agoraphobia severity and AQ total score, as well as the subdomains of attention shifting, communication, and social skills. These results suggest that autistic traits may have a more pronounced impact on agoraphobic avoidance behaviors.

The findings of this study highlight potential shared mechanisms between autistic traits and factors contributing to treatment resistance in PD, including high baseline disorder severity, severe agoraphobic avoidance, delayed pharmacological response, and comorbid psychiatric disorders (1). Notably, the presence of more pronounced autistic traits may influence treatment resistance in multiple domains, with agoraphobic avoidance being particularly affected.

Moreover, these findings align with previous research on autistic traits in psychiatric disorders, including Social Anxiety Disorder and Obsessive-Compulsive Disorder (8, 9,10,11). The presence of subclinical autistic traits in PD may contribute to individual differences in treatment response and disorder progression. Future research should further investigate the underlying neurobiological and cognitive mechanisms linking autistic traits to PD severity and treatment outcomes.

Limitations

The study's reliance on self-report measures and the predominance of female participants may limit generalizability. Additionally, the absence of a control group restricts comparisons. Future studies should include larger samples, control groups, and prospective designs.

Conclusion

This study demonstrates a significant relationship between autistic trait severity and disorder severity reduction in PD, particularly in agoraphobia. Recognizing autistic traits in PD populations may facilitate individualized treatment approaches, improving therapeutic outcomes.

References

1. Bandelow, B., & Rüther, E. (2004). Treatment-resistant panic disorder. CNS spectrums, 9(10), 725–739. https://doi.org/10.1017/s1092852900022379
2. Robinson EB. Evidence That Autistic Traits Show the Same Etiology in the General Population and at the Quantitative Extremes (5%, 2.5%, and 1%). Arch Gen Psychiatry. 2011 Nov 1;68(11):1113.
3. Donati, M. A., Berrocal, C., Primi, C., Petracchi, G., Carpita, B., Cosci, F., Ruiz, A., Carmassi, C., & Dell'Osso, L. (2019). Measuring subthreshold autistic traits in the general population: Psychometric properties of the Adult Autism Subthreshold Spectrum (AdAS Spectrum) scale. Psychiatry research, 281, 112576. https://doi.org/10.1016/j.psychres.2019.112576
4. Losh M, Adolphs R, Piven J. The Broad Autism Phenotype. In: Autism Spectrum Disorders. Oxford University Press; 2011. p. 457–76.
5. Pine, D. S., Guyer, A. E., Goldwin, M., Towbin, K. A., & Leibenluft, E. (2008). Autism spectrum disorder scale scores in pediatric mood and anxiety disorders. Journal of the American Academy of Child and Adolescent Psychiatry, 47(6), 652–661.
6. Rosbrook, A., & Whittingham, K. (2010). Autistic traits in the general population: What mediates the link with depressive and anxious symptomatology? Research in Autism Spectrum Disorders, 4, 415–424.
7. Kanne, S. M., Christ, S. E., & Reiersen, A. M. (2009). Psychiatric symptoms and psychosocial difficulties in young adults with autistic traits. Journal of Autism and Developmental Disorders, 39, 827–833.
8. Carpita, B., Nardi, B., Bonelli, C., Massimetti, E., Amatori, G., Cremone, I. M., Pini, S., & Dell'Osso, L. (2024). Presence and correlates of autistic traits among patients with social anxiety disorder. Frontiers in psychiatry, 14, 1320558. https://doi.org/10.3389/fpsyt.2023.1320558
9. Dell'Osso L, Carpita B, Bertelloni CA, Diadema E, Barberi FM, Gesi C, et al. Subthreshold autism spectrum in bipolar disorder: prevalence and clinical correlates. Psychiatry Res. (2019) 281:112605. doi: 10.1016/j.psychres.2019.112605
10. Dell'Osso L, Cremone IM, Amatori G, Cappelli A, Cuomo A, Barlati S, et al. Investigating the relationship between autistic traits, ruminative thinking, and suicidality in a clinical sample of subjects with bipolar disorder and borderline personality disorder. Brain Sci. (2021) 11:621. doi: 10.3390/brainsci11050621
11. Mito H, Matsuura N, Mukai K, Yanagisawa Y, Nakajima A, Motoyama M, et al. The impacts of elevated autism spectrum disorder traits on clinical and psychosocial features and long-term treatment outcome in adult patients with obsessive-compulsive disorder. Compr Psychiatry. 2014 Oct;55(7):1526–33.

0114 - The Impact of Sleep Problems on Executive Function in Boys With ADHD: A Comparative Study

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Introduction

Attention-Deficit/Hyperactivity Disorder (ADHD) is one of the most prevalent neurodevelopmental disorders in children, characterized by symptoms of inattention, hyperactivity, and impulsivity. These symptoms often interfere with various aspects of daily life, including academic achievement, social relationships, and overall well-being. Executive functions, encompassing cognitive skills such as working memory, planning, and emotional regulation, are frequently impaired in children with ADHD. These deficits exacerbate the challenges faced by affected children, making the evaluation and management of executive functioning a critical focus in ADHD research and treatment (1).

Sleep, an essential physiological process for cognitive development and executive function, plays a crucial role in the functioning of executive processes. A significant body of research highlights that children with ADHD often experience sleep disturbances, such as difficulties in initiating or maintaining sleep, shorter sleep duration, and poor sleep quality (2). These sleep problems can further impair cognitive performance, potentially exacerbating deficits in executive functioning in children already at risk due to ADHD. Despite these established connections, the intricate relationship between sleep disturbances and executive function deficits in children with ADHD requires further exploration (3).

The current study investigates the impact of sleep problems on executive functions in boys diagnosed with ADHD. It focuses on comparing executive function profiles between boys with and without clinically significant sleep problems. It was hypothesized that boys with ADHD who experience clinically significant sleep problems would exhibit lower executive functioning compared to boys with ADHD who do not have clinically significant sleep problems.

Methods

Sociodemographic Data Form (SDF): The form was created by the researcher. It includes information such as the age of the children, the age of their parents, and the years of education of their parents.

The Schedule for Affective Disorders and Schizophrenia for School- Age Children-Present and Lifetime Version, DSM-5 November 2016- Turkish Adaptation (SADS-5-T): The scale is a semi-structured interview tool used to assess past and present psychiatric conditions of children and adolescents. Scoring is done by combining information from the child, parent, and school with clinician observation. The scale was first designed in 1997 and later revised to be compatible with DSM-5. A Turkish version of the scale is also available (4).

Disruptive Behavior Disord0114 - ers Screening and Assessment Scale based on DSM-IV (Turgay-IV): The scale developed according to DSM-IV questions inattention with nine items, hyperactivity with six items, impulsivity with three items, oppositional defiant disorder with eight items and conduct disorder with 15 items. The scale was developed by transforming the DSM-IV criteria into question form without changing their meaning. It was filled out by the parents of children and adolescents diagnosed with ADHD. Each item has the options 0=not at all, 1=just a little, 2=pretty much, 3=very much. Turkish validity and reliability study was conducted (5).

Children‘s Sleep Habits Questionnaire (CSHQ): The questionnaire was developed by Owens et al. and 33 functional items were determined and the short form of the questionnaire was obtained. The Turkish validity-reliability study of the questionnaire was conducted and the Cronbach alpha coefficient was reported as 0.78. The cut-off point was determined as 41 points. Values of 42 and above indicate clinically significant sleep problems in children (6).

Behavior Rating Inventory of Executive Function (BRIEF) Parent Form: The form is an 86-item Likert-type behavior rating scale that assesses the frequency with which the child demonstrates difficulties (Never, Sometimes,

Often). It consists of eight subscores assessing dimensions of executive function (inhibit, shift, emotional control, initiate, working memory, plan/organize, organization of materials and task monitor) and a total score. Subscale scores contribute to three index scores (Behavioral Regulation Index (BRI), Metacognition Index (MI), and Global Executive Composite (GEC)). The form has been adapted for Turkish (7).

Procedure: Boys who applied to Sakarya Education and Research Hospital Child Psychiatry Outpatient Clinic and were diagnosed with ADHD after psychiatric interview were included in the study. The researcher completed the SDF and SADS-5-T. The parents of the boys also filled in the Turgay-IV, CSHQ and BRIEF forms. Boys with a CSHQ score of 42 and above constituted the case group, and boys with a CSHQ score below 42 constituted the control group. Data were analyzed with IBM SPSS Statistics version 27.0 software. Data analyses included independent samples t-tests to compare BRIEF scores between groups.

All children and their families who participated in the study completed written informed consent. All study procedures were conducted in accordance with the Declaration of Helsinki. The Sakarya University Faculty of Medicine Ethics Committee approved the study.

Results

The study included 35 boys diagnosed with ADHD. Two cases were excluded from the study due to missing data. The mean age of the children was 9.1±1.3 years, the mean age of their mothers was 35.4±5.8 years, and the mean age of their fathers was 40.9±8.7 years. The mean years of education of their mothers was 9.7±3.7 years and the mean years of education of their fathers was 9.1±3.3 years. The mean inattention subscore and the mean hyperactivity/impulsivity subscore of the Turgay-IV were 18.0±5.3 and 18.3±6.4, respectively.

The mean CSHQ score of the children was 43.2±6.2. The group with clinically significant sleep problems (CSHQ≥42; case group) consisted of 20 (57.1%) cases and the group without clinically significant sleep problems (CSHQ<42; control group) consisted of 15 (42.9%) cases.

Children with clinically significant sleep problems had significantly higher BRIEF total scores, all BRIEF subscores, and all BRIEF index scores compared to the control group. Comparisons of executive functions in children with and without clinically significant sleep problems are presented in Table 1.

Table 1. Comparison of executive functions of children with and without clinically significant sleep problems

Variables	Case group Mean±SD (n=20)	Control group Mean±SD (n=15)	Statistics (*t*)	*p*
Inhibit	32.0±6.2	25.4±5.5	3.259	**.003**
Shift	22.3±3.9	18.7±2.9	2.995	**.005**
Emotional control	22.8±4.6	18.7±2.1	3.462	**.002**
Initiate	17.9±3.5	14.7±2.7	2.920	**.006**
Working memory	25.8±3.4	21.9±4.1	3.045	**.005**
Plan/organize	35.3±5.2	28.6±6.5	3.352	**.002**
Organization of materials	18.4±3.9	15.0±4.8	2.269	**.030**
Task monitor	19.6±2.9	16.3±3.2	3.206	**.003**
Behavioral regulation index	77.0±12.7	62.9±8.7	3.730	**<.001**
Metacognition index	116.9±15.6	96.5±18.5	3.532	**.001**
Global executive composite	192.3±24.2	154.4±24.4	3.970	**<.001**
Total score	165.6±20.2	136.5±20.5	4.201	**<.001**

CSHQ: Children‘s sleep habits questionnaire, SD: Standard deviation.

Discussion

The findings of this study underscore the significant influence of sleep problems on executive functioning in boys diagnosed with ADHD. As hypothesized, boys with clinically significant sleep disturbances exhibited more pronounced deficits in executive function compared to their peers without such issues. This outcome aligns with previous research emphasizing the critical role of sleep in cognitive processes and executive control (2). Sleep disturbances may exacerbate existing challenges related to ADHD, compounding deficits in areas such as inhibition, working memory, and emotional regulation (3).

The results revealed that boys with ADHD and sleep problems scored significantly higher on all subscales and composite scores of the BRIEF. These findings suggest that the interplay between sleep quality and ADHD symptomatology profoundly affects both behavioral regulation and metacognitive abilities (8). For example, impairments in the "inhibit" and "emotional control" subscales indicate difficulties in managing impulses and regulating emotions, which are essential for adaptive functioning in social and academic settings. Similarly, deficits in "working memory" and "plan/organize" highlight challenges in maintaining focus, organizing tasks, and planning effectively, all of which are exacerbated by poor sleep quality (9).

The observed differences could be attributed to the role of sleep in restoring brain function, particularly in areas responsible for executive processes, such as the prefrontal cortex. Poor sleep disrupts neural plasticity and reduces the efficiency of synaptic communication, which are essential for optimal cognitive performance (10). Children with ADHD are already at a disadvantage due to structural and functional differences in the prefrontal cortex, making them more susceptible to the cognitive impairments caused by inadequate sleep.

These findings have important clinical implications. Addressing sleep disturbances in children with ADHD could significantly improve executive functioning and, by extension, their quality of life. Behavioral interventions targeting sleep hygiene, along with appropriate pharmacological treatments, when necessary, may be effective in mitigating these deficits. Furthermore, parents and caregivers should be educated about the importance of establishing consistent sleep routines and minimizing environmental factors that disrupt sleep.

This study highlights the need for further research to explore the bidirectional relationship between sleep and executive functioning in ADHD. Longitudinal studies investigating how improvements in sleep quality influence executive functioning over time would provide deeper insights into causal relationships. Additionally, exploring gender differences and including diverse populations could enhance the generalizability of findings.

In conclusion, this study reinforces the critical role of sleep in managing executive functions in ADHD. Comprehensive intervention strategies that address both sleep and executive functioning deficits could significantly enhance therapeutic outcomes for children with ADHD, paving the way for more effective and holistic care.

References

1. Song Y, Fan B, Wang C, Yu H. Meta-analysis of the effects of physical activity on executive function in children and adolescents with attention deficit hyperactivity disorder. PLoS One. 2023;18(8):e0289732.
2. Craig SG, Weiss MD, Hudec KL, Gibbins C. The Functional Impact of Sleep Disorders in Children With ADHD. J Atten Disord. 2020;24(4):499-508.
3. Lambek R, Thomsen PH, Sonuga-Barke EJS, Jennum P, Sorensen AV. The Association between Sleep Problems and Neuropsychological Deficits in Medication-naive Children with ADHD. Behav Sleep Med. 2022;20(4):429-41.
4. Ünal F, Öktem F, Çetin Çuhadaroğlu F, Çengel Kültür SE, Akdemir D, Foto Özdemir D, et al. Reliability and Validity of the Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version, DSM-5 November 2016-Turkish Adaptation (K-SADS-PL-DSM-5-T). Turk Psikiyatri Dergisi. 2019;30(1):42-50.
5. Ercan ES. Development of a test battery for the assessment of attention deficit hyperactivity disorder. Turk J Child Adolesc Psychiatry. 2001;8:132-44.
6. Fiş NP, Arman A, Ay P, Topuzoğlu A, Güler AS, Gökçe İmren S, et al. Çocuk uyku alışkanlıkları anketinin Türkçe geçerliliği ve güvenilirliği. Anadolu Psikiyatri Dergisi. 2010;11(2):151-60.
7. Batan SN, Öktem-tanör Ö, Kalem E. Yönetici İşlevlere Yönelik Davranış Değerlendirme Envanterinin (YİYDDE) sağlıklı bir Türk örneklemde güvenilirlik ve geçerlilik çalışması. İlköğretim Online. 2011;10(3):894-904.
8. Shen C, Luo Q, Chamberlain SR, Morgan S, Romero-Garcia R, Du J, et al. What Is the Link Between Attention-Deficit/Hyperactivity Disorder and Sleep Disturbance? A Multimodal Examination of Longitudinal Relationships and Brain Structure Using Large-Scale Population-Based Cohorts. Biol Psychiatry. 2020;88(6):459-69.
9. Carpena MX, Matijasevich A, Loret de Mola C, Santos IS, Munhoz TN, Tovo-Rodrigues L. The effects of persistent sleep disturbances during early childhood over adolescent ADHD, and the mediating effect of attention-related executive functions: Data from the 2004 Pelotas Birth Cohort. J Affect Disord. 2022;296:175-82.
10. Raven F, Van der Zee EA, Meerlo P, Havekes R. The role of sleep in regulating structural plasticity and synaptic strength: Implications for memory and cognitive function. Sleep Med Rev. 2018;39:3-11.

0125 - Post-Weaning Social Isolation Stress Leads to Behavioral Impairments: A Focus on the Alterations of the Hippocampus and Prefrontal Cortex

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Objective

Stressful experiences in early life have been linked to increased reactivity to stress, impaired cognitive function, and the development of various neuropsychiatric disorders in adulthood. Despite the critical role of adolescence in brain maturation—particularly in the frontal lobe and hippocampus—relatively few studies have investigated the effects of stress during this period following weaning. One well-established model of early-life adversity is post-weaning social isolation stress, in which experimental animals are housed individually, thereby being deprived of social play, visual and tactile contact. This paradigm induces reproducible and long-lasting behavioral and neurobiological changes in adulthood [1]. In the present study, a post-weaning social isolation model was conducted to investigate the behavioral and molecular consequences of social isolation during early postnatal brain development. Furthermore, given the increasing prevalence of chronic social isolation due to factors such as the 2019 novel coronavirus pandemic and modern living conditions, we sought to explore its underlying mechanisms. Understanding the long-term neurobiological consequences of social isolation is crucial in this context. Therefore, we examined the effects of chronic social isolation stress on cognitive functions, as well as depression-like, anxiety-like, and obsessive-compulsive-like behaviors in adulthood, with a particular focus on molecular alterations in the hippocampus and prefrontal cortex (PFC), two critical structures in the limbic system that interact in cognitive functions, regulation of mood and stress response.

Methods

All procedures in this study were approved by the Kocaeli University Animal Experiments Local Ethics Committee. In this context, the rats were housed under standard laboratory conditions and provided with food and water ad libitum. Male Wistar albino rats were randomly assigned to either group-rearing or isolation-rearing following weaning at postnatal day 21. The social isolation stress procedure involved housing in individual cages without visual and tactile stimulation throughout the 8-week isolation procedure [1,2]. Group-rearing controls were socially housed with 3 rats/per cage and allowed to maintain visual and tactile contact. Body weights were recorded at the beginning and end of the isolation procedure. The percentage of body weight change was calculated. Subsequent to the conclusion of the 8-week isolation period, the rats were subjected to a series of behavioral tests. These included the locomotor activity test, the elevated plus maze test (EPM), the forced swim test (FST), the passive avoidance test (PAT), the Morris water maze test (MWMT), and the marble-burying test (MBT) [2–4]. The tests were recorded using video-tracking software, and were administered between 09:00 and 13:00, with the rats' group or isolated housing conditions remaining unaltered. Initially, the total locomotor activity scores were recorded for a period of five minutes within a plexiglass activity cage. Anxiety-like behaviors were evaluated by measuring the time spent in the open arms within 5 minutes by rats placed in the centre of the platform consisting of two equal open and two closed arms and a centre in the EPM test. Depression-like behaviors were assessed by measuring the durations of immobility and struggling in the test cylinder in which they were forced to swim on the test day in the FST. Emotional and spatial memory functions were assessed on the test days following the training days for the PAT and MWMT tests, respectively, by measuring the time spent entering the dark compartment (retention time) in the PAT and the time spent in the target quadrant where the platform was previously located in the MWMT. Obsessive-compulsive-like behavior was evaluated by increased marble burying behavior in MBT. After the administration of behavioral tests, samples of the hippocampus and PFC were collected under ketamine/xylazine anesthesia and then subjected to a series of analyses to determine the potential mechanisms

underlying behavioral impairments induced by post-weaning social isolation stress. The evaluation of BDNF levels in the hippocampus and PFC was performed using the ELISA method. The present study employed a quantitative real-time PCR method to examine BDNF, TNF-α, iNOS, SOD-1, HO-1, RAGE, and PPAR-γ gene expression levels in the hippocampus and the prefrontal cortex. The Student's t-test was employed to determine significant differences between groups. *P*-values of less than 0.05 were considered to be statistically significant.

Results

The percentage of body weight change in isolated-rearing rats was found to be significantly higher than in group-housed rats (*P*=0.0396, not shown). In the EPM test, isolation-rearing rats spent the majority of their time in closed arms, whereas the time spent in open arms was significantly shorter than in the group-rearing group, suggesting an anxiety-like behavior. In addition to inducing anxiety-like behavior, post-weaning social isolation led to the emergence of symptoms of hopelessness, a key feature of major depressive disorder. This was evidenced by an increase in the duration of immobility and a decrease in the duration of struggle in the FST test in comparison with group-reared controls. Furthermore, isolation-rearing rats exhibited obsessive-compulsive-like behaviors in the marble burying test, burying a greater number of marbles than group-rearing rats. This statistically significant pattern of anxiety-like, depression-like, and obsessive-compulsive-like behaviors, shown in Figure 1, was observed without any difference in total locomotor activity scores compared to group-rearing controls (*P*=0.5656, not shown). As shown in Figure 1, the results also indicated that chronic exposure to social isolation stress significantly decreased the retention latency in the PAT and the time spent in the target quadrant in the MWMT, suggesting spatial and emotional memory impairments.

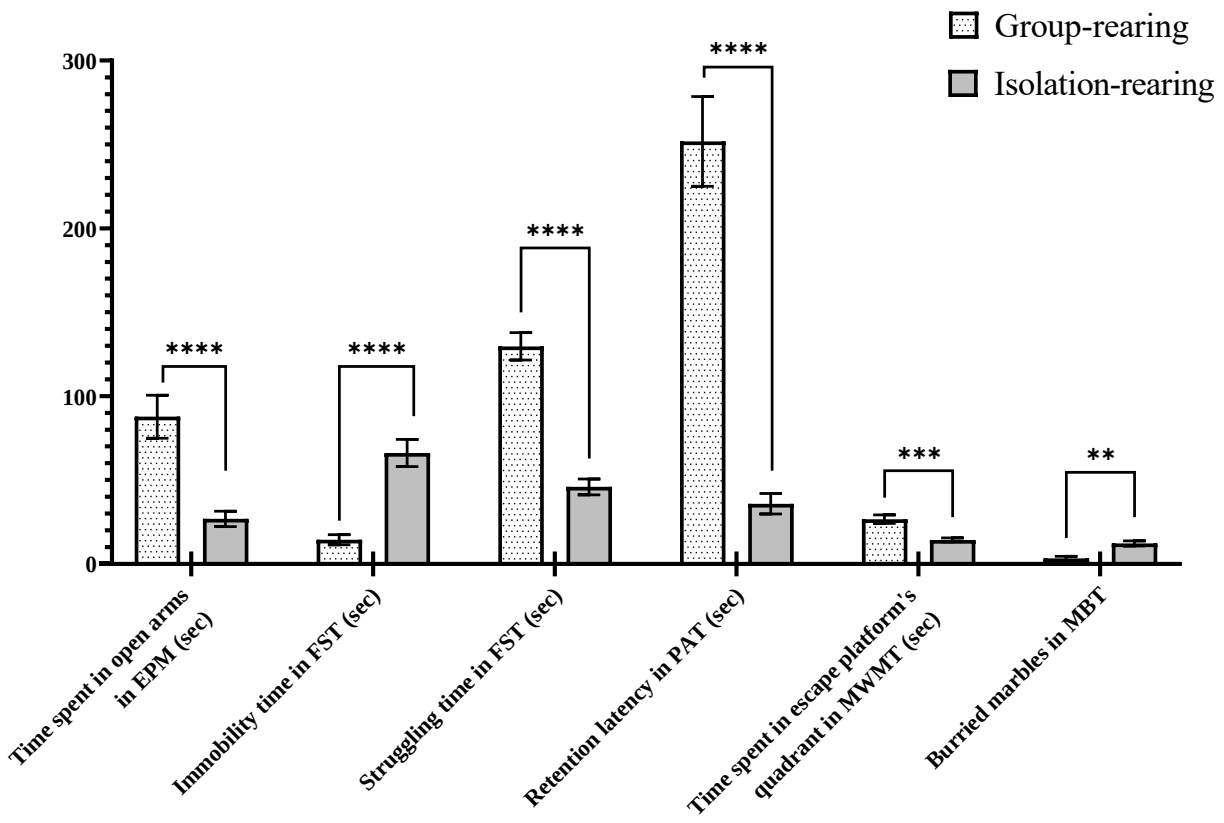


Figure 1. Behavioral results of group-rearing and isolation-rearing rats from the elevated plus maze test, the forced swim test, the passive avoidance test, the Morris water maze test, and the marble-burying test, respectively. Data was expressed as mean±SEM. The t-test results were significant at *****P*<0.01, ******P*<0.001, *******P*<0.0001 compared to group-rearing rats.

The alterations in the hippocampus and PFC tissues induced by post-weaning social isolation stress were analyzed at the molecular level by ELISA and qRT-PCR (Table 1), and the findings are outlined below in comparison with the group-rearing controls;

1. The ELISA findings revealed a significant decrease in BDNF concentration (in milligrams per microgram protein of sample) in both the PFC (***P<0.001) and the hippocampus (**P<0.01).

2. Isolation rearing led to a significant increase in the BDNF mRNA fold change relative to the housekeeping gene (ActB) in the PFC (*P<0.05), while there was a decrease in the hippocampus, though this was not significant (P>0.05).

3. The fold change of TNF-α and iNOS mRNA expression levels relative to ActB significantly increased in the PFC, respectively *P<0.05 and **P<0.01. However, this increase was insignificant in the hippocampus (P>0.05).

4. The mRNA expression level of SOD-1, which encodes the enzyme superoxide dismutase with antioxidant activity, was found to increase in both hippocampus (**P<0.01) and PFC (****P<0.0001).

5. Peroxisome proliferator-activated receptor gamma (PPARγ) mRNA expression level significantly decreased in the PFC (****P<0.0001), but there was a significant increase in the hippocampus (****P<0.0001).

6. Receptor for advanced glycation endproducts (RAGE) mRNA expression level significantly decreased in the PFC (****P<0.0001), while it was significantly increased in the hippocampus (**P<0.01).

Table 1. ELISA and qRT-PCR findings from prefrontal cortex and hippocampus samples of isolation-rearing rats compared with group-rearing controls, expressed as↑: increased level or ↓: decreased level at *P<0.05, **P<0.01, ***P<0.001, ****P<0.0001.

		Prefrontal Cortex	Hippocampus
mg/µg protein of the sample	BDNF	↓***	↓**
fold change mRNA relative to ActB	BDNF	↑*	ns
	SOD-1	↑****	↑**
	TNF-α	↑*	ns
	iNOS	↑**	ns
	PPARγ	↓****	↑****
	RAGE	↓****	↑**

Discussion

The findings of this study revealed that post-weaning social isolation stress is a contributing factor to the development of anxiety-like, depression-like, and obsessive-compulsive-like behaviors, as well as cognitive impairments [1,3]. Furthermore, the prefrontal cortex and hippocampus, which play pivotal roles in cognitive functions and mood regulation, were found to be differentially impacted by social isolation stress [3]. In contrast to the behavioral and cognitive impairments that develop in rodents exposed to chronic stress in adulthood, which are usually associated with reduced BDNF levels, our results, in support of previous studies [4,5], showed that pre-adolescent rats exposed to post-weaning social isolation stress increased BDNF mRNA expression in the PFC but tended to decrease in the hippocampus. The observed increase in BDNF and SOD-1 levels in the PFC may be indicative of an early compensatory response and resilience to oxidative stress, resulting in a decrease in RAGE expressions [6]. However, an increase in BDNF and SOD-1 gene expression could not protect against social isolation stress in this condition, as evidenced by decreased BDNF protein levels (mg/µg) and increased neuroinflammatory and nitrosative stress markers in the PFC. Herein, in comparison with the hippocampus, the PFC may demonstrate increased susceptibility to neuroinflammation, oxidative and nitrosative stress. The

suggested effects of post-weaning social isolation-induced oxidative, nitrosative and neuroinflammatory status on the hippocampus less than on the PFC may be explained by the induction of anti-oxidant or anti-inflammatory pathways mediated by PPARγ, a nuclear hormone receptor that regulates the transcription of genes involved in inflammatory processes, oxidative stress, apoptosis and differentiation in the brain and its activation has been associated with neuroprotective effects. In conclusion, post-weaning social isolation (SI) significantly affects both the hippocampus and PFC, but these regions exhibit distinct vulnerabilities and adaptive mechanisms. Our findings suggest that interventions targeting neuroprotection, oxidative stress management and PPARγ activation in those brain regions may help reduce the detrimental effects of post-weaning social isolation stress. Further studies examining region-specific neurotrophic, oxidative and nitrosative changes in social isolation-induced behavioral disorders are needed.

Keywords: social isolation stress, oxidative stress, neuroinflammation, prefrontal cortex, hippocampus, rat.

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References

1. Fone KCF, Porkess MV. Behavioural and neurochemical effects of post-weaning social isolation in rodents-relevance to developmental neuropsychiatric disorders. Neurosci Biobehav Rev. 2008 Aug;32(6):1087–102.
2. Harvey BH, Regenass W, Dreyer W, Möller M. Social isolation rearing-induced anxiety and response to agomelatine in male and female rats: Role of corticosterone, oxytocin, and vasopressin. J Psychopharmacol. 2019 May;33(5):640–6.
3. Zlatković J, Todorović N, Bošković M, Pajović SB, Demajo M, Filipović D. Different susceptibility of prefrontal cortex and hippocampus to oxidative stress following chronic social isolation stress. Mol Cell Biochem. 2014 Aug;393(1–2):43–57.
4. Han X, Wang W, Xue X, Shao F, Li N. Brief social isolation in early adolescence affects reversal learning and forebrain BDNF expression in adult rats. Brain Res Bull. 2011 Oct 10;86(3–4):173–8.
5. Li M, Du W, Shao F, Wang W. Cognitive dysfunction and epigenetic alterations of the BDNF gene are induced by social isolation during early adolescence. Behav Brain Res. 2016 Oct 15;313:177–83.
6. Geddie H, Cairns M, Smith L, van Wyk M, Beselaar L, Truter N, et al. The impact of chronic stress on intracellular redox balance: A systems level analysis. Physiol Rep. 2023 Apr 5;11(7):e15640.

0130 - Efficacy and Safety of an Accelerated Deep TMS Protocol Targeting DMPFC with a Double-Cone Coil in Treatment-Resistant Depression

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Objective

Transcranial Magnetic Stimulation (TMS) is a neuromodulation technique that has been used for treatment-resistant depression over the past 20 years. Conventionally, it is applied to the dorsolateral prefrontal cortex (DLPFC) once daily with protocols lasting 20-40 minutes per session [1]. Since its early implementation, various modifications have been made to enhance treatment efficacy and reduce costs. To shorten treatment duration, an intermittent theta burst stimulation (iTBS) protocol, which reduces session length to as short as 3 minutes, has been developed. Additionally, coils capable of stimulating deeper structures have been produced, and alternative stimulation targets, such as the dorsomedial prefrontal cortex (DMPFC), have been identified [2,3]. In recent years, accelerated TMS protocols involving multiple daily sessions have demonstrated that the effectiveness of a one-month TMS treatment can be maintained while condensing it into a period as short as five days [4]. In this study, we present the efficacy and safety of an accelerated TMS treatment regimen consisting of four daily sessions targeting the DMPFC using a double-cone coil. This study is supported by the Istanbul University-Cerrahpaşa Scientific Research Projects Unit (İUC-BAP).

Method

Patients who applied to the outpatient clinics of the Department of Psychiatry at Cerrahpaşa Faculty of Medicine and were diagnosed with major depressive disorder (MDD) according to DSM-5 criteria, with at least one instance of treatment resistance to antidepressants, were included in the study. Additional inclusion criteria required that patients had a Hamilton Depression Rating Scale (HAMD) score of 17 or above and had been on a stable dose of antidepressant medication for at least one month. The determination of the TMS location and dose was based on the protocol previously described by Bakker et al. [3]. Treatment was administered using a "Magventure MagPro-TMS Device" and a "DB-80" double-cone coil, targeting the DMPFC with a 50 Hz iTBS protocol at 120% of the motor threshold. The DMPFC target was defined as the point corresponding to 25.8% of the nasion-inion distance, with an additional 5 mm displacement to the right and left. Each session delivered a total of 1200 pulses, with 600 pulses to each hemisphere. Four daily treatment sessions were administered, with 50-minute breaks between sessions. The full treatment course consisted of 20 sessions over five days. For patients who did not reach the target dose within the first 10 sessions, an additional 10 sessions (3 additional treatment days) were administered. Patients were evaluated using the Hamilton Depression Scale (HAMD) before treatment, at the end of treatment, and one month after treatment. Resistance staging was conducted using the Maudsley Staging Method (MSM). Patients were monitored daily for side effects. A treatment response was defined as a 50% reduction in HAMD scores, while remission was defined as a HAMD score below seven. The difference between patients' mean HAMD scores before and after treatment was assessed using a paired t-test. A repeated measures ANOVA was conducted to evaluate whether there was a significant difference in HAMD scores across the pre-treatment, post-treatment, and first-month time points. The Bonferroni test was applied as a post-hoc analysis.

Results

A total of 34 patients with MDD meeting the inclusion criteria were enrolled in the study. One patient withdrew due to the development of suicidal thoughts during treatment, one due to a severe headache, and one without specifying a reason, resulting in a dropout rate of 8.8%. The study protocol was completed by 31 patients.

Among the 31 patients who completed the study, 32.3% (n=10) were male and 67.7% (n=21) were female. The mean age was 51.52 (10.79) years, and the mean education duration was 8.94 (4.38) years. Marital status distribution was as follows: 77.4% (n=24) were married, 12.9% (n=4) were divorced, 6.5% (n=2) were single, and

3.2% (n=1) were widowed. In terms of employment status, 54.8% (n=17) were unemployed, 29% (n=9) were employed, 12.9% (n=4) were retired, and 3.2% (n=1) were students.

The mean pre-treatment HAMD score was 21.7 (4.48), and the mean duration of the last depressive episode was 12.9 (13.3) months. The mean MSM score was 7.94 (1.73), with 29% (n=9) of patients classified as having mild resistance, 58.1% (n=18) as moderate resistance, and 12.9% (n=4) as severe resistance. All patients were using at least one antidepressant. Among them, 48.4% (n=15) were on one antidepressant, while 51.6% (n=16) were on two. In terms of antidepressant classes, 83% (n=26) were taking serotonin-norepinephrine reuptake inhibitors (SNRIs), 9% (n=3) selective serotonin reuptake inhibitors (SSRIs), 9% (n=3) tricyclic antidepressants (TCAs), and 48% (n=15) other antidepressants. Additionally, 87% (n=27) of patients were on augmentation therapy with non-antidepressant medications, including antipsychotics (80%, n=25), mood stabilizers (38%, n=12), and benzodiazepines (9%, n=3). Prior to TMS, 16% (n=5) of patients had undergone electroconvulsive therapy (ECT) without a satisfactory response. The sociodemographic and clinical characteristics of the patients are summarized in Table 1.

Table-1: Sociodemographic and Clinical Characteristics

Variable	Values
Gender	Male: 32.3% (n=10) Female: 67.7% (n=21)
Mean Age	51.52 (10.79)
Mean Education Duration (years)	8.94 (4.38)
Marital Status	Married: 77.4% (n=24) Divorced: 12.9% (n=4) Single: 6.5% (n=2) Widowed: 3.2% (n=1)
Employment Status	Unemployed: 54.8% (n=17) Employed: 29% (n=9) Retired: 12.9% (n=4) Student: 3.2% (n=1)
HAMD Score (Pre-Treatment)	21.7 (4.48)
Duration of Last Depressive Episode (Months)	12.9 (13.3)
MEM Score (Mean)	7.94 (1.73)
MEM Resistance Group	Mild: 29% (n=9) Moderate: 58.1% (n=18) Severe: 12.9% (n=4)
Antidepressant Use	One antidepressant: 48.4% (n=15) Two antidepressants: 51.6% (n=16)
Antidepressant Drug Classes	SNRI: 83% (n=26) SSRI: 9% (n=3) TCA: 9% (n=3) Other: 48% (n=15)
Non-Antidepressant Augmentation	Yes: 87% (n=27)
Augmentation Drug Classes	Antipsychotic: 80% (n=25) Mood Stabilizer: 38% (n=12) Benzodiazepine: 9% (n=3)
ECT Before TMS	16% (n=5)

During TMS treatment, 61% (n=19) of patients did not experience any side effects. The most common side effect was mild-to-moderate headache, reported by 29% (n=9) of patients. Other reported side effects included increased anxiety in 9% (n=3) and insomnia in 3% (n=1) of patients. The mean HAMD score decreased from 21.7 (4.48) pre-treatment to 9.61 (8.05) post-treatment, a statistically significant change (p=0.000). A total of 64.5% (n=20) of patients responded to TMS, and 51.6% (n=16) achieved remission. Patients were reassessed at day 30 post-treatment. Three patients were excluded from follow-up analysis due to receiving ECT, and five patients had not yet completed the one-month follow-up. Among the remaining 23 patients, 65% (n=15) maintained response criteria, and 47% (n=11) remained in remission. Two previously remitted patients relapsed, while two non-responders achieved remission. The mean HAMD score at one month was 10 (7.69), with no statistically significant difference between post-treatment and one-month scores (p=0.401). The changes in HAMD scores are visualized in Figure 1-3. Figure

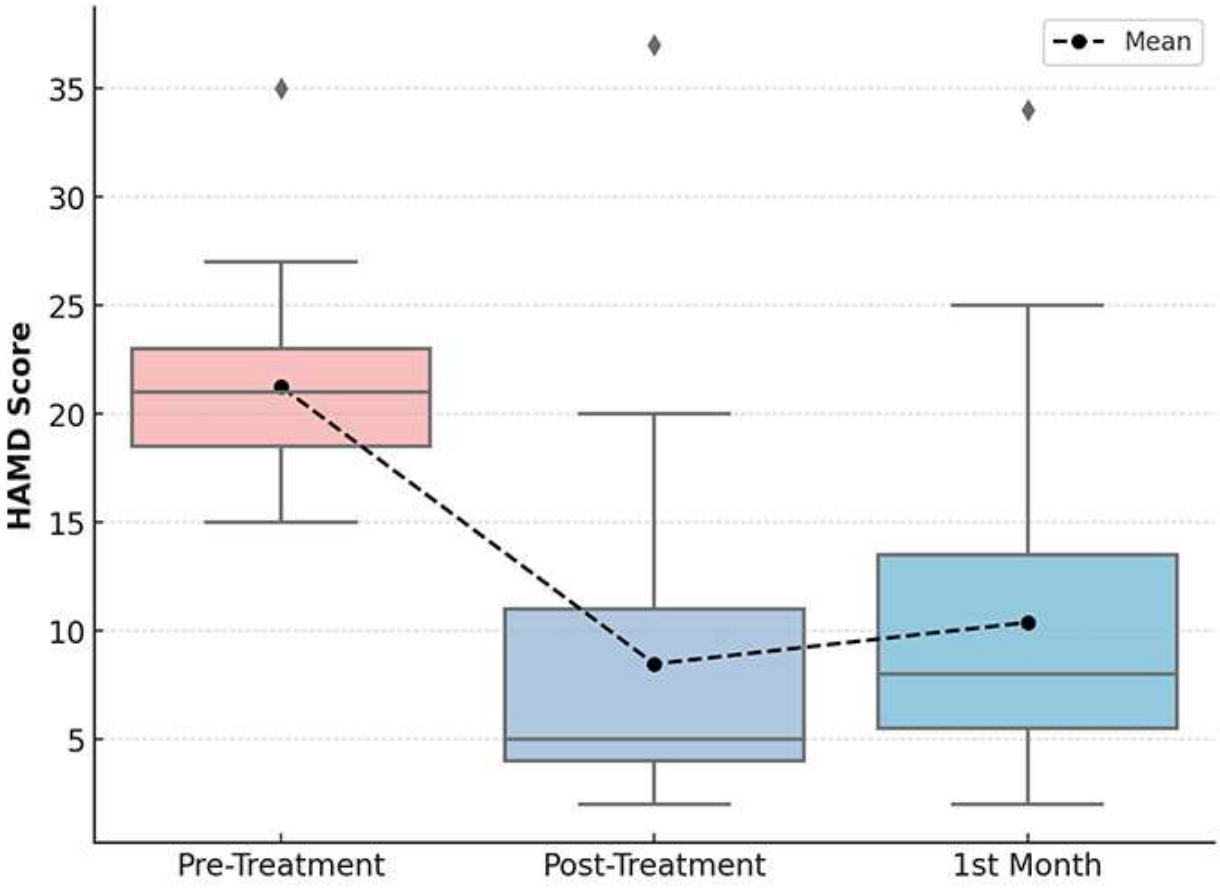


Figure 1: Changes in Mean HAMD Scores Over Time

Discussion

Our study demonstrates that an accelerated deep TMS protocol targeting the DMPFC with a double-cone coil is both effective and safe. Accelerated protocols involving multiple daily sessions and deep TMS using the H1 coil have previously demonstrated shorter treatment durations with similar or better outcomes [4,5]. Although researchers have shown increasing interest in accelerated TMS protocols, the optimal parameters for accelerated TMS remain unclear [6]. This is the first study to apply four daily sessions with a double-cone coil. Results indicate that a one-month treatment can be condensed into 5-8 days. Furthermore, our findings show that the acute treatment response is largely maintained at one-month post-treatment. With these characteristics, administering

four daily TMS sessions targeting the DMPFC appears to be a promising TMS protocol that could provide a rapid response in treatment-resistant depression.

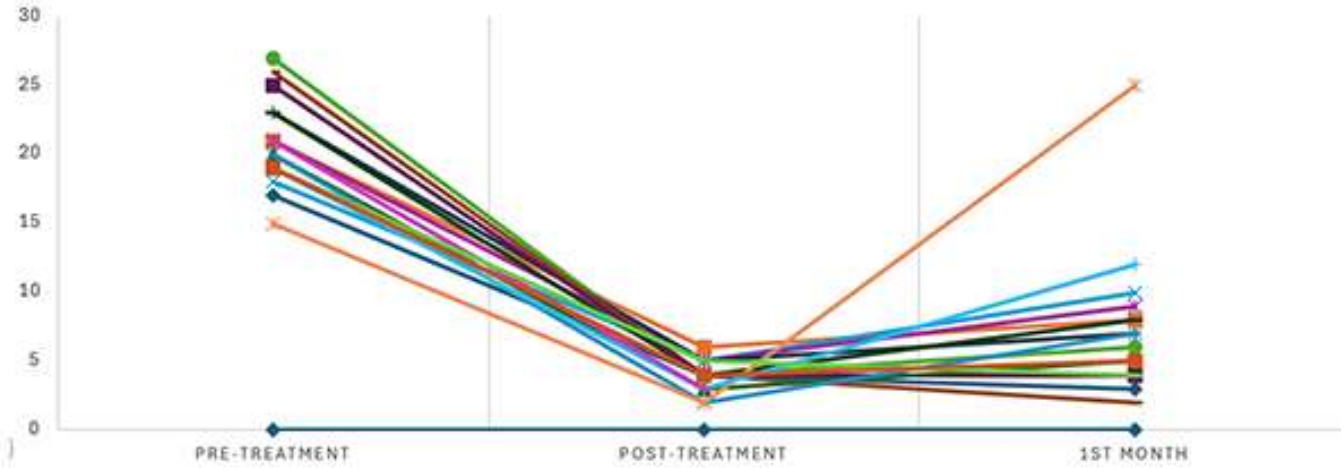


Figure 2: Trend of HAMD Scores Over Time in Responders

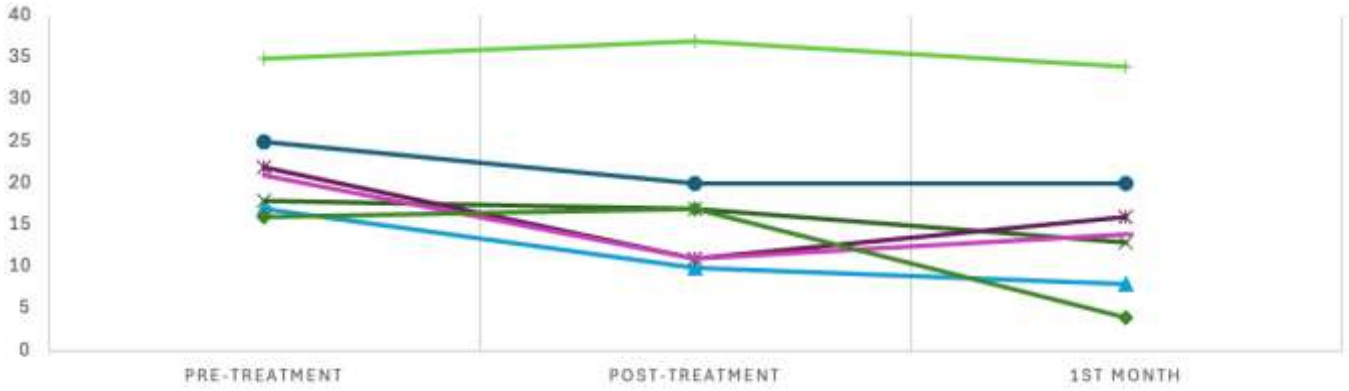


Figure 3: Trend of HAMD Scores Over Time in Patients Nonresponders

The study has some limitations, including a relatively small sample size and the short follow-up period, which limits conclusions regarding long-term efficacy and relapse rates. A second limitation is the open-label nature of the study and the absence of a placebo control arm. A third limitation is the lack of patient and evaluator blinding. Despite these limitations, our study introduces an important treatment protocol that could be further explored in future research.

Keywords: Transcranial Magnetic Stimulation; Accelarated; Treatment Resistant Depression; Deep TMS; Double-Cone Coil

References

1) George MS. Transcranial magnetic stimulation for the treatment of depression. Expert Rev Neurother. 2010;10(11):1761-1772. doi:10.1586/ern.10.95

2) Chung SW, Hoy KE, Fitzgerald PB. Theta-burst stimulation: a new form of TMS treatment for depression?. Depress Anxiety. 2015;32(3):182-192. doi:10.1002/da.22335

3) Bakker N, Shahab S, Giacobbe P, et al. rTMS of the dorsomedial prefrontal cortex for major depression: safety, tolerability, effectiveness, and outcome predictors for 10 Hz versus intermittent theta-burst stimulation. Brain Stimul. 2015;8(2):208-215. doi:10.1016/j.brs.2014.11.002

4) Cole EJ, Stimpson KH, Bentzley BS, et al. Stanford Accelerated Intelligent Neuromodulation Therapy for Treatment-Resistant Depression. Am J Psychiatry. 2020;177(8):716-726. doi:10.1176/appi.ajp.2019.19070720

5) Roth Y, Hanlon CA, Pell G, et al. Real world efficacy and safety of various accelerated deep TMS protocols for major depression. Psychiatry Res. 2023;328:115482. doi:10.1016/j.psychres.2023.115482

6) van Rooij SJH, Arulpragasam AR, McDonald WM, Philip NS. Accelerated TMS - moving quickly into the future of depression treatment. Neuropsychopharmacology. 2024 Jan;49(1):128-137. doi: 10.1038/s41386-023-01599-z.

0139 - The Relationship Between Symptom Severity and Primary Caregiver/ Parental Temperament and Attachment in Preschool Children Diagnosed with Autism Spectrum Disorder

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Objective

Autism Spectrum Disorder (ASD) is a heterogeneous neurodevelopmental disorder characterized by impairments in social and communication skills, restricted and repetitive behavioral patterns, atypical interests, and differences in responses to sensory stimuli. Numerous studies have shown that the severity of ASD symptoms and children's behavioral problems are associated with parental stress levels (1). Studies addressing the contribution of parental temperament and child interaction to the development of children's symptoms are limited (2). Clarifying the interactive relationship between attachment and temperament remains unresolved (3). This study aims to examine the relationships between the temperamental characteristics and attachment styles of parents of children with ASD and the severity of children's symptoms.

Methods

This study was conducted cross-sectionally. Before starting the study, approval was obtained from the Ethics Committee of Erenköy Mental and Nervous Diseases Education and Research Hospital. The study included 78 patients who applied to the outpatient clinic, aged 0-6 years, and who met the inclusion and exclusion criteria, and their parents who signed the informed consent form. Statistical analysis was performed using SPSS v.26. All tests were considered $p < 0.05$ to be statistically significant.

Results

The study included 78 participants, of whom 26.92% were female and 73.08% were male, with a mean age of 46.63±15.61 months. Average age of mothers was 34.44±6.42 years, fathers was 37.39±6.84 years. The majority of children (88.46%) (n=69) lived with both parents, while 11.56% (n=9) lived with a single caregiver. In terms of their special education status, 52.56% (n=41) of the participants have never received special education, 44.87% (n=35) are currently attending special education, and 2.56% (n=2) have received special education before. In terms of duration of education, the average duration of education of the participants was determined as 5.27±9.25 months. According to income level, 15.38% (n=12) have an income below minimum wage, 73.08% (n=57) have an income between 1-3 minimum wages, and 11.54% (n=9) have an income of 3+ minimum wages. The mother's education level was 20.51% (n=16) primary school, 7.69% (n=6) secondary school, 42.31% (n=33) high school and 29.49% (n=23) university graduates. The father's education level was 8.97% (n=7) primary school, 12.82% (n=10) secondary school, 42.31% (n=33) high school and 35.90% (n=28) university graduates. The regression analysis results for the CARS score model show that the model is 56.3% explanatory ($R^2 = 0.563$). The effects of the avoidant attachment subscale ($B = 0.433$, $p < 0.001$) and hyperthymic temperament subscale ($B = 0.304$, $p = 0.001$) variables on the CARS score were found to be significant. However, the effects of the Conflict, Positive Relationship subscales, Secure and Anxious attachment subscales, Depressive, Hyperthymic, Irritable and Anxious temperament subscale variables were not found to be statistically significant (Table 1).

The mediating role of the TEMPSA scale in the relationship between the attachment scale and the CARS score was examined in the mediator analysis. In the analysis conducted before the inclusion of the TEMPSA Scale in the model, it was found that the attachment scale had a significant positive effect on the CARS score ($p<0.001$). When the TEMPSA Scale was included, a positive and significant effect was found on the TEMPSA and Attachment scale CARS scores. When the mediating effect was evaluated, it was observed that the attachment scale also had an effect on the TEMPSA scale ($p<0.05$) (Table 2 and Figure 1).

Table 1: Regression analysis for the prediction of the CARS

	Unstandardized Coe. B.	Standardized Coe. Beta	95.0% CI for B(Lower)	95.0% CI for B(Upper)	p
(Constant)	17.283		6.072	28.493	0.003
Conflict	0.065	0.086	-0.074	0.204	0.352
Closeness	0.022	0.023	-0.163	0.208	0.810
Avoidant Attachment	0.662	0.433	0.367	0.956	**0.000***
Secure Attachment	-0.038	-0.020	-0.376	0.300	0.825
Anxious Attachment	-0.004	-0.003	-0.259	0.251	0.975
Depressive Temperament	0.292	0.198	-0.064	0.648	0.106
Cyclothymic Temperament	0.132	0.093	-0.171	0.436	0.387
Hyperthymic Temperament	0.431	0.304	0.178	0.685	**0.001***
Irritable Temperament	0.086	0.052	-0.246	0.418	0.606
Anxious Temperament	0.154	0.120	-0.112	0.420	0.252

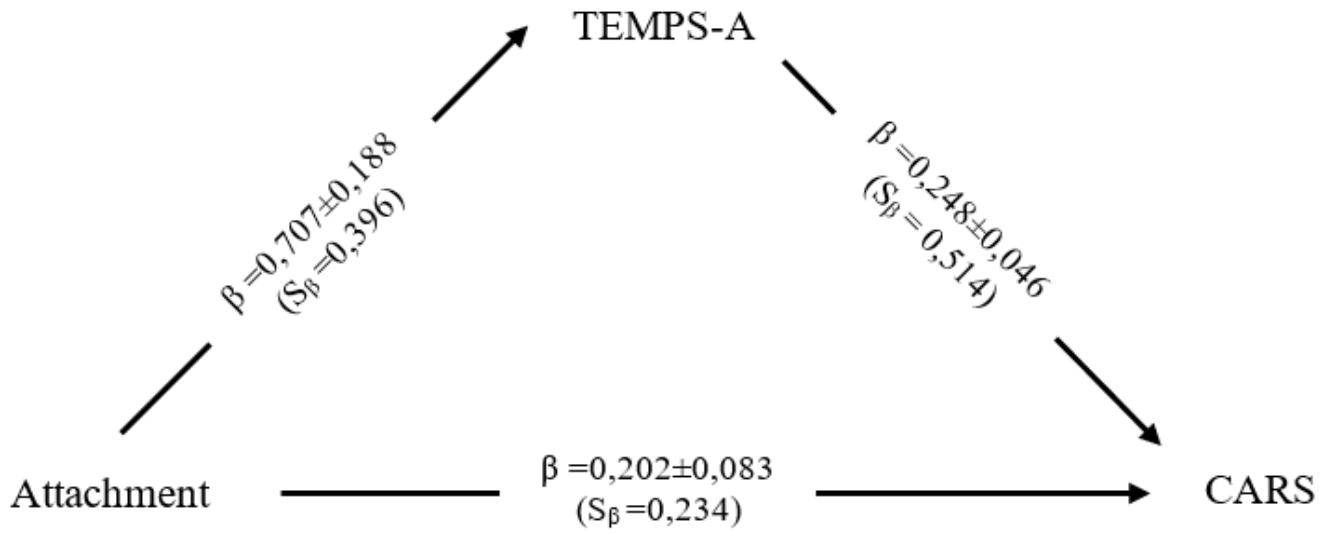
**P values in bold are statistically significant.*
R =0.750, R2 = 0.563, Regression model (F= 8,239) p<0.001

Table 2: Mediator Analysis of Attachment in the Relationship Between TEMPS-A and CARS

		Unstandardized Coe. B	Standardized Coe. Beta	95.0% CI for B (Lower)	95.0% CI for B (Upper)	p
Attachment -> CARS	(Direct)	0.377 ± 0.089	0.438	0.200	0.554	<0.001*
Attachment -> CARS	(Mediation)	0.202 ± 0.083	0.234	0.037	0.367	0.017*
TEMPSA -> CARS	(Mediation)	0.248 ± 0.046	0.514	0.156	0.341	<0.001*
Attachment -> TEMPSA		0.707 ± 0.188	0.396	0.332	1,081	<0.001*

**P values in bold are statistically significant.*

Figure 1: Mediator Analysis of Attachment in the Relationship Between TEMPS-A and CARS



Discussion

This study aimed to reveal the effect of caregiver temperament and attachment on symptom severity in children with ASD. There are studies on the attachment behaviors of preschool children, but studies on parental attachment representations are limited and there is no study on parental temperament (4). In studies examining the temperament and psychological distress of caregivers, it has generally been observed that maternal anxiety is associated with the child's negative affect. Some studies have investigated the factors related to the stress experienced by parents of children with ASD. However, relatively few studies have investigated whether the interactional processes between parental temperament and the child create a path for the development of the child's symptoms (5). In conclusion, it is important to include the characteristics of the caregiver in the diagnosis and treatment planning of children with ASD.

Keywords: Autism, Attachment, Temperament, Paternal, Caregiver

References

1. Brobst JB, Clopton JR, Hendrick SS. Parenting Children With Autism Spectrum Disorders: The Couple‟s Relationship. Focus Autism Dev Disabil. 2009 Mar 1;24(1):38–49.
2. Schröder M, Seker S, d‟Huart D, Izat Y, Bolten M, Schmeck K, et al. The Relationship of Temperament and Character, Parental Stress, and Mental Health Problems with Attachment Disorders among Children. Int J Environ Res Public Health. 2022 Nov 22;19(23):15458.
3. Groh AM, Narayan AJ, Bakermans-Kranenburg MJ, Roisman GI, Vaughn BE, Fearon RMP, et al. Attachment and Temperament in the Early Life Course: A Meta-Analytic Review. Child Dev. 2017 May;88(3):770–95.
4. Giannotti M, de Falco S. Attachment and Autism Spectrum Disorder (Without Intellectual Disability) During Middle Childhood: In Search of the Missing Piece. Front Psychol. 2021 May 28;12:662024.
5. Schröder M, Seker S, d‟Huart D, Izat Y, Bolten M, Schmeck K, et al. The Relationship of Temperament and Character, Parental Stress, and Mental Health Problems with Attachment Disorders among Children. Int J Environ Res Public Health. 2022 Nov 22;19(23):15458.

0149 - Trends in Substance Use Disorders: A Retrospective Analysis of Outpatient Data from a Major University Hospital in Turkey (2018–2023)

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Background and Aim:

Substance use disorders (SUD) are a significant public health concern and financial burden, with trends influenced by demographic, societal, and policy changes (1). Understanding variations in the prevalence and demographic characteristics of patients is crucial for developing effective prevention and intervention strategies (2). This retrospective study examines trends in the prevalence of substance use disorder diagnoses from 2018 to 2023 in an outpatient addiction clinic, alongside the analysis of age and gender dynamics.

Method:

Data from 5.231 patients attending our outpatient addiction clinic between 2018 and 2023 were retrospectively analyzed. Diagnoses were categorized according to ICD-10 codes for cannabinoids (F12), sedatives or hypnotics (F13), cocaine (F14), stimulants (F15), and multiple substance use (F19). Linear regression models were used to evaluate annual trends in prevalence rates for each substance use disorder, alongside changes in gender ratios. A one-way ANOVA test was applied to assess age differences across the years. All statistical analyses were conducted with SPSS v.25.

Results:

A total of 2.475 (%47.3) patients applied to our outpatient clinic with substance use disorder. While multiple substance use disorder displayed a significant increase, with an annual growth rate of 6.57% ($p = 0.00114$, $R^2 = 0.94$), cannabis use disorder and cocaine use disorder demonstrated a significant yearly decline, decreasing by an average of 3.21% per year ($p = 0.00652$, $R^2 = 0.87$) for cannabinoid use and an average of 1.00% per year ($p = 0.00614$, $R^2 = 0.87$) for cocaine use. Sedatives or hypnotics use disorder showed a modest but non-significant increase ($p = 0.0607$, $R^2 = 0.63$), while stimulant use disorder exhibited fluctuating rates without a clear trend ($p = 0.4683$, $R^2 = 0.14$). Analysis of gender trends revealed a statistically significant increase in the proportion of female patients diagnosed with substance use disorders, with the female ratio rising by 1.79% annually ($p = 0.0208$, $R^2 = 0.77$). Age analysis using one-way ANOVA showed no significant differences in the mean age of patients across the years ($p = 0.657$), indicating stability in the age distribution of the clinic‘s population.

Conclusions:

This study identifies a significant increase in multiple substance use disorder rates and a decline in cannabis use disorder prevalence, while sedative or hypnotics use disorder and stimulant use disorder trends remain less pronounced. This increasing trend is important because multiple substance use increases the risk of overdose, depression, suicide, psychosis, cardiac arrhythmias, and death (3,4). Notable demographic shifts, including a steady increase in the proportion of female patients, underscore the evolving nature of substance use disorders and highlight the need for gender-specific prevention and treatment approaches (5). The stability in age distribution suggests consistent access to services across age groups. These findings emphasize the importance of continuous monitoring and targeted interventions to address changing patterns of substance use and patient demographics. Future research should explore underlying factors contributing to these trends, including sociocultural influences, policy changes, and treatment accessibility, to inform public health strategies better.

Keywords: Substance use disorder, cannabinoids, stimulant, prevalence, addiction.

References:

1. Degenhardt L, Charlson F, Ferrari A, Santomauro D, Erskine H, Mantilla-Herrara A, et al. The global burden of disease attributable to alcohol and drug use in 195 countries and territories, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016. Lancet Psychiatry. 2018;5(12).
2. Nelson LF, Weitzman ER, Levy S. Prevention of Substance Use Disorders. Vol. 106, Medical Clinics of North America. 2022.
3. Armoon B, Grenier G, Cao Z, Huỳnh C, Fleury MJ. Frequencies of emergency department use and hospitalization comparing patients with different types of substance or polysubstance-related disorders. Subst Abuse Treat Prev Policy. 2021;16(1).
4. Crummy EA, O'Neal TJ, Baskin BM, Ferguson SM. One Is Not Enough: Understanding and Modeling Polysubstance Use. Vol. 14, Frontiers in Neuroscience. 2020.
5. White A, Castle IJP, Chen CM, Shirley M, Roach D, Hingson R. Converging Patterns of Alcohol Use and Related Outcomes Among Females and Males in the United States, 2002 to 2012. Alcohol Clin Exp Res. 2015;39(9).

0168 - Severe Anxiety Induced by Dalfampridine: The First Case Report in the Literature

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Objective

Dalfampridine (Fampyra) is a potassium channel blocker commonly prescribed to improve walking ability in patients with multiple sclerosis (MS). It enhances nerve conduction by prolonging action potential duration in demyelinated fibers, thereby improving motor function (Goodman et al., 2009). While its known adverse effects include headache, dizziness, nausea, paresthesia, insomnia, and gastrointestinal discomfort, its potential to induce anxiety remains largely unexplored (Lamore III et al., 2010). This report presents the first documented case of severe anxiety associated with dalfampridine use and explores the possible underlying mechanism.

Methods

A 45-year-old male patient with a 17-year history of MS was transitioned from Glatiramer Asetat to dalfampridine (Fampyra) 20 mg/day. The patient had no prior psychiatric history. Within 48 hours of initiating dalfampridine, he experienced insomnia and worsening anxiety, which escalated into a severe anxiety attack characterized by pronounced fear of death. Electrokardiography (ECG) was performed, along with blood and urine analyses, blood tests and screening test was normal. Imaging studies were conducted, none of which revealed any significant abnormalities, thereby excluding relevant differential diagnoses The patient was evaluated in the emergency department using the Beck Anxiety Inventory, where he scored 37, indicating severe anxiety. Treatment with alprazolam 0.5 mg twice daily provided symptomatic relief. Informed written consent was obtained from the patient or their legally authorized representative.

Results

The patient exhibited severe anxiety symptoms shortly after initiating dalfampridine therapy. His anxiety symptoms improved significantly with alprazolam treatment and were completely resolved following discontinuation of dalfampridine. These findings suggest a possible causal relationship between dalfampridine and heightened anxiety responses in susceptible individuals.

Discussion

Several potassium channel blockers have been linked to anxiety, particularly due to their effects on neuronal excitability. Aminopyridines such as 4-aminopyridine (4-AP) and 3,4-diaminopyridine (3,4-DAP) have been associated with agitation, restlessness, and anxiety at higher doses, suggesting a dose-dependent neuropsychiatric risk (Stork & Hoffman, 1994). In clinical trials, patients using 4-AP for MS or spinal cord injury have reported symptoms ranging from mild nervousness to severe anxiety, likely due to its excitatory effects on the central nervous system (Goodman et al., 2009). Although dalfampridine‘s neuropsychiatric side effects have not been extensively studied, there are reports of psychiatric symptoms worsening in some patients, particularly those with preexisting anxiety (Goodman et al., 2009). Additionally, aminopyridine derivatives, including dalfampridine, have been linked to agitation, anxiety, palpitations, tremors, and seizures, especially at higher doses (up to 40 mg/day) (Strupp et al., 2011).Mechanistically, potassium channel blockade is known to heighten neuronal excitability, which may predispose individuals to anxiety symptoms. Kv7 (KCNQ) channels play a crucial role in stabilizing neuronal firing, and their inhibition has been found to increase susceptibility to fear and anxiety (Brown et al., 2009). Additionally, small-conductance calcium-activated potassium channels regulate synaptic plasticity in fear-related circuits, and their dysfunction has been implicated in heightened fear responses (Lamore III et al., 2010). Given that dalfampridine is a broad potassium channel blocker, it may contribute to an imbalance in excitatory and inhibitory neural pathways, resulting in increased anxiety vulnerability. Alprazolam, a gaba alpha receptor

modulator, enhances GABAergic inhibition by increasing chloride influx into neurons, which reduces excitability and produces anxiolytic, sedative, and anticonvulsant effects. (Brown et al., 2009) This mechanism makes alprazolam a suitable agent to counteract the heightened neural excitability induced by dalfampridine. In our case, the patient demonstrated significant improvement in anxiety symptoms following alprazolam administration, further suggesting a functional antagonism between dalfampridine‘s excitatory effects and alprazolam‘s GABAergic inhibition. However, further research is needed to explore the efficacy and safety of benzodiazepines in managing potassium channel blocker-induced anxiety. Future studies should investigate whether alternative therapeutic strategies may offer similar benefits with a lower risk of sedation or dependence. Increased clinical awareness is crucial to optimizing patient management and minimizing unexpected adverse reactions in MS patients undergoing this therapy.

References

1. Goodman, A. D., n, T. R., Krupp, L. B., Schapiro, R. T., Schwid, S. R., Cohen, R., Marinucci, L. N., & Blight, A. R. (2009). Sustained-release oral fampridine in multiple sclerosis: a randomized, double-blind, controlled trial. The Lancet, 373(9665), 732–738. https://doi.org/10.1016/S0140-6736(09)60442-6
2. Lamore III, R., Jacob, E., Jacob, S. C., & Hilas, O. (2010). Dalfampridine (Ampyra): An aid to walking in patients with multiple sclerosis. US Pharmacist, 35(12), 665–673. Available from: https://pmc.ncbi.nlm.nih.gov/articles/PMC3008376/
3. Strupp, M., Kalla, R., Claassen, J., Adrion, C., Mansmann, U., Klopstock, T., Freilinger, T., Neugebauer, H., Spiegel, R., Dichgans, M., Lehmann-Horn, F., Jurkat-Rott, K., Brandt, T., Jen, J. C., & Jahn, K. (2011). A randomized trial of 4-aminopyridine in EA2 and related familial episodic ataxias. Neurology, 77(3), 269–275. https://doi.org/10.1212/WNL.0b013e318225ab07
4. Stork, C. M., & Hoffman, R. S. (1994). Characterization of 4-aminopyridine overdose: Toxic dose and possible mechanisms of toxicity. Journal of Toxicology: Clinical Toxicology, 32(5), 583-592. https://doi.org/10.3109/15563659409000396
5. Brown, D. A., & Passmore, G. M. (2009). Neural KCNQ (Kv7) channels. British Journal of Pharmacology, 156(8), 1185–1195. https://doi.org/10.1111/j.1476-5381.2009.00119.x

0187 - Are Environmental Conditions and Access to Resources Related to Children's Brain and Cognitive Development?

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Introduction

Neighborhood advantages—such as access to educational resources, environmental quality, and socioeconomic stability—play a critical role in shaping cognitive abilities and influencing physical and mental health outcomes across the lifespan [1]. These effects are particularly pronounced during childhood and adolescence, a critical neurodevelopmental period characterized by significant structural and functional brain maturation. Prior research indicates that children from disadvantaged neighborhoods exhibit lower cognitive performance, particularly in language, processing speed, and executive function, alongside an elevated risk of psychiatric disorders [1]. Neuroimaging studies support these findings, demonstrating structural and functional differences in key brain regions such as the frontal, parietal, and temporal lobes [2]. However, the underlying mechanisms through which neighborhood advantages affect neurocognitive development remain underexplored.

White matter tracts, particularly association fibers, facilitate intra-hemispheric connectivity by linking key cortical areas and supporting cognitive functions such as memory, decision-making, and emotional regulation [3]. These tracts continue developing into early adulthood, making them highly susceptible to environmental influences [3]. While previous studies suggest that environmental factors shape white matter integrity, the specific impact of neighborhood advantages remains insufficiently investigated.

This study examines how neighborhood advantages influence white matter integrity and cognitive performance in 6,141 children (ages 8–10) from the Adolescent Brain Cognitive Development (ABCD) Study. We hypothesize that greater neighborhood advantages correlate with higher white matter integrity in association tracts and enhanced cognitive performance. Additionally, we propose that white matter integrity mediates the relationship between neighborhood advantages and cognition, indicating that structural brain changes partially transmit the effects of neighborhood environments on cognitive development. By clarifying these relationships, this study aims to deepen our understanding of how neighborhood advantages shape neurodevelopment in childhood.

Methods

Participants

We analyzed baseline data from the ABCD Study (Release 5.1), a large-scale longitudinal investigation of child health and neurodevelopment conducted across 21 U.S. sites [4]. After excluding participants with incomplete data on neighborhood advantages, harmonized diffusion magnetic resonance imaging (dMRI) measures, cognitive scores, and covariates, our final sample included 6,141 children (ages 8–10). Participant demographics are presented in Table 1.

Neighborhood Advantages

The Child Opportunity Index 2.0 (COI) is a comprehensive measure that assesses children‘s access to neighborhood resources through 29 indicators based on their residential addresses across 72,000 geographic areas in the U.S. [4,5].

Table 1: Demographics

Characteristics *(N = 6,141)*	**Range**
Age *(in months)*	107-133
Parental education *(in years)*	3-22
	No. (%)
Sex	
Female	2575 (41.9%)
Male	3566 (58.1%)
Race	
White	4827 (78.6%)
Black	892 (14.5%)
Asian	138 (2.3%)
Other	284 (4.6%)
Ethnicity	
Hispanic	1114 (18.1%)
Non-Hispanic	5027 (81.9%)
Household Income	
< 25k	807 (13.2%)
25-49k	879 (14.3%)
50-74k	878 (14.3%)
75-99k	874 (14.2%)
100-199k	1955 (31.8%)
> 200k	748 (12.2%)

COI scores capture key neighborhood characteristics, including:

- Education: Access to high-quality schools, school poverty rates, and teacher experience.
- Social-Economic: Neighborhood economic resources and employment rates.
- Health-Environment: Access to green spaces, walkability, and exposure to environmental toxins.

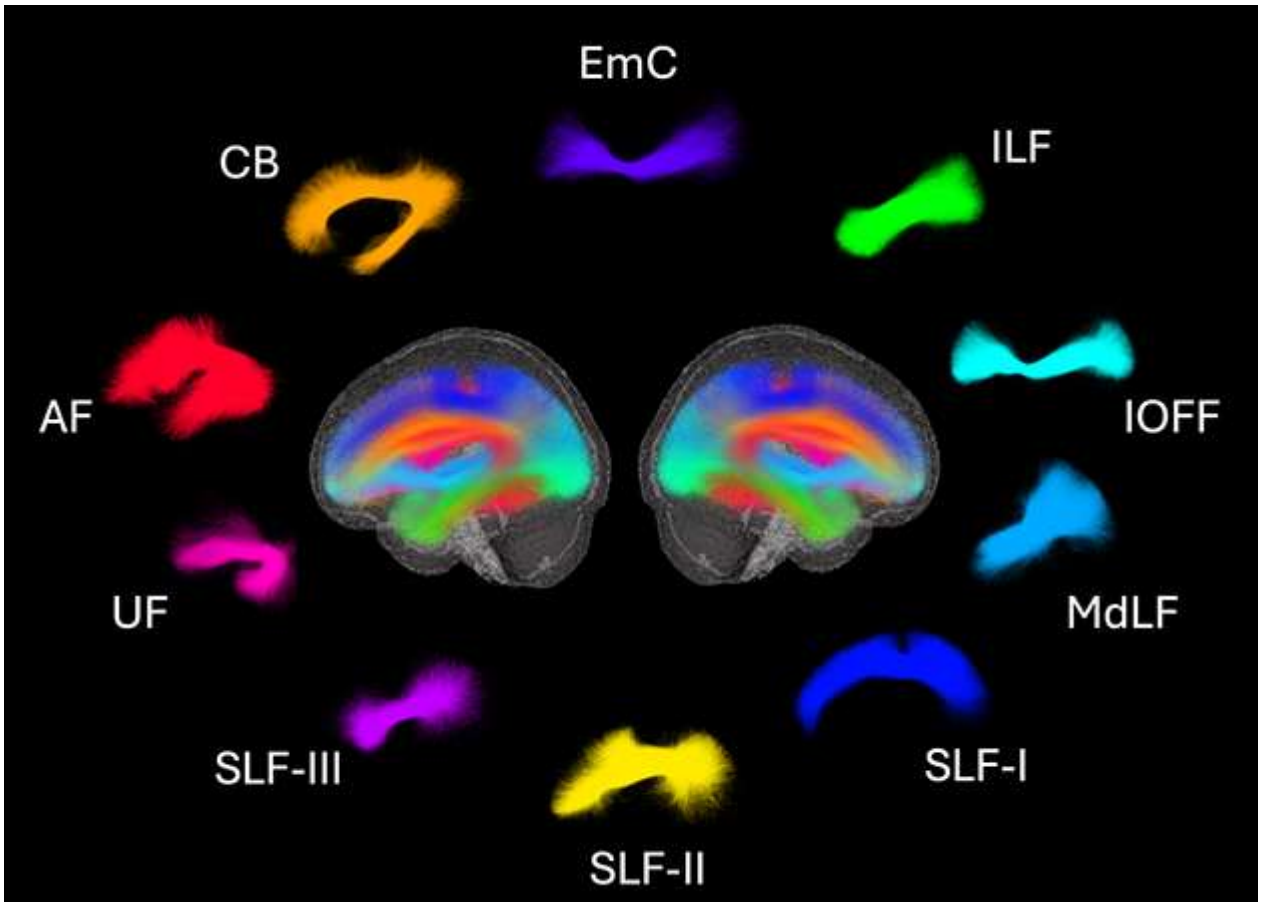
For this analysis, we used nationally normed COI scores (1–100), with higher scores indicating greater opportunity.

White Matter Microstructure

Diffusion MRI data were used to analyze white matter integrity. One of the main challenges in multi-site neuroimaging studies is scanner-related variability. To address this, we applied our well-established harmonization framework based on Rotation-Invariant Spherical Harmonics (RISH), minimizing scanner-related differences across sites (see Cetin-Karayumak et al. 2024 for details [6]). To test our hypothesis, we examined Fractional Anisotropy (FA) values of 20 association fiber tracts (Figure 1) as proxies for white matter integrity, neural pathway organization, and myelination.

Figure 1. White matter association fiber tracts. The middle view displays 20 association tracts across both hemispheres, with 10 tracts visualized individually in the left hemisphere.

Abbreviations: AF: arcuate fasciculus; CB: cingulum bundle; EmC: extreme capsule; ILF: inferior longitudinal fasciculus; IOFF: inferior occipital fasciculus; MdLF: middle longitudinal fasciculus; SLF-I, II, III: superior longitudinal fasciculus I, II, III; UF: uncinate fasciculus



Neurocognitive Performance

Cognitive performance was assessed using the NIH Toolbox Cognitive Battery [7], which includes seven subtests and three composite scores. The Total Cognition Composite provides a comprehensive measure of overall cognitive ability. The Crystallized Cognition Composite evaluates knowledge-based skills acquired through experience, using the *Picture Vocabulary* and *Oral Reading Recognition* subtests. The Fluid Cognition Composite assesses logical thinking, problem-solving, attention, working memory, and processing speed through the *Dimensional Change Card Sort, Flanker Inhibitory Control and Attention, Picture Sequence Memory, List Sorting Working Memory,* and *Pattern Comparison subtests.*

Statistical Analysis

Generalized Additive Models (GAMs) were implemented in R ('mgcv' package, version 4.3.1) to capture nonlinear relationships between neighborhood advantages, white matter integrity, and cognitive performance [8]. Analyses were adjusted for age, sex, race, ethnicity, household income, parental education, BMI, sleep duration, pubertal stage, and family psychopathology history to account for their associations with neurocognitive development and neighborhood advantages.

Model performance was evaluated using adjusted R^2, which quantified the proportion of variability explained and predictive ability. F-statistics were used to evaluate the contribution of neighborhood advantages. Parameter tuning and cross-validation were applied to optimize model fitting. All tests were FDR-corrected for multiple comparisons.

Mediation analysis examined whether association tracts mediated the relationship between neighborhood opportunities and cognitive outcomes. Using the `mediation` package in R, bootstrapping estimated indirect effects with a 95% confidence interval (CI) for robust assessment of mediation significance. Mediation proportions quantified how much FA of association tracts contributed to the relationship between COI and cognition.

Results

Neighborhood Advantages and White Matter Integrity

We examined 20 association fiber tracts (10 per hemisphere) to evaluate their relationship with neighborhood opportunity using GAMs, with the COI score included as a predictor. Higher COI scores were significantly associated with increased FA only in the Superior Longitudinal Fasciculus-I (SLF-I) tract, suggesting that greater neighborhood advantages support white matter integrity in this tract.

Higher COI scores were associated with increased FA in the SLF-I tract, with a stronger effect observed in the left hemisphere ($R^2 = 0.09$, $F = 14.63$, $p < .001$) than in the right hemisphere ($R^2 = 0.11$, $F = 8.65$, $p = .006$), as indicated by the higher F-statistic.

Neighborhood Advantages and Cognitive Performance

GAM analyses examined the total effect of neighborhood advantages on neurocognitive performance. Higher COI scores were significantly associated with better cognitive performance, particularly in processing speed, language, and executive function.

Higher COI score was associated with increased Total Cognition ($R^2 = 0.32$, $F = 6.40$, corrected $p < .001$), as well as with several cognitive subtests (Table 2). These findings suggest that greater neighborhood advantages support improved cognitive performance. The strongest relationship was observed with the Picture Vocabulary subtest, which demonstrated the highest F-statistics ($F = 12.59$).

Table 2. Effect of Neighborhood Advantages on Cognitive Performance.

	COI → Cognition			
	R^2 (adj)	**F**	**p-value**	**FDR corrected p-value**
Total Cognition Composite	0.32	6.40	**< .001**	**< .001**
Fluid Cognition Composite	0.21	3.01	**.002**	**.004**
Crystallized Cognition Composite	0.32	10.39	**< .001**	**< .001**
Picture Vocabulary	0.30	12.59	**< .001**	**< .001**
Flanker Inhibitory Control and Attention	0.09	1.76	.11	.12
List Sorting Working Memory	0.13	4.45	**.01**	**.02**
Dimensional Change Card Sort	0.12	3.36	.07	.09
Pattern Comparison Processing Speed	0.10	5.92	**.002**	**.005**
Picture Sequence Memory	0.08	2.11	.15	.16
Oral Reading Recognition	0.21	3.71	**.002**	**.004**

Mediation Analyses

Mediation analyses assessed whether SLF-I FA mediated the positive association between neighborhood advantages and cognitive outcomes. Significant indirect effects were observed across cognitive functions, with mediation proportions ranging from 3.6% to 22.9%, with SLF-I FA mediating 13% of the total effect on cognition (0.91, 95% CI: 0.87–0.96).

Discussion

This study is one of the largest to examine how neighborhood advantages (COI) influence white matter integrity and cognitive performance.

The SLF-I tract, a dorsal component of the Superior Longitudinal Fasciculus, supports attentional control, working memory, and voluntary attention orientation. Our findings indicate that lower COI scores are associated with reduced FA in the SLF-I tract, suggesting that lower-opportunity environments may affect white matter development in this tract [3]. Also, the left SLF-I showed stronger associations with neighborhood opportunity, consistent with the left hemisphere‘s established role in attention, language, and executive function.

Lower FA in SLF has been linked to neurodevelopmental and psychiatric disorders, including schizophrenia, autism, and ADHD, highlighting the impact of neighborhood factors on white matter development during childhood and adolescence [9,10]. This is consistent with our findings, highlighting the importance of understanding how neighborhood environments shape white matter development, particularly during childhood and adolescence, when this tract is actively maturing and the risk for psychiatric disorders emerges.

Higher COI scores were associated with enhanced cognitive performance, particularly in processing speed, language, and executive function. Greater access to educational, social, and health resources likely supports these cognitive functions [1]. In contrast, children in disadvantaged neighborhoods experience higher exposure to crime, violence, and chronic stress, which may negatively impact brain structure and cognition [11].

Mediation analyses suggest that SLF-I FA partially mediates the link between neighborhood advantages and cognition, supporting a potential neurodevelopmental pathway through which neighborhood factors shape neurocognitive outcomes.

Limitations

Several limitations should be acknowledged. While mediation analysis offers insights into white matter‘s role as a linking mechanism, causal inferences remain limited. Longitudinal studies are needed to establish causal pathways and long-term effects. Additionally, the COI captures broad neighborhood resources but does not capture dynamic changes and individual factors like community shifts, household resources, and parental support. Future research should integrate individual and neighborhood data over time to better understand neighborhood multi-level effects on neurodevelopment.

Conclusion

This study enhances our understanding of the role neighborhood advantages play in neurodevelopment. By identifying the SLF-I tract as a key pathway connecting enriched neighborhood environments to stronger cognitive abilities, our findings highlight how community resources influence brain structure and cognitive function.

These results underscore the need for community-level interventions, including expanding access to quality education, reducing socioeconomic disparities, and improving environmental conditions. Such efforts could support neurocognitive development, mitigate the risk of psychiatric disorders, and promote better long-term health outcomes for children in disadvantaged communities. To establish causal relationships and inform targeted interventions, future research should prioritize large-scale longitudinal studies.

Keywords: Neighborhood Conditions, Neuroimaging, Diffusion MRI, Cognition, Child Brain Development, ABCD Study

References

1. Michael YL, Senerat AM, Buxbaum C, et al. Systematic review of longitudinal evidence and methodologies for research on neighborhood characteristics and brain health. *Public Health Rev.* 2024;45:1606677.
2. Rakesh D, Zalesky A, Whittle S. Assessment of Parent Income and Education, Neighborhood Disadvantage, and Child Brain Structure. *JAMA Netw Open.* 2022;5(8):e2226208.
3. Lebel C, Deoni S. The development of brain white matter microstructure. 2018;182:207-218.
4. Fan CC, Marshall A, Smolker H, et al. Adolescent Brain Cognitive Development (ABCD) study Linked External Data (LED): Protocol and practices for geocoding and assignment of environmental data. *Dev Cogn Neurosci.* 2021;52:101030.
5. Noelke C, Mc Ardle N, Baek M, et al. Child Opportunity Index 2.0. http://new.diversitydatakids.org/sites/default/files/2020-01/ddk_coi2.0_technical_documentation_20200115_1.pdf
6. Cetin-Karayumak S, Zhang F, Zurrin R, et al. Harmonized diffusion MRI data and white matter measures from the Adolescent Brain Cognitive Development Study. *Sci Data.* 2024;11(1):249.
7. Akshoomoff N, Beaumont JL, Bauer PJ, et al. VIII. NIH Toolbox Cognition Battery (CB): composite scores of crystallized, fluid, and overall cognition: Nih toolbox cognition battery (Cb). *Monogr Soc Res Child Dev.* 2013;78(4):119-132.
8. Wood SN. Generalized additive models: an introduction with R. Published online May 18, 2017. doi:10.1201/9781315370279/generalized-additive-models-simon-wood
9. Cetin-Karayumak S, Di Biase MA, Chunga N, et al. White matter abnormalities across the lifespan of schizophrenia: a harmonized multi-site diffusion MRI study. *Mol Psychiatry.* 2020;25(12):3208-3219.
10. Shakeel MK, Hassel S, Davis AD, et al. White matter microstructure in youth at risk for serious mental illness: A comparative analysis. *Psychiatry Res Neuroimaging.* 2021;312(111289):111289.
11. Hackman DA, Betancourt LM, Brodsky NL, Hurt H, Farah MJ. Neighborhood disadvantage and adolescent stress reactivity. *Front Hum Neurosci.* 2012;6:277.

0206 - Retrospective Analysis of Antidepressant Use and Its Association with Gastrointestinal Bleeding in Emergency Department Patients

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Introduction

Selective serotonin reuptake inhibitors (SSRIs) are associated with side effects such as nausea, vomiting, abdominal pain, and diarrhea. [1] Notably, the increased tendency for bleeding observed with these medications is of particular interest. [2] Various pharmacological mechanisms may explain the increased bleeding risk associated with SSRIs. Among these mechanisms are the stimulation of gastric acid secretion and the inhibition of serotonin uptake by platelets. [3]

Platelets release serotonin in response to vascular injury, which triggers vasoconstriction and platelet aggregation, thereby contributing to hemostasis. SSRIs inhibit the reuptake of serotonin not only into presynaptic neurons but also into platelets. Since platelets do not synthesize serotonin, inhibition of serotonin uptake leads to serotonin depletion within platelets, ultimately reducing their hemostatic function. [4] Additionally, SSRIs increase gastric acidity, which may explain why most of the literature on SSRI-related bleeding focuses on upper gastrointestinal (GI) hemorrhages. [5]

When combined with nonsteroidal anti-inflammatory drugs (NSAIDs) [6], antiplatelet agents [7], and [8] or warfarin [9], SSRIs may further elevate the risk of upper gastrointestinal hemorrhage.

Method

The study was approved by the Ankara Bilkent City Hospital No. 1 Medical Research Scientific and Ethical Evaluation Board on 07.08.2024, under the protocol number TABED 1-24-445.

Medical records of patients who presented to the Emergency Department of Ankara Bilkent City Hospital with complaints of gastrointestinal bleeding between 01.02.2024 and 20.08.2024 were retrospectively reviewed. This included cases of hematemesis, melena, gastrointestinal bleeding, acute hemorrhagic gastritis, esophageal bleeding, and anal or rectal bleeding (ICD-10 Diagnosis Codes: K92.0, K92.1, K92.2, K29.0, K22.8, K62.5). Data were collected on patients' sociodemographic characteristics, past psychiatric diagnoses and treatments, use of antidepressants and other pharmacological agents that increase bleeding tendency, as well as their history of additional medical conditions.

The exclusion criteria are as follows: being under 18 years of age and having insufficient data in the medical records.

Data analysis was performed using IBM SPSS 26, employing descriptive statistical methods.

Results

A total of 624 participants with a mean age of 60.4 ± 21.5, including 47.1% (294) females and 52.9% (330) males,were included in the study. The hemorrhage focus for the participants was as follows: 58.3% (364) had upper GI bleeding,39.1% (244) had lower GI bleeding, and 2.6% (16) had an undetermined hemorrhage focus. Additionally, 24.2% (151) ofparticipants had a psychiatric disorder, and 16.7% (104) were using antidepressants at the time of admission.

Regarding the course characteristics: 43.6% (272) of patients were discharged, 43.3% (270) were admitted to the inpatientclinic, 2% (3) experienced complications, 3% (19) left the hospital against medical advice, and 9.1% (57) refused treatment.

Table 1. Sociodemographic and Clinical Charachteristics of Participants

Total participants (n)	n:624
Age (mean ± SD)	60.4 ± 21.5
Gender (%, n)	
Female	47.1% (294)
Male	52.9% (330)
Hemorrhage region (%, n)	
Upper GI tract	58.3% (364)
Lower GI tract	39.1% (244)
Undetermined	2.6% (16)
Psychiatric history at the time of admission (%, n)	
Psychiatric disorder	24.2% (151)
Using antidepressants	16.7% (104)
Course of the hemmorhage (%, n)	
Discharged	43.6% (272)
Admitted to the inpatient clinic	43.3% (270)
Experienced complications	2% (3)
Left the hospital against medical advice	3% (19)
Refused treatment	9.1% (57)

Table 2. Comparison of the characteristics of Antidepressant users and Non-users

	Antidepressant users	Non-users	p value
Age (mean±SD)	68.7±19.6	58.7±21.4	**< 0.05**
Gender (%)			
female	65.4%	43.5%	**< 0.05**
male	34.6%	56.5%	
Hemorrhage region (%)			
upper GI tract	54.8%	59.8%	> 0.05
lower GI tract	40.4	38.4%	
undetermined	4.8%	1.8%	
Course of the hemmorhage (%)			
recovery	39.4%	44.6%	
admission to inpatient clinic	48.1%	42.1%	
comlication	0.0%	0.4%	> 0.05
exitus	3.8%	2.9%	
refusal of treatment	8.7%	9.4%	
undetermined	0.0%	0.6%	
Comorbid conditions (%)	94.2%	76.6%	**< 0.05**
Use of medications that increase bleeding risk (%)	57.7%	44.1%	**< 0.05**
Number of other factors predisposing to bleed (mean±SD)	1.42±0.88	1.18 ±0.99	**< 0.05**

Chi-square test was used to compare categorical variables, and Student's t test was used to compare numerical variables.

When comparing the characteristics of antidepressant users and non-users, the mean age was significantly higher in the antidepressant group (68.7 vs. 58.7, $p < 0.05$), and the proportion of women was greater among antidepressant users (65.4%vs. 43.5%, $p < 0.05$).

There were no significant differences between antidepressant users and non-users in terms of hemorrhage focus distribution or course characteristics ($p > 0.05$). However, the rate of comorbid conditions was higher in

antidepressant users (94.2% vs. 76.6%, $p < 0.05$), as was the use of medications that increase bleeding risk (57.7% vs. 44.1%,$p < 0.05$). The mean number of other factors (e.g., diseases, steroids, antiplatelets/anticoagulants, NSAIDs) that could predispose to bleeding was also higher in antidepressant users compared to non-users ($p < 0.05$).

Discussion

The association between selective serotonin reuptake inhibitors (SSRIs) and gastrointestinal bleeding is well-established. SSRIs, especially those with strong serotonin reuptake inhibition like fluoxetine, impair platelet aggregation by lowering serotonin levels in platelets, raising the bleeding risk, particularly when used with NSAIDs. [10]

Evidence indicates that SSRIs more than double the risk of upper gastrointestinal hemorrhage (UGIH), with the risk increasing over 500% when combined with NSAIDs due to serotonin depletion in platelets. [11]

SSRIs elevate bleeding risk through reduced platelet aggregation and higher gastric acid secretion. This risk is significantly increased when SSRIs are taken with other medications that affect hemostasis, such as NSAIDs, antiplatelet agents, and anticoagulants. Concurrent use of SSRIs and NSAIDs raises gastrointestinal bleeding risk by more than fivefold, with odds ratios ranging from 4 to 15. While proton pump inhibitors (PPIs) may offer protection, further research on preventive strategies for high-risk patients is essential. Clinicians should assess bleeding risks and consider alternative treatments or gastroprotective agents for at-risk patients. [12]

A case-control study showed that the combination of SSRIs and NSAIDs significantly increased bleeding risk in patients not using acid-suppressing agents (OR = 9.1) but not in those who were (OR = 1.3). The risk was similarly heightened with SSRIs and antiplatelet agents in non-users of acid-suppressing agents (OR = 4.7) but not significant in users (OR = 0.8) [13]

This study emphasizes the importance of evaluating the use of antidepressants in patients who are experiencing gastrointestinal bleeding. It sheds light on the potential link between these medications and the risk of bleeding, which is crucial for clinicians. As a result, it highlights the need for careful monitoring and thoughtful risk management, especially for patients who may have other co-morbidities and using multiple medications.

References

1) Goldstein BJ, Goodnick PJ. Selective serotonin reuptake inhibitors in the treatment of affective disorders--III. Tolerability, safety and pharmacoeconomics. J Psychopharmacol. 1998;12(3 Suppl B):S55-87.

2) Yuan Y, Tsoi K, Hunt RH. Selective serotonin reuptake inhibitors and risk of upper GI bleeding: confusion or confounding? Am J Med 2006; 119: 719–27

3) Yuet WC, Derasari D, Sivoravong J, Mason D, Jann M. Selective Serotonin Reuptake Inhibitor Use and Risk of Gastrointestinal and Intracranial Bleeding. J Am Osteopath Assoc. 2019 Feb 1;119(2):102-111.

4) Andrade C, Sandarsh S, Chethan KB, et al. Serotonin reuptake inhibitor antidepressants and abnormal bleeding: a review for clinicians and a reconsideration of mechanisms. J Clin Psychiatry 2010;71(12):1565–75.

5) Andrade C, Sandarsh S, Chethan KB, et al. Serotonin reuptake inhibitor antidepressants and abnormal bleeding: a review for clinicians and a reconsideration of mechanisms. J Clin Psychiatry 2010;71(12):1565–75.

6) Anglin R, Yuan Y, Moayyedi P, et al. Risk of upper gastrointestinal bleeding with selective serotonin reuptake inhibitors with or without concurrent nonsteroidal anti-inflammatory use: a systematic review and meta-analysis. Am J Gastroenterol 2014;109(6):811–9.

7) Serebruany VL, Glassman AH, Malinin AI, et al. Platelet/endothelial biomarkers in depressed patients treated with the selective serotonin reuptake inhibitor sertraline after acute coronary events: the Sertraline AntiDepressant Heart Attack Randomized Trial (SADHART) Platelet Substudy. Circulation 2003;108(8):939–44.

8) Serebruany VL, Glassman AH, Malinin AI, et al. Selective serotonin reuptake inhibitors yield additional antiplatelet protection in patients with congestive heart failure treated with antecedent aspirin. Eur J Heart Fail 2003;5(4):517–21.

9) Schalekamp T, Klungel OH, Souverein PC, de Boer A: Increased bleeding risk with concurrent use of selective serotonin reuptake inhibitors and coumarins. Arch Intern Med 2008; 168:180–185.

10) McFarland, D., Merchant, D., Khandai, A. et al. Selective Serotonin Reuptake Inhibitor (SSRI) Bleeding Risk: Considerations for the Consult-Liaison Psychiatrist. Curr Psychiatry Rep 25, 113–124 (2023).

11) Loke YK, Trivedi AN, Singh S. Meta-analysis: gastrointestinal bleeding due to interaction between selective serotonin uptake inhibitors and non-steroidal anti-inflammatory drugs. Aliment Pharmacol Ther. 2008 Jan 01; 27(1):31-40.

12) Andrade C., Sharma E. Serotonin Reuptake Inhibitors and Risk of Abnormal Bleeding // Psychiatric Clinics of North America. 2016. Vol. 39. No. 3. pp. 413-426.

13) Loke YK, Trivedi AN, Singh S. Meta-analysis: gastrointestinal bleeding due to interaction between selective serotonin uptake inhibitors and non-steroidal anti-inflammatory drugs. Aliment Pharmacol Ther. 2008 Jan 01; 27(1):31-40.

0219 - Evaluation of Slow Cognitive Tempo Symptoms, Psychological Flexibility Levels and Executive Functions in Adolescents with Attention Deficity and Hyperactivity Disorder

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Introduction:

ADHD is one of the most common psychiatric problems in children and adolescents; It is a chronic neurodevelopmental disorder that negatively affects social, occupational or academic areas in at least two environments and is present with attention deficit and impulsivity inappropriate for the developmental period and in some cases hyperactivity. It is known that ADHD affects 5% of children and adolescents and 2.5% of adults worldwide and is 3 times more common in boys than girls, but in the clinic this rate increases 9 times.

Slow Cognitive Tempo, a disorder of cognitive arousal and alertness that shows clinical symptoms such as daydreaming, difficulty staying awake, low energy level, living in one's own world, and appearing confused. Recently, there has been a change in terminology and the term Cognitive Disconnection Syndrome (CDS) is used instead of Slow Cognitive Tempo. ADHD and CDS symptoms differ from each other with developmental and genetic characteristics.

CDS is diagnosed at a later age. Although there are very few studies examining the prognosis of CDS; CDS comorbid ADHD adult cases were found to have lower levels of education, lower annual income and lower marriage rates in the future. I

Executive functions, which are among the functions of the frontal region; It plays a role in regulating cognitive, emotional, and social behavior and is necessary to maintain goal-directed behavior; It helps initiate and direct mental activity and then sustain the activity. Cognitive flexibility is defined as the ability of an individual to spontaneously recreate knowledge in response to changing events that is, to organize cognitive processes to adapt to that situation.

Psychological flexibility can be defined as a collection of mechanisms that support people's coping with a stressful situation and behavior based on values. Psychological flexibility consists of 6 components: acceptance, separation, being in the moment, contextual self, values and actions towards values, and all of the concepts are needed for flexibility to occur.

There is no study that has investigated the relationship between CDS and psychological flexibility, cognitive flexibility and executive functions in adolescents with ADHD. Our main aim in our study was to evaluate the symptoms of Slow cognitive tempo, psychological levels and executive functions in adolescents with ADHD.

Method:

A total of 101 adolescents diagnosed with ADHD who applied to Izmir City Hospital Child and Adolescent Mental Health and Diseases Polyclinic and volunteered to participate in the study were included in our study. In order to learn the sociodemographic information, the Sociodemographic Data Form was given to this case group, and the Barkley Child Attention Scale was given to the parents to evaluate the CDS symptoms and they were asked to fill it in, taking their children into consideration. The Cognitive Flexibility Inventory was given to the adolescents to evaluate cognitive flexibility, and the Psychological Flexibility Scale was given to the adolescents to evaluate psychological flexibility, and these scales were filled out by the volunteer adolescent participant. The Stroop test was applied by the clinician to evaluate executive functions. Inclusion criteria were being diagnosed with ADHD between the ages of 12-18, having clinically normal intelligence, approval to participate after the purpose and process of the study are explained. Exclusion criteria were having a neurological or chronic medical disease. Verbal and written consent was obtained from the parents and children participating in the study. Our research was approved by the Izmir City Hospital Non-Interventional Clinical Research Ethics Committee on 17/04/2024 with protocol number 2024/26.

Sociodemographic Data Form: This form includes sociodemographic and clinical characteristics about the child and his family.

Turgay Screening and Assessment Scale for Child and Adolescent Behavior Disorders Based on DSM-IV : It is a scale that screens disruptive behavior disorders developed by Turgay. The Turkish validity and reliability of the scale was determined by Ercan et al.

Barkley Child Attention Scale: The scale, developed by Russell Barkley in 2013, measures CDS symptoms. Symptoms such as inactivity, lethargy, and slowness in behavior belong to the first subscale and consist of seven items.

Psychological Flexibility Scale: The original form of scale was developed in 2016. The Turkish validity and reliability study was conducted by Karakuş and Akbay in 2020.

Cognitive Flexibility Scale: The scale was developed by Martin and Rubin in 1995. Turkish validity and reliability study of the scale was conducted in the adolescent group.

Stroop Test -T BAG Form: Stroop test was first developed as an experimental task by Stroop. The Turkish validity and reliability study of the test was conducted by Karakaş in 1999.

The data obtained from the study were evaluated using SPSS 24. $p<0.05$ was considered statistically significant.

Conclusion:

A total of 101 children and adolescents were included in our study, 54 of whom were diagnosed with ADHD and 47 were diagnosed with ADHD accompanied by CDS. When categorical variables were examined (Table I), it was determined that 25.92% of the children and adolescents in the ADHD group were girls (n=14), 74.18% were boys (n=40), and 42.55% were girls (n=20) and 48.45% were boys (n=27) in the ADHD group accompanied by CDS. The mean age of cases diagnosed with ADHD was 13.55±1.80, while the mean age of cases with CDS was 13.65±1.69. No statistically significant difference was found between the genders and age interval and classes. In our study, no significant statistical difference was found between the marital status and education level of the parents of the cases and the medical disease comorbidities of the cases.In our study, no difference was found between the ages of the mothers, but a significant difference was found between the groups between the ages of the fathers, but no significant difference was found. (p=0.037)

When the sub-dimensions of psychological flexibility were examined in our study; while the sub-scores of contextual self and separation were higher in the CDS group, the sub-scores of Values and behaviors in line with values, being in the moment and acceptance were higher in the ADHD group without CDS, but no statistically significant difference was found between the groups in terms of all sub-headings. However, when the total psychological flexibility scale score was examined, it was concluded that the scale scores of the ADHD group with CDS were statistically significantly lower compared to the ADHD group without CDS. the group with CDS, but no significant difference was found between the groups.

In our study; in terms of cognitive flexibility levels assessed with the Cognitive Flexibility Scale, the ADHD group with CDS had lower scale scores than the ADHD group without CDS, but this difference was not found to be statistically significant. When the table showing the results of the Stroop-T Bag form, which is one of the executive function tests, is examined, Stroop 1 durations, number of errors, Stroop 2 error counts, Stroop 3 error counts, Stroop 4 durations, number of errors, Stroop 5 durations and correction counts were examined, CDS features were detected more in the accompanying group, but no significant difference was found between the ADHD group with CDS and the ADHD groups without CDS. When evaluated in terms of resistance to Stroop disruptive effects, no significant difference was observed between the groups in terms of Stroop 5 duration, error and correction counts. ($p> 0.05$).

Discussion:

Psychological flexibility refers to the ability of an individual to adapt to stressful or variable conditions, and this ability plays a critical role in mental health. In our study, it was determined that individuals with ADHD accompanied by CDS have lower levels of psychological flexibility. Cognitive flexibility refers to the individual's capacity to explore alternative ways of thinking and adapt to new situations. However, no significant difference

was found between the groups in terms of cognitive flexibility. The fact that the cognitive flexibility levels of individuals with BCS were similar to the control group may indicate that these individuals did not show any significant differences in abstract thinking and problem-solving skills. However, future studies should examine the different components of cognitive flexibility in more detail by using broader neuropsychological test batteries.

Executive functions include cognitive processes that include the individual's ability to maintain attention, plan, and response inhibition. In our study, the executive functions of adolescents with ADHD were assessed using the Stroop test. However, no significant difference was found between the groups with and without CDS in terms of executive functions. This result suggests that executive dysfunction may be a general feature of ADHD.

Interventions aimed at increasing attention management strategies and cognitive flexibility in individuals with ADHD may have positive results in terms of academic success and daily life skills. This study contributes to the literature by examining the effects of CDS on adolescents with ADHD in terms of psychological flexibility, cognitive flexibility and executive functions. The findings emphasize the need for an individualized approach in the treatment of ADHD and pose new questions for further research.

Keywords: Slow Cognitive Tempo, Cognitive Disengagement Syndrome, Attention Deficit Hyperactivity Disorder, Psychological Flexibility, Cognitive Flexibility, Stroop Test, Executive Functions

References

1. Polanczyk GV, Willcutt EG, Salum GA, Kieling C, Rohde LA. ADHD prevalence estimates across three decades: an updated systematic review and meta-regression analysis. Int J Epidemiol. 2014;43(2):434-442.
2. Slow Cognitive Tempo Among Young Adolescents with ADHD: Relationships to Mental Health, Academic, and Social Functioning - Stephen P. Becker, Joshua M. Langberg, 2013. Accessed July 1, 2024.
3. Martin, M. M., & Rubin, R. B. (1995). A new measure of cognitive flexibility. Psychological reports, 76(2), 623-626.

0223 - An Eye Tracking Study: Comparison of Neuropsychological Profiles and Reading Performance of Children with Attention Deficit Hyperactivity Disorder and Dyslexia

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Objective: ADHD and dyslexia are among the most common psychiatric disorders in childhood. Both disorders can negatively affect cognitive functions. It is critical that the diagnosis and differential diagnosis of these disorders are made accurately and objectively in order to plan individualized interventions. In this study, the objective is to map the neuropsychological profiles and reading performances of children with ADHD and dyslexia using objective tools such as 'neurocognitive test battery' and 'eye tracking', to identify the areas where they show deficits and differences, and thereby to obtain objective data to elucidate the neuropsychological mechanisms underlying these disorders. For this purpose, we plan to;

1- Evaluate the cognitive functions of ADHD, dyslexia, and healthy control groups with the main domain scores (NCI, Composite Memory, Psychomotor Speed, Psychomotor Speed, Reaction Time, Complex Attention, Cognitive Flexibility) in the CNSVS neurocognitive test battery and Working Memory scores, which are frequently associated with reading, and map their neuropsychological profiles;

2- Evaluate the reading performances of ADHD, dyslexia, and healthy control groups with the 'eye tracking' method and determine the differences in their eye movements;

3- Investigate whether there is a correlation between working memory performance and eye movements during reading in ADHD, dyslexia, and healthy control groups.

Methods: A total of 78 children between the ages of 8-12 years, including 26 children with ADHD, 26 children with dyslexia, and 26 children with typical development, were enrolled in the study. WISC-R intelligence test was applied to all participants and those with an IQ score >80 were included in the study. Participants were administered the CNSVS neurocognitive test battery in front of a computer in a quiet and comfortable practice room. Then, participants were presented with a reading text generated on a computer screen using the SMI RED 250 eye tracker and the eye tracker's software. Eye movements were recorded using the iViewX software and evaluated using the BeGaze software. *The Central Nervous System Vital Signs (CNSVS)* is a computerized neurocognitive test battery that allows for millisecond-precise measurement and assessment of important cognitive functions through neurocognitive tests (the mean of standard scores is 100 and higher scores indicate better performance). Table 1 shows the CNSVS domains and scoring methods.

Results: ***Sociodemographic Data Results***: In terms of age, gender, intelligence level and parental education level no significant difference was observed between the groups included in the study (**p>0.05**). ***CNSVS Results***: **Neurocognitive Index (NCI)**: NCI scores of ADHD (81.00±10.62) and dyslexia groups (73.46±12.34) were significantly lower compared to the control group (96.62±12.59) (**p<0.001**; **p<0.001**). **Composite Memory**: The score of the dyslexia group (64.38±24.88) was significantly lower compared to the ADHD (83.62±23.30) and control groups (97.04±18.57) (**p=0.008**; **p<0.001**). **Verbal Memory**: The scores of the ADHD (75.65±27.28) and dyslexia groups (55.12±27.09) were significantly lower than the control group (95.73±21.40) (**p=0.017**; p<**0.001**). Also, the score of the dyslexia group was significantly lower than the ADHD group (**p=0.014**). **Visual Memory**: The score of the dyslexia group (84.96±20.47) was significantly lower than the control group (99.73±18.29) (**p=0.016**). **Psychomotor Speed**: The scores of the ADHD (82.15±15.58) and dyslexia groups (83.38±10.59) were significantly lower than the control group (97.31±11.57) (**p<0.001**; **p<0.001**). **Reaction Time**: The score of the dyslexia group (64.65±29.54) was significantly lower than the control group (84.00±18.77) (**p=0.009**). **Complex Attention**: The scores of the ADHD (84.00±22.10) and dyslexia groups (80.19±20.17) were significantly lower than the control group (105.12±11.61) (**p<0.001**; **p<0.001**). **Cognitive Flexibility**: The scores of the ADHD (82.96±11.26) and dyslexia groups (74.19±14.06) were significantly lower than the control group (99.65±14.83) (**p<0.001**; **p<0.001**). **Working Memory**: The score of the dyslexia group (78.54±16.46) was significantly lower

than the control group (92.77±17.1) (**p=0.007**). Table 2 shows the CNSVS results. **Eye-*Tracking Results:*** **Number of fixations per word:** It was significantly higher in the dyslexia group (1.54±0.70) compared to the control group (1.08±0.27) (**p=0.015**). **Mean fixation time (ms):** It was significantly longer in the dyslexia group (699.92±240.99) than in the ADHD (428.42±134.98) and control groups (420.12±100.84) (**p<0.001**; **p<0.001**). **Mean saccade amplitude (pixel)**: It was significantly lower in the dyslexia group (100.54±36.75) compared to the control group (123.88±38.48) (**p=0.014**). **Number of saccades**: It was significantly higher in the dyslexia group (182.96±58.70) compared to the ADHD (142.62±60.94) and control groups (126.96±22.91) (**p=0.003**; **p<0.001**). **Total saccade durations (ms)**: It was significantly longer in the dyslexia group (4569.69±1969.74) than the control group (2829.38±465.10) (**p<0.001**). **Total reading time (s)**: It was significantly longer in the dyslexia group (282.81±157.94) compared to the ADHD (134.37±55.15) and control groups (109.92±40.08) (**p<0.001**; **p<0.001**). Table 3 shows the CNSVS results. In ADHD and dyslexia groups, there was no significant correlation between the CNSVS Working Memory performances and the eye movements during reading (**p>0.05**).

Table 1: The tests included in the CNSVS and their descriptions

Domains	Scoring Method
NCI	Calculated by taking the average of Composite Memory, Psychomotor Speed, Reaction Time, Complex Attention, and Cognitive Flexibility domain scores.
Composite Memory	Calculated as the sum of the correct answers in the Verbal and Visual Memory Tests.
Verbal Memory	Calculated as the number of correct answers in the Verbal Memory Test.
Visual Memory	Calculated as the number of correct answers in the Visual Memory Test.
Psychomotor Speed	Calculated as the sum of the average number of clicks of the left and right hands in the Finger Tapping Test and the sum of the correct answers in the Symbol Digit Coding Test.
Reaction Time	Calculated by taking the average of the two complex reaction times in the Stroop Test.
Complex Attention	Calculated as the sum of errors made in the Continuous Performance Test, Shifting Attention Test, and the Stroop Test.
Cognitive Flexibility	Calculated by subtracting the incorrect answers from the correct answers in the Shifting Attention Test from the incorrect answers in the Shifting Attention Test and the Stroop Test.
Working Memory	Calculated by subtracting the incorrect answers in Section 4 of the 4-Section Continuous Performance Test from the correct answers in this section.

Discussion: ***Cognitive Performance:*** In the domains of **Psychomotor Speed, Complex Attention, Cognitive Flexibility** and **NCI** (indicates general neurocognitive status) cognitive performance of children with ADHD and dyslexia was poorer compared to the control group, consistent with the literature (Willcutt & Petrill, 2023). There were no significant differences between the ADHD and dyslexia groups in these domains. **Memory:** According to our results, ADHD is thought to have no significant effect on visual memory and general memory and mostly affects the verbal memory area; dyslexia is thought to have a disruptive effect on verbal, visual and general memory. The dyslexia group also showed lower performance than children with ADHD in the composite memory and verbal memory domains. In line with the phonological deficit theory, which is a widely accepted theory in the etiology of dyslexic individuals, it is suggested that incorrect coding of verbal information makes it difficult to remember this information. This may be related to lower verbal memory and general memory performances in the dyslexia group than in the ADHD group. **Reaction Time:** In this study, we have concluded that there is no ‗slowness' in the reaction times of children with ADHD. **Reaction time problems in individuals with ADHD have been attributed to 'reaction time variability' rather than reaction speed, but this area is not assessed in the CNSVS.** In the current study, the reaction time of the dyslexia group was significantly slower than the control group, consistent with the literature. **Working memory:** Working memory includes components such as the phonological loop (verbal working memory), visual-spatial working memory, and central executive. The CNSVS working memory test is based on visual materials and tests visuospatial working memory. The results of this study suggest that ADHD has no significant effect on at least the 'visuospatial working memory' component. Working memory is closely related to learning ability and learning difficulties (Jeffries & Everatt, 2004). In parallel with the

working memory deficits described in the literature, the results of this study suggest that dyslexia negatively impacts working memory performance. ***Eye Movements:*** In the present study, the reading performances of individuals with ADHD and dyslexia were compared using the 'eye tracking' method in order to contribute to addressing the current gap in the literature. In this study, no significant difference was noted between the ADHD group and the healthy control group. In the present study, the reading performance and oculomotor characteristics of dyslexic children differed from that of healthy control children (higher number of fixations, longer mean duration of fixation, a higher number of saccades, shorter mean saccade amplitudes, and longer total reading time compared), in line with the literature. Considering the reading text characteristics stated as limitations in the studies (Caldani vd., 2022; Deans vd., 2010), we chose a longer reading text appropriate to the level of the participants. It was concluded that the eye movement patterns exhibited by dyslexic children in short texts were similarly observed in longer texts. It was an interesting finding: The dyslexia group had a significantly longer mean duration of fixations, a higher number of saccades, and a longer total reading time compared to the ADHD group. The reason for this may be underlying in the etiology of the two disorders. Factors in the etiology of dyslexia, such as the phonological deficit theory (dyslexic individuals exhibit poorer reading performance because they have difficulty in associating graphemes and phonemes) and visual processing theory (dyslexic individuals have problems processing visual information), may be related to the difference in the reading performance and oculomotor characteristics of the dyslexia group from the ADHD group. Taken together, the results of this study suggest that dyslexia negatively impacts reading performance and that inadequate oculomotor performance in dyslexic children has the potential to be a biomarker of reading impairment, whereas ADHD has no significant impact on reading performance. Finally, working memory performance was also assessed as it is frequently associated with reading and also based on a recent eye-tracking study (Caldani vd., 2022) which suggested that working memory performance should be assessed together with reading. However, no significant correlation was found between working memory performance and eye movements ($p>0.05$). In Figures 1 and 2, examples of eye movements of children with ADHD and dyslexia during reading performance can be seen.

Table 2: CNSVS Main Domain Score

Main Domain Scores	ADHD Mean (SD)	Dyslexia Mean (SD)	Control Mean (SD)	p	Significant Difference
NCI	81.00 (10.62)	73.46 (12.34)	96.62 (12.59)	***<0.001***[d]	Control > ADHD = Dyslexia
Composite Memory	83.62 (23.30)	64.38 (24.88)	97.04 (18.57)	***<0.001***[d]	Control = ADHD > Dyslexia
Verbal Memory	75.65 (27.28)	55.12 (27.09)	95.73 (21.40)	***<0.001***[d]	Control > ADHD > Dyslexia
Visual Memory	96.35 (17.72)	84.96 (20.47)	99.73 (18.29)	***0.016***[d]	Control > Dyslexia
Psychomotor Speed	82.15 (15.58)	83.38 (10.59)	97.31 (11.57)	***<0.001***[e]	Control > ADHD = Dyslexia
Reaction Time	73.77 (15.21)	64.65 (29.54)	84.00 (18.77)	***0.009***[d]	Control > Dyslexia
Complex Attention	84.00 (22.10)	80.19 (20.17)	105.12 11.61	***<0.001***[e]	Control > ADHD = Dyslexia
Cognitive Flexibility	82.96 (11.26)	74.19 (14.06)	99.65 (14.83)	***<0.001***[d]	Control > ADHD = Dyslexia
Working Memory	83.65 (14.92)	78.54 (16.46)	92.77 (17.1)	***0.008***[d]	Control > Dyslexia

ADHD: Attention Deficit and Hyperactivity Disorder, d: One-way analysis of variance (ANOVA), e: Kruskal-Wallis test

Conclusion: Our study supports the view that ADHD and dyslexia cause significant impairment in various cognitive domains and shows that the eye movements of children with dyslexia during reading objectively reflect the difficulties they experience during reading.

Table 3: Eye-Tracking Results

Parameters	ADHD Mean (SD)	Dyslexia Mean (SD)	Control Mean (SD)	p	Significant Difference
Mean Number of Fixations	1.23(0.65)	1.54(0.70)	1.08(0.27)	**0.017**[d]	Dyslexia > Control
Mean Duration of Fixation (ms)	428.42(134.98)	699.92(240.99)	420.12(100.84)	**<0.001**[e]	Dyslexia > Control = ADHD
Mean Saccade Amplitude (px)	116.15(41.75)	100.54(36.75)	123.88(38.48)	**0.044**[e]	Control > Dyslexia
Number of Saccades	142.62(60.94)	182.96(58.70)	126.96(22.91)	**0.003**[e]	Dyslexia > Control = ADHD
Total Saccade Duration (ms)	3506.31(1713.68)	4569.691969.74	2829.38(465.10)	**<0.001**[e]	Dyslexia > Control
Reading Time (s)	134.38(55.15)	282.81(157.94)	109.92(40.08)	**<0.001**[e]	Dyslexia > Control = ADHD

ADHD: Attention Deficit and Hyperactivity Disorder, d: One-way analysis of variance (ANOVA), e: Kruskal Wallis Test, ms: millisecond, s: second, 1 pixel (px) = 0.02645833333 centimeter.

Figure 1: An example of eye movements of participants with ADHD during reading

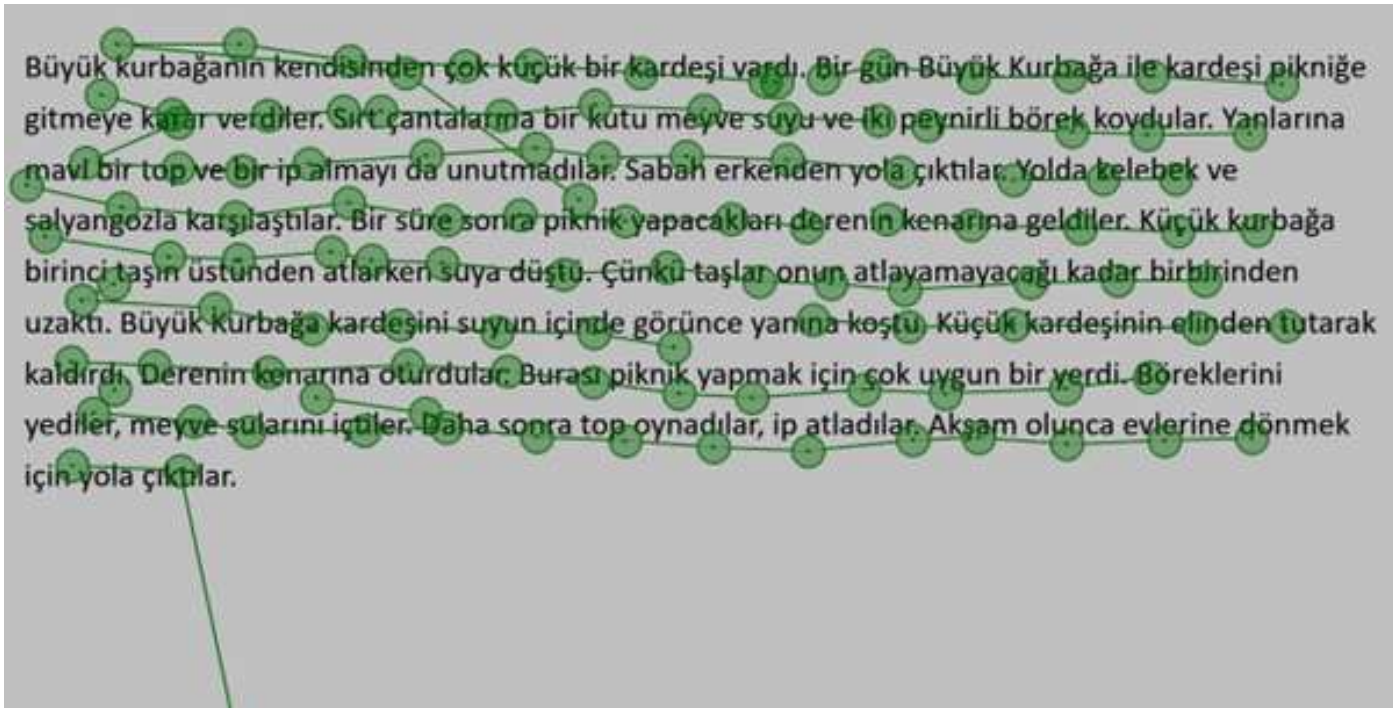
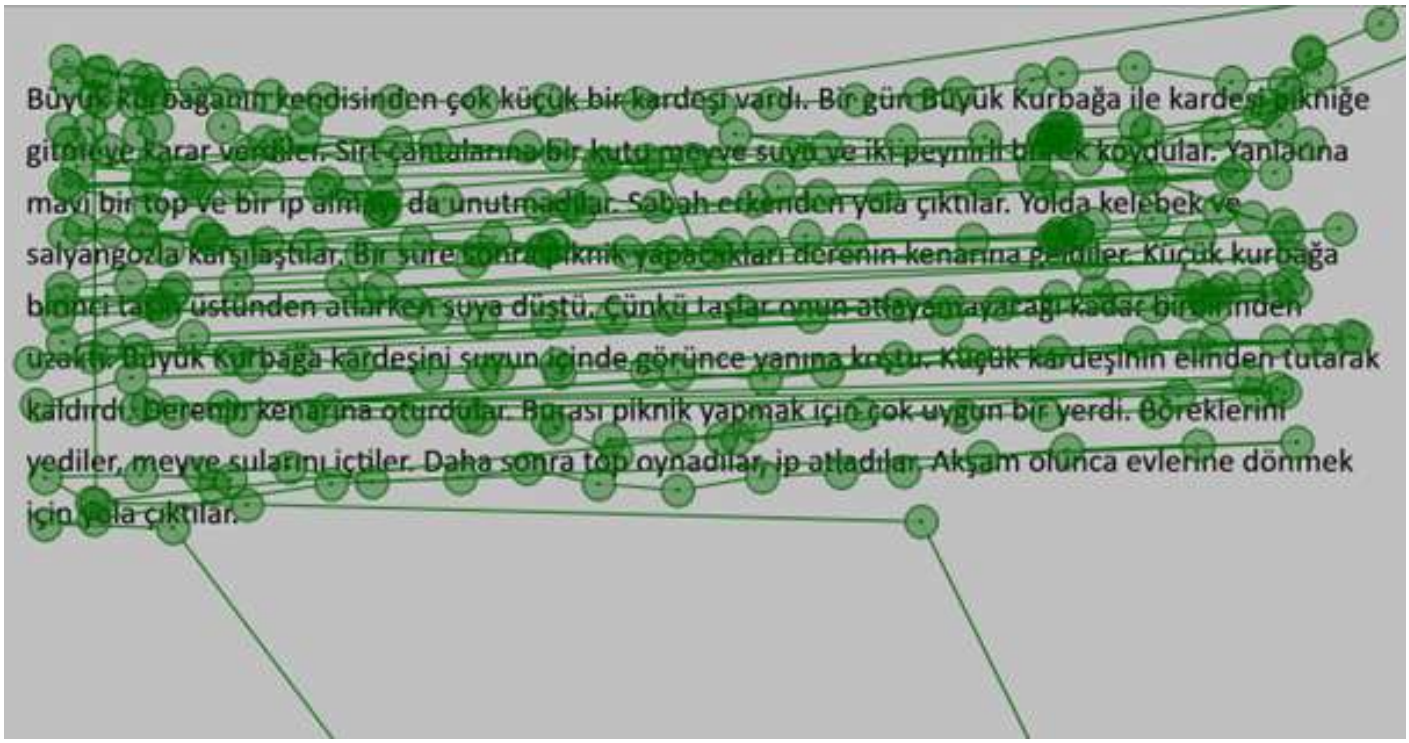


Figure 2: An example of eye movements of dyslexic participants during reading



References

Caldani, S., Acquaviva, E., Moscoso, A., Peyre, H., Delorme, R., & Bucci, M. P. (2022). Reading performance in children with ADHD: An eye-tracking study. *Annals of Dyslexia,* 72(3), 552-565. https://doi.org/10.1007/s11881-022-00269-x

Deans, P., O'Laughlin, L., Brubaker, B., Gay, N., & Krug, D. (2010). Use of Eye Movement Tracking in the Differential Diagnosis of Attention Deficit Hyperactivity Disorder (ADHD) and Reading Disability. *Psychology,* 01(04), Article 04. https://doi.org/10.4236/psych.2010.14032

Jeffries, S., & Everatt, J. (2004). Working memory: Its role in dyslexia and other specific learning difficulties. *Dyslexia,* 10(3), 196-214.

Willcutt, E. G., & Petrill, S. A. (2023). Comorbidity between reading disability and ADHD in a community sample: Implications for academic, social, and neuropsychological functioning. *Mind, brain and education : the official journal of the International Mind, Brain, and Education Society,* 17(4), 338-348. https://doi.org/10.1111/mbe.12393

0236 - Serum Neuropeptide Y Levels in Medication-Free Patients With Major Depression: Relationship With Gender and Duration of The Disease

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Objective

Depression is a significant public health issue due to its increasing prevalence, high rates of chronicity and relapse, and its being one of the leading causes of death by suicide. One of the neuropeptides studied in relation to depression in recent years is Neuropeptide Y (NPY), which plays an important role in regulating several functions such as nutrition, body weight, blood pressure, sleep, emotions, stress, impulsivity, and attention. The regions of the central nervous system where NPY is found are associated with neurocognitive functions and affective processes, suggesting that this neuropeptide may also play a role in the pathophysiology of depression [1].

Research suggests that NPY may be a stress-related neuropeptide and may be involved in the etiology of anxiety and depression [2].Preclinical studies support that NPY has antidepressant and anxiolytic effects [3]. It has been reported that individuals with low plasma NPY levels or low NPY expression have decreased stress tolerance and increased susceptibility to stress-related disorders [4]. In one study, it was found that patients with depression and anxiety had lower NPY levels, and these levels were similar to those of healthy controls following antidepressant treatment [5]. These findings support the hypothesis that antidepressants may exert their therapeutic effects by regulating endogenous NPY levels [6].

Although most studies on plasma NPY levels in depressive patients report low NPY levels, some studies have reported high levels [7,8]. or no significant difference compared to the control group [9].

Methods

This study included 69 patients (48 women, 21 men) aged between 18-65, diagnosed with Major Depressive Disorder (MDD) according to DSM-5 criteria, who were either outpatient or hospitalized at Erciyes University Faculty of Medicine's Psychiatry Clinic, and had not received any medication for at least the last two weeks (six weeks for fluoxetine). Patients were evaluated by clinical interview and categorized according to DSM-5 diagnostic criteria: single episode (n=47), recurrent (n=12), chronic (n=4), double (n=2), and psychotic (n=3). Patients with known neurological, metabolic, endocrine (e.g., diabetes, hyperlipidemia, thyroid dysfunction), or any other psychiatric disorders (including sleep and eating disorders), those who were using psychotropic medications, those with substance or alcohol use disorders (except for smoking), patients on a special diet, and women who were pregnant, breastfeeding, or using oral contraceptives were excluded from the study.

To form the control group, 30 healthy volunteers (19 women, 11 men) aged within the same range as the patients, with no known psychiatric disorders, were included. The same exclusion criteria were applied to the control group. The research protocol was approved by the Erciyes University Ethics Committee on 28.08.2015 (decision no: 2015/374). Written informed consent was obtained from patients and controls after explaining the purpose and methodology of the study. This study was conducted as part of a TÜBİTAK project and was supported by TÜBİTAK (Project ID: 215S598).

A participant follow-up form containing sociodemographic and clinical information was completed by all patients and controls, and a clinical interview was conducted for diagnostic evaluation. The "Hamilton Depression Rating Scale" was used to assess the severity of depressive symptoms.

Blood samples were collected between 8:00-9:00 AM after 12 hours of fasting for measuring NPY levels. A total of 10 cc of blood was drawn, placed in standard vacuum tubes, and centrifuged at 1000 rpm for 15 minutes within 30 minutes to separate the serum. Serum samples were stored at -70°C until analysis. Serum hormone levels were measured by the Nuclear Medicine Department using the Radioimmunoassay (RIA) method. Serum NPY levels

were determined using RIA kits (Phoenix Pharmaceuticals, Inc., USA), with a measurement range of 10-1280 pg/ml (detection limit: 3.79 pg/ml).

Statistical Analysis

The normality of data distribution was assessed using the Shapiro-Wilk test. Independent samples t-tests were used for normally distributed data, while the Mann-Whitney U test was used for non-normally distributed data for comparing sociodemographic, clinical, and psychometric test scores, as well as hormone levels between patients and controls. To control for the effects of BMI and age on hormone levels, ANCOVA was performed with BMI and age as covariates. The chi-square test was used for comparing categorical data such as gender, physical comorbidities, family psychiatric history, and smoking status between patients and controls. Spearman's correlation test was used to explore relationships between demographic and clinical data. Data are expressed as mean ± standard deviation for normally distributed variables, median (interquartile range) for non-normally distributed variables, and counts and percentages for categorical variables.

Results

There was no significant difference in age, gender ratio, or BMI between patients and controls. The patients had lower educational levels and a higher rate of family psychiatric history compared to the control group. The HAM-D scores of patients were significantly higher than those of controls (Table 1).

Tablo 1. Sociodemographic and Clinical Characteristics of Patients and Controls

		Patients (n=69)	Controls (n=30)	Comparasion
Age	median (IQR) Mean ± SD	38(23) 37,12±12,58	31,5(18,75) 35,84±11,68	Z=0,281 p=0,779
Female/Male		48/21	19/13	X^2=1,017 p=0,313
Body Mass Index		25,39(6,39)	25,82(5,88)	Z=0,821 p=0,412
Years of education		12(7)*	12(4)	Z=2,851 p=0,004
Family history of mental illness	Yes No	19(%27,5)** 50(%72,5)	1(%3,1) 31(%96,9)	X^2=8,203 p=0,004
Total illness duration(years)		2(4)	-	-
HAM-D		18(4)**	0(0)	Z=8,173 p<0,001

*:Lower than controls **:Higher than controls IQR: Interquartile range SD: Standard deviation

There was no significant difference in neuropeptide Y levels between the patient and control groups (Table 2). When age, BMI, and gender effects were controlled, no difference in NPY levels was found between patients and controls (F=1.317, p=0.254).

Tablo 2. Comparison of Hormonal Levels Between Patients and Controls

	Patients (n=69)		Controls (n=30)		Comparison
	Median (IQR)	Mean ± SD	Median (IQR)	Mean ± SD	
Neuropeptide Y (pg/ml)	13,52(7,71)	14,20±6,16	14,69(7,15)	15,55±5,44	t=1,039 p=0,301

Female patients had higher NPY levels compared to male patients. No gender differences in NPY levels were observed in the control group. The total disease duration was found to be longer in female patients compared to male patients (Table 3).

Tablo 3. Hormonal Level by Gender

	Patients		Controls		Famale/Male Comparasion		Patients/Control Comparasion	
	Kadın n=48	Erkek n=21	Kadın n=19	Erkek n=11	Hasta	Kontrol	Kadın	Erkek
NPY	15,25(6,4) 15,87±7,26	11,77(4,88) 11,29±4,39	16,1(5,28) 15,02±7,79	14,59(5,82) 14,37±6,64	t=2,221 p=0,030	Z=-0,710 p=0,478	t=-0,510 p=0,612	Z=-1,448 p=0,148
Total illness duration (years)	2,5(3)	1(2,5)	-	-	Z=-2,294 p=0,022	-	-	-

Discussion

In the patient group, a positive correlation was found between serum NPY levels and total disease duration (r=0.263, p=0.029).

In our study, while there was no significant difference in NPY levels between patients and controls, NPY levels were higher in women compared to men in the patient group. The results of studies related to NPY show inconsistency in the literature. There are studies that report no significant difference between patients and controls, which aligns with our findings [9,10]. However, there are also studies that report differences in NPY levels between depressive patients and healthy controls [5,7,8,11]. The absence of significant differences between patients and controls in our study may be due to factors such as the absence of pharmacological treatment, the subtype of depression, variables like sleep and appetite changes, and the patients not being in an acute depressive episode. In fact, one study reported that antidepressant drugs increase NPY levels [12].

A recent meta-analysis reported that in depressive patients, peripheral blood NPY levels were lower than those of controls, but this difference was not observed in the cerebrospinal fluid (CSF). Furthermore, NPY levels were higher in women and in individuals using psychotropic drugs [13]. In our study, the higher NPY levels in female patients and the longer disease duration in female patients compared to males suggest a possible relationship between NPY levels and the chronicity of depression.

In a study by Martinez et al., no significant difference in NPY levels was found between depressive patients and healthy controls, but patients with recurrent depressive episodes had significantly higher NPY levels [10]. This has been interpreted as an adaptation to multiple depressive episodes. Similarly, our findings of a positive correlation between NPY levels and total disease duration are consistent with the hypothesis that NPY may increase in chronic stress situations. Literature supports the idea that chronic stress elevates plasma NPY levels [13].

In conclusion, it appears that NPY levels may be associated with disease duration and are higher in female patients compared to male patients. These findings suggest a potential role of NPY in the neurobiology of depression; however, further longitudinal studies with larger sample sizes are required to better understand this relationship.

References

[1] Kılıç C, Ulusoy M, Keçeci M, Şimşek Z. Turkey Mental Health Profile Report - Prevalence of mental disorders in the adult population, related factors, disability, and mental health service usage results. Eksen Tanıtım Ltd Şti, Ankara 1998.

[2] Güleç C. A study investigating the impact of healthcare organization on the prevalence of affective disorders and attitudes towards them. Unpublished Associate Professorship Thesis, Hacettepe University, Ankara 1981.

[3] Fuchs T. Life events in late paraphrenia and depression. Psychopathology 1999;32(2):60-9.

[4] Melchior M, Caspi A, Milne BJ, Danese A, Poulton R, Moffitt TE. Work stress precipitates depression and anxiety in young, working women and men. Psychol Med 2007;37(8):1119-29.

[5] Hirschfeld RM, Cross CK. Epidemiology of affective disorders: Psychosocial risk factors. Arch Gen Psychiatry 1982;39(1):35-46.

[6] Roy A. A case–control study of social risk factors for depression in American patients. SAGE Publications Sage CA 1997;42(3):307-9.

[7] Irwin M, Brown M, Patterson T, Hauger R, Mascovich A, Grant I. Neuropeptide Y and natural killer cell activity: findings in depression and Alzheimer caregiver stress. Faseb J 1991;5(15):3100-7.

[8] Soleimani L, Oquendo MA, Sullivan GM, Mathé AA, Mann JJ. Cerebrospinal fluid neuropeptide Y levels in major depression and reported childhood trauma. Int J Neuropsychopharmacol 2014;18(1):23.

[9] Czermak C, Hauger R, Drevets WC, et al. Plasma NPY concentrations during tryptophan and sham depletion in medication-free patients with remitted depression. J Affect Disord 2008;110(3):277-81.

[10] Ozsoy S, Olguner Eker O, Abdulrezzak U. The effects of antidepressants on neuropeptide Y in patients with depression and anxiety. Pharmacopsychiatry 2016;49(01):26-31.

[11] Wu G, Feder A, Wegener G, et al. Central functions of neuropeptide Y in mood and anxiety disorders. Expert Opin Ther Targets 2011;15(11):1317-31.

[12] Ünler M, Ekmekçi Ertek İ, Afandiyeva N, Kavutçu M, Yüksel N. The role of neuropeptide Y, orexin-A, and ghrelin in differentiating unipolar and bipolar depression: a preliminary study. Nord J Psychiatry 2022;76(3):162–9.

[13] Tural U, Iosifescu DV. Neuropeptide Y in PTSD, MDD, and chronic stress: A systematic review and meta-analysis. J Neurosci Res 2020;98(5):950-63.

0248 - The Mediating Role of Psychological Resilience in The Relationship Between Perceived Parenting Styles and Social Anxiety in Adults

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Objective: Social anxiety disorder is characterized by an intense fear of negative evaluation in social or performance situations, leading to significant distress and impairment. Its development is influenced by both genetic and environmental factors, with perceived parental attitudes being a key environmental factor shaping social anxiety. Research suggests that rejecting and overprotective parenting styles are positively associated with social anxiety (1). Additionally, a lack of emotional warmth in parent-child interactions has been identified as a risk factor for increased social anxiety symptoms (2). On the other hand, psychological resilience refers to an individual's ability to adapt and maintain psychological well-being despite adversity. It is often regarded as a protective factor that can mitigate the negative effects of adverse life experiences (3). However, the extent to which psychological resilience buffers the relationship between perceived parental attitudes and social anxiety remains unclear. Therefore, this study aims to investigate the potential mediating role of psychological resilience in the relationship between perceived parental attitudes in childhood and social anxiety in adulthood.

Methods: The data collected in the study were analyzed using the SPSS 27 software package. Pearson correlation analysis was conducted to examine the relationships between perceived parental attitudes, social anxiety, and psychological resilience. Mediation analysis was performed using Hayes PROCESS Macro Model-4 with 5,000 bootstrap samples to determine whether psychological resilience mediated the effect of perceived parental attitudes on social anxiety. A significance threshold of $p < 0.01$ was applied to all analyses.

For this study, data were collected between 2024 and 2025 from adult individuals aged 18 to 65 residing in Turkey using a convenience sampling method. The measurement scales used in the study were converted into an online survey format and distributed to individuals willing to participate through social media applications. Participants completed the survey online in approximately 10 minutes. A total of 395 adults aged 18 to 64 ($M = 28.72$, $SD = 8.27$) participated in the study. Among the participants, 63.4% were female ($n = 255$), and 36.6% were male ($n = 130$).

Psychometric Scales: Perceived Parental Attitudes Scale (s-EMBU-C): This 23-item scale measures individuals‘ perceptions of their parents' behaviors in three subdimensions—rejecting, overprotective, and warm parental st.The validity and reliability of the inventory in Turkish have also been formed (4).

Liebowitz Social Anxiety Scale (LSAS): This 24-item instrument evaluates social interaction anxiety and avoidance behaviors. The validity and reliability of the inventory in Turkish have also been formed (5).

Connor-Davidson Resilience Scale (CD-RISC-10): A 10-item short form assessing psychological resilience and adaptive coping strategies. The validity and reliability of the inventory in Turkish have also been formed (6).

Results

The results indicate that both maternal and paternal rejecting and overprotective parenting styles increase social anxiety, whereas emotional warmth reduces it. Additionally, psychological resilience was found to play a partial mediating role in these relationships. Specifically, negative parental attitudes weakened psychological resilience, thereby increasing social anxiety levels, while parenting styles characterized by emotional warmth strengthened psychological resilience, leading to lower levels of social anxiety.

Maternal rejecting ($\beta = -0.21$, $p < 0.01$) and overprotective ($\beta = -0.23$, $p < 0.01$) attitudes** were found to reduce psychological resilience, which in turn led to higher levels of social anxiety ($\beta = -0.46$, $p < 0.01$; $\beta = -0.44$, $p < 0.01$). In contrast, maternal emotional warmth** increased psychological resilience ($\beta = 0.20$, $p < 0.01$), which subsequently reduced social anxiety ($\beta = -0.48$, $p < 0.01$). Bootstrap analyses confirmed the significant mediating role of psychological resilience in the relationship between maternal rejecting ($\beta = 0.10$, 95% CI [0.0495 - 0.1516]), maternal overprotective ($\beta = 0.10$, 95% CI [0.0496 - 0.1596]), and maternal emotional warmth ($\beta = -0.10$, 95% CI [-0.1512 - -0.0446]) attitudes on social anxiety.

Similarly, paternal rejecting ($\beta = -0.17$, $p < 0.01$) and overprotective ($\beta = -0.18$, $p < 0.01$) attitudes** were found to reduce psychological resilience, leading to higher social anxiety levels ($\beta = -0.47$, $p < 0.01$; $\beta = -0.46$, $p < 0.01$). Conversely, paternal emotional warmth** increased psychological resilience ($\beta = 0.18$, $p < 0.01$), which in turn decreased social anxiety ($\beta = -0.48$, $p < 0.01$). Bootstrap analyses demonstrated that psychological resilience significantly mediated the effect of paternal rejecting ($\beta = 0.08$, 95% CI [0.0312 - 0.1410]), paternal overprotective ($\beta = 0.08$, 95% CI [0.0344 - 0.1426]), and paternal emotional warmth ($\beta = -0.09$, 95% CI [-0.1509 - -0.0328]) attitudes on social anxiety.

Discussion

This study examined the mediating role of psychological resilience in the relationship between perceived parental attitudes and social anxiety. The findings indicate that both maternal and paternal rejecting and overprotective parenting styles increase social anxiety, whereas parental emotional warmth decreases it. In particular, individuals exposed to rejecting parental attitudes may develop an expectation of being rejected in social settings, which in turn may lead to the emergence or intensification of social anxiety. Schimmenti and Bifulco (7) demonstrated that individuals who experienced rejecting parental attitudes in childhood tend to develop fear of rejection in adulthood.

Parents who adopt overprotective attitudes often exhibit restrictive behaviors to shield their children from potential risks in daily life. Individuals raised under such restrictive conditions may lack the necessary experience to act independently and express themselves in social settings during adulthood. Consequently, they may develop a tendency to avoid social interactions and exhibit symptoms of social anxiety. Spokas and Heimberg (2) found that exposure to overprotective parenting behaviors negatively affects the development of social skills, making individuals feel anxious in social situations.

On the other hand, individuals who receive warm and supportive parenting tend to develop a greater sense of autonomy, positive self-esteem, and high self-efficacy (8). In contrast, individuals with social anxiety often exhibit negative self-esteem and low self-efficacy (9). This contrast highlights the protective effect of perceived emotional warmth against social anxiety.

Finally, this study revealed that both maternal and paternal rejecting and overprotective parenting styles weaken psychological resilience, leading to increased social anxiety, whereas perceived emotional warmth strengthens psychological resilience, thereby reducing social anxiety levels. This finding suggests that psychological resilience may serve as a protective factor against the long-term negative effects of adverse parental experiences in childhood. Research shows that individuals with high psychological resilience tend to experience lower levels of anxiety and psychological distress, as well as exhibit more adaptive responses to stressful situations (10). In this context, psychological resilience appears to function as a buffer that mitigates the impact of perceived parental attitudes on social anxiety.

Keywords: parenting styles, resilience, social anxiety

References

[1] Lieb, R., Wittchen, H. U., Höfler, M., Fuetsch, M., Stein, M. B., & Merikangas, K. R. (2000). Parental psychopathology, parenting styles, and the risk of social phobia in offspring: a prospective-longitudinal community study. *Archives of general psychiatry, 57*(9), 859-866. .https://doi.org/10.1001/archpsyc.57.9.859

[2] Spokas, M., Heimberg, R.G. Overprotective Parenting, Social Anxiety, and External Locus of Control: Cross-sectional and Longitudinal Relationships. *Cogn Ther Res* 33, 543–551 (2009). https://doi.org/10.1007/s10608-008-9227-5

[3] Poole, J. C., Dobson, K. S., & Pusch, D. (2017). Childhood adversity and adult depression: The protective role of psychological resilience. *Child abuse & neglect, 64,* 89-100.https://doi.org/10.1016/j.chiabu.2016.12.012

[4] Dirik, G., Yorulmaz, O. ve Karancı, A.N. (2015). Çocukluk Dönemi Ebeveyn Tutumlarının Değerlendirilmesi: Kısaltılmış Algılanan Ebeveyn Tutumları-Çocuk Formu. *Türk Psikiyatri Dergisi, 26*(2), 123-130.

[5] Soykan, Ç., Özgüven, H. D. ve Gençöz, T. (2003). Liebowitz social anxiety scale: the Turkish version. Psychological Reports, 93, 1059-1069. https://doi.org/10.2466/pr0.2003.93.3f.1059

[6] Kaya, F. ve Odacı, H. (2021). The adaptation of the Connor–Davidson resilience scale short form into Turkish: A validity and reliability study. Hayef: Journal of Education, 18(1), 38–54. https://doi.org/10.5152/hayef.2021.20029

[7] Schimmenti A, Bifulco A. Linking lack of care in childhood to anxiety disorders in emerging adulthood: the role of attachment styles. Child Adolesc Ment Health. 2015 Feb;20(1):41-48. https://doi.org/10.1111/camh.12051

[8] Khaleque, A., & Rohner, R. P. (2012). Transnational relations between perceived parental acceptance and personality dispositions of children and adults: A meta-analytic review. *Personality and Social Psychology Review, 16*(2), 103–115. https://doi.org/10.1177/1088868311418986

[9] Leary, M. R. (1990). Responses to Social Exclusion: Social Anxiety, Jealousy, Loneliness, Depression and Low Self-Esteem. Journal of Social and Clinical Psychology, 9, 221-229. http://dx.doi.org/10.1521/jscp.1990.9.2.221

[10] Afek A, Ben-Avraham R, Davidov A, Berezin Cohen N, Ben Yehuda A, Gilboa Y, Nahum M. Psychological Resilience, Mental Health, and Inhibitory Control Among Youth and Young Adults Under Stress. Front Psychiatry. 2021 Jan 20;11:608588. doi: 10.3389/fpsyt.2020.608588. PMID: 33584372; PMCID: PMC7874000.

0250 - Serum Neurofilament Polypeptide Levels and Their Effects on Cognitive Functions in Patients with Bipolar Disorder

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Abstract

Introduction: Neurodegenerative processes may be effective in the onset of bipolar disorder (BD), the occurrence of episodes, course and progression of the disease, those also might contribute to cognitive deterioration(1). Neurofilaments are the main components of the cytoskeleton. Elevated neurofilaments at serum may be an indicator of axonal damage, neuropathology and neurodegeneration in BD(2). The computer-based neuropsychological test battery CNSVS(Central Nervous System Vital Signs) allows the evaluation of cognitive functions (3). In our study, we evaluated the serum levels of neurofilament light chain(NF-L), medium chain(NF-M) and heavy chain(NF-H) in the manic, depressive and euthymic stages of BD and the explored the relationship of those measurements with sociodemographic, clinical and neuropsychological functions through CNSVS.

Methods: Patients diagnosed with BD according to DSM-5 who applied to the Department of Psychiatry of Atatürk University Medical Faculty were included in the study. 35 manic, 35 depressive, 35 remission patients and 35 healthy volunteers were included. The healthy control group consisted of hospital employees who past or currently did not have any medical or mental illness. All participants were adults between the ages of 18 and 50. Written consent was obtained from all patients and healthy volunteers participating in the study. The sociodemographic-clinical data form, clinical scales and CNSVS tests were applied to the participants, respectively. Serum values of NF-L, NF-M and NF-H were measured by ELISA method.

Results: 54.3% of the participants were male and 45.7% were female. Patients and healthy controls were significantly similar in terms of age, gender and years of education ($p>0.05$). Mean NF-L levels; 7.22±6.46ng/ml in the mania, 7.41±4.79ng/ml in the depression, 6.86±2.97ng/ml in the remission and 4.92±0.56ng/ml in the control group; there is a significant difference between the mania-remission group and the remission-control groups ($p<0.001$). Mean NF-M levels; 778.77±529.65 ng/L in the mania, 1013.63±681.50 ng/L in the depression, 541.66±202.24 ng/L in the remission, 454.85±81.73 ng/L in the control group. There is a significant difference between the mania-remission, mania-control, depression-remission and depression-control groups($p<0.001$). NF-H levels were 29.39±20.70 ng/ml in the mania, 33.10±21.62 ng/ml in the depression, 21.72±10.65 ng/ml in the remission, and 13.37±2,65 ng/ml in the control group. There is a significant difference between the mania-remission, mania-control, depression-remission, depression-control, remission-control groups($p<0.001$. The results are summarized in Table 1. Neurofilament levels and neurocognitive areas were evaluated in bipolar patients (n = 105); a negative correlation was detected with NF-M levels and Neurocognition Index (NCI) ($p<0.01$,$r=-0.216$), composite memory($p<0.01$,$r=-0.265$) and executive functions($p<0.01$,$r=-0.214$). A negative correlation was detected with NF-H levels and NCI($p<0.01$, $r=-0.3$), composite memory($p<0.01$, $r=-0.326$), psychomotor speed($p<0.05$, $r=-0.204$) and executive functions($p<0.01$, $r=-0.294$). Neurofilament levels and their relationships with cognitive functions are shown in Table 2.

Discussion: As a result of our research, NF-L levels, which indicate neurodegeneration, were found to be higher in the manic episode than in the remission and control groups; we found that it was higher in the remission group than in the controls. No significant difference was detected between the depression group and the other groups. In light of the current results, it is thought that neurodegeneration is more common during the manic phase of bipolar disorder, that manic episodes may increase neuronal damage during the course of BD and therefore cause impairment in cognitive functions, and that neurodegeneration may be the source of memory and attention problems in patients during the manic episode. The fact that NF-L levels are higher in the remission period than in the control group indicates that neurodegeneration continues in the euthymic period, and this result may be the cause of ongoing cognitive function problems in euthymic patients. NF-L is a neuronal cytoplasmic protein found in high abundance in large-caliber myelinated axons. Its levels in CSF(cerebrospinal fluid) and blood increase in proportion to the degree of axonal damage in inflammatory and neurodegenerative diseases(4). In our study, the

high level of NF-L in BD can be considered as a finding in favor of being a neuroinflammatory and neurodegenerative disease. The mania group had higher serum NF-M levels compared to the remission group and the control group; it suggests that neurodegenerative and neuroinflammatory processes play a role during the episode, may be a factor in the onset or continuation of the attack, or other inflammatory or degenerative processes may be the initiating factor of the episode. The depression group had higher serum NF-M levels compared to the remission and control groups; it explains the destructive effects of depression on cognitive processes and is thought to cause deterioration in areas such as memory, memory, attention and executive functions. It suggests that neuronal and glial cell atrophy or loss may be a reflection of neurodegenerative processes and contributing factors to mood disorders(5). In our study, the mania group had higher serum NF-H levels compared to the remission group and control group; this suggests that manic episodes are strongly associated with neuropregression in BD and may be related to brain structural changes and cognitive impairment that develop in some BD patients. The neuroprogression hypothesis posits that repetition of mood episodes may promote cumulative damage to nerve cells, affecting the integrity of neural circuits and increasing the brain's vulnerability to future attacks of disease(6). In our study, it was observed that the depression group had higher serum NF-H levels compared to the remission and control groups. While manic episodes in the course of the disease are largely manageable in clinical practice, recurrent depressive episodes pose a major challenge to clinicians today and are often associated with chronicity and neuroprogression of the disease(7). The time spent in depression is longer in BD; both syndromal and subsyndromal depressive symptoms may be responsible for increasing functional impairment over time. In our study, we found higher serum NF-H levels in the depression group. The current high level supports that NF-H can be used as a neurodegenerative biomarker and shows that it can be used as an indicator in favor of neuropregression and clinical destruction in depression. It was found that the remission group had higher serum NF-H levels than the control group, indicating that neurocognitive impairment continues during the euthymic period of bipolar disorder and that these deficiencies may cause deterioration in psychosocial and occupational functionality. Early intervention may be particularly important for improving such disorders; because several studies, including this study, show that the degree of dysfunction may increase as the disease progresses(5). Therefore, one of the most important goals of future research should be to prevent attacks, identify the neurobiology underlying neurocognitive impairment in euthymic patients, and thus provide a target for therapeutic intervention. Cognitive and psychoeducational rehabilitation programs may be necessary to improve long-term outcomes for some patients. When symptomatic and euthymic patients are evaluated together in our study; No significant correlation was detected between serum NF-L levels and cognitive tests. We detected a weak negative correlation between NF-M levels and NCI, composite memory, verbal memory, cognitive flexibility, and executive functions. An increase in serum NF-M levels was found to be associated with impairment in the mentioned cognitive domains. We detected a low negative correlation between serum NF-H levels and NCI, verbal memory, visual memory, psychomotor speed, executive functions, composite memory, and cognitive flexibility. We have concluded that the increase in serum NF-M and NF-H levels is an indicator of inflammatory-mediated axonal damage and may indicate deterioration in existing cognitive tests. It can be used as a biomarker in the follow-up process of the disease and in the evaluation of degeneration. Since our study includes patients from all stages of the disease, it can be considered a more objective marker. Our results should be supported by studies with larger samples.

The results of our study show that elevated neurofilament polypeptide levels during all stages of BD compared to controls may be an indicator of inflammatory-mediated axonal damage in bipolar patients and might be used as a biomarker for neurodegeneration in BD. CNSVS neuropsychological test battery has an important place in determining the neurocognitive dysfunctions in individuals with BD. Negative correlation detected between serum NF-M and NF-H levels and cognitive test performance might reflect the neurodegeneration related poor cognitive performance.

Table 1. Comparison of Neurofilament Levels of Groups

	Grup	N	Mean	Median	SD	Min	Max	p	Significant Differences
NF-L lelvels (ng/ml)	Mania	35	7.22	4.91	6.462	2.85	30.70	**<0.001**	*m>r* *r>c*
	Depression	35	7.41	5.97	4.793	3.30	20.03		
	Remission	35	6.86	5.59	2.975	4.43	20.60		
	Control	35	4.92	4.91	0.563	3.75	6.42		
NF-M levels (ng/L)	Mania	35	778.77	621.17	529.656	375.66	2885.32	**<0.001**	*m>r* *m>c* *d>r* *d> c*
	Depression	35	1013.63	829.03	681.507	431.33	2975.82		
	Remission	35	541.66	456.46	202.243	344.92	1308.61		
	Control	35	454.85	430.62	81.737	290.07	664.64		
NF-H levels (ng/ml)	Mania	35	29.39	21.49	20.704	17.35	107.86	**<0.001**	*m>r* *m>c* *d>r* *d> c* *r>c*
	Depression	35	33.10	23.13	21.623	15.71	88.87		
	Remission	35	21.72	18.80	10.652	13.14	66.84		
	Control	35	13.37	12.72	2.659	8.39	19.61		

Kruskal Wallis Test m:mania d:depression r: remission c:control **Bold values represent $p < 0.05$**

Table 2. Spearman correlation analysis of neurofilament levels and CNS subfield scores in all patients (n=105)

	NF-L	NF-M	NF-H	NCI	CM	VM	VIM	PMS	CF	EF	CA
NF-L	—										
NF-M	0,52**	—									
NF-H	0,584**	0,783**	—								
NCI	0,074	-0,216**	-0,3**	—							
CM	-0,063	-0,265**	-0,326**	0,598**	—						
VM	0,005	-0,225**	-0,23**	0,425**	0,828**	—					
VIM	-0,06	-0,138	-0,207*	0,524**	0,731**	0,342**	—				
PMS	0,155	-0,076	-0,204*	0,84**	0,404**	0,258**	0,42**	—			
CF	0,044	-0,231**	-0,3**	0,92**	0,532**	0,352**	0,437**	0,732**	—		
EF	0,037	-0,214*	-0,294**	0,92**	0,521**	0,339**	0,442**	0,748**	0,982**	—	
CA	0,204*	-0,107	-0,144	0,772**	0,448**	0,323**	0,459**	0,647**	0,77**	0,775**	—

Spearman correlation analysis p<0,05 * p<0,001 ** NCI(neurocognition index), CM (composite memory), VM(verbal memory), VIM(visual memory), PMS(psychomotor speed), CF(cognitive flexibility), EF(executive functions), CA(constant attention)

Reference

1. Torres I, Boudreau V, Yatham L. Neuropsychological functioning in euthymic bipolar disorder: a meta-analysis. Acta Psychiatrica Scandinavica. 2007;116:17-26.
2. Aggio V, Fabbella L, Finardi A, Mazza EB, Colombo C, Falini A, et al. Neurofilaments light: possible biomarker of brain modifications in bipolar disorder. Journal of affective disorders. 2022;300:243-8.
3. Gualtieri CT, Johnson LG. Reliability and validity of a computerized neurocognitive test battery, CNS Vital Signs. Archives of clinical neuropsychology. 2006;21(7):623-43.
4. Guo M, Zhu C. Serum neurofilament light chain, markers of systemic inflammation and clinically relevant depressive symptoms in US adults. Journal of Affective Disorders. 2024;363:572-8.
5. Hurley LL, Tizabi Y. Neuroinflammation, neurodegeneration, and depression. Neurotoxicity research. 2013;23:131-44.
6. Bearden CE, Hoffman KM, Cannon TD. The neuropsychology and neuroanatomy of bipolar affective disorder: a critical review. Bipolar disorders. 2001;3(3):106-50.
7. Serafini G, Pardini M, Monacelli F, Orso B, Girtler N, Brugnolo A, et al. Neuroprogression as an illness trajectory in bipolar disorder: a selective review of the current literature. Brain Sciences. 2021;11(2):276.

0255 - Psychological Impact of Disaster and Migration on Preschool Children Following the 2023 Turkey Earthquakes

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Introduction

Natural disasters are a prevalent type of trauma around the world, and in addition to loss of life, they can affect children in many different ways, such as loss of family members, their homes, neighbours, and schools.1,2 Among the more severe natural disasters, the earthquake stands out, as a magnitude 7.8 seismic event struck southeastern Turkey and parts of Syria on the morning of February 6, 2023, followed by a magnitude 7.5 event nine hours later and over 200 subsequent aftershocks.3 Since the 2010 Haiti earthquake, these seismic events have been some of the most fatal globally4 signalling potential devastation to the mental health and psychological development of children.5,6 Previous research findings have established that acute stress disorder (ASD), post-traumatic stress disorder (PTSD), adjustment disorder, depression, and anxiety disorders are the predominant psychiatric disorders observed in children following natural disasters.7

Across studies in our country of earthquake-experienced children aged between 0 and 18 years, the reported prevalence of ASD ranges from 5% to 80%.8-11 In a recent meta-analysis, it was shown that around one-fifth of preschool-aged children who were directly exposed to trauma meet the criteria for PTSD.12

Although there is an abundance of literature investigating psychiatric problems following earthquakes in school-aged children and adolescents,13,9 the current study highlighted a gap in focusing specifically on young children for a comprehensive evaluation of psychiatric symptoms. Our study aimed to assess psychiatric problems and the occurrence of ASD and PTSD among preschool-aged children who experienced the 2023 Turkey earthquakes and migrated and to compare them with a cohort group exposed to any other life-threatening event.

Materials and Methods

The study was based on a clinical sample of 34 preschool children aged 2–6 years who experienced earthquakes on February 6, 2023 and applied to our clinic between 15.03.2023 and 15.05.2023. As a control group, a cohort that experienced any life-threatening event, excluding natural disasters, was selected from the simultaneously conducted investigation on the validity and reliability of Turkish version of Preschool Age Psychiatric Assessment (PAPA). Ethics approval was obtained from Ankara University Faculty of Medicine Human Research Ethics Committee (Approval number: İ06-362-23). Written informed consent was obtained from the children and their parents.

An earthquake outpatient clinic in our department was served to children who experienced the earthquake. After psychiatric assessment, PAPA/Post-Traumatic Stress sections were conducted by a certified child and adolescent psychiatrist. Parents completed the sociodemographic questionnaires, the Pediatric Emotional Distress Scale (PEDS) and the Child Behavior Checklist for Ages 1.5-5 (CBCL/ 1′ –5).

Results: The study group (n=34) consisted of 2-6-year-old children exposed to the 2023 Turkey earthquakes who lived in earthquake-affected areas and migrated after the earthquake. The age-matched control group (n=37) comprised other trauma-affected children. The duration of leaving the earthquake-hit provinces ranged between 0 and 30 days. When comparing trauma-related symptoms between the two groups, the earthquake group demonstrated significantly higher levels of acute emotional and behavioral responses than the other trauma group.

After interviewing via PAPA and psychiatric assessments, 18 children were diagnosed with ASD, and 13 had PTSD in the earthquake group, whereas ASD and PTSD diagnoses were detected in 3 children within the other trauma group.

Comparison of behavioral and emotional psychiatric problems and emotional distress among the groups. In the comparative analysis of CBCL, the earthquake group exhibited significantly higher levels of anxious-depressed symptoms and sleep problems. Additionally, according to PEDS, trauma-related distress was also higher in the earthquake group than in the other trauma groups. While examining sociodemographic factors and earthquake-related experiences (damage status of house, duration of leaving the earthquake-hit provinces) that could be associated with PTSD in the earthquake group, the relationships between PTSD and age and gender were significant. To determine the effects of migration, ASD and PTSD diagnoses in the earthquake-affected group, we determined the attribution of "migration" as a contributing factor to psychiatric problems. Our findings indicated that 8 children in the earthquake-exposed group had psychiatric symptoms related to migration to another city. However, migration-related psychiatric problems were not significantly associated with the presence of earthquake-related ASD and PTSD diagnoses. To define the factors that predicted the presence of PTSD, univariate analyses were conducted, and child age, gender, presence of ASD diagnosis, and CBCL sleep problems subscale scores were included in the binary regression model. Multicollinearity was checked using the variance inflation factor (VIF), and no problems were identified.

Discussion

According to our study findings, ASD and PTSD diagnoses related to the earthquake were identified in 52.9% and 38.2% of the earthquake-experienced children, whereas approximately 8% were two each in the other trauma-exposed group. These findings are consistent with studies indicating that children who have experienced an earthquake exhibit more cognitive, language, and emotional problems and are more likely to have PTSD than those who had not been affected by the earthquake.1-3 This study scrutinizes trauma-related acute stress reactions, PTSD symptoms, and broader manifestations of psychiatric distress within preschool-age cohort. Our findings also revealed that emotional and behavioral problems (especially anxious depressed and sleep problems) were more prevalent among the earthquake-exposed group. Furthermore, an elevated PEDS total score suggests a heightened level of distress in these children compared with those who experienced other trauma. In contrast to prior investigations, wherein the control cohort comprised children unaffected by the earthquake, our study delineated the comparison group as children exposed to a different life-threatening trauma distinct from the earthquake but not the earthquake per se. Almost all children in the earthquake group had peritraumatic emotional responses, and behavioral responses were detected in approximately two-thirds of the children on average, primarily involving confusion. Early stress responses, including excessive screaming or crying, numbness, confusion, and aggressive/impulsive behaviors, are commonly observed in children.4,5 Moreover, the earthquake-exposed group demonstrated markedly elevated symptom levels in almost all acute emotional and behavioral responses compared with their other trauma-exposed peers. In the earthquake-exposed group, half of the children experienced nightmares after the earthquake, and sleep problems that emerged post-earthquake were evident in over half of them consistent with the previous literature.6,8 Irritability and hypervigilance symptoms were identified in approximately half of the sample. Similarly, nearly half of them have experienced fear since the earthquake, including going to the bathroom alone, fear of the dark, and separation fears, supporting the literature.9 Almost all of these trauma-related symptoms were more prevalent in the earthquake-exposed group than in the other trauma-exposed group.

Preschool children suffering from traumatic stress symptoms generally have difficulty regulating their behaviors and emotions.4 Developmental differences in the manifestation of PTSD symptoms might explain why our findings indicate a loss of positive and negative emotional expressions rather than a loss of positive and negative effects among preschool children, particularly in the earthquake group. Although regression is a common subsequent trauma-related symptom in infants and young children,4 our results revealed that the loss of acquired skills was scarcely detected in almost any of them; however, we found that approximately 5% of the earthquake group had a regression in verbal skills, and 8% of the other trauma group had regression in toileting. Because the psychiatric assessments of children were conducted within three months, we may not have captured the language regression. After experiencing trauma, children might miss critical language development periods, leading to long-term deficits that we could not detect at earlier stages.10 It is also possible that this result may not reflect the broader reality, as the evaluation was conducted solely on the sample that applied to our clinic and involved a relatively small number of children.

In the current study, we detected a lower prevalence of re-experiencing symptoms and failures of recall than other PTSD-related symptoms in the entire sample. According to various research findings, after traumatic events, young children showed a lower rate of cognitive signs (e.g., minimal re-experiencing symptoms) and few avoidance symptoms (e.g., inability to recall an aspect of the trauma and avoidance of thoughts, feelings, or conversations about the event), which could be related to the developmental process.4 Initially, ASD was recognized as a strong predictor of PTSD;11 however, in recent years, there has been a decreased focus on this relationship.12 Although before our prediction analysis, we found that ASD was significantly associated with PTSD diagnosis in the earthquake group, after regression analysis, this significance was lost for the prediction of PTSD. When reviewing the literature and analyzing our study findings, we found that ASD is more prevalent than PTSD.6,7 Therefore, it can be concluded that a higher occurrence of ASD compared with PTSD does not guarantee that every case of ASD will progress to PTSD. In addition, the complexity of the course of PTSD might limit the capacity of ASD diagnosis to predict subsequent PTSD.13 According to our regression analysis, child age was also found to be a predictor of PTSD, in line with a prior meta-analysis.14 Our findings indicate a higher propensity for developing PTSD among older child survivors than among their younger counterparts following earthquakes. This trend potentially signifies universal patterns in the distribution of child PTSD after seismic events.15 Alternatively, the observed lower frequencies might also be attributed to the developmental insensitivity of PTSD symptoms, which could fail to adequately capture manifestations of the disorder within this age

References

1. Achenbach TM, Rescorla LA. Child behavior checklist for ages 1 1/2-5. Reporter. 2000;10:20.
2. Bal A. Post-traumatic stress disorder in Turkish child and adolescent survivors three years after the Marmara earthquake. Child Adolesc Ment Health. 2008;13(3):134-139. doi:10.1111/j.1475-3588.2007.00469.x
3. Bui E, Ohye B, Palitz S, et al. Acute and chronic reactions to trauma in children and adolescents. IACAPAP E-textbook on child and adolescent mental health. Published online 2014.
4. Bryant RA. Acute stress disorder as a predictor of posttraumatic stress disorder: a systematic review. J Clin Psychiatry. 2010;71(2):381. doi:10.4088/JCP.09r05072blu
5. Bryant RA. The current evidence for acute stress disorder. Curr Psychiatry Rep. 2018;20:1-8. doi:10.1007/s11920-018-0976-x
6. Çağlayan P. Uluslararası ilişkiler disiplininde göç araştırmaları: Türkiye'deki doktora tezleri üzerine bir değerlendirme (2000-2021). Göç Dergisi. 2023;10(1):25-42.
7. Cloitre M, Stolbach BC, Herman JL, Kolk BVD, Pynoos R, Wang J, Petkova E. A developmental approach to complex PTSD: Childhood and adult cumulative trauma as predictors of symptom complexity. J Trauma Stress. 2009;22(5):399-408.
8. Daglar M, Melhuish E, Barnes J. Parenting and preschool child behaviour among Turkish immigrant, migrant and non-migrant families. Eur J Dev Psychol. 2011;8(3):261-279.
9. D'Andrea W, Ford J, Stolbach B, Spinazzola J, Van der Kolk BA. Understanding interpersonal trauma in children: why we need a developmentally appropriate trauma diagnosis. Am J Orthopsychiatry. 2012;82(2):187.
10. Dell'Osso L, Carmassi C, Massimetti G, et al. Age, gender and epicenter proximity effects on post-traumatic stress symptoms in L'Aquila 2009 earthquake survivors. J Affect Disord. 2013;146(2):174-180.
11. Demir T, Demir DE, Alkas L, Copur M, Dogangun B, Kayaalp L. Some clinical characteristics of children who survived the Marmara earthquakes. Eur Child Adolesc Psychiatry. 2010;19:125-133.
12. Diler RS, Avci A, Kulan E, Uzel M, Adiguzel L. Assessment of outpatient referrals after Adana earthquake. In: 9th National Child and Adolescent Psychiatry Congress Book, CUY, Adana (Turkish); 1999.
13. Egger HL, Angold A. The Preschool Age Psychiatric Assessment (PAPA): A structured parent interview for diagnosing psychiatric disorders in preschool children. Handbook of Infant, Toddler, and Preschool Mental Health Assessment. 2004;42(5):223-243.
14. Egger HL, Erkanli A, Keeler G, Potts E, Walter BK, Angold A. Test-retest reliability of the preschool age psychiatric assessment (PAPA). J Am Acad Child Adolesc Psychiatry. 2006;45(5):538-549.
15. Efendi GY, Temeltürk RD, Çakmak IB, Dinçer M. Surviving the Immediate Aftermath of a Disaster: A Preliminary Investigation of Adolescents' Acute Stress Reactions and Mental Health Needs after the 2023 Turkey Earthquakes. Children. 2023;10(9):1485.
16. Fujiwara T, Yagi J, Homma H, et al. Clinically significant behavior problems among young children 2 years after the Great East Japan Earthquake. PLoS One. 2014;9(10):e109342. doi:10.1371/journal.pone.0109342
17. Gomez CJ, Yoshikawa H. Earthquake effects: Estimating the relationship between exposure to the 2010 Chilean earthquake and preschool children's early cognitive and executive function skills. Early Child Res Q. 2017;38:127-136.
18. Göktepe K. Çocukluk çağı travma sonrası duygusal stres ölçeğinin uyarlama, geçerlik ve güvenirlik çalışması. Published online 2014.

0261 - Comparison of Temperament Traits and Insight Levels Between Schizophrenia Patients With and Without A Criminal History

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Introduction

Criminal behavior has been explained through various theories, including biological, psychological, social learning, and sociological models, yet no single theory is sufficient. Research indicates an increased risk of violent behavior in individuals with schizophrenia compared to the general population (1). The rising number of forensic cases involving schizophrenia, often highlighted in mass media, contributes to stigma and concerns about treatment and monitoring. Identifying risk factors is essential for prevention and mental health policy development.

Key factors increasing the risk of violence in schizophrenia include male gender, young age, substance abuse, treatment nonadherence, antisocial or paranoid personality traits, paranoid delusions, suicidal ideation or attempts, and frequent hospitalizations (2,3). Impaired insight—difficulty in accepting the diagnosis, recognizing symptoms, and adhering to treatment—further exacerbates risks through disease relapse, interpersonal conflicts, and misinterpretation of symptoms (4).

Temperament, a hereditary and structural component of personality, may also influence criminal behavior. Akiskal et al. identified five primary affective temperaments: hyperthymic, cyclothymic, depressive, irritable, and anxious. While TEMPS-A has been widely used in mood disorders, its application to schizophrenia and criminal behavior remains unexplored.

This study aims to identify predictors of criminal behavior in schizophrenia by examining sociodemographic variables, clinical features, and affective temperament in relation to crime type and severity.

Methods

This study included 150 consecutive patients diagnosed with schizophrenia who presented to the Psychiatry Outpatient Clinic of Ankara Numune Training and Research Hospital. Inclusion criteria were a diagnosis of schizophrenia according to DSM-5 criteria, age between 18 and 65 years, voluntary participation, absence of mental disorders due to general medical conditions, and absence of intellectual disability. After excluding 47 patients who did not meet these criteria, 103 patients were included in the study. These patients were classified into two groups: schizophrenia patients with a criminal record (n=63) and schizophrenia patients without a criminal record (n=40).

All participants were assessed by psychiatrists and completed the Positive and Negative Syndrome Scale (PANSS), the Temperament Evaluation of Memphis, Pisa, Paris, and San Diego-Autoquestionnaire (TEMPS-A) and the Scale to Assess the Three Components of Insight (SAI-E). Ethical approval for the study was obtained from the Ethics Committee of Ankara Numune Training and Research Hospital (03.02.2016 approval date, E16-728).

Positive and Negative Syndrome Scale (PANSS): Developed by Kay et al. to evaluate positive, negative, and general psychopathological symptoms in schizophrenia using a semi-structured, seven-point Likert-type interview. It consists of 30 items divided into three subscales: Positive Symptoms, Negative Symptoms, and General Psychopathology.The Turkish validity and reliability study was conducted in 1999.

TEMPS-A Temperament Scale: A 99-item self-report scale developed by Akiskal et al. to assess predominant affective temperament. Respondents answer "yes" or "no" based on their lifetime experience. The scale includes five temperament dimensions: depressive, cyclothymic, hyperthymic, irritable, and anxious. The Turkish validity and reliability study was conducted by Vahip et al.

Scale to Assess the Three Components of Insight (SAI-E): A semi-structured clinician-administered scale developed by David to evaluate insight into illness and the ability to recognize psychotic experiences. Each item is

scored from 0 to 2, with higher scores indicating better insight. The Turkish validity and reliability study was conducted by Arslan et al.

Data analysis was conducted using SPSS version 21.0. The Pearson Chi-Square test was used for ordinal data comparisons. The normality of continuous variables was assessed using the Shapiro-Wilk test. Independent sample t-tests were used for normally distributed variables, while the Mann-Whitney U test was applied for non-normally distributed variables. A significance level of α=0.05 was set for all statistical analyses.

Results

The sample consisted of 103 patients with schizophrenia (91 males, 12 females), including 63 with a criminal record and 40 without. The mean age was 38.9±9.3 years, and the mean education duration was 10.5±4.3 years. Patients with a history of criminal behavior were older than those without (t=2.025, p=0.046). Additionally, multiple hospitalization history was more frequent in the criminal group, while patients with no hospitalization history were more common in the non-criminal group (χ^2=11.242, p=0.004). Other sociodemographic factors, age at illness onset, illness duration, family psychiatric history, suicide attempts, self-harm history, smoking, and substance use did not differ significantly between groups (Table 1).

Table 1. Sociodemographic Characteristics of Schizophrenia Groups with and without Criminal History

	Schizophrenia with criminal history (n=63)	**Schizophrenia without criminal history (n=40)**	
Age (years)	40,28 ± 9,22	36,94 ± 9,21	t=2,025, p=0,046*
Education (years)	10,32 ± 4,15	10,27 ± 3,19	t=-0,893, p=0,374
Duration of illness (years)	11,62 ± 7,44	10,82 ± 8,51	t=0,538, p=0,592
Age of onset (years)	28,23 ± 8,97	26,03 ± 8,28	t=1,503, p=0,136
Duration of untreated psychosis (years)	1 (0-10)	1(0-10)	H: -1,409, p=0,159
Gender [n(%)]			
Female	5 (%7,9)	7 (%17,5)	X^2=2,174, p=0,140
Male	58 (%92,1)	33 (%82,5)	
Marital status [n(%)]			
Single	28 (%44,4)	23 (%57,5)	X^2=1,744, p=0,418
Married	20 (%31,7)	9 (%22,5)	
Widowed	15 (%23,8)	8 (%20,0)	
Living arrangement [n(%)]			
Traditional family	34 (%54,0)	23 (%57,5)	X^2=2,353, p=0,502
Nuclear family	13 (%20,6)	9 (%22,5)	
Living alone	16 (%25,4)	7 (%17,5)	
Social institution	0	1 (%2,5)	
Family history of psychiatric illness [n(%)]	23 (%36,5)	14 (%35,9)	X^2=0,004, p=0,950
History of suicide attempts [n(%)]	14 (%22,2)	7 (%17,5)	X^2=0,024, p=0,876
History of self-harm behavior [n(%)]	25 (%39,7)	14 (%35,0)	X^2=0,228, p=0,633
Smoking [n(%)]	50 (%79,4)	27 (%69,2)	X^2=1,337, p=0,248
Substance use [n(%)]	8 (%12,5)	3(%7,7)	X^2=0,627, p=0,428
Number of hospitalizatons [n(%)]			
None	1[a] (%1,6)	6[b] (%15)	X^2=11,242, p=0,004*
1-2 times	28 (%44,4)	23 (%57,5)	
3 or more times	34[a] (%54,0)	11[b] (%27,5)	

[ab] Different letters indicate statistically significant differences, p<0,05

*= statistically significant, p<0,05

Among the 63 patients with a criminal record, 45 reported experiencing delusions and 27 hallucinations at the time of the offense. Regarding offense types, 19 (30.2%) committed major violent crimes, 29 (46.0%) minor violent crimes, and 26 (41.3%) property-related crimes. A total of 24 (38.1%) were repeat offenders, with minor violent crimes being the most recurrent (n=15) (Table 2). Substance users were more likely to be repeat offenders (n=7, 29.2%) compared to non-users (n=1, 2.6%) (χ^2=9.484, p=0.002). Furthermore, self-harm behavior was significantly higher in substance users (n=9, 58.3%) than in non-users (n=3, 28.2%) (χ^2=5.634, p=0.018). However, no significant associations were found between substance use and delusions/hallucinations during the crime, offense type, or number of offenses.

Table 2: Demographic and Clinical Data of Schizophrenia Patients with a Criminal History

Employment status before crime	
Regular	38 (%60,3)
Irregular	25 (%39,7)
Psychiatric diagnosis before crime	
No	20 (%31,7)
Yes	43 (%68,3)
Presence of delusions during crime	
No	18 (%28,6)
Yes	45 (%71,4)
Presence of hallucinations during crime	
No	36 (57,1)
Yes	27 (%42,9)
Number of crimes	
Single crime	39 (%61,9)
Two or more	24 (%38,1)
Type of crime	
Major violent crime	19 (%30,2)
Minor violent crime	29 (%46,0)
Property and public damage crimes	26 (%41,3)

Table 3: Comparison of TEMPS-A, SUMD, and PANSS Scores Between Schizophrenia Patients with and without a Criminal History

Scale scores	**Schizophrenia with criminal history (n=63)**	**Schizophrenia without criminal history (n=40)**	
TEMPS-A Scores			
Depressive	6 (1-13)	6 (1-17)	X^2=1237, p=0,876
Cyclothymic	6 (0-15)	6 (0-18)	X^2=1371,5, p=0,449
Hyperthymic	9 (0-19)	6 (1-17)	X^2=1002,5, p=0,081
Irrıitable	2 (0-16)	3 (0-9)	X^2=1256,5, p=0,981
Anxious	4 (0-21)	5,5 (0-22)	X^2=1337,5, p=0,559
SUMD Scores			
Adherence to treatment	4 (1-4)	4 (0-4)	X^2=1040,5, p=0,077
Awareness of illness	5 (0-6)	6 (0-6)	X^2=1238,5, p=0,880
Recognition of psychotic experiences	3 (0-4)	3 (0-4)	X^2=1276,5, p=0,909
Total score	12 (2-14)	11,5 (2-14)	X^2=1227, p=0,821
PANSS Scores			
Pozitive symptoms	8 (7-23)	8 (7-23)	X^2=1115,5, p=0,424
Negative symptoms	12 (5-31)	10 (7-26)	X^2=1012,5, p=0,134
General psychopathology	24 (16-50)	20 (16-42)	X^2=959,9, p=0,063
Total score	47 (30-89)	39 (30-87)	X^2=003,5, p=0,105

TEMPS-A: Temperament Evaluation of Memphis, Pisa, Paris and San Diego-Autoquestionnaire
SUMD: Scale to Assess the Three Components of Insight
PANSS: Positive and Negative Syndrome Scale

Regarding temperament (TEMPS-A), both groups showed similar temperament traits, with no significant association between temperament and offense type or frequency.

Insight assessment revealed no significant differences in insight scores between groups based on offense history, gender, substance use, suicide history, hospitalization frequency, or offense type. However, among offenders, those who reported hallucinations during the crime had significantly higher psychotic experience recognition and total insight scores compared to those without hallucinations (χ^2=6.91, p=0.003; χ^2=6.55, p=0.017). Additionally, repeat offenders had lower treatment adherence insight scores (χ^2=3.175, p=0.006), and those involved in minor violent crimes had lower total insight scores than those involved in other offenses (χ^2=3.29, p=0.022). PANSS scores did not significantly differ between groups, indicating similar illness severity (Table 3).

Discussion

This study aimed to compare the sociodemographic and clinical characteristics, insight levels, and temperament traits of schizophrenia patients with and without a history of criminal behavior. Consistent with previous literature, individuals with a history of crime were more likely to be single or divorced and to live alone. However, contrary to expectations, a relatively high proportion had work experience, possibly due to the urban nature of the study sample, which was drawn from a major hospital in Ankara.

Substance use disorder has been identified as a major risk factor for violence in schizophrenia. However, in our study, no significant relationship was found between substance use and crime. This may be influenced by the severe legal consequences of substance use in Turkey, leading to underreporting despite assurances of confidentiality. Notably, substance use was significantly associated with repeated offenses, highlighting the need for further investigation in larger samples.

While self-harm was significantly linked to substance use in schizophrenia, no such relationship was found for suicide attempts, despite previous studies identifying substance use as a key predictor of suicidality in schizophrenia (5,6). This discrepancy may be due to defensive reporting by patients or the potential mitigating effect of consistent medication use in forensic patients under judicial monitoring.

Delusions and hallucinations have been implicated in violent behavior among schizophrenia patients. In our study, 71.4% of offenders reported experiencing delusions, and 42.8% reported hallucinations during the crime. Furthermore, offenders who reported experiencing hallucinations at the time of the crime had higher insight into psychotic experiences compared to those who did not. This could be attributed to the episodic nature of insight in schizophrenia, where retrospective evaluation allows patients to recognize their symptoms as pathological. Alternatively, forensic processes may prompt patients to articulate their symptoms as a means of explaining or mitigating their behavior.

Frequent psychiatric hospitalization was significantly associated with criminal behavior, aligning with previous findings. This may be explained by nonadherence to treatment, substance use, and disease exacerbation leading to violent acts. Recidivism has been linked to lower social and occupational functioning, prior offenses, and offense severity (7,8). In line with prior research, our findings indicate that repeat offenders primarily committed minor violent or property-related crimes.

Temperament studies suggest that schizophrenia patients exhibit higher harm avoidance, lower reward dependence, and lower self-directedness. However, no significant differences in temperament traits were found between offenders and non-offenders in our study. This may question the validity of the TEMPS-A scale in schizophrenia populations or highlight the heterogeneity of criminal behavior, which is influenced by multiple factors beyond temperament alone. Prior studies have linked high harm avoidance with violent crime risk, yet our findings suggest that crime in schizophrenia arises from an interaction of environmental, biological, and clinical factors rather than temperament alone.

Insight reduction in schizophrenia is associated with treatment nonadherence and increased violence risk (9,10). Our study found that single-time offenders had higher insight scores regarding treatment adherence than repeat offenders. This suggests that repeat offenders may exhibit more severe psychotic symptoms, leading to impaired insight and lower treatment adherence. Single-time offenders may have received better social support and

rehabilitation after their offense, whereas repeat offenders might have faced greater social isolation and substance use, further impairing their insight.

The lack of significant findings regarding temperament traits and crime risk may stem from the relatively small sample size. Additionally, TEMPS-A presents limitations in schizophrenia, as retrospective self-assessment may be challenging for patients. Despite reminders to consider their entire lifespan, distinguishing pre-illness temperament remains difficult. Future studies should include larger, more diverse samples incorporating other psychiatric disorders and healthy controls.

Rather than focusing solely on temperament, future research should explore broader psychosocial and environmental factors influencing criminal behavior in schizophrenia. Overemphasizing temperament risks oversimplifying the complex interplay of risk factors. Identifying reliable predictors of recurrent violent and criminal behavior remains a key challenge, and further research is needed to determine whether certain temperament traits contribute to criminal propensity in schizophrenia.

Keywords: crime, criminal behavior, Schizophrenia, temperament

References

1. Fazel S, Gulati G, Linsell L, Geddes JR, Grann M. Schizophrenia and violence: systematic review and meta-analysis. *PLoS Med.* 2009;6(8):e1000120. doi:10.1371/journal.pmed.1000120
2. Belli H, Ural C, Vardar MK, Tezcan B. Schizophrenia, violence and homicidal act: Assessing the risks, preventive measures and place of clozapine in the treatment. *Dusunen Adam - J Psychiatry Neurol Sci.* 2011;24(3):222-227. doi:10.5350/DAJPN2011240308
3. Aras Hİ. Şizofrenide Şiddet TT - Violence in Schizophrenia. *Psikiyatr Güncel Yaklaşımlar.* 2014;6(1). doi:10.5455/cap.20130522110439
4. Brébion G, Amador X, David A, Malaspina D, Sharif Z, Gorman JM. Positive symptomatology and source-monitoring failure in schizophrenia--an analysis of symptom-specific effects. *Psychiatry Res.* 2000;95(2):119-131. doi:10.1016/s0165-1781(00)00174-8
5. Cinik E, Guclu O, Senormanci O, Aydin E, Erkiran M, Erkmen H. Substance use effects on the characteristics of crime and violence in schizophrenia/Sizofreni hastalarinda madde kullaniminin suc ve siddet ozelliklerine etkisi. *Anadolu Psikiyatr Derg.* 2015; 16:104+. https://link.gale.com/apps/doc/A558814534/AONE?u=anon~2144acfa&sid=googleScholar&xid=cde53d5a
6. Popovic D, Benabarre A, Crespo JM, et al. Risk factors for suicide in schizophrenia: systematic review and clinical recommendations. *Acta Psychiatr Scand.* 2014;130(6):418-426. doi:10.1111/acps.12332
7. Uygur N, Işıklı M, Ögel K, Çeliker AR. Suç işlemiş şizofrenlerin demografik özellikleri ve suç profili. *Düşünen Adam Psikiyatr ve Nörolojik Bilim Derg.* 1992;5:5-9.
8. Öncü F, Soysal H, Uygur N, et al. Zorunlu klinik tedavi sonrası yineleyici suç işleyen adli psikiyatri olgularının tanı ve suç niteliği açısından değerlendirilmesi. *Düşünen Adam, Psikiyatr ve Nörolojik Bilim Derg.* 2002;15(3):132-148.
9. Ekinci O, Ekinci A. Association between insight, cognitive insight, positive symptoms and violence in patients with schizophrenia. *Nord J Psychiatry.* 2013;67(2):116-123. doi:10.3109/08039488.2012.687767
10. İnan S, Öncü F. İnsana yönelik ciddi suç işleyen adli psikiyatri olgularının hastalık öyküleri, sosyodemografik ve suç özellikleri.

0262 - The Effects of a Ketogenic Diet on Neuroinflammation and Hippocampal Autophagy in Rats with Induced Post-Traumatic Stress Disorder

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Introduction: Post-Traumatic Stress Disorder (PTSD) is a complex psychiatric disorder characterized by intense feelings of fear, helplessness, and horror following exposure to severe traumatic events. Experiences such as war, natural disasters, terrorist attacks, or serious accidents are among the primary causes of PTSD. Despite extensive research efforts, the pathophysiology of PTSD remains incompletely understood. It is believed that severe stress can damage the hippocampus and that PTSD-induced hippocampal dysfunction contributes to impaired neuroplasticity and the formation of fear memory [1]. The ketogenic diet (KD), characterized by high fat and low carbohydrate content, has been widely used for decades in the treatment of epilepsy and other neurological disorders. Experimental and clinical data support the neuroprotective effects of the ketogenic diet [2]. It has been suggested that the neuroprotective effects of the ketogenic diet may improve hippocampal function by regulating autophagy processes [3]. Furthermore, the ketogenic diet has been shown to exert neuroprotective effects in microglial cells, exhibit anti-inflammatory properties, and enhance autophagy [4].The present study aims to investigate the effects of stress and the ketogenic diet on neuroinflammation and autophagy in a rat model of PTSD.

Methods: In our study, 24 adult male Wistar rats, weighing between 120-250 grams, were obtained from the Necmettin Erbakan University Experimental Medicine Application and Research Center (KONÜDAM) and divided into three groups. A Post-Traumatic Stress Disorder model was induced in two groups using the Single Prolonged Stress (SPS) protocol. The animals were fed with either a standard or a ketogenic diet for 28 days. To assess the effects of the SPS model and diet on the rats, the Elevated Plus Maze (EPM) test was conducted on the 8th and 28th days. Hippocampal changes were evaluated by measuring the levels of tumor necrosis factor-alpha (TNF-α), interleukin-10 (IL-10), light chain 3-II (LC3-II) and light chain 3-I (LC3-I) using the enzyme-linked immunosorbent assay (ELISA) method. Additionally, immunohistochemical analysis was performed to determine the levels of beclin-1 and ionized calcium-binding adapter molecule 1 (Iba-1).

Statistical analyses were conducted using GraphPad 9.0 and IBM® SPSS® 27 (Version 27.0, Armonk, NY: IBM Corp. USA) software. The conformity of the variables to a normal distribution was assessed using analytical methods, specifically the Kolmogorov-Smirnov and Shapiro-Wilk tests. Descriptive analyses were presented as mean ± standard deviation for continuous variables and as frequency and percentage (%) for categorical variables. Pearson's chi-square test or Fisher's exact chi-square test was used to analyze categorical data. One-way ANOVA and post hoc Tukey tests were performed for comparisons between groups. The relationship between parameters was examined using Spearman‘s rho correlation analysis. A p-value of less than 0.05 was considered statistically significant.

Ethical approval for the study was obtained from the Necmettin Erbakan University Local Animal Experiments Ethics Committee (IRB= 27/02/2024-20).

Results: In our study, the Elevated Plus Maze (EPM) test was conducted on all groups on the 8th and 28th days following the SPS protocol. No significant differences were observed between the groups in the EPM test on the 8th day; however, on the 28th day, the ketogenic diet group spent significantly more time in the open arms compared to the other groups (M=45.7, SD=35.2) ($p<0.05$). No significant differences were found among the groups in terms of the number of entries into the open arms, distance traveled, or average speed parameters.

Following PTSD induction, the hippocampal levels of Iba-1, a microglial marker, were found to be significantly increased compared to the control group (M=17.1, SD=11.8) ($p<0.05$). In the PTSD model group fed with a ketogenic diet, Iba-1 levels were also found to be elevated (M=17.8, SD=12.2) ($p<0.05$). Compared to the groups fed with a standard diet, the ketogenic diet group exhibited increased IL-10 levels (M=1.4, SD=0.2) ($p<0.05$) and decreased TNF-alpha levels (M=2.1, SD=0.2) ($p<0.001$). No significant differences were observed among the groups in the LC3-II/LC3-I ratio ($p>0.05$).

Discussion: Recent research by Edwards et al. (2024) monitored three patients diagnosed with PTSD who followed a ketogenic diet supplemented with exogenous ketones (β-hydroxybutyrate) for four weeks. By the end of the study, their PTSD Checklist for DSM-5 scores showed a reduction of 10 to 20 points. Consistent with these findings, our study demonstrated that rats in the PTSD model group fed with a ketogenic diet spent significantly more time in the open arms of the Elevated Plus Maze compared to other groups. This observation supports our hypothesis that a ketogenic diet may exert anxiolytic effects.

The pathophysiology of PTSD is believed to involve neuroinflammation, hypothalamic-pituitary-adrenal (HPA) axis dysfunction, and activation of microglia and astrocytes via pro-inflammatory cytokines [6]. In our study, no significant differences were found in TNF-α and IL-10 levels between the standard diet PTSD model group and the control group. However, the ketogenic diet group exhibited increased IL-10 levels and decreased TNF-α levels, suggesting that the ketogenic diet may have a beneficial modulatory effect on neuroinflammation, consistent with findings in the existing literature.

Microglia, activated by environmental stimuli, play a critical role in neuronal health by producing pro-inflammatory cytokines and engaging in neuroprotective mechanisms [4]. Iba-1, a calcium-binding protein involved in microglial differentiation, motility, and phagocytosis, is a widely recognized microglial marker. In a previous study using an electric shock-induced PTSD model in rats, an increase in Iba-1 expression was observed 32 days after the trauma [7]. Similarly, our study found a significant increase in Iba-1 levels in both PTSD model groups compared to the control group, indicating microglial activation as a consequence of PTSD.

Interestingly, in the ketogenic diet group, the concurrent increase in Iba-1 levels with elevated IL-10 and reduced TNF-α levels suggests a potential shift in microglial polarization from a pro-inflammatory M1 phenotype to an anti-inflammatory M2 phenotype. This finding aligns with in vitro studies that have demonstrated the ability of ketogenic diets to promote anti-inflammatory microglial polarization [4].

Autophagy is considered a critical process in maintaining immune homeostasis by balancing the beneficial and harmful effects of inflammation, offering potential therapeutic insights for autoimmune and inflammatory diseases [8]. However, the relationship between PTSD and autophagy remains inadequately explored. Existing studies have examined Beclin-1 levels and the LC3-II/LC3-I ratio to assess autophagy, with findings indicating temporal variations in Beclin-1 expression. A study by Zheng et al. (2017) found an increase in Beclin-1 levels on day 7 following APS model induction, followed by a decline on day 14.

In our study, Beclin-1 levels were elevated in both the standard and ketogenic diet PTSD groups on day 28; however, this increase did not reach statistical significance. Furthermore, no significant differences were observed in the LC3-II/LC3-I ratio among the groups. These findings may be attributed to the timing of our measurements, conducted on the 28th day of the APS model, or the relatively small sample size (n=8).

Conclusion: To the best of our knowledge, this study is the first to investigate the effects of a ketogenic diet on post-traumatic stress disorder in an animal model. Our findings highlight the crucial role of microglial activation in the pathophysiology of PTSD. Furthermore, the results indicate that a ketogenic diet not only exerts anxiolytic effects but also positively modulates inflammatory parameters and promotes a shift in microglial activity toward an anti-inflammatory state. However, further comprehensive studies with larger sample sizes and longitudinal assessments are required to better understand the activation of autophagy mechanisms and the potential therapeutic applications of ketogenic diets in PTSD.

Keywords: Autophagy, Ketogenic Diet, Microglial Activation, Neuroinflammation, Trauma

References

[1] J. E. Sherin and C. B. Nemeroff, "Post-traumatic stress disorder: the neurobiological impact of psychological trauma," *Dialogues Clin Neurosci*, vol. 13, no. 3, p. 263, 2011, doi: 10.31887/DCNS.2011.13.2/JSHERIN.

[2] D. Liśkiewicz *et al.*, "Differential Response of Hippocampal and Cerebrocortical Autophagy and Ketone Body Metabolism to the Ketogenic Diet," *Front Cell Neurosci*, vol. 15, Aug. 2021, doi: 10.3389/FNCEL.2021.733607.

[3] G. Chimienti *et al.*, "The Ketogenic Diet Reduces the Harmful Effects of Stress on Gut Mitochondrial Biogenesis in a Rat Model of Irritable Bowel Syndrome," *Int J Mol Sci*, vol. 22, no. 7, Apr. 2021, doi: 10.3390/IJMS22073498.

[4] R. Polito *et al.*, "The Ketogenic Diet and Neuroinflammation: The Action of Beta-Hydroxybutyrate in a Microglial Cell Line," *Int J Mol Sci*, vol. 24, no. 4, Feb. 2023, doi: 10.3390/IJMS24043102.

[5] M. G. P. Edwards, T. Furuholmen-Jenssen, E. G. I. Søegaard, S. B. Thapa, and J. R. Andersen, "Exploring diet-induced ketosis with exogenous ketone supplementation as a potential intervention in post-traumatic stress disorder: a feasibility study," *Front Nutr*, vol. 11, 2024, doi: 10.3389/FNUT.2024.1406366.

[6] J. Li, L. Tong, B. C. Schock, and L. L. Ji, "Post-traumatic Stress Disorder: Focus on Neuroinflammation," *Mol Neurobiol*, vol. 60, no. 7, pp. 3963–3978, Jul. 2023, doi: 10.1007/S12035-023-03320-Z.

[7] K. L. Smith *et al.*, "Microglial cell hyper-ramification and neuronal dendritic spine loss in the hippocampus and medial prefrontal cortex in a mouse model of PTSD," *Brain Behav Immun*, vol. 80, pp. 889–899, Aug. 2019, doi: 10.1016/J.BBI.2019.05.042.

[8] P. Su *et al.*, "The role of autophagy in modulation of neuroinflammation in microglia," *Neuroscience*, vol. 319, pp. 155–167, Apr. 2016, doi: 10.1016/J.NEUROSCIENCE.2016.01.035.

[9] S. Zheng, F. Han, Y. Shi, L. Wen, and D. Han, "Single-Prolonged-Stress-Induced Changes in Autophagy-Related Proteins Beclin-1, LC3, and p62 in the Medial Prefrontal Cortex of Rats with Post-traumatic Stress Disorder," *J Mol Neurosci*, vol. 62, no. 1, pp. 43–54, May 2017, doi: 10.1007/S12031-017-0909-X.

0266 - Comparison of The Severity of Autistic Features Between Obsessive-Compulsive Disorder, Panic Disorder, and Healthy Controls

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Objective

The annual prevalence of anxiety disorders is high in the general population, ranging from 14.0% to 19.9%. Chronic pain, mood disorders and anxiety disorders are major causes of disability and impaired functioning. The annual prevalence in the general population ranges from 1.1-2.8% for panic disorder (PD) and 0.8-2.0% for agoraphobia. The lifetime prevalence of panic attacks, panic disorder and agoraphobia is even higher, ranging from 7.2-28.3%, 3.4-4.7% and 1.9%, respectively (1).

The factors that have been identified as affecting the treatment response of patients diagnosed with panic disorder include the duration of the condition, the severity of the disorder at the time of diagnosis, the extent to which the patient avoids situations that they perceive to be dangerous (agoraphobic avoidance), the number of emergency room visits, the presence of other anxiety-related disorders, depression, personality disorders, a delayed response to drug treatment, and low compliance with cognitive-behavioural therapy (CBT) (2).

Autism Spectrum Disorder (ASD) is a lifelong heterogeneous neurodevelopmental condition characterised by impairments in reciprocal social interaction and communication, as well as restricted, limited behaviour and interest patterns. In recent years, research on ASD has revealed the need to examine clinical forms of the autism spectrum that are milder and show continuity and prevalence in the general population (3,4). The presence of subthreshold autistic features is of particular interest as they have been shown to have a detrimental effect on quality of life and to exacerbate the severity of various psychiatric disorders. Consequently, milder autistic traits (i.e. mild cognitive impairments and mild language impairments) in family members of individuals with autism have been hypothesised to reflect an intermediate phenotype or to be an endophenotype for autism. This concept has subsequently been termed the Broad Autism Phenotype (BAP) (5,6).

However, given that autism is still considered to be a condition mainly associated with child health due to the early onset of the autism spectrum, subthreshold autistic features or milder clinical forms of ASD may be under-recognised in adulthood and may silently worsen the course of other comorbid disorders (7,8).

In recent years, the frequency of BAP characteristics in various psychiatric disorders (social anxiety disorder, obsessive-compulsive disorder, bipolar disorder, borderline personality organisation) and their effects on disease characteristics have been studied (9,10,11,2). Studies conducted in patients with social anxiety disorder (SAD) confirm the link between SAD and autistic features in the adult population, and show the correlation of conditions overlapping with autistic features at a high level, as well as the relationship with symptom severity (9). In one of the studies conducted in obsessive-compulsive disorder (OCD) patients, 34% of the patients scored above the threshold in a screening tool for autistic traits (Autism Spectrum Questionnaire, AQ); approximately half of the patients who scored above the threshold met the diagnostic criteria for pervasive developmental disorder. Another important finding was that there was a positive correlation between the Yale Brown Obsession Compulsion Scale (YBOCS) scores representing OCD severity and the —attention to detail", —attention shifting" and —imagination" subscales of the AQ. The results suggested that these specific ASD domains may have a moderate effect on OCD severity (12).

In light of the observations pertaining to panic disorder, including agoraphobia, other avoidance behaviours, discrepancies in introspective and other senses, and social-cognitive distortions, the potential ramifications of BAP effects on PD warrant further scrutiny. The objective of this study was to undertake a comparative analysis of the severity of autistic traits among individuals with OCD, PD, and healthy controls (HC), utilising the AQ.

Methods

Design and Sample

The Autism Spectrum Questionnaire (AQ) was administered to patients undergoing follow-up in the psychiatry outpatient clinic of Dinar State Hospital, or who had been diagnosed with PD or OCD at their initial presentation, and who had agreed to participate in the study. Once a sufficient number of participants had been obtained, the sociodemographic data, such as age, gender, education level, family history and total and sub-scores of the AQ scale, were compared.

The inclusion criteria were as follows: subjects were required to be between 18 and 65 years of age, to met the diagnostic criteria for PD or OCD according to DSM-5, and to provide written consent to participate in the study. Once the PD and OCD groups had been formed, the HC group was established from volunteers residing in the local area, the majority of whom were relatives of hospital employees, and who exhibited similar age, gender and education level characteristics. Exclusion criteria included past or current psychotic disorder, bipolar disorder or alcohol-substance use disorder, and cognitive deficits that prevented understanding and completion of the scales to be administered. Ethics committee approval: AFSU, 13.12.2024, T-2024/11.

Scales

a. Case report form: This form includes demographic characteristics of the patients, information about their clinical conditions and scale scores.

b. Autism Spectrum Questionnaire (AQ): AQ is the most frequently used scoring scale in the evaluation of ASD. The AQ adult form is a 50-item scale consisting of five sub-headings: ―social skills", ―attention shifting", "attention to detail", ―communication" and ―imagination". It was developed to identify ASD among adults with normal intelligence. In a study conducted by Köse et al. (2010) on 406 university students (58% female, 42% male), reliability and construct validity were demonstrated for the Turkish version of the adult version of the AQ. The reliability and validity study for the adolescent form was conducted by Çetinoğlu in 2019.

Statistical Analysis

All statistical analyses were carried out using IBM SPSS (25) software.Bonferroni correction was applied for main effects in repeated variance analyses.For all analyses, results were considered significant at the 0.05 alpha level, and the effect size was reported as partial eta square.

In all parametric analyses, skewness and kurtosis values were examined to ensure normal distribution, and outlier analysis was applied where normality was not present. The Greenhouse-Geisser correction, a conservative approach to addressing violations of sphericity, was applied when necessary, and the results are reported accordingly.The scale data was compared using a One-Way ANOVA.

Results

AQ was administered to 24 participants diagnosed with OCD (Age: 37.08 (13.46); Male 9/24) and 28 participants diagnosed with PD (Age: 42.25 (10.25); Male 11/28) who applied to the Dinar State Hospital Psychiatry outpatient clinic and consented to participate in the study. HC group was formed from 16 volunteers (Age: 33.75 (15.95); Male: 7/16) who exhibited similar characteristics in terms of age, gender and education level to both groups (Table 1.).

Table 1. Sociodemografic Data

	PD	OCD	HC
Age (SD)	42.25 (10.25)	37.08 (13.46)	33.75 (15.95)
Gender (Male)	11/28	9/24	7/16
Education Level (Year/Mean) (SD)	9.75 (3,77)	10.58 (3,64)	11.50 (2,77)

A significant discrepancy was identified between the groups with regard to AQ total ($F(2,55)=7.408$, $p=.001$), Social Skills ($F(2,55)=4.067$, $p=0.023$), Attention Shifting ($F(2,55)=3.884$, $p=0.027$), Communication ($F(2,55)=3.624$, $p=0.033$) and Imagination ($F(2,55)=9.511$, $p<0.001$) sub-scores (Figure 1.).

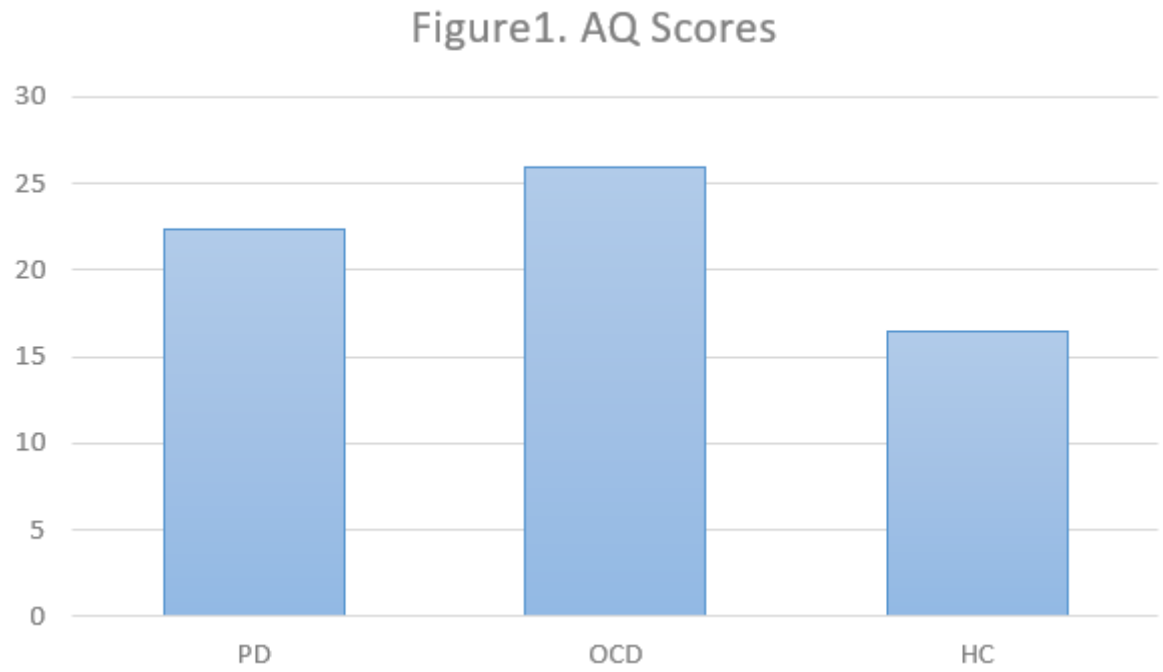


Figure 1.

Subsequent post-hoc comparisons indicated that the OCD group exhibited statistically significant disparities from the HC with regard to Social Skills ($p=0.025$) and Attention Shifting ($p=0.049$) sub-scores, and marginally in the Communication sub-score ($p=0.057$).

Furthermore, in post-hoc comparisons, the PD group demonstrated significant differences from both the SD ($p=0.016$) and OCD ($p<0.001$) groups in the Imagination subscore (Figure 2.).

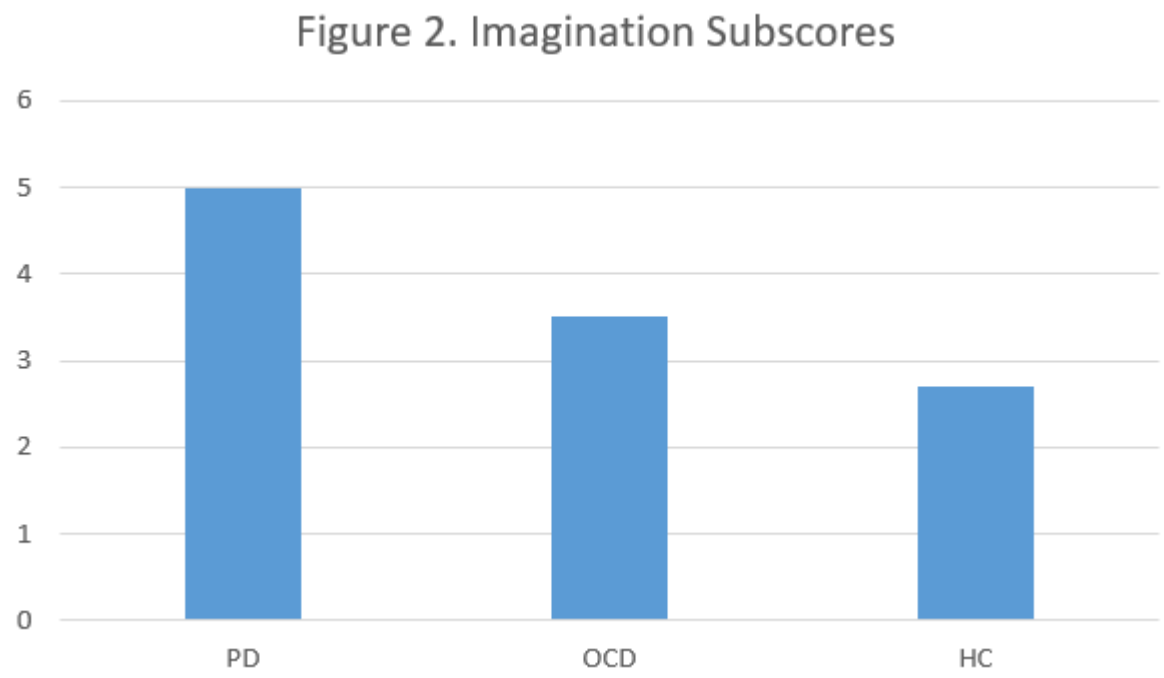


Figure 2.

Discuission

In consideration of these findings, the present study sought to build upon the extant body of research concerning the prevalence and severity of autistic traits in individuals diagnosed with OCD. To this end, a comprehensive investigation was conducted, encompassing the analysis of autistic traits in the PD group, in addition to the OCD and healty control groups. The results obtained from this study indicated that individuals diagnosed with PD exhibited a higher prevalence of autistic traits when compared to healthy controls. Additionally, this study highlighted that the Imagination subscale scores in the PD group exceeded those of both the OCD and control groups, underscoring the necessity for further exploration of this autism domain in individuals with PD.

The most significant limitation of this study is the relatively small number of participants. It is imperative for future studies to replicate these results using a larger sample size. Additionally, a notable limitation is the reliance on self-report scales for the study's findings, which may introduce bias.

Future research should further investigate the underlying neurobiological and cognitive mechanisms linking autistic traits to PD severity and treatment outcomes.

In conclusion, this study revealed that autistic traits were more prevalent in PD participants than in healthy controls, and the excess of severity in the field of Imagination was particularly prominent.

References

1- Bandelow, B., & Rüther, E. (2004). Treatment-resistant panic disorder. CNS spectrums, 9(10), 725–739. https://doi.org/10.1017/s1092852900022379

2- Bandelow, B., & Rüther, E. (2004). Treatment-resistant panic disorder. CNS spectrums, 9(10), 725–739. https://doi.org/10.1017/s1092852900022379

3- Robinson EB. Evidence That Autistic Traits Show the Same Etiology in the General Population and at the Quantitative Extremes (5%, 2.5%, and 1%). Arch Gen Psychiatry. 2011 Nov 1;68(11):1113.

4- Donati, M. A., Berrocal, C., Primi, C., Petracchi, G., Carpita, B., Cosci, F., Ruiz, A., Carmassi, C., & Dell'Osso, L. (2019). Measuring subthreshold autistic traits in the general population: Psychometric properties of the Adult Autism Subthreshold Spectrum (AdAS Spectrum) scale. Psychiatry research, 281, 112576. https://doi.org/10.1016/j.psychres.2019.112576

5- Losh M, Adolphs R, Piven J. The Broad Autism Phenotype. In: Autism Spectrum Disorders. Oxford University Press; 2011. p. 457–76.

6- Pine, D. S., Guyer, A. E., Goldwin, M., Towbin, K. A., & Leibenluft, E. (2008). Autism spectrum disorder scale scores in pediatric mood and anxiety disorders. Journal of the American Academy of Child and Adolescent Psychiatry, 47(6), 652–661.

7- Rosbrook, A., & Whittingham, K. (2010). Autistic traits in the general population: What mediates the link with depressive and anxious symptomatology? Research in Autism Spectrum Disorders, 4, 415–424.

8- Kanne, S. M., Christ, S. E., & Reiersen, A. M. (2009). Psychiatric symptoms and psychosocial difficulties in young adults with autistic traits. Journal of Autism and Developmental Disorders, 39, 827–833.

9- Carpita, B., Nardi, B., Bonelli, C., Massimetti, E., Amatori, G., Cremone, I. M., Pini, S., & Dell'Osso, L. (2024). Presence and correlates of autistic traits among patients with social anxiety disorder. Frontiers in psychiatry, 14, 1320558. https://doi.org/10.3389/fpsyt.2023.1320558

10- Dell'Osso L, Carpita B, Bertelloni CA, Diadema E, Barberi FM, Gesi C, et al. Subthreshold autism spectrum in bipolar disorder: prevalence and clinical correlates. Psychiatry Res. (2019) 281:112605. doi: 10.1016/j.psychres.2019.112605

11- Dell'Osso L, Cremone IM, Amatori G, Cappelli A, Cuomo A, Barlati S, et al. Investigating the relationship between autistic traits, ruminative thinking, and suicidality in a clinical sample of subjects with bipolar disorder and borderline personality disorder. Brain Sci. (2021) 11:621. doi: 10.3390/brainsci11050621

12- Mito H, Matsuura N, Mukai K, Yanagisawa Y, Nakajima A, Motoyama M, et al. The impacts of elevated autism spectrum disorder traits on clinical and psychosocial features and long-term treatment outcome in adult patients with obsessive-compulsive disorder. Compr Psychiatry. 2014 Oct;55(7):1526–33.

0276 - Investigation of Adolescents With Internet Gaming Disorder and Problematic Internet Use and Those With Substance Use Disorder in Terms of Attachment and Emotion Regulation Skills

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Objective

Addiction is defined as a compulsive desire to repeatedly engage in a specific behavior despite its negative effects on an individual‘s physical health, mental well-being, and social life, making it difficult to resist (1). Although the etiology and underlying mechanisms of addiction are not yet fully understood, difficulties in emotion regulation have been recognized as a risk factor for both substance and behavioral addictions (2). Individuals who develop a negative self-concept due to adverse early-life relationships are more likely to engage in addictive behaviors as a means of escaping these distressing emotions (3). This study aims to examine the relationship between attachment levels and emotion regulation skills, as well as their differences in relation to internet addiction and substance addiction. The findings of this study are expected to contribute to a more precise understanding of addiction etiology and to enhance the effectiveness of both medical and psychotherapeutic interventions, thereby improving treatment outcomes.

Method

Our study included 53 cases diagnosed with substance use disorder (SUD) between the ages of 12 and 18, 57 individuals in the internet addiction (IA) group, and 33 healthy controls. Within the IA case group, 34 individuals scored 50 points or above on the Young Internet Addiction Scale and met the DSM-5 diagnostic criteria for internet gaming disorder (IGD), as well as 23 individuals with problematic internet use (PIU) and did not meet the DSM-5 diagnostic criteria for IGD. Exclusion criteria included illiteracy, intellectual disability, and the presence of psychotic, bipolar, or autism spectrum disorders. The sociodemographic data was filled in with the information obtained from the participants and their parents. After obtaining informed consent from the cases and healthy controls, psychiatric assessment was established by using the Schedule for Affective Disorders and Schizophrenia for School-Aged Children (KID-SADS-PL). In addition, Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA), Toronto Alexithymia Scale (TAS), Revised Inventory of Parent and Peer Attachment (IPPA-R), Strengths and Difficulties Questionnaire (SDQ) parent forms were filled out. Additionally, the Addiction Profile Index Adolescent Form was used in the SUD case group.

Results

Of the individuals participating in our study, 49 were female (34.3%), and 94 were male (65.7%), with a mean age of 15.489 ± 0.948 years. No significant differences were found between the patient and control groups in terms of mean age and gender distribution ($p>0.05$).

When individuals with IGD and PIU were compared in terms of their age at first internet use, age at first online gaming experience, total weekly time spent on the internet, and total scores on the Young Internet Addiction Scale, no significant differences were found between the groups ($p>0.05$).

Among the individuals with SUD included in the study, the most frequently used substances were cannabinoids (60.4%), stimulants (26.4%), inhalants (7.5%), opioids (5.7%), sedative-hypnotic anxiolytics (3.8%), and ecstasy (3.8%). When substance use preferences were compared by gender, the number of males who primarily used cannabinoids was significantly higher than that of females, whereas the number of females who primarily used stimulants was significantly higher than that of males ($p<0.05$).

To compare individuals in the IA group with those in the healthy control group in terms of emotion regulation skills, the reappraisal subscale score of the ERQ-CA was examined. Results indicated that the IA group had a lower reappraisal subscale score and a higher suppression subscale score compared to the healthy control group. However, these differences were not statistically significant ($p > 0.05$). In contrast, the total alexithymia score was significantly higher in the IA group ($p < 0.05$). The analysis of emotion regulation skills in the SUD group compared to the healthy control group revealed a significantly lower reappraisal subscale score in the SUD group ($p < 0.05$). Although the suppression subscale score was higher in the SUD group, the difference did not reach statistical significance ($p>0.05$). The total alexithymia score, however, was significantly higher in the SUD group ($p < 0.05$). A comparison between individuals with IA and those with SUD showed no significant differences in reappraisal and suppression subscale scores of the ERQ-CA or in the total score of the TAS ($p>0.05$) (Table-1).

Table 1. Comparison of Emotion Regulation Skills

			N	M	SS	p	Group Differences
(ERQ-CA)	Cognitive Reappraisal	SUD[1]	53	18.867	6.615	**0.038**	3>1
		IA[2]	57	19.561	3.900		
		Healthy Control[3]	33	21.697	3.513		
	Expressive Suppression	SUD[1]	53	12.528	3.153	0.119	-
		IA[2]	57	11.929	3.011		
		Healthy Control[3]	33	11.121	2.987		
TAS	Total	SUD[1]	53	57.641	14.153	**0.002**	3<1
		IA[2]	57	56.333	12.573		3<2
		Healthy Control[3]	33	48.121	8.473		

IA, Internet Addiction; ERQ-CA, Emotion Regulation Questionnaire for Children and Adolescents; SUD, Substance Use Disorder; TAS, Toronto Alexithymia Scale

In our study, no significant correlation was found between the reappraisal subscale score of the ERQ-CA and the parental score of the IPPA-R in the patient group ($p > 0.05$). However, the suppression subscale score showed a significant negative correlation with the parental score of the IPPA-R ($p < 0.05$). Similarly, the total alexithymia score was found to be significantly and negatively correlated with the parental score of the IPPA-R ($p < 0.05$).

To examine the mediating effect of emotion regulation skills, separate models were constructed for each dependent variable using the reappraisal and suppression subscales. However, the mediating effect of emotion regulation on the relationship between attachment and addiction was not found to be significant ($p > 0.05$).

Table 2. Associations Between Scale Scores (Patient Group)

			1	2	3	4	5	6	7	8
1	**ERQ-CA**	Cognitive Reappraisal	1							
2		Expressive Suppression	0.312**	1						
3	**TAS**	Difficulty Identifying Feelings	-0.074	0.094	1					
4		Difficulty Describing Feelings	-0.127	0.283**	0.711**	1				
5		Externally-Oriented Thinking	-0.173	0.182	0.089	0.206*	1			
6		Total	-0.150	0.219*	0.884**	0.847**	0.482**	1		
7	**IPPA-R**	Parent	0.054	-0.266**	-0.432**	-0.335**	-0.032	-0.389**	1	
8		Peer	0.027	-0.240*	-0.219*	-0.303**	-0.169	-0.297**	0.222*	1

ERQ-CA, Emotion Regulation Questionnaire for Children and Adolescents; IPPA-R, Revised Inventory of Parent and Peer Attachment; TAS, Toronto Alexithymia Scale

Discussion

Our study found no significant differences in the reappraisal and suppression subscale scores of the ERQ-CA between individuals with IA and healthy controls. However, a review of the literature indicates that a study assessing emotion regulation in young adults with IGD reported significantly lower reappraisal scores and significantly higher suppression strategy scores compared to the control group (4). Similarly, a recent study conducted with an adolescent sample examined the mediating role of emotion regulation skills in the relationship between negative emotions and internet addiction. The findings demonstrated a negative association between reappraisal strategy use and internet addiction, whereas suppression strategy use was positively associated with internet addiction (5). Several factors may account for the discrepancies between our findings and previous research. These include the relatively small sample size, the use of self-report measures, which may have led participants with low treatment motivation to present themselves more favorably during assessments, and the inclusion of both individuals with IGD and those with PIU within the IA group.

When individuals with SUD were compared to healthy controls in terms of emotion regulation skills, the reappraisal subscale score of the ERQ-CA was found to be significantly lower in the SUD group, while no significant difference was observed in the suppression subscale score. A study in the literature reported similar findings, indicating that individuals with SUD did not show a significant difference in suppression strategy use compared to healthy controls, but had significantly lower reappraisal scores (6). The suppression strategy functions by inhibiting emotional expression, whereas the reappraisal strategy involves cognitively reframing negative stimuli as neutral or positive during emotional arousal. Deficits in reappraisal skills may contribute to difficulties in emotion regulation, potentially increasing vulnerability to substance use as a maladaptive coping mechanism.

In the assessment of alexithymia, both individuals with IA and those with SUD were found to have significantly higher total scores on the TAS compared to healthy individuals. A review of the literature reveals findings consistent with our results. A study reported a significant positive association between alexithymia and Gaming Disorder (7), while a meta-analysis conducted with an adult sample examined the relationship between alexithymia

and SUD (8), yielding similar conclusions. These findings underscore the importance of difficulties in recognizing emotions as a potential risk factor for addictions.

When individuals with IA and SUD were compared in terms of emotion regulation skills, no significant differences were found in total scores on the ERQ-CA or the TAS in our study. This finding is inconsistent with a previous study conducted with adolescent and young adult samples, which examined both substance-related addictions and non-substance-related addictions. According to that study, deficits in emotional clarity were associated with video game addiction, difficulties in goal-directed behaviors were linked to harmful alcohol use, non-acceptance of emotional responses was related to problematic internet use, and deficits in emotional awareness were associated with harmful substance use (9). The discrepancies between our findings and those in the literature may be attributed to the presence of co-occurring psychopathologies within the clinical groups, differences in sample size, and methodological variations.

In our study, the mediating effect of emotion regulation skills on attachment and addiction severity was evaluated within the clinical groups. The mediating roles of reappraisal and suppression strategies, both of which are emotion regulation strategies, in the relationship between attachment and addiction severity were found to be nonsignificant. A study conducted with a young adult sample reported that emotion regulation difficulties mediated the relationship between anxious-avoidant attachment and substance addiction, while also playing a mediating role in the association between anxious attachment and the development of IGD (10). The discrepancies between our findings and those in the literature may be attributed to the relatively small sample size, the inability to evaluate the emotion regulation scale as a single total score, and the separate assessment of addiction within two distinct groups.

References

1. Yıldız E. Bağımlılık terimleri sözlüğü. Truva Yayın İstanbul. 2016;
2. Brand M. Can internet use become addictive? Science. 20 Mayıs 2022;376(6595):798-9.
3. Pace U, Schimmenti A, Zappulla C, Di Maggio R. Psychological variables characterizing different types of adolescent gamblers: A discriminant function analysis. Clin Neuropsychiatry. 2013;10(6):253-60.
4. Yen JY, Yeh YC, Wang PW, Liu TL, Chen YY, Ko CH. Emotional Regulation in Young Adults with Internet Gaming Disorder. Int J Environ Res Public Health. Ocak 2018;15(1):30.
5. Liang L, Zhu M, Dai J, Li M, Zheng Y. The Mediating Roles of Emotional Regulation on Negative Emotion and Internet Addiction Among Chinese Adolescents From a Development Perspective. Front Psychiatry [İnternet]. 2021 [a.yer 09 Şubat 2024];12. Erişim adresi: https://www.frontiersin.org/journals/psychiatry/articles/10.3389/fpsyt.2021.608317
6. Çıftçı E, Firat S. The Relationship of Substance Abuse with Attachment and Emotion Regulation. Dicle Tıp Derg. 29 Aralık 2023;50(4):507-18.
7. Li L, Niu Z, Griffiths MD, Wang W, Chang C, Mei S. A network perspective on the relationship between gaming disorder, depression, alexithymia, boredom, and loneliness among a sample of Chinese university students. Technol Soc. 01 Kasım 2021;67:101740.
8. Honkalampi K, Jokela M, Lehto SM, Kivimäki M, Virtanen M. Association between alexithymia and substance use: A systematic review and meta-analysis. Scand J Psychol. 2022;63(5):427-38.
9. Estévez A, Jáuregui P, Sánchez-Marcos I, López-González H, Griffiths MD. Attachment and emotion regulation in substance addictions and behavioral addictions. J Behav Addict. 01 Aralık 2017;6(4):534-44.
10. Liese BS, Kim HS, Hodgins DC. Insecure attachment and addiction: Testing the mediating role of emotion dysregulation in four potentially addictive behaviors. Addict Behav. 01 Ağustos 2020;107:106432.

0288 –The Role of Serum Vitamin B12 in Adolescent Anxiety and Depression: A Preliminary Study

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Introduction

Anxiety and depressive disorders are of significant societal concern due to their contribution to substantial impairments in daily functioning, increased rates of disability, and their role as leading contributors to suicide [1,2]. Notably, anxiety and depressive symptoms often co-occur in affected individuals [1,2]. If left untreated, mental health disorders during childhood and adolescence can have long-term effects, persisting into adulthood and negatively impacting the quality of life, academic performance, and professional outcomes [3]. Therefore, early identification and intervention are essential to mitigate these long-term consequences.

Despite the high prevalence of anxiety and depressive disorders in adolescents, the underlying biological mechanisms remain incompletely understood. Recent studies have suggested that deficiencies in certain vitamins, such as vitamin B12, may contribute to the etiology of depression in children and adolescents [4]. Vitamin B12, obtained through diet, is essential for optimal brain function and neurotransmitter production [5]. Deficiency in vitamin B12 has been linked to various psychiatric disorders, including anxiety and depressive disorders. Additionally, vitamin B12 protects against hypercysteinemia, which is associated with an increased risk of mood disorders [6]. Furthermore, lower vitamin B12 levels have been associated with an increased risk of severe anxiety and depression symptoms in adolescents [7,8]. A previous study investigating the relationship between depression, anxiety, and serum vitamin B12 levels found that over 50% of patients with depression/anxiety had vitamin B12 levels below 200 pg/ml, and more than 60% had levels below 250 pg/ml, highlighting the potential role of vitamin B12 deficiency in these conditions [9].

This study aims to build on these findings by investigating whether vitamin B12 levels specifically correlate with anxiety and depression symptomatology in adolescents diagnosed with anxiety disorders and/or major depressive disorders (MDD). Based on these observations, we hypothesized that lower vitamin B12 levels would be associated with increased anxiety and depression symptoms in adolescents.

Methods

Study Design and Participants

This cross-sectional study presents preliminary findings from an ongoing investigation conducted at the outpatient department of the Child and Adolescent Psychiatry Clinic of the Ministry of Health Doğubayazıt Dr. Yaşar Eryılmaz State Hospital.

After assessments, 43 eligible adolescents were enrolled in the study, as shown in Figure 1. The case group included 30 adolescents with Generalized Anxiety Disorder (GAD) and 4 with MDD, aged 13–18 years, diagnosed according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) [10]. The control group comprised 9 healthy controls (HCs).

Inclusion criteria for the case group included adolescents diagnosed with anxiety disorders and/or MDD according to DSM-5 criteria, with no additional psychiatric diagnoses apart from anxiety disorders or MDD. The control group consisted of outpatients with no diagnosis of any psychopathology. Exclusion criteria included participants younger than 13 or older than 18 years, those with chronic diseases (including metabolic, genetic, or neurological disorders), intellectual disability, a history of alcohol or drug abuse, or recent (within the last month) vitamin B12 supplementation. Non-voluntary participants were also excluded from the study.

Clinical assessments were conducted by a child and adolescent psychiatrist using standardized tools, including the Kiddie Schedule for Affective Disorders and Schizophrenia Present and Lifetime Version DSM-5 (K-SADS-PL DSM-5) [11] for diagnostic evaluation and the Revised Child Anxiety and Depression Scale-Child Versions (RCADS-CV) [12] to assess anxiety and depression symptoms. Additionally, a socio-demographic data form specifically designed for the study was completed for each participant. Venous blood samples were collected from all participants to measure B12 levels.

Instruments

Socio-demographic data form

A specifically designed demographic survey form was used to gather general information about participants, including their age, gender, parental marital status (married or divorced), family structure (nuclear or extended), and any family history of psychiatric conditions.

Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version (K-SADS-PL-DSM-5)

The K-SADS-PL-DSM-5, revised by Kaufman et al. (2016), is a semi-structured diagnostic tool designed to assess psychopathology in children aged 6 to 18 years according to DSM-5 diagnostic criteria. The interview is conducted by certified child and adolescent psychiatrists, incorporating responses from both the child and their parents/caregivers to evaluate symptoms across various psychiatric disorders comprehensively [11]. The Turkish version of this scale was validated by Unal et al. (2019) [13].

Revised Child Anxiety and Depression Scale, Child Versions (RCADS-CV)

Initially developed by Spence (1997) [14] and later revised by Chorpita et al. (2000), the RCADS-CV consists of 47 items aimed at evaluating symptoms of anxiety and depression based on DSM-IV criteria in individuals aged 8 to 18 years [12]. The scale is divided into six subscales, including separation anxiety disorder (SAD), social phobia (SP), obsessive-compulsive disorder (OCD), panic disorder (PD), GAD, and MDD. Participants rate items on a 4-point scale from 0 ('never') to 3 ('always'), indicating the frequency of each symptom. Completing the RCADS-CV typically requires 10–15 minutes. The Turkish adaptation by Gormez et al. (2017) [15] demonstrated strong internal consistency, with a Cronbach's alpha of 0.95. Higher scores indicate greater severity of anxiety and depression symptoms.

Statistical Analysis

Statistical analysis was performed using SPSS 26.0 software. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize demographic data such as age, gender, number of siblings, and birth order. To explore the relationship between serum vitamin B12 levels and total anxiety and depression scores, Spearman's rho correlation analysis was conducted, as both variables were continuous and non-normally distributed.

Results

These preliminary findings are based on an initial sample of 43 adolescents (aged 13-17 years, mean age: 14.84 ± 1.47), including 30 adolescents diagnosed with GAD (69.8%), 4 with MDD (9.3%), and 9 HCs (20.9%). Among the adolescents diagnosed with GAD, 11 (25.6%) had comorbid MDD, and 1 (2.3%) had comorbid SP. Table 1 presents descriptive data on the participants' demographic characteristics, including age, gender, and family history.

According to the results, no statistically significant relationship was found between serum B12 levels and the RCADS-CV MDD Subscale Score ($r = 0.165$, $p = 0.292$) or the RCADS-CV Total Anxiety Score ($r = 0.200$, $p = 0.199$). However, a very strong and significant positive correlation was identified between the RCADS-CV Depression Subscale Score and the RCADS-CV Total Anxiety Score ($r = 0.902$, $p < 0.001$). Table 2 presents these results.

Discussion

Although no statistically significant relationships were found between vitamin B12 levels and anxiety or depression scores in adolescents, the weak positive correlations observed warrant further investigation with larger sample sizes to better understand the potential role of vitamin B12 in these conditions.

References

[1] Saha S, Lim CCW, Cannon DL, et al. Co-morbidity between mood and anxiety disorders: A systematic review and meta-analysis. Depress Anxiety. 2021;38(3):286-306.

[2] Ferrari AJ, Charlson FJ, Norman RE, et al. Burden of depressive disorders by country, sex, age, and year: findings from the global burden of disease study 2010. PLoS medicine. 2013;10(11):e1001547.

[3] World Health Organization (WHO). Mental health of adolescents. 2021. Accessed January 19, 2025. https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health

[4] Esnafoglu E, Ozturan DD. The relationship of severity of depression with homocysteine, folate, vitamin B12, and vitamin D levels in children and adolescents. Child Adolesc Ment Health. 2020;25(4):249-255.

[5] Herbison CE, Hickling S, Allen KL, et al. Low intake of B-vitamins is associated with poor adolescent mental health and behaviour. Prev Med. 2012;55(6):634-638.

[6] Kamphuis MH, Geerlings MI, Grobbee DE, Kromhout D. Dietary intake of B(6-9-12) vitamins, serum homocysteine levels and their association with depressive symptoms: the Zutphen Elderly Study. Eur J Clin Nutr. 2008;62(8):939-945.

[7] Taj R, Faheem S, Khan AM, Khan AY, Naveed A. Role of Vitamin B12 in Mental Health of Children and Adolescents: A Systematic Review. J Uni Col Med Dentistry. 2024:127-132.

[8] Tan Y, Zhou L, Huang J, et al. Vitamin B12, Folate, Homocysteine, Inflammatory Mediators (Interleukin-6, Tumor Necrosis Factor-α and C-Reactive Protein) Levels in Adolescents with Anxiety or Depressive Symptoms. Neuropsychiatric Disease and Treatment. 2023:785-800.

[9] Todorov AA, Chumpalova-Tumbeva PG, Stoimenova-Popova MY, et al. Correlation between Depression and Anxiety and the Level of Vitamin B12 in Patients with Depression and Anxiety and Healthy Controls. Journal of Biomedical and Clinical Research. 2017;10(2):140-145.

[10] American Psychiatric Association D, Association AP. Diagnostic and Statistical Manual of Mental Disorders: DSM-5. Vol 5. American psychiatric association Washington, DC; 2013.

[11] Kaufman J, Birmaher B, Axelson D, Perepletchikova F, Brent D, Ryan N. K-Sads-Pl Dsm-5. Pittsburgh: Western Psychiatric Institute and Clinic. 2016.

[12] Chorpita BF, Yim L, Moffitt C, Umemoto LA, Francis SE. Assessment of symptoms of DSM-IV anxiety and depression in children: A revised child anxiety and depression scale. Behav Res Ther. 2000;38(8):835-855.

[13] Unal F, Oktem F, Cetin Cuhadaroglu F, et al. Reliability and Validity of the Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version, DSM-5 November 2016-Turkish Adaptation (K-SADS-PL-DSM-5-T). Turk J Psychiatry. 2019;30(1).

[14] Spence SH. Spence children′ s anxiety scale. J Anxiety Disord. 1997.

[15] Gormez V, Kılınçaslan A, Orengul AC, et al. Psychometric properties of the Turkish version of the Revised Child Anxiety and Depression Scale – Child Version in a clinical sample. Psychiatry Clin Psychopharmacol. 2017;27(1):84-92.

0291 - Side Effects of Antidepressant Medications: A 3-Month Prospective Study

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Background and Purpose

Antidepressant medications exert their effects through different receptor mechanisms, leading to distinct side effect profiles. The most common adverse effects of antidepressants typically emerge within the first 1–2 weeks of treatment, while some side effects may develop in the later months. The serotonergic, noradrenergic, and dopaminergic systems play a crucial role in the manifestation of these side effects (1). The aim of this study is to prospectively evaluate the side effect profiles of different classes of antidepressants in patients undergoing treatment over a three-month follow-up period and to assess the impact of these side effects on medication adherence.

Method

This study was conducted in accordance with the Helsinki Declaration, and written informed consent was obtained from all patients. Ethical approval was obtained from the Clinical Research Ethics Committee of Bozok University (Decision No: 2017-KAEK-189, Date: 28.07.2022). A total of 450 patients requiring antidepressant treatment and initiated on a single antidepressant were randomly selected and followed up for three months. Sociodemographic data forms, the UKU Side Effect Rating Scale, and the Morisky Medication Adherence Scale were administered to all participants. At each follow-up visit, side effects were recorded, and the scales were reapplied. Patients who required a change in medication due to side effects were excluded from further follow-up.

Results

Among the 450 patients, the most common diagnostic category was anxiety and related disorders (47.3%), followed by depressive disorders (19.3%). Of the participants, 56.9% were newly diagnosed, and 58.7% had no prior history of antidepressant use.

Escitalopram (20.7%) and sertraline (20.2%) were the most frequently prescribed antidepressants. During the first follow-up at one month, significant differences were observed in the incidence of neurological side effects among different medications ($p = 0.027$), with citalopram, paroxetine, and imipramine being the top three medications associated with these effects. Similarly, significant differences were noted in the occurrence of autonomic side effects ($p = 0.038$), with amitriptyline, imipramine, and fluoxetine being the most frequently implicated drugs.

The most frequently reported side effects in the first follow-up were decreased sexual desire, emotional blunting, and nausea/vomiting. Although no significant differences were found between antidepressants in terms of sexual dysfunction, imipramine, bupropion, and clomipramine were the most frequently associated with this effect. Emotional blunting was most commonly reported with venlafaxine, vortioxetine, and sertraline, while nausea/vomiting was most frequently linked to venlafaxine, vortioxetine, and sertraline.

At the second follow-up (month two), significant differences were observed only in autonomic side effects ($p < 0.05$). Amitriptyline and imipramine were found to cause significantly more autonomic side effects than other antidepressants ($p < 0.05$). The most frequently reported side effects during this follow-up were decreased sexual desire, reduced sleep duration, and emotional blunting. The medications most frequently associated with decreased sexual desire were imipramine, bupropion, and fluvoxamine. The top three drugs linked to reduced sleep duration were fluoxetine, atomoxetine, and vortioxetine, while trazodone, venlafaxine, and escitalopram were most frequently associated with emotional blunting.

By the final follow-up (month three), no significant differences were found among medications in terms of psychiatric, neurological, or autonomic side effects ($p > 0.05$). However, bupropion and fluvoxamine were associated with significantly more "other" side effects compared to other antidepressants ($p < 0.05$). The incidence of side effects was significantly higher in the second month compared to both the first and third months ($p < 0.001$ for both comparisons). A marked reduction in the frequency of side effects was observed at the final follow-up,

with no reports of neurological or autonomic side effects. The most commonly reported side effect at this time was decreased sexual desire (n = 38, 9.2%), with bupropion, fluvoxamine, and imipramine being the most frequently implicated drugs.

Medication adherence was significantly lower in the first month compared to the third month ($p < 0.001$). Daily functional impairment was significantly greater in the first month compared to both the second ($p = 0.04$) and third months ($p < 0.001$). In the third month, causality assessment scores were significantly higher compared to both the first and second months ($p < 0.001$).

Conclusion

Our study demonstrated that different classes of antidepressants exhibit distinct and variable side effect profiles. While psychiatric (emotional blunting), neurological (tremor), and autonomic (nausea/vomiting) side effects were more prominent in the early months, decreased sexual desire was identified as the most persistent adverse effect. Antidepressants are known to cause nausea, vomiting, and tremors in the early stages of treatment. Although the precise mechanism underlying emotional blunting remains unclear, it is hypothesized that increased serotonin levels in the limbic system may suppress dopamine activity. The association between antidepressant use and sexual dysfunction has been well documented in previous studies (1-3).

Throughout the three-month follow-up period, patients who required a change in medication due to side effects were excluded, accounting for 8.2% of the initial cohort. This suggests that antidepressants are generally well tolerated in terms of their side effect profiles (2).

The increased incidence of side effects in the second month may be related to dose adjustments and increased use of tricyclic antidepressants (TCAs). Additionally, receptor desensitization or compensatory regulation and neurotransmitter adaptations may contribute to delayed side effects. Notably, the significant autonomic side effects of amitriptyline and imipramine during the second month support this hypothesis. The autonomic effects of these medications are well documented in the literature (4). Furthermore, only 2.8% of the 379 patients who continued into the second follow-up required a change in medication, indicating that most patients experienced tolerable side effects. The peak in side effect incidence at two months appears to be a multifactorial phenomenon involving pharmacokinetic and pharmacodynamic processes, neuroadaptation, and specific drug properties.

In assessing the functional impact of side effects, although patients reported more side effects in the second month, side effects in the first month had a greater impact on daily performance. This may be attributed to adaptation difficulties during the initiation phase of treatment and the peak occurrence of side effects.

Medication adherence was significantly higher in the third month compared to the first month. This improvement may be attributed to increased patient awareness, reinforcement during clinical visits, and the gradual reduction of side effects. Additionally, prior education on potential side effects and reassurance that they would diminish over time have been identified as factors that enhance adherence to antidepressant treatment (5).

The significantly higher causality assessment scores in the third month compared to both the first and second months suggest that side effects reported by patients in later months were considered more reliably associated with the medication by clinicians.
The strengths of this study include its prospective design, large sample size, and comparison of different antidepressant groups. However, a limitation of the study is that it was conducted at a single center.

This study demonstrates that antidepressants generally have a tolerable side effect profile and that careful management of side effects can enhance treatment adherence. Personalized treatment strategies, patient education, and meticulous side effect management are critical for optimizing the success of antidepressant therapy.

Reference

1. Read, J., & Williams, J. (2018). Adverse effects of antidepressants reported by a large international cohort: emotional blunting, suicidality, and withdrawal effects. Current drug safety, 13(3), 176-186.
2. Carvalho, A. F., Sharma, M. S., Brunoni, A. R., Vieta, E., & Fava, G. A. (2016). The safety, tolerability and risks associated with the use of newer generation antidepressant drugs: a critical review of the literature. Psychotherapy and psychosomatics, 85(5), 270-288.
3. Marks, S. (2023). A clinical review of antidepressants, their sexual side-effects, post-SSRI sexual dysfunction, and serotonin syndrome. British Journal of Nursing, 32(14), 678-682.
4. Saha, K., Torous, J., Kiciman, E., & De Choudhury, M. (2021). Understanding side effects of antidepressants: large-scale longitudinal study on social media data. JMIR mental health, 8(3), e26589.
5. Atmaca, M., Korucu, T., Cekic, S., Kazgan, A., Keles, D. D., Tabara, M. F., ... & Korkmaz, S. (2018). Should patients be informed about the side effects of psychotropic drugs? According to us: Yes. Psychiatry Research, 270, 176-179.

0299 - Peripheral Immune Cell Markers as Predictors of Electroconvulsive Theraphy Response

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Objective: Electroconvulsive therapy (ECT) is a psychiatric treatment method that induces generalized seizures by delivering controlled electrical currents to brain tissue. There is substantial evidence supporting ECT as a highly effective treatment, particularly for depressive disorders. However, considering the significant costs associated with ECT, its potential side effects, and the fact that approximately one-third of patients do not respond, it is crucial to identify depressed patients who are most likely to benefit from this treatment. The potential role of inflammation in this context warrants consideration. Inflammation can act not only as a trigger for depression but also as a perpetuating factor that hinders recovery. Importantly, inflammatory markers can aid in diagnosing and predicting treatment response, enhancing the potential for personalized treatments. Previous studies have demonstrated that depressed patients with elevated inflammation levels tend to respond less effectively to antidepressant treatments. However, limited research has assessed whether baseline inflammation levels can predict clinical improvement in response to ECT. In recent years, changes in peripheral immune cell markers have been observed in patients with depression and bipolar mood disorders. Ratios such as neutrophil-to-lymphocyte (NLR) and platelet-to-lymphocyte (PLR) have been analyzed as peripheral immune markers, showing promise as indicators of inflammation in mood disorders. This study evaluated peripheral immune markers to determine whether baseline inflammation levels predict the response to ECT in depressed patients and to identify which immune marker most effectively predicts treatment outcomes.

Methods: In this retrospective study, patients who were hospitalized in Karadeniz Technical University Faculty of Medicine Psychiatry Clinic and decided to receive ECT treatment between 2016 and 2024 with the diagnosis of depression were screened. The inclusion criteria included patients aged ≥18 years old, had a DSM-V diagnosis of a major depressive episode (either bipolar or unipolar) as assessed by an experienced site psychiatrist, and had an indication for ECT. Indications for ECT were medical treatment-resistant depression, oral intake refusal, and acute agitation. The exclusion criteria included a known diagnosis of mental retardation or neurodevelopmental disorder, a known neurological disease affecting the central nervous system, head trauma affecting consciousness or dementia, a known chronic inflammatory disease or anti-inflammatory drug use, and insufficient data. We determined baseline hemogram parameters, including NLR, PLR, mean platelet volume (MPV), and C-reactive protein (CRP) levels. In addition, we evaluate the Montgomery-Asberg Depression Rating Scale (MADRS) scores and clinical and sociodemographic characteristics of the patients. Treatment response was defined as a decrease of more than 50% in baseline MADRS scores. The study has been approved by the Karadeniz Technical University Ethics Committee.

Descriptive statistics were presented as numbers and percentages for categorical variables and as means and standard deviations for numerical variables. The chi-square test was used to compare differences in categorical variables between independent groups. Kolmogorov-Smirnov test and the Shapiro-Wilk test were applied to assess the normality of the distribution of measurement data. The independent samples t-test was performed for normally distributed data and the Mann-Whitney U test was used for non-normally distributed data to compare numerical variables between independent groups. Spearman's correlation test was employed for the analysis of non-normally distributed data, and Pearson's correlation test was used for normally distributed data. Forward binary logistic regression analysis was conducted to evaluate the variables that predict treatment response. The model fit was examined using the requisite residual and fit statistics. p values <0.05 were regarded as significant for all analyses.

Results: A total of 45 patients diagnosed with depression who received ECT between 2016 and 2024 were screened, and 28 patients with complete data were included in the study. 39.3% of the patients were female. The mean age was 54.1±13.5 years, the mean duration of illness was 12.5±11.6 years, the mean number of hospitalizations was 2.0±1.1 and the mean duration of the last episode was 41.3±43.7 days. 15 patients received ECT treatment for medical treatment-resistant depression and 13 patients received ECT treatment for oral intake refusal and acute agitation. The mean number of ECT sessions was 8.2±2.0. The mean MADRS score was

33.3±8.1 before the ECT treatment and 15.3±10.5 after completing ECT sessions. At the end of the treatment, the mean decrease in the initial MADRS score was 17.9±12.7. Eighteen patients (64.3%) were found to respond to ECT. There were no significant differences in age, gender, age of illness onset, duration of illness, or the number of ECT sessions between responders and non-responders. The duration of the last episode was significantly shorter in responders compared to non-responders ($p = 0.016$). Additionally, serum MPV levels were significantly higher in responders than in non-responders ($p = 0.002$). No significant differences were found in other immune markers. Correlation analysis showed that increased baseline MPV levels were associated with a greater change in the MADRS ($r = 0.410$, $p = 0.030$) and lower MADRS scores at the end of treatment ($r = -0.481$, $p = 0.010$). Conversely, a longer duration of the last episode correlated with a lower change in the MADRS ($r = -0.531$, $p = 0.004$), higher end-of-treatment MADRS scores ($r = 0.385$, $p = 0.043$), and lower baseline serum MPV levels ($r = -0.465$, $p = 0.013$). No significant correlations were found between MADRS change and other immune markers or clinical characteristics. Forward binary logistic regression analysis was performed to evaluate the variables that predict treatment response. Gender, age, duration of the last episode, baseline MADRS score, and MPV were included as independent variables in the regression model. The analysis determined that MPV was a significant predictor of treatment response (Nagelkerke $R^2 = 0.331$).

Discussion: The findings of this study suggest that a longer duration of depressive episodes is related to poor ECT response. This is consistent with the literature and emphasizes the importance of immediate decisions to start ECT treatment in appropriate patient groups. Another finding of this study is that higher MPV levels at baseline are associated with better ECT response in patients with depression. This may be due to the relationship between MPV levels and inflammation. It is well known that the pathogenesis of mood disorders is associated with elevated inflammatory responses. Moreover, severe inflammation is linked to poor treatment outcomes. MPV may either increase or decrease depending on the intensity of systemic inflammation. Differentiating between acute and chronic inflammation is essential when examining inflammation, since platelets appear to transition from a pro-inflammatory to a pro-resorptive function in acute conditions. It has been hypothesized that MPV increases in low-grade inflammation due to the presence of large platelets in circulation, whereas it decreases in severe inflammation as these large platelets are consumed in the inflammatory region. Thus, higher MPV values at baseline may indicate low-grade inflammation. Over time, the decline in MPV values may indicate the exacerbation of inflammation, which may also explain the worse ECT response in depressed patients with longer episode duration. Taken together, elevated serum MPV levels, due to their simplicity and cost-effectiveness, could serve as a potential predictive marker of ECT response in patients with depression. The limitations of the study are the relatively small sample size as a result of the narrow range of years included in the study and inflammatory diseases may not have been completely ruled out in the patients included in the study by reviewing past medical records. Further large sample-size studies are needed to evaluate the relationship between MPV, inflammation, and ECT response.

References

1. Chen, Z., Wang, J., Carru, C., Sedda, S., Nivoli, A. M., & Li, Z. (2023). Meta-analysis of peripheral mean platelet volume in patients with mental disorders: Comparisons in depression, anxiety, bipolar disorder, and schizophrenia. *Brain and Behavior,* 13(11), e3240

2. Korniluk, A., Koper-Lenkiewicz, O. M., Kamińska, J., Kemona, H., & Dymicka-Piekarska, V. (2019). Mean platelet volume (MPV): new perspectives for an old marker in the course and prognosis of inflammatory conditions. *Mediators of inflammation,* 2019(1), 9213074.

0312 - Emergency Psychiatric Intervention: Evaluation of Patients Admitted for Psychiatric Hospitalization in the Pediatric Emergency Department

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Objective: The aim of this study is to evaluate the demographic data, clinical characteristics, treatment processes, and hospitalization outcomes of patients who presented with psychiatric complaints and were subsequently admitted for psychiatric hospitalization at the Pediatric Emergency Department of Marmara University Pendik Training and Research Hospital.

Method: The study included patients who presented to the Pediatric and Adult Emergency Departments of Marmara University Pendik Training and Research Hospital with psychiatric complaints between October 1, 2022, and September 30, 2024. These patients were initially evaluated by emergency physicians, who then requested psychiatric consultations. Following assessments by child and adolescent psychiatrists, patients who were deemed to require hospitalization were included in the study. During this period, a total of 1,355 patients were referred for emergency psychiatric evaluation. Psychiatric disorders were diagnosed based on DSM-5 clinical interviews, and appropriate treatment was initiated. Among these cases, 57 patients were admitted to the Child and Adolescent Psychiatry inpatient unit and were included in the study. Data were retrieved from patients‘ electronic medical records. Sociodemographic data, psychiatric diagnoses, medication use, history of suicide attempts, and hospitalization outcomes were analyzed. The Children‘s Global Assessment Scale (CGAS) was used to assess the functionality of the childr VEen and adolescents.

Ethical approval was obtained (Approval No: 09.2025.0025), and data were analyzed using SPSS v.23.

Results: Between October 1, 2022, and September 30, 2024, a total of 1,355 patients aged 0–18 years were referred for emergency psychiatric consultation, and hospitalization was recommended for 57 patients (4.206%). The study included 36 female adolescents (mean age: 15.20±1.68 years) and 21 male adolescents (mean age: 15.81±1.13 years). Among the female adolescents, 50% (n=18) were enrolled in formal education, whereas this rate was 33.3% (n=7) among males. Parental cohabitation was reported in 50% (n=18) of female patients and 52.4% (n=11) of male patients. A family history of psychiatric disorders was present in 41.7% (n=15) of females and 57.1% (n=12) of males. The onset of psychiatric symptoms occurred at a mean of 18.48±2.55 months prior in females and 19.92±4.51 months prior in males. The duration of psychiatric follow-up was 14.19±3.10 months for females and 7.37±3.56 months for males. The most common diagnoses were depressive disorder, conduct disorder, and anxiety disorder. Suicide attempts were significantly more frequent in females (80.6%) than in males (42.9%) (p=0.002). The mean number of suicide attempts was 2.10±1.971 in females and 1.44±0.726 in males. Drug overdose was the most common method of suicide attempt in females, whereas suicide methods were more evenly distributed among males. Medication use was high in both groups (females: 91.7%, males: 95.2%). The most commonly prescribed drug classes were atypical antipsychotics and selective serotonin reuptake inhibitors (SSRIs).

Of the patients recommended for psychiatric hospitalization, 43.9% (n=25) were admitted to the child psychiatry inpatient unit, and 7% (n=4) were admitted to the adult psychiatry unit. However, 31.6% (n=18) refused treatment, 5.3% (n=3) could not be admitted due to the unavailability of inpatient beds and were followed up on an outpatient basis, and 12.3% (n=7) cooperated with the treatment team to cancel the hospitalization decision and were discharged with outpatient follow-up.

Discussion: As seen globally, psychiatric emergency visits among children and adolescents have increased rapidly in recent years. The rise in pediatric mental health-related emergency visits has been disproportionately higher than that of visits for other chronic conditions. One of the main reasons for this increase is the inadequacy of community-based mental health services and the difficulties in accessing these services. The lack of coordination in service provision and the limited availability of human, financial, and infrastructural resources create significant barriers to accessing mental health care. Consequently, children and adolescents often do not receive appropriate care in a timely manner, leading to crisis-driven emergency department visits. In Turkey, the number of child and

adolescent psychiatry outpatient clinics has not kept pace with the rising demand, potentially contributing to the increase in psychiatric emergency visits. Additionally, separate triage systems for psychiatric patients are not implemented in adult and pediatric emergency departments. Some studies suggest that mental health triage scales used in certain countries may improve wait times and patient classification in emergency settings.

Suicide attempts constitute a critical aspect of pediatric psychiatric emergency visits. In our study, depressive disorder was diagnosed in 69.4% of females and 33.3% of males, while suicide attempts were observed in 80.6% of females and 42.9% of males, with significantly higher rates in females ($p=0.002$). The increasing mental health crises have been particularly associated with suicide attempts and depressive disorders. Suicide is one of the leading causes of death among young people. In 2020, suicide was the 10th leading cause of death among children aged 5–9 years, the 2nd leading cause among those aged 10–14 years, and the 3rd leading cause among those aged 15–24 years.

A systematic review has demonstrated that emotional disorders, such as anxiety and depression, are associated with lower school attendance rates among children and adolescents. In our study, only 33.3% of males and 50% of females were enrolled in formal education. A study conducted at a university hospital in Turkey found that 15.6% of mothers and 7.6% of fathers of children and adolescents receiving psychiatric care had a psychiatric history. In our sample, 41.7% of females and 57.1% of males had a family history of psychiatric disorders. This finding suggests that a family history of psychiatric disorders may influence the likelihood of seeking psychiatric services. However, there is limited research directly linking family psychiatric history to increased emergency psychiatric visits. Further studies are needed to clarify this relationship.

Psychiatric hospitalization among adolescents is most commonly necessitated by suicide attempts, self-harm behaviors, psychotic exacerbations, substance use-related conditions, severe behavioral problems, and mood disorders. Data indicate that the need for psychiatric hospitalization among adolescents has increased in recent years, with the COVID-19 pandemic exacerbating this trend. A study in the U.S. reported that approximately 5.4% of adolescents covered by Medicaid experienced at least one psychiatric hospitalization within two years. Additionally, studies from the U.S. and France indicate that hospitalization rates related to anxiety, depression, and suicidal behaviors increased among adolescents during the COVID-19 pandemic.

The increasing need for psychiatric hospitalization among children and adolescents has become a global concern. A meta-analysis on psychiatric bed capacity revealed that, while the demand for beds has remained stable since 2000, the available capacity is 80% lower than required. This shortage leads to long wait times and overcrowding in emergency departments, particularly in rural areas. In Turkey, the limited availability of child and adolescent mental health services, the shortage of psychiatric hospitals, and the insufficient number of inpatient psychiatric units contribute to the rising number of emergency visits. Consistent with the literature, our study found that a significant proportion of children and adolescents could not be hospitalized due to bed shortages and were managed on an outpatient basis. The findings highlight the urgent need for strategic planning to expand emergency psychiatric services and inpatient capacity for children and adolescents.

References

1) Hamm MP, Osmond M, Curran J, Scott S, Ali S, Hartling L, Gokiert R, Cappelli M, Hnatko G, Newton AS. A systematic review of crisis interventions used in the emergency department: recommendations for pediatric care and research. Pediatr Emerg Care. 2010 Dec;26(12):952-62. doi:10.1097/PEC.0b013e3181fe9211. PMID:21131813; PMCID:PMC3031523.

2) Ekinci Ö, Güneş S. Çocuk ve ergen psikiyatrisinde acil yatışlar. In: Sabuncuoğlu O, editor. Çocuk ve Ergen Psikiyatrisinde Aciller. 1st ed. Ankara: Türkiye Klinikleri; 2021. p.67-71.

3) Hua LL, Lee J, Rahmandar MH, Sigel EJ, Committee on Adolescence, Council on Injury, Violence, and Poison Prevention. Suicide and suicide risk in adolescents. Pediatrics. 2024 Jan;153(1):e2023064800. doi:10.1542/peds.2023-064800.

4) Karakoç Demirkaya S, Aksu H, Yılmaz N, Gürbüz Özgür B, Eren E, Avcil S. Bir üniversite hastanesi çocuk ve ergen psikiyatrisi polikliniğine başvuran olguların tanıları ve sosyodemografik özellikleri. Meandros Med Dent J. 2015;16(1):4-8. doi:10.5152/adutfd.2015.2045.

5) Ezquerra B, Peñuelas-Calvo I, Marti-Estevez I, et al. Emergency psychiatric care for children and adolescents: factors associated with multiple visits and hospital admissions. Eur Child Adolesc Psychiatry. 2024. doi:10.1007/s00787-024-02594-5.

6) Eğilmez OB, Örüm MH. Bir erişkin psikiyatri servisinde yatan ergen hastaların değerlendirilmesi: 2015-2018 yılı verileri. KOU Sag Bil Derg. 2020 Jun;6(2):118-122. doi:10.30934/kusbed.652460.

7) Lalayants M, Kim M, Prince JD. Psychiatric hospitalization among adolescents. J Behav Health Serv Res. 2018;45:292-299. doi:10.1007/s11414-017-9567-6.

8) Gutiérrez-Sacristán A, Serret-Larmande A, Hutch MR, et al. Hospitalizations associated with mental health conditions among adolescents in the US and France during the COVID-19 pandemic. JAMA Netw Open. 2022;5(12):e2246548. doi:10.1001/jamanetworkopen.2022.46548.

9) Mundt AP, Rozas-Serri E, Fritz FD, Delhey S, Siebenförcher M, Priebe S. Need estimates of psychiatric beds: a systematic review and meta-analysis. Psychol Med. 2024;54(14):3795-3808. doi:10.1017/S0033291724002307.

10) Bilginer Ç, Karadeniz S, Aydoğdu S, Bulut Şahin D. Bir üniversite hastanesinin acil servisinde sunulan çocuk ruh sağlığı hizmetleri. Çocuk ve Gençlik Ruh Sağlığı Dergisi. 2021;28(1):12-19. doi:10.4274/tjcamh.galenos.2020.91300.

0318 - Examining The Mediating Role of Emotion Regulation in The Relationship Between Suicide Attempts in Adolescents, Adverse Life Events, and Parental Emotional Availability

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Objective

Suicidal behavior includes thoughts, plans, and actions related to ending one's life. Suicide is an important public health issue, especially among adolescents and young adults. Suicide risk factors for adolescents include genetics, sociodemographics, adverse life events, family problems, and psychiatric conditions [1]. Studies have shown that functional emotion regulation reduces suicidal risk, while maladaptive strategies increase it [2]. Parental emotional availability, based on attachment theory, influences emotion regulation and behavioral issues in children and adolescents [3]. Research suggests that higher parental emotional availability correlates with fewer depressive symptoms and behavioral problems [4,5]. This study aims to explore the relationship between parental emotional availability, negative life events, and suicide, focusing on emotional dysregulation as a mediator. Identifying these factors is key to preventing suicide and improving adolescent well-being.

Methods

This study included 31 adolescents (12–18 years) who were evaluated in Kocaeli University Faculty of Medicine‘s Child and Adolescent Mental Health Department with a history of suicide attempt in the past month, treated at Kocaeli University Child and Adolescent Psychiatry Department, along with 31 healthy controls from the same department. Exclusion criterias were intellectual disabilities, severe psychopathologies, and communication impairments. Participants completed sociodemographic data forms, the Columbia Suicide Severity Rating Scale (C-SSRS), the Difficulties in Emotion Regulation Scale (DERS), and the Parental Emotional Availability Scale (PEAS).

Results

Of the 62 adolescents who participated in our study, 67,7% were female (n=42), and 32,3% were male (n=20). The mean age was 15,40 ± 1,10 years in the case group and 14,60 ± 1,60 years in the control group, and no significant difference was found between the two groups. The case group showed higher rates of alcohol and cigarette use, physical illness, previous hospitalization, psychiatric referrals, and psychiatric medication use. In contrast, school performance and monthly family income were found to be lower. Additionally, adolescents who attempted suicide had a higher prevalence of broken family structure, physical illness in mothers, alcohol-substance use in parents, self-harm behavior and suicide attempts in parents, and intrafamily physical violence.

78,9% of the variability in suicide attempt risk is explained by the scores of parental emotional availability and emotional dysregulation. Emotional dysregulation has a full mediation effect on the relationship between suicide attempt and father‘s emotional availability in adolescents. Emotional dysregulation has a partial mediation effect on the relationship between suicide attempt and mother‘s emotional availability in adolescents (Table 1).

48% of the variability in maternal emotional availability scores was explained by the negative events experienced by adolescents. Sexual abuse was found to be a significant and negative predictor for maternal emotional availability scores. 73,1% of the variability in paternal emotional availability scores was explained by the negative events experienced by adolescents. Sexual abuse and physical violence were found to be significant and negative predictors for paternal emotional availability scores. 58,2% of the variability in emotional dysregulation scores was explained by the negative events experienced by adolescents. Sexual abuse, physical violence, and school change were found to be significant and positive predictors of emotional dysregulation scores (Table 2).

Table 1. Hierarchical Regression Table for Mother and Father Emotional Availability

Model	The dependent variable	Independent variable	B	t	p	R^2	Statistics
Model 1	Group (Case)	MEA	-0,29	-2,286	0,026	0,564	F=40.443, p<.001
		PEA	-0,519	-4,085	,000		
Model 2	DERS	MEA	-0,189	-2,618	0,011	0,642	F=52.916, p<.001
		PEA	-0,65	-5,556	,000		
Model 3	Group (Case)	MEA	-0,155	-2,568	0,022	0,789	F=77.237, p<.001
		PEA	-0,007	-0,067	0,947		
		DERS	0,787	8,012	,000		

DERS: Difficulties in Emotion Regulation Scale; MEA: Maternal Emotional Availability; PEA: Paternal Emotional Availability

Table 2. Effect of Negative Life Events on Parental Emotional Availability and Difficulty in Emotion Regulation

		MEA			**PEA**			**DERS**	
Independent Variables	**β**	**t**	**P**	**β**	**t**	**P**	**β**	**T**	**P**
Serious illness (yes)	-0,21	-1,797	0,079	-0,146	-1,733	0,09	0,078	0,742	0,462
Serious accident (yes)	-0,086	-0,671	0,506	-0,156	-1,689	0,098	0,227	1,973	0,054
Natural disaster (yes)	-0,107	-0,879	0,384	-0,074	-0,842	0,404	0,035	0,322	0,749
Sexual abuse (yes)	-0,311	-2,08	**0,043***	-0,382	-3,55	**0,001***	0,295	2,204	**0,032***
Physical violence (yes)	-0,211	-1,446	0,155	-0,541	-5,136	**,000***	0,287	2,186	**0,034***
Witnessing crime, terrorism, or accident (yes)	-0,068	-0,465	0,644	-0,036	-0,339	0,736	0,061	0,469	0,641
Serious illness or injury in the family (yes)	0,063	0,465	0,644	0,027	0,277	0,783	-0,089	-0,736	0,465
Death of someone in the family (yes)	-0,136	-1,172	0,247	-0,056	-0,673	0,504	-0,032	-0,31	0,758
Someone in the family entering prison (yes)	0,031	0,219	0,828	0,138	1,364	0,179	0,155	1,23	0,225
Change of school (yes)	-0,035	-0,289	0,773	-0,054	-0,617	0,54	0,243	2,225	**0,031***
Repeating a grade in school (yes)	0,135	1,025	0,31	0,133	1,401	0,168	-0,149	-1,265	0,212
Peer bullying (yes)	0,002	0,013	0,99	0,058	0,554	0,582	0,144	1,098	0,278
Breakup with a boyfriend/girlfriend (yes)	-0,224	-1,729	0,09	-0,162	-1,741	0,088	0,035	0,3	0,765
Death of a friend (yes)	-0,215	-1,555	0,127	-0,196	-1,966	0,055	-0,114	-0,919	0,363

DERS: Difficulties in Emotion Regulation Scale; MEA: Maternal Emotional Availability; PEA: Paternal Emotional Availability

Discussion

According to the results of our study, a statistically significant negative relationship was found between the PEAS scores for fathers and mothers and the Difficulty in Emotional Regulation Scale, both in total scores and subscale scores. When reviewing the literature, it is observed that healthy communication with parents and the emotional availability of parents positively influence the emotion regulation process in children and adolescents [6]. A study conducted by Yap et al. in 2010 revealed that when adolescents did not receive appropriate responses to their emotional expressions from their mothers, they tended to use more maladaptive emotion regulation strategies and exhibited more depressive symptoms [7]. Children of emotionally unavailable mothers tend to have both a genetic predisposition and a depressive parenting style. Additionally, adolescents who are frequently demeaned by caregivers‘ negative behaviors may develop a sense of helplessness, posing a risk for depression. This emphasizes the significance of parental emotional availability on emotional regulation, as supported by the present study. The study also showed that emotional dysregulation partially mediated the relationship between maternal emotional availability and suicide attempts, and fully mediated the relationship with paternal emotional availability. There are no studies in the literature examining the mediating effect of emotional dysregulation on the relationship between parental emotional availability and suicide risk. Therefore, the results obtained in the present study can contribute to the literature. These findings highlight the role of emotional regulation and parental emotional availability in preventing suicidal behavior in adolescents. Child and adolescent mental health professionals should consider evaluating the emotional availability of parents when addressing psychological symptoms. In mental health studies involving families, behavioral approaches aimed at enhancing emotional care and support provided by parents, along with parent awareness training, can reduce the risk of psychopathology development in adolescents.

A significant negative relationship was found between experiencing sexual abuse and maternal emotional availability, and between experiencing sexual abuse and physical violence and paternal emotional availability. In a study conducted by Nivison et al. in 2021, maternal sensitivity was found to be associated with neglect and abuse experienced by children during infancy, early childhood, middle childhood, and adolescence [8]. Another study linked the emotional withdrawal of the parent, indicating low emotional availability, to the severity of trauma experienced by the individual until the end of adolescence [9]. As a result, not having an emotionally supportive parent-child relationship may pose a risk for experiencing more neglect and abuse. Additionally, adolescents experiencing abuse may lead to parents not accepting or rejecting the adolescent, and setting up an emotional barrier toward them.

It was found that experiencing sexual abuse, exposure to physical violence, and changing schools were positively correlated with emotional dysregulation. In a meta-analysis conducted in 2022, it was found that emotional dysregulation mediate the relationship between childhood negative life events and the development of psychopathologies [10]. Based on the findings obtained in the present study, it is crucial to consider emotional aspects and issues related to emotional dysregulation in the treatment of the effects of negative life events during childhood. Interventions for at risk adolescents should aim to reduce dysfunctional emotional regulation strategies and enhance external-functional emotional regulation strategies.

References

1. Lim K-S, Wong CH, McIntyre RS, et al. Global lifetime and 12-month prevalence of suicidal behavior, deliberate self-harm, and non-suicidal self-injury in children and adolescents between 1989 and 2018: A meta-analysis. *Int J Environ Res Public Health* 2019;16(16): 4581. doi: 10.3390/ijerph16224581.
2. Eaddy M, Zullo L, Horton SE, Hughes JL, Kennard B, Diederich A, et al. A theory-driven investigation of the association between emotion dysregulation and suicide risk in a clinical adolescent sample. *Suicide Life Threat Behav* 2019;49(5): 928-940.
3. Lum JJ, Phares V. Assessing the emotional availability of parents. *J Psychopathol Behav Assess* 2005;27(3): 211-226.
4. Steinberg SJ, Davila J. Romantic functioning and depressive symptoms among early adolescent girls: The moderating role of parental emotional availability. *J Clin Child Adolesc Psychol* 2008;37(2): 350-362.
5. White R, Renk K. Externalizing behavior problems during adolescence: An ecological perspective. *J Child Fam Stud* 2012;21(1): 158-171.
6. Volling BL, McElwain NL, Notaro PC, et al. Parents' emotional availability and infant emotional competence: Predictors of parent–infant attachment and emerging self-regulation. *J Fam Psychol* 2002;16(4): 447.
7. Yap MB, Schwartz OS, Byrne ML, et al. Maternal positive and negative interaction behaviors and early adolescents' depressive symptoms: Adolescent emotion regulation as a mediator. *J Res Adolesc* 2010;20(4): 1014-1043.
8. Nivison MD, Facompré CR, Raby KL, et al. Childhood abuse and neglect are prospectively associated with scripted attachment representations in young adulthood. *Dev Psychopathol* 2021;33(4): 1143-1155.
9. Khoury JE, Rajamani M, Bureau J-F, et al. Aspects of parent–child interaction from infancy to late adolescence are associated with severity of childhood maltreatment through age 18. *Int J Environ Res Public Health* 2020;17(11): 3749.
10. Miu AC, Szentágotai-Tătar A, Balázsi R, et al. Emotion regulation as mediator between childhood adversity and psychopathology: A meta-analysis. *Clin Psychol Rev* 2022;93: 102-141.

0323 - Study of Current Inflammation Indices in Children With General Developmental Delay: A Case-Control Study

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Introduction

Global Developmental Delay is an umbrella term used when children are significantly delayed in two or more areas of development (1, 2). It can be diagnosed when a child is delayed in one or more milestones, categorised into motor skills, speech, cognitive skills, and social and emotional development. In recent years, research interest on inflammation which are influential in development and function of the central nervous system and which may also play a role in development of psychopathology has increased (2-4). Finding biomarkers linked to poor neurodevelopmental outcomes is a promising way to learn more about the biological processes underlying the link between early trauma and development. The notion that inflammation is harmful to the growing brain, as demonstrated by research on both humans and animals, forms the basis for the study of inflammatory indicators. This study aims to investigate the level of peripheral blood mononuclear cells and their ratios which may point to the immunological mechanisms involved in the etiopathogenesis of Global Developmental Delay.

Methods

Study design and participants

This study is a retrospective, case-control study. The case group consists of 69 children aged 36-72 months who applied to the Child and Adolescent Psychiatry Polyclinic and Health Board Polyclinics between January 2024 and December 2024 and were diagnosed with General Developmental Delay. The medical records of the cases were reviewed retrospectively, and those with defined neurological, metabolic diseases and hearing loss were not included in the case group. In our hospital, pediatric consultation is requested for every child diagnosed with general developmental delay, and general hematological examinations are requested during this process.In the case group, complete blood counts and Denver Developmental Screening Test results were obtained from hospital medical records. The control group consists of 66 healthy children matched in terms of age and gender who applied to the pediatric polyclinic for routine check-ups.

Blood Indicators and Novel Systemic Inflammatory Markers (NLR, SII, HRR, SIRI): Results retrieved from the hospital database included white blood cell count (WBC, 1000 cells/uL), lymphocyte count (1000 cells/uL), monocyte count (1000 cells/uL), segmented neutrophil count (1000 cell/uL), red blood cell count (RBC, million cells/uL), Hb (g/dL), and RDW (%). In our hospital, pediatric consultation is requested for every child diagnosed with general developmental delay, and general hematological examinations are requested during this process. The novel systemic inflammatory markers NLR, HRR, SII and SIRI were obtained from blood counts during the initial diagnosis of GDD. HRR values were calculated by dividing Hb by RDW. Decreased HRR has been linked to increased inflammation. NLR values was calculated Neutrophil count/lymphocyte count. SIRI was calculated as neutrophils x monocytes/lymphocytes. SII vallues was calculated Neutrophil count× platelet count/lymphocyte count. High SIRI, SII and NLR values indicate increased inflammation.

Denver Developmental Screening Test-2 (DDST-2): This scale was developed by Dodds and Frankenburg for application to children aged 0-6 years for the purpose of examining children‘s development and detecting deficits in the early period. This standardized developmental test evaluated four basic areas of development, fine motor, gross motor, personal-social, and language based on 134 skills. DDST-2 is routinely applied to all children diagnosed with ASD in our clinic, and the results were retrieved from medical records during the initial diagnostic process. A developmental quotient (DQ) is calculated separately for each developmental subheading from the test results obtained using the formula DQ =developmental age/chronological age x 100.

Statiscal Analysis

Statistical analysis was applied to compare demographic, clinical, and laboratory parameters between the GDD and control groups and for the purpose of constructing relational and predictive models. Normality of distribution of

continuous variables was assessed using the Kolmogorov-Smirnov test.. Non-normally distributed continuous variables were expressed as median (min-max) values and normally distributed continuous variables as mean ± standard deviation, while categorical variables were presented as frequency (%) values. Normally distributed laboratory parameters were compared between the two groups using the t test, and others by means of the Mann-Whitney U test. Relationships between HRR, NLR, SII, SIRI parameters and DQ subscales scores were examined using Pearson (normal distribution) and Spearman (non-normal distribution) correlation coefficients.

Results

The study was carried out with 135 participants, 69 patients with GDD and 74 healhty controls. Boys constituted 70.8 % of the GDD group and 82.6% of the control group, the difference being statistically insignificant (p=0.341). No significant age difference was also determined between the two groups (p=0.994). The mean age of the case group was 56.46±11.317 months, and the mean age of the control group was 52.70±16.47 months. No significant difference was found between the case and control groups in terms of age (p=0,369).

Neutrophil, basophil, White Blood Cells (WBC), systemic immune-inflammation index (SII) and neutrophil-to-lymphocyte ratio (NLR) were found to be significantly higher in the Global Developmental Delay group (respectively p=0.021, p=0.035, p=0.29, p=0.033, p=0.01). Mean platelet volume (MPV) was found to be significantly lower in the Global Developmental Delay group (p=0,012). No significant difference was found between the case and control groups in terms of platelet-to-lymphocyte ratio (PLR), systemic inflammation response index (SIRI), and hemoglobin-to-red cell distribution width (HRR) (respectively p=0.160, p=0.462, p=0.353). No relationship was found between inflammation indices and developmental quotients in the case group.

Discussion

Although a limited number of studies have been conducted on whether inflammation plays a role in GDD, our study is the first to examine peripheral inflammation biomarkers in children with GDD. Our study results show that neutrophil, basophil, WBC, NLR and SII levels are higher in children with GDD than in healthy children. Our findings support our hypothesis that inflammation may play a role in Global Developmental Delay.

The notion that inflammation is harmful to the growing brain, as demonstrated by research on both humans and animals, forms the basis for the study of inflammatory indicators. In a prospective study, levels of CRP, sCD14, IL-1β and IL-6 were shown to be associated with neurodevelopment in the first 3 years of life (2). In another study, newborn babies were followed up to 24 months. IL-1β and IL-6 were shown to be associated with neurodevelopment (5). Measurements of cytokines and chemokines are expensive and time-consuming. However, the evaluation of inflammatory markers obtained from routine peripheral blood counts during health screening is both rapid and low-cost. Our study results show that neutrophil, basophil, WBC, NLR and SII levels are higher in children with GDD than in healthy children. The results of our study are similar to other studies in the literature indicating that inflammation is higher in GDD.

Our results may support involvement of inflammation in the underlying pathophysiology of Global Developmental Delay. However, these parameters should be analyzed in a wider population to clarify the effect on the etiology and symptomatology of Global Developmental Delay. We think that these findings should be taken into account in future research on the causes of Global Developmental Delay. Our study has important implications for advancing the understanding of this mechanism that contributes to clinical heterogeneity in Global Developmental Delay.

Key Words: Global Developmental Delay, inflammation, systemic immune-inflammation index, neutrophil-to-lymphocyte ratio, systemic inflammation response index, hemoglobin-to-red cell distribution width.

References

1. Leviton A, Allred EN, Fichorova RN, Kuban KC, Michael O'Shea T, Dammann O; ELGAN study investigators. Systemic inflammation on postnatal days 21 and 28 and indicators of brain dysfunction 2years later among children born before the 28th week of gestation. Early Hum Dev. 2016 Feb;93:25-32. doi: 10.1016/j.earlhumdev.2015.11.004. Epub 2015 Dec 28. PMID: 26735345; PMCID: PMC4733407.
2. Jiang NM, Tofail F, Ma JZ, Haque R, Kirkpatrick B, Nelson CA, Petri WA. Early Life Inflammation and Neurodevelopmental Outcome in Bangladeshi Infants Growing Up in Adversity. Am J Trop Med Hyg. 2017 Sep;97(3):974-979. doi: 10.4269/ajtmh.17-0083. Epub 2017 Jul 19. PMID: 28722635; PMCID: PMC5590603.
3. Zhao WX, Wu ZY, Zhao N, Diao YP, Lan Y, Li YJ. Novel Systemic Inflammatory Markers Predict All-Cause Mortality in Patients Undergoing Endovascular Abdominal Aortic Aneurysm Repair. Rev Cardiovasc Med. 2024 May 31;25(6):202. doi: 10.31083/j.rcm2506202. PMID: 39076323; PMCID: PMC11270096.
4. Donowitz JR, Cook H, Alam M, Tofail F, Kabir M, Colgate ER, Carmolli MP, Kirkpatrick BD, Nelson CA, Ma JZ, Haque R, Petri WA Jr. Role of maternal health and infant inflammation in nutritional and neurodevelopmental outcomes of two-year-old Bangladeshi children. PLoS Negl Trop Dis. 2018 May 29;12(5):e0006363. doi: 10.1371/journal.pntd.0006363. PMID: 29813057; PMCID: PMC5993301.
5. Jiang NM, Tofail F, Moonah SN, Scharf RJ, Taniuchi M, Ma JZ, Hamadani JD, Gurley ES, Houpt ER, Azziz-Baumgartner E, Haque R, Petri WA Jr. Febrile illness and pro-inflammatory cytokines are associated with lower neurodevelopmental scores in Bangladeshi infants living in poverty. BMC Pediatr. 2014 Feb 18;14:50. doi: 10.1186/1471-2431-14-50. PMID: 24548288; PMCID: PMC3936797.

0326 - The Effects of Parental Attitudes on Cognitive Distortions and Self-Esteem in 12-18 Years Old Adolescents Diagnosed With Obsessive Compulsive Disorder

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BACKGROUND AND AIM: Obsessive-Compulsive Disorder (OCD) is defined as a chronic neuropsychiatric disorder characterized by obsessions and/or compulsions that can affect individuals from early childhood to adulthood, causing significant negative impact on the quality of life. Research has shown that, in addition to various etiological factors such as genetic, neurological and immunogical influences, enviromental factors such as parenting attitudes may also be potential risk factors for OCD. Numerous studies indicate that the parenting styles adopted by parents can influence a child's cognitive structure and self-esteem either positively or negatively. The child's self-esteem rises as they feel liked and supported in their relationships with their surroundings. High self-esteem plays a protective role in terms of psychiatric disorders. In our study, it has been demonstrated that the diognosis of OCD has negative effects on the self-esteem of adolescent and cognitive distortions are more frequently used in cases where OCD in diagnosed. Furthermore, the impact of parental attitudes and behaviors on individuals self-perception and thought system has been highlighted, along with the protective role of perceived acceptance/interest from parents against psychological disorders. OCD can lead to destructive outcomes in children and adolescent. Therefore, preventive mental health measures focusing on parental attitudes and self-esteem are crucial in preventing the destructive consequences of OCD and are at the forefront of protective mental health measures.

Methods: The study included 83 adolescents diagnosed with OCD and 48 adolescents with no previous psychiatric referrals between the ages of 12-18. Participants completed a socio-demographic and clinical data form, the Kiddie Schedule for Affective Disorders and Schizophrenia Present and Lifetime Version-Turkish Version (K-SADS-PL-T). The severity of OCD symptoms in the case group was assessed using the Children's Yale-Brown Obsessive-Compulsive Scale (CY-BOCS). All participants completed the Rosenberg Self-Esteem Scale (RSES), the Children‘s Negative Cognitive Errors Questionnaire (CNCEQ), and the Parenting Style Inventory (PSI).

Results: In our study, individuals in the OCD case group had significantly higher RSES scale scores compared to the control group, indicating lower self-esteem ($p < 0.001$). Furthermore, the total CNCEQ scores ($p = 0.019$) and the subscale scores of "individual perception" ($p = 0.048$) and "selective perception" ($p = 0.040$) were found to be higher in the OCD case group compared to the control group. It was observed that cognitive distortions were more frequently used by the OCD case group compared to the control group. When examining the RSES and CNCEQ scale scores, a significant positive correlation was found in both the case and control groups ($p < 0.001$ and $p = 0.018$). Adolescents who scored higher on the PSI-acceptance/interest dimension were found to have higher self-esteem and use fewer cognitive distortions ($p < 0.001$ and $p = 0.08$).

Conclusions: The study showed that adolescents diagnosed with OCD had lower self-esteem and used more cognitive distortions. Additionally, a positive correlation was found between the scores of the PSI-acceptance subscale and the level of self-esteem, and a negative correlation was found in terms of cognitive distortion scores.

Keywords: Adolescent, Obsessive-Compulsive Disorder, Self-Esteem, Cognitive Distortions, Parental Attitudes

References

[1] Walitza S, Melfsen S, Jans T, Zellmann H, Wewetzer C, Warnke A. Obsessive-compulsive disorder in children and adolescents. Dtsch Arztebl Int [Intern 2011 Mar 18 [cited 2023 Jan 3];108(11):173-9.

[2] Careau Y, O'Connor KP, Turgeon L, Freeston MH, Childhood Experiences and Adult Beliefs in Obsessive-Compulsive Disorder: Evaluating a Specific Etiological Model. J Cogn Psychother [Internet]. 2012 [cited 2023 Jan 3]:26(3):236-56.

[3] Garcia F, Serra E, Garcia OF, Martinez I, Cruise E. A Third Emerging Stage for the Current Digital Society Optimal Parenting Styles in Spain, the Unite States, Germany, and Brazil. Int J Environ Res Public Health [Internet]. 2019 Jul 1 [cited 2023 Jan 4];16(13).

[4] Ehntholt KA, Salkovskis PM, Rimes KA. Obsessive-compulsive disorder, anxiety disorders, and self-esteem: an exploratory study. Behaviour Research and Therapy. 1999 Aug 1;37(8):771-81.

[5] Berman NC, Jacoby RJ, Sullivan AD, Hoeppner S, Micco JA, Wilhelm S. Parent-level risk factors for children's obsessive beliefs, interpretation biases, obsessive-compulsive symptoms: A cross-sectional examination. Journal of obsessive-compulsive and related disorders. 2018;18:8-17.

0328 - Pharmacological Treatment of Preschool ADHD: A 12-Year Retrospective Study on Efficacy and Side Effects'

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Objective

Attention Deficit Hyperactivity Disorder (ADHD) is a neuropsychiatric disorder that begins in childhood and characterized by symptoms of inattention, hyperactivity, and impulsivity, which are inconsistent with the individual's age and developmental level. Although ADHD diagnosis is typically made during school years, many parents report that the symptoms in their children started earlier. The American Academy of Pediatrics (AAP) recommends that children aged 4 to 18 who have academic or behavioral issues and exhibit symptoms of inattention, hyperactivity, or impulsivity should be evaluated for ADHD.1 Epidemiological studies show that the prevalence of preschool ADHD varies between 2-7%. In scale-based studies, this prevalence is 18%, while it drops to 7% in semi-structured interviews.2 In the literature, ADHD studies have mostly focused on school-age and adolescent periods. Publications on preschool ADHD are limited. This study aims to examine the clinical characteristics of patients who presented to our clinic during the preschool age period and were diagnosed with ADHD, determine the treatment methods applied to these cases, assess the effect and side effect levels of medications if used, and compare patients with and without medication in terms of symptom severity and various characteristics. Additionally, it aims to contribute to the literature on the characteristics of preschool ADHD diagnosis, an area with limited awareness and studies, and to increase awareness among physicians in this field.

Methods

In this study, the file data of 412 patients who visited the Child and Adolescent Psychiatry outpatient clinic of Kocaeli University Faculty of Medicine between 2012 and 2024, who were under the age of 6 and diagnosed with ADHD, were retrospectively analysed. From the files, sociodemographic information, treatment methods, and if medications were prescribed to the patients, the effect and side effect status of the medication, as well as the severity of any side effects, were collected. The 'Clinical Global Impressions Scale' and 'General Assessment Scale for Children' scores, which are routinely answered by clinicians in our department, were also evaluated in the study.

Results

It was found that 209 out of 412 patients (50.73%) started drug treatment. Most of the children who started taking medication were male (76.6%) and aged 4-6 years (88.5%). However, no significant differences were found between sex and age groups and the status of initiation of medication ($p>0,05$). The most commonly prescribed medication was antipsychotics, with 170 (%81,34) children using at least one type of antipsychotic. Guanfacine was the least used drug, with only 3 people receiving it. No significant difference was found between gender and age groups and drug preference ($p>0,05$). The rate of starting medication was significantly higher and antipsychotics were started significantly more in those with comorbidity ($p<0,05$). No significant difference was found between the use of other medications and the comorbidity. In the group that started medication treatment, the initial CGI score was found to be significantly higher ($p=0,00$) and CGAS score was found to be significantly lower compared to the group that did not start medication ($p=0,00$). The average CGI score of the group that started drug treatment was 5.01±0.76 before treatment, and 3.67±0.95 after treatment. Similarly, the average CGAS score of the same group was 46.88±5.97 before treatment, and 58.89±6.71 after treatment. In methylphenidate and atomoxetine users, the CGI score decreased significantly after treatment compared to before, and the CGAS score increased significantly. The differences in CGI and CGAS scores before treatment and between pre-treatment and post-treatment for the most commonly used drug groups are shown in Table 1. When looking at the age of medication initiation, no difference was found in the changes in CGI and CGAS scores between the 0-3 age group and the 4-6 age group after treatment.

Table 1. The CGI and CGAS scores before and after treatment for patients who started medication, categorized by drug groups

Variables		CGI (Average±SD)				CGAS (Average±SD)			
		Pre-treatment	p	Post-treatment	p (Pre-Post treatment)	Pre-treatment	p	Post-treatment	p (Pre-Post treatment)
Methylphenidate	No	4,67±0,77	**0,00**	-	-	49,68± 7,22	-	-	-
	Yes	5,07±0,87		3,57±1,06	0,00	47,32±5,85			**0,00**
Antipsychotics	No	4,36±0,77	**0,00**	-	-	51,94±6,64	**0,00**	-	-
	Yes	5,05±0,72		3,90±0,83	0,00	46,77±5,82			**0,00**
Atomoxetine	No	4,74±0,80	0,06	-	-	49,43±7,05	**0,03**	-	-
	Yes	5,11±0,76		3,17±1,04	0,001	44,72±4,36			**0,00**

The Mann-Whitney U test was applied. $p<0.05$ was considered statistically significant.

No relationship was found between the age of medication initiation and the severity score of CGI side effects. The most common side effects related to medication use in the 4-6 age group are symptoms such as headache and dizziness, and in the 0-3 age group, these side effects and insomnia are the most common side effects. When looking at the severity of CGI side effects, only 20 people experienced side effects at the level of ‗does not significantly affect functioning' and no higher levels of side effects were observed. When looking at drug types, appetite problems were found to be significantly higher in those using methylphenidate, atomoxetine or guanfacine, complaints such as headache and dizziness were found to be significantly higher in those using antipsychotics, and sleep disorders were found to be significantly higher in those using atomoxetine. When examining the side effect status according to gender and age for each drug group individually, no significant difference was found.

Discussion

For preschool children with ADHD, treatment guidelines primarily recommend considering non-pharmacological approaches, such as psychosocial interventions, and transitioning to medication treatment only when functionality cannot be maintained with non-pharmacological options.3 The pharmacological treatment management of ADHD approved by the U.S. Food and Drug Administration (FDA) for children over 6 years old includes methylphenidate, atomoxetine, clonidine, and guanfacine. However, there is no approval for the use of these medications in the preschool age group. Although not approved for use in this age group, if ADHD symptoms persist or worsen despite behavioral therapy, the AAP recommends MPH as the first-line pharmacotherapy option.4 In our study, it was observed that half of the group started medication treatment, the severity of symptoms in the medicated group was at the level of "markedly ill," and their functionality was at the level of "moderate to marked impairment in functionality." The most frequently started medications were antipsychotics. Doctors often avoid starting methylphenidate treatment in younger age groups due to concerns about side effects. However, in our study, no serious side effects of methylphenidate were observed, and the level of side effects was not found to be different from other medications. It was also found that all drug groups, including methylphenidate, caused a significant difference in both disease severity and functionality compared to pre-treatment.

ADHD is one of the most commonly diagnosed mental disorders in the preschool age group as well. In Turkey, there are few studies regarding the treatment of ADHD in preschool children. Studies conducted with this group will make it possible to determine the most effective medication treatment with the least potential for side effects in this age group. The recognition and treatment of ADHD in the preschool period is important for preventing challenges that may arise in later stages. If children are not treated during this period, it can lead to the chronicity of problems and increase the likelihood of experiencing various issues in the following years, such as school functionality problems, family issues, and a decrease in the child's self-confidence. It is important to inform families about ADHD before it causes serious problems in a child's life, to assess the children before starting elementary school, and to identify and take preventive measures for potential issues they may face in school.

References:

1. Wolraich M, Brown L, Brown RT et al. ADHD: Clinical practice guideline for the diagnosis, evaluation, and treatment of attention-deficit/hyperactivity disorder in children and adolescents. Pediatrics. 2011;128(5):1007-1022
2. Pineda DA, Lopera F, Palacio JD, Ramirez D, Henao GC. Prevalence estimations of attention-deficit/hyperactivity disorder: Differential diagnoses and comorbidities in a Colombian sample. International Journal of Neuroscience. 2003;113(1):49-71.
3. Wigal S, Chappell P, Palumbo D, Lubaczewski S, Ramaker S, Abbas R. Diagnosis and treatment options for preschoolers with attention-deficit / hyperactivity disorder. Journal of Child and Adolescent Psychopharmacology. 2020;30(2):104- 118.
4. Wolraich ML, Hagan JF, Allan C et al. Clinical practice guideline for the diagnosis, evaluation, and treatment of attention-deficit/hyperactivity disorder in children and adolescents. Pediatrics. 2019;144(4).

0331 - The Effect of Anxiety on Social Competence in Children with Autism Spectrum Disorder (ASD): Evidence From a Clinical Study of 3- to 6-Year-Olds

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Introduction

Autism Spectrum Disorders (ASD) are neurodevelopmental disorders characterized by deficits in communication and social interaction, along with restricted interests and repetitive behaviors. Beyond these core features, individuals with ASD often exhibit a range of associated challenges, including cognitive and attentional impairments, behavioral symptoms, mood disturbances, and a diminished response to actual dangers. Notably, anxiety is recognized as a specific feature of ASD, and certain comorbid diagnoses are considered better explained by ASD itself rather than representing separate clinical entities. For instance, separation anxiety disorder, social anxiety disorder, and generalized anxiety disorder are frequently encountered comorbid conditions in individuals diagnosed with ASD.

Empirical studies have demonstrated that approximately 70% of children and adolescents with ASD experience at least one comorbid psychopathology, with 40% presenting with multiple comorbid conditions. Among these comorbidities, anxiety is the most prevalent psychiatric disorder, with between 30% and 80% of individuals with ASD meeting the clinical criteria for an anxiety disorder. Symptoms of anxiety in this population may include severe panic attacks, restricted participation in social activities, sleep disturbances, attention difficulties, somatic symptoms, and avoidance of anxiety-inducing environmental triggers.

The manifestation of anxiety in individuals with ASD often reflects the distinctive characteristics of the disorder. ASD-specific anxiety may include atypical phobias, heightened rigidity, sensory overload, and excessive distress in response to changes in routines. Furthermore, anxiety in individuals with ASD has been found to be associated with additional challenges, including sleep disturbances, self-harming behaviors, and increased parental stress. Consequently, the complex relationship between ASD and anxiety underscores the need for a thorough exploration of both the etiological and behavioral mechanisms involved.

In comparison to typically developing (TD) children, those with ASD and comorbid anxiety often report more pronounced difficulties in emotional functioning, mood regulation, and establishing meaningful social relationships. Additionally, research has highlighted significant differences between the anxiety symptoms common in the general population and those unique to ASD. These differences include heightened auditory sensitivities, difficulties adapting to changes, and the presence of specific phobias, such as a fear of food changes or the sound of a hairdryer.

Methods

This study included 62 children diagnosed with autism spectrum disorder (ASD) in the age range of 36–72 months. All participants underwent a psychiatric evaluation based on the criteria outlined in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR). The children's developmental levels were assessed using the Denver Developmental Screening Test II (DDST-II), while behavioral problems and social skills were evaluated using the Social Competence and Behavior Evaluation (SCBE-30). We measured the anxiety levels using the Preschool Anxiety Scale-Revised (PAS-R).

Results

This research identified strong negative relationships between social competence scores and both social anxiety and separation anxiety in children diagnosed with ASD ($r = -0.34982$, $p = 0.00764$; $r = -0.23221$, $p = 0.08219$, respectively). The results demonstrate that elevated levels of social anxiety and separation anxiety correlate with a decline in social competence. Moreover, significant positive relationships were identified between introversion scores and both generalized anxiety and social anxiety levels ($r = 0.3315$, $p = 0.01177$; $r_s = 0.40542$, $p = 0.00176$,

respectively). The results indicate that elevated levels of generalized anxiety and social anxiety correlate with an increase in introversion. A significant positive correlation was observed between anger-aggression scores and specific phobia scores ($r = 0.34174$, $p = 0.00927$). This association implies that an increase in specific phobia level correlates with elevated levels of anger-aggression.

Discussion

Our findings clearly highlight the critical importance of assessing anxiety symptoms in children diagnosed with Autism Spectrum Disorder (ASD). The frequent observation of anxiety in individuals with ASD indicates that it not only represents a component of the disorder but also leads to significant disruptions in social interaction and behavioral regulation. Research has emphasized that anxiety is a major comorbid condition for children with ASD, and effectively addressing anxiety is crucial for improving their psychosocial functionality.

Accurately identifying anxiety profiles is particularly important given the diverse range of symptoms these individuals experience. Anxiety in children with ASD may manifest in specific symptoms such as particular phobias, social anxiety, and separation anxiety, or it may present as more generalized anxiety disorders. This variability necessitates the adoption of personalized and targeted treatment approaches for each individual.

It has also been observed that the successful management of anxiety in individuals with ASD can have positive effects on social communication and interaction. A reduction in anxiety symptoms leads to improvements in social skills, facilitating healthier relationships with both peers and adults. Furthermore, controlling anxiety levels contributes to a decrease in aggressive behaviors and improvement in anger management, resulting in a notable enhancement in overall functioning.

In summary, therapeutic interventions targeting anxiety in children and adolescents with ASD can lead to significant improvements in social skills, anger management, and overall functionality. However, the effectiveness of these processes will be further enhanced by personalizing treatment approaches and considering each child‘s specific needs. Future research will be crucial in further exploring the relationship between ASD and anxiety and identifying the most effective strategies for managing anxiety disorders in this population.

References

1. Lau BY, Leong R, Uljarevic M, Lerh JW, Rodgers J, Hollocks MJ, South M, McConachie H, Ozsivadjian A, Van Hecke A, Libove R, Hardan A, Leekam S, Simonoff E, Magiati I. Anxiety in young people with autism spectrum disorder: Common and autism-related anxiety experiences and their associations with individual characteristics. Autism. 2020 Jul;24(5):1111-1126. doi: 10.1177/1362361319886246.
2. Den Houting J, Adams D, Roberts J, Keen D. An exploration of autism-specific and non-autism-specific measures of anxiety symptomatology in school-aged autistic children. Clin Psychol. 2019;23(3):237–48. 10.1111/cp.12174.
3. Leachman C, Nichols ES, Al-Saoud S, Duerden EG. Anxiety in children and adolescents with autism spectrum disorder: behavioural phenotypes and environmental factors. BMC Psychol. 2024 Oct 5;12(1):534. doi: 10.1186/s40359-024-02044-6.
4. Frank HE, Kagan ER, Storch EA, Wood JJ, Kerns CM, Lewin AB, Small BJ, Kendall PC. Accommodation of Anxiety in Youth with Autism Spectrum Disorder: Results from the TAASD Study. J Clin Child Adolesc Psychol. 2022 Mar-Apr;51(2):219-229. doi: 10.1080/15374416.2020.1759075. Epub 2020 Jun 8. PMID: 32511015; PMCID: PMC7722072.
5. van Steensel FJ, Bögels SM, Perrin S. Anxiety disorders in children and adolescents with autistic spectrum disorders: a meta-analysis. Clin Child Fam Psychol Rev. 2011 Sep;14(3):302-17. doi: 10.1007/s10567-011-0097-0. PMID: 21735077; PMCID: PMC3162631.

0341 - Sex Differences and Seasonal Variations in Suicidal Behavior Among Adolescents: Exploring Inflammatory Markers and Suicidal Methods

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Objective:

Adolescent suicide remains a critical public health issue, with distinct variations in risk factors based on sex, seasonal patterns, and biological markers [1]. In fact, it is estimated to be the second leading cause of death among young people aged 10-24. Some risk factors for suicide are associated with sociodemographic variables such as age, marital status, economic status, and educational status [2]. Additionally, various clinical characteristics may contribute to suicide risk such as tobacco and alcohol use, exposure to traumatic stressful events such as abuse, physical illness, somatic symptoms, anxiety; and some psychological factors such as hopelessness, impulsivity, low self-esteem, loneliness, anger, and loss of appetite.

Suicidal behavior occurs as a result of the interactions of many biological, genetic, psychological and social factors [3]. Identifying these factors, recognizing at-risk children and adolescents before suicidal behavior occurs, and taking appropriate precautions is one of the most important approaches for suicide prevention [4].

In addition, growing evidence suggests a potential link between inflammation and psychiatric disorders, prompting an increasing number of studies exploring the association between suicide and inflammation. For example, inflammation has been reported to be positevely associated with the severity of suicidal ideation in individuals with neuropsychiatric disorders [5].

Although there are many studies investigating risk factors in adolescents who exhibit suicidal behavior, the number of studies examining the relationship between suicide methods, seasonality and inflammatory markers is limited.

This study aims to investigate the relationship between sex and seasonal fluctuations in adolescent suicidal behavior, while also examining how inflammatory markers correlate with chosen methods of suicide. By exploring these factors in tandem, the study seeks to highlight temporal variations and sex-specific differences that may inform more targeted prevention efforts.

Methods:

We retrospectively analyzed data from patients admitted to the emergency department and referred to the Child and Adolescent Psychiatry Department at Antalya Education and Research Hospital, Turkey, from January 1, 2023, to January 1, 2025.

Data such as age, sex, the season in which the suicide attempt occurred, and the chosen suicide method were collected. The hemogram and biochemical values that were used in the study were obtained from the blood samples taken within the first six hours after the suicide attempt.

The data were categorized by astronomical seasons as follows: Winter (December 21 to March 20), Spring (March 21 to June 20), Summer (June 21 to September 20), and Autumn (September 21 to December 20).

Suicide methods were classified based on lethality: violent (e.g., hanging, firearms, drowning, jumping, cutting, or self-immolation) and non-violent (e.g., ingestion of poisons, drugs, gases, or vapors), as per the International Classification of Diseases (ICD).

Seasonal variations in suicidal behavior were examined using a Chi-Square Goodness of Fit test, while statistical analyses such as chi-square, t-test and logistic regression were employed to evaluate the influence of sex and season on suicidal tendencies.

Results:

A total of 219 patients were included, comprising 188 females (85.8%) and 31 males (14.2%), aged 9 to 17 years (Mean age ± std=15.4 ± 1.51 years). The mean age of males (Mean age ± std= 15.9 ± 1.2 years) was significantly higher than females (Mean age ±std=14.8 ± 1.5 years) ($p < 0.001$).

In whole group, the months with the highest frequency of suicide attempts were March (9.6%), September (9.6%), and October (9.6%). Females most frequently attempted suicide in October (10.1%), while males most frequently attempted suicide in March (16.1%). However, the difference was not statistically significant (p=0,819).

A total of 189 (86.3%) suicide attempts were classified as non-violent group, while 30 (13.6%) were classified as violent group. Among non-violent group, the highest rate was in April with 10.1% (n=19). Among violent group, the highest rate was in December with 20% (n= 6). There was no significant difference between groups (p=0,204).

Among whole group, red blood cell (RBC) values were significantly higher in males compared to females (Mean ± std = 5,15±0,50, p=0,00). Hemoglobin levels were also significantly higher in males than in females (Mean ± std=14,403 ± 1,69, p=0,00), as were hematocrit levels (Mean ± std =43,15± 4,46, p=0,00), and platelet counts (Mean ± std = 244,2± 73,91, p=0,001). Additionally, creatin kinase (CK) levels were significantly higher in males than in females (Mean ± std = 450,57± 120,8, p=0,005).

Regarding suicide methods, 10.6% (n = 20) of females used violent methods, compared to 32.3% (n = 10) of males (p = 0.003). No significant sex-based differences in seasonal distribution were found (p = 0.443), nor were there significant seasonal differences in the type of suicide attempt (p = 0.214).

Analysis of inflammatory markers routinely measured in the emergency department revealed significant differences between the violent and non-violent groups. The violent group exhibited higher levels of white blood cell (WBC) count (p = 0.018), neutrophil-to-lymphocyte ratio (NLR) (p = 0.03), immunoglobulin (Ig) levels (p = 0.000), lactate dehydrogenase (LDH) levels ($p < 0.001$), and CK levels ($p < 0.001$). However, C-reactive protein (CRP) levels did not show a significant difference (p = 0.114).

Seasonal distribution analysis indicated no significant overall variation ($\chi^2(3) = 2.973$, p = 0.396). However, preliminary findings suggest distinct seasonal trends in suicidal behavior, with higher frequencies in spring and autumn. Sex-specific patterns were observed: males exhibited a peak in winter, while females showed two peaks—one in spring and another in autumn. Furthermore, violent suicide methods peaked in winter and declined in spring, while non-violent methods were most common in spring and autumn, with a decrease in winter (p = 0.005) (Figure 1).

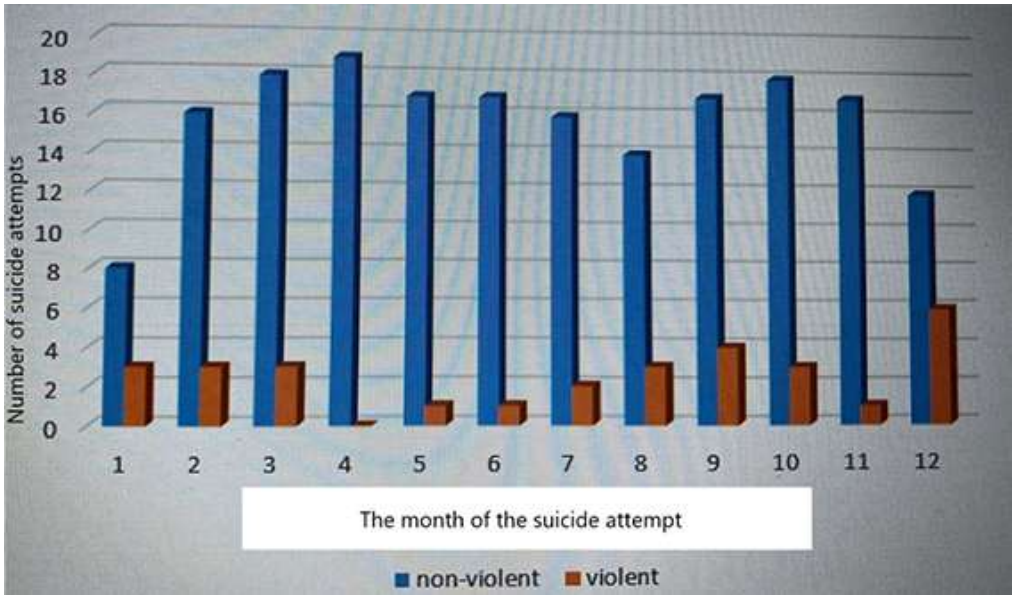


Figure 1. Violent suicide methods peaked in winter and declined in spring, while non-violent methods were most common in spring and autumn, with a decrease in winter (p = 0.005)

Dicussion:

Our study revealed that patients who attempted suicide using violent methods had significantly higher levels of NLR, WBC, Ig, LDH, and CK compared to those who used non-violent methods. The interplay between sex, seasonality, and inflammatory markers in adolescent suicidal behavior highlights the importance of considering biological factors in prevention strategies.

The significant association between inflammatory markers and suicide methods suggests that these biomarkers may serve as potential indicators for identifying at-risk youth. Additionally, the peaks of nonviolent suicide attempts in the spring and autumn seasons are notable. Tailoring interventions to address these temporal patterns, along with the underlying inflammatory responses, could enhance the effectiveness of early prevention efforts and improve outcomes for adolescents. However, further studies are needed to elucidate the complex pathophysiological mechanisms of immune pathways underlying suicidal behavior.

Keywords: Adolescent suicide, inflammatory markers, prevention strategies, seasonality, sex differences, suicidal behavior

References

1. Miranda-Mendizabal A, Castellví P, Parés-Badell O, Alayo I, Almenara J, Alonso I, Blasco MJ, Cebrià AI, Gabilondo A, Gili M, Lagares C, Piqueras JA, Rodríguez-Marín J, Rodríguez-Jiménez T, Soto-Sanz V, Vilagut G, Roca M, Alonso J. Gender differences in suicidal behavior in adolescents and young adults: systematic review and meta-analysis of longitudinal studies. International Journal of Public Health. 2019 Mar;64(2):265-283.
2. Jang JM, Park JI, Oh KY, and et al. Predictors of suicidal ideation in a community sample: roles of anger, selfesteem, and depression. Psychiatry Research 2014;216(1):74–81. https://doi.org/10.1016/j.psychres.2013 .12.054
3. Hodgman CH, McAnarney ER. Adolescent depression and suicide: Rising problems. Hosp Pract. 1992;27(4):73–96.
4. Pfeffer CR. Suicide in mood disordered children and adolescents. Child and Adolescent Psychiatric Clinics of North America. 2002;11(3):639–47.
5. Brundin L, Erhardt S, Bryleva EY, Achtyes ED, Postolache TT. The role of inflammation in suicidal behaviour. Acta Psychiatr Scand. 2015 Sep;132(3):192-203. doi: 10.1111/acps.12458.

0359 - The Impact of Serum Vitamin D and B12 Levels on Disorder Severity in Autism Spectrum Disorder

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Introduction

Autism spectrum disorder (ASD) is a developmental disorder marked by limited and repetitive behaviors, impaired social interaction, and challenges in reciprocal communication, usually evident in the first two years of life.

The Centers for Disease Control and Prevention report that the prevalence of the disorder is around 1 in 36 (%2.8).

Males have a higher incidence rate of ASD than females—almost four times greater.

Despite much research aimed at elucidating the etiology of ASD, a comprehensive explanation for the onset and mechanisms of the disorder remains elusive.

There is substantial evidence indicating genetic involvement in the etiology of the disorder.

Simultaneously, several environmental variables influence the etiology of ASD via epigenetic processes and de novo mutations across various ethnic, cultural, and socioeconomic backgrounds.

Also referred to as the "sunshine vitamin," vitamin D is a lipid-soluble vitamin produced in our skin when exposed to sunlight.

This hormone-like vitamin has been associated with a variety of medical conditions, including cardiovascular disease, cancer, stroke, and metabolic disorders.

Nevertheless, it has also been demonstrated to have an impact on various systems, including the brain, in recent years.

The interchange of diminished vitamin D levels has been associated with cognitive impairment, dementia, psychosis depression, and anxiety.

Given its roles in brain homeostasis, embryogenesis, neurodevelopmental immune modulation, antioxidants, anti-apoptosis, neural proliferation, and gene regulation, vitamin D may also be an environmental risk factor for ASD.

Homocysteine and vitamin B complexes are other environmental etiological factors associated with ASD.

Numerous studies have also indicated that ASD is associated with high homocysteine levels. Serum vitamin B12 levels have been shown to be either normal or decreased in individuals with ASD.

This study aims to investigate the relationship between disorder severity and blood vitamin D and B12 levels, along with sociodemographic data, in 24- to 72-month-old children who applied to the child and adolescent mental health outpatient clinic and received their first diagnosis of ASD between December 2022 and December 2024.

Materials and Methods

In this cross-sectional/retrospective cohort study, we performed a retrospective analysis of a database of blood levels of 25-hydroxyvitamin D and B12 and Childhood Autism Rating Scale (CARS) scores for individuals diagnosed with ASD from their medical records.

The study group consisted of 57 children aged between 24 and 72 months (10 girls and 47 boys) who applied to the child and adolescent psychiatry outpatient clinic at an education and research hospital and received an ASD diagnosis between December 2022 and December 2024.

The exclusion criteria included a chronic medical condition, comorbid neurologic or genetic disorders, and obesity with a body mass index percentile (BMI) greater than 95%.

Results

We identified 102 children between the ages of 24-72 months who received an ASD diagnosis between December 2022 and 2024 after conducting an analysis.

Due to the exclusion criteria, we excluded 10 patients. In conclusion, our evaluation encompassed 57 individuals diagnosed with ASD (n=10 females and n=47 males).

Vitamin D levels were below the recommended level in nearly half of the ASD cases (49.1%).

We found a statistically significant negative correlation between the CARS score and vitamin D levels, suggesting that children diagnosed with ASD with lower vitamin D levels have more severe autism symptoms.

Vitamin B12 levels did not significantly correlate with the CARS score. Furthermore, we found a statistically significant positive correlation between vitamin D levels and vitamin B12 levels, indicating similar nutritional deficiencies in children with autism.

Linear regression analysis revealed that vitamin D levels were significantly associated with CARS scores.

Lower vitamin D levels predicted higher CARS scores. Vitamin B12 levels, maternal age, and paternal age were not found to be significant predictors of CARS score.

Discussion

Our research findings indicate that just 2.57% of patients in the study group (2.57%) had insufficient serum vitamin B12 levels.

Vitamin D levels were below the recommended threshold in around 49.1% of ASD patients. We observed a statistically significant negative correlation between the CARS score and serum vitamin D levels, suggesting that children diagnosed with ASD with lower vitamin D levels exhibit more severe autistic symptoms.

Wang et al. conducted a meta-analysis of 24 research, revealing that children and adolescents with ASD had substantially lower vitamin D levels compared to the control group, with low vitamin D levels correlating with an elevated risk of ASD.

They furthermore discovered that children with diminished maternal or neonatal vitamin D exhibited a 54% increased probability of developing ASD, indicating that the identification and timely management of vitamin D insufficiency in ASD patients and pregnant or nursing women have medical and public importance.

Additionally, we identified a substantial association between reduced blood vitamin D levels and the severity of the disorder; vitamin D levels emerged as a strong predictor of the CARS score. Numerous studies have documented that the symptoms of autism are alleviated by vitamin D supplementation.

The serum vitamin B12 levels of children diagnosed with Autism Spectrum Disorder (ASD) were reported to be substantially lower, while their homocysteine levels were significantly higher.

Post-mortem analyses of individuals with ASD have shown reduced amounts of vitamin B12 in cerebral tissue.

In contrast to the previously mentioned literature, our investigation found that only 2.5 percent of children with autism had low B12 levels. This finding may be due to the younger age of our study sample compared to previous studies.

The eating habits of autistic children indicate that the majority exhibit insufficient vitamin consumption.

Our study revealed that half of the ASD individuals were vitamin D deficient, which is consistent with the literature. Furthermore, we discovered a statistically significant positive correlation between vitamin D and vitamin B12 levels, indicating that individuals with autism might be suffering from multiple vitamin deficiencies.

Conclusion

In conclusion, our study revealed children with ASD had considerably decreased vitamin D levels, which were associated with the severity of the disease.

This could potentially play a role in the etiology of the disorder.

Vitamin D supplementation is readily available and affordable. Children diagnosed with ASD have an elevated risk of nutritional deficiencies.

Consequently, assessing vitamins and other dietary factors in children with ASD and providing vitamin and mineral supplements may be beneficial in avoiding subsequent medical conditions and mitigating autistic symptoms.

Informing parents of children with ASD about ensuring a balanced diet, getting enough sunshine exposure, and avoiding non-evidence-based dietary practices is crucial.

Future research is necessary to determine the potential link between ASD and vitamin D and B12 deficiencies, as well as the mechanism in children with ASD that needs further validation.

Keywords: Neurodevelopmental Disorders, Autism, ASD, vitamin D, vitamin B12, CARS

References

1. Lai MC, Lombardo MV, Baron-Cohen S, Autism. Lancet 2014; 383:896-910Kappelmann N, Lewis G, Dantzer R, et al. Antidepressant activity of anti-cytokine treatment: a systematic review and meta-analysis of clinical trials of chronic inflammatory conditions. Mol Psychiatry 2018 232. 2016;23:335–343.
2. Puig-Alcaraz C, Fuentes-Albero M, Calderón J, Garrote D, Cauli O. Increased homocysteine levels correlate with the communication deficit in children with autism spectrum disorder. Psychiatry research 2015;229(3):1031-1037
3. Tiemeier H, Van Tuijl HR, Hofman A, Meijer J, Kiliaan AJ, Breteler MM. Vitamin B12, folate, and homocysteine in depression: the Rotterdam Study. American Journal of Psychiatry 2002;159(12):2099-2101.
4. Feng J, Shan L, Du L, Wang B, Li H, Wang W, Staal WG. Clinical improvement following vitamin D3 supplementation in Autism Spectrum Disorder. Nutritional neuroscience 2016:1-7.
5. Babaknejad N, Sayehmiri F, Sayehmiri K, Mohamadkhani A, Bahrami S. The Relationship between Zinc Levels and Autism: A Systematic Review and Meta-analysis. Iran J Child Neurol. 2016 Fall;10(4):1-9. PMID: 27843460; PMCID: PMC5100031.

0375 - Triglyceride-Glucose Index and Atherogenic Plasma Index as Cardiovascular Disease Risk Indicators in Patients With Schizophrenia and Their Relationship With Clinical Parameters

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Objective: Cardiovascular disease (CVD) is recognised as an important cause of death in people with schizophrenia. Routine laboratory assessments and their derived parameters are used to predict CVD risk during clinical follow-up, and recent studies suggest that the triglyceride-glucose (TyG) index and the atherogenic plasma index (AIP) are clinically relevant in predicting CVD risk and assessing prognosis. The most common cause of death in schizophrenia is cardiovascular system diseases, the most common being coronary artery disease. Cardiovascular system diseases are more common in schizophrenia patients than in the normal population. This situation, in which many genetic and epigenetic factors are blamed, is attributed to the increased prevalence of important cardiovascular disease risk factors such as diabetes, dyslipidemia, obesity, hypertension, and smoking in schizophrenia patients. In addition, deaths due to cardiac problems are increasing due to reasons such as stigmatization-related neglect, decreased self-care, poor communication skills, denial of illness, increased pain tolerance, limited ability of psychiatrists to evaluate cardiac diseases, and disconnection between medical and psychiatric services. Second-generation antipsychotic drugs in particular are seen as risk-increasing factors for metabolic syndrome and cardiovascular diseases.

The TyG index, calculated as TyG index = ln [Fasting triglyceride (mg/dl) × fasting glucose (mg/dl)]/2, is a composite indicator composed of fasting triglyceride (TG) and fasting glucose (FG) levels. The TyG index has been gradually linked to the development of CVD and poor outcomes. Research has demonstrated that it can serve as an effective alternative biomarker for insulin resistance (IR) due to its high sensitivity and specificity. The TyG index is straightforward to compute and imposes fewer time and cost constraints, rendering it suitable for large populations and advantageous for use in various applications, clinical settings, and epidemiological investigations. Numerous high-quality clinical studies have underscored the significance of the TyG index in diverse medical conditions. The atherogenic index of plasma (AIP) is a novel biomarker consisting of the logarithmically transformed ratio of triglycerides to high-density lipoprotein (HDL)-cholesterol in molar concentrations. AIP is the most effective atherogenic index for mood disorders.

The aim of this study was to investigate the risk of CVD in people with schizophrenia during remission using the TyG index and the AIP.

Methods: This research included individuals diagnosed with schizophrenia who were receiving ongoing follow-up and therapy at the Vefa Psychiatric Outpatient Clinic of Kütahya Evliya Çelebi Training and Research Hospital. The research received approval from the Ethics Committee of Kütahya Health Science University (2024/02-10). A total of 101 people with schizophrenia in remission were included. A total of 100 healthy individuals with similar age, sex and BMI distribution were included as a control group. Sociodemographic parameters, fasting plasma glucose and lipid profile were assessed. The PANSS scale was used for clinical assessment in the patient group. The triglyceride-glucose index (TyG) was calculated as triglycerides multiplied by glucose divided by two. The atherogenic plasma index (AIP) was calculated using the formula log (Tg/HDL-C).

Results: The study included 101 patients and 100 healthy controls. The mean age did not significantly differ between the patient (45.9 ± 10.5 years) and control (45.1 ± 10.5 years) groups ($p = 0.605$). Similarly, no significant difference was found in BMI ($p = 0.886$) or gender distribution ($p = 0.105$). However, smoking rates were significantly higher in the patient group (61.4%) compared to the control group (34.0%) ($p = 0.001$).

No significant differences were observed in systolic ($p = 0.994$) and diastolic ($p = 0.740$) blood pressure or fasting blood glucose levels ($p = 0.635$) between the groups. However, triglyceride levels were significantly higher in the patient group (210.1 ± 138.8 mg/dL) than in controls (150.9 ± 55.9 mg/dL) ($p = 0.001$). HDL levels were significantly lower in the patient group (39.7 ± 8.5 mg/dL) compared to the controls (46.6 ± 10.2 mg/dL) ($p = 0.001$). The TG/HDL index ($p = 0.023$) and AIP index ($p = 0.001$) were also significantly elevated in the patient

group. The mean duration of illness in the patient group was 23.9 ± 10.1 years. The PANSS scores indicated a mean negative symptom score of 24.6 ± 9.9, a positive symptom score of 17.6 ± 7.7, a general psychopathology score of 43.1 ± 15.2, and a total PANSS score of 85.4 ± 29.3. (Table 1)

Table 1. Demographic, clinical and laboratory characteristics of the patient and control groups

Parameters		Patient (n=101)	Control (n=100)	p value
Age (year)		45.9 ± 10.5	45.1 ± 10.5	0.605*
BMI (kg/m^2)		28.9 ± 6.1	28.8 ± 4.7	0.886*
Gender	Female	45(44.6%)	56(56.0%)	0.105**
	Male	56(55.4%)	44(44.0%)	
Smoking		62(61.4%)	34(34.0%)	**0.001****
Systolic blood pressure (mmHg)		124.9 ± 10.8	124.9 ± 8.2	0.994*
Diastolic blood pressure (mmHg)		79.0 ± 8.1	79.4 ± 6.8	0.740*
Fasting blood glucose (mg/dL)		117.7 ± 33.6	115.8 ± 23.3	0.635*
Triglyceride (mg/dL)		210.1 ± 138.8	150.9 ± 55.9	**0.001***
HDL (mg/dL)		39.7 ± 8.5	46.6 ± 10.2	**0.001***
TGv index		9.26 ± 0.57	9.09 ± 0.50	**0.023***
AIP index		0.68 ± 0.26	0.49 ± 0.20	**0.001***
Disease duration(years)		23.9 ± 10.1		
PANNS Negative		24.6 ± 9.9		
PANNS Positive		17.6 ± 7.7		
PANNS General		43.1 ± 15.2		
PANNS Total		85.4 ± 29.3		

Data were given as mean ± SD. *independent t test, ** Chi Square test(n%)
BMI: Body Mass Index, HDL: High Density Lipoprotein, PANSS: Positive and Negative Syndrome Scale, $p<0.05$ was considered significant.

Discussion: Schizophrenia is associated with an increased risk of cardiovascular disease (CVD), which contributes significantly to the decreased life expectancy observed in these patients. Recent research has focused on identifying reliable biomarkers for assessing CVD risk in individuals with schizophrenia. The focus on lipoprotein ratios for these markers in the literature is due to their stronger predictive value for CVD risk compared to traditional lipid measures. These ratios, especially those that include HDL, are considered better indicators of cardiovascular health in psychiatric patients. Atherogenic plasma index (AIP) is considered an important biomarker for assessing cardiovascular disease (CVD) risk. Research on the relationship of AIP with psychiatric disorders is limited. Studies suggest that AIP is positively associated with major depressive disorder (MDD). High AIP levels increase the risk of MDD, and this relationship becomes more pronounced in individuals with additional health problems such as diabetes or hypertension. AIP values were found to be significantly higher in patients with depression and bipolar disorder compared to controls. Atherogenic indices such as AIP, Castelli risk index-I (CRI-I) and Castelli risk index-II (CRI-II) were found to be higher in patients with schizophrenia compared to healthy individuals. In another study, comparisons between psychotic disorders and healthy control groups found that AIP values in psychotic patients were significantly higher. The data from our study are also consistent with the literature in this respect. This situation emphasizes the negative effects of psychotic disorders on cardiovascular health. Triglyceride-glucose (TyG) index is another biomarker that is considered an indicator of insulin resistance and whose relationship with psychiatric conditions has been investigated recently. High TyG index has been associated

with an increase in the prevalence of depression. A meta-analysis has shown that individuals with high TyG index have a higher prevalence of depression compared to those with low TyG index. This relationship has been consistent across subgroups such as age, gender, and methods used to diagnose depression. TyG index is positively associated with increased risk of cognitive impairment and dementia. Insulin resistance is higher in psychotic patients, especially in first-episode patients who have not used medication, compared to healthy controls. This is supported by higher insulin and C-peptide levels, measured by HOMA-IR index. In first-episode psychotic patients who started antipsychotic treatment, significant increases in body mass index (BMI) and serum lipid levels (especially triglycerides) were observed within a short period of six months. After three years of continuous treatment, significant increases were recorded in fasting glucose, insulin, total cholesterol, triglyceride levels, HbA1c, and HOMA-IR index. In our study, a significantly higher TyG index was found in schizophrenia patients compared to controls. This result is consistent with the literature and highlights the need for careful metabolic monitoring in this population.

This study is consistent with research indicating a significant risk of cardiovascular disease in people with schizophrenia. The elevated TyG index and AIP index in individuals with schizophrenia may serve as preliminary markers of impending cardiovascular disease risk and may aid in its prevention in these patients. These findings highlight the need for careful monitoring and management of metabolic risk variables in patients with schizophrenia.

Keywords: Schizophrenia, Triglyceride-glucose index, Atherogenic plasma index, Cardiovascular disease

References:

1. Onen S, Taymur I. Evidence for the atherogenic index of plasma as a potential biomarker for cardiovascular disease in schizophrenia. *J Psychopharmacol.* 2021;35(9):1120-1126.
2. Kim SH, et al. Association of the atherogenic index of plasma with cardiovascular risk beyond the traditional risk factors: a nationwide population-based cohort study. *Cardiovasc Diabetol.* 2022;21(1):81.
3. Jin Z, et al. The associations of two novel inflammation indexes, SII and SIRI, with the risks for cardiovascular diseases and all-cause mortality: a ten-year follow-up study in 85,154 individuals. *J Inflamm Res.* 2021;14:131.
4. Kaya H, Ayık B. Comparison of metabolic parameters of the patients with schizophrenia and bipolar disorder followed by a community mental health center. *Dicle Med J.* 2023;50(1):14-21.
5. Wan W, Yu Y. Association between the triglyceride glucose index and depression: a meta-analysis. *Front Psychiatry.* 2024;15:1390631.

0388 - Evaluation of Clinical Characteristics of Adolescents with Repeated Visits to the Pediatric Psychiatry Emergency Department of Marmara University

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Objective:

Pediatric emergency psychiatric evaluations represent an essential component of patients' access to the healthcare system (1). Repeated emergency psychiatric visits raise questions regarding the effectiveness of emergency psychiatric evaluations and the clinical characteristics associated with repeated visits. There are varying opinions in the literature regarding the diagnoses linked to repeated visits. It has been identified that the reasons for emergency psychiatric admissions differ by gender and age, with self-harming behaviors being more prominent in females, while violence and aggression are more prevalent in males (2). Another finding is that repeated emergency psychiatric admissions are associated with psychiatric comorbidities, substance use, and the presence of psychotic disorders (3). The examination of the clinical characteristics of repeated psychiatric visits will shed important light on the development of more effective intervention methods and the prevention of recurrent visits in the future. This study aims to evaluate the clinical characteristics of adolescents who made repeated visits to the Pediatric Psychiatry Emergency Department of Marmara University and identify the underlying reasons for these visits.

Methods:

This study aims to retrospectively examine the clinical diagnoses, sociodemographic data, medication usage, duration of psychiatric complaints, total number of visits made to the emergency department, history of self-harm behaviors, number and types of suicide attempts, and hospital admission referrals of adolescents who visited the Marmara University Child Emergency Department with psychiatric complaints three or more times between October 1, 2022, and September 30, 2024. The data used in the study were obtained from the hospital's computer system database. To assess the adolescents' level of functioning, the Children's Global Assessment Scale (CGAS) was used.

CGAS is a rating tool that provides a single score between 1 and 100 based on the clinician's assessment of various aspects related to a child's psychological functioning. According to the scoring system, children with a score of 80 or lower are recommended for psychiatric follow-up, while children with a score of 60 or lower are recommended for both psychiatric follow-up and treatment.

A total of 1,355 patients were evaluated at the Child Psychiatry Emergency Clinic between September 2022 and September 2024. Among these patients, 32 female and 18 male adolescents, who had visited the emergency department three or more times, were included in the study.

The study protocol was approved by the Marmara University Ethics Committee (09.2025.0026).

For the statistical analysis, descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to summarize the data. The Kolmogorov-Smirnov test assessed data distribution. Chi-squared tests were used to analyze categorical variables. For the analysis of parametric cross-sectional data, the T-test was used. Regression analysis was also performed to assess relationships between key variables. Analyses were conducted using SPSS version 20.0, with a significance level of 0.05. P-values greater than this were considered statistically insignificant, while values less than or equal to 0.05 were considered significant.

Results:

Out of 1,355 patients evaluated in the Pediatric Psychiatry Emergency Clinic between September 2022 and September 2024, 32 girls (14.60±1.77 years) and 18 boys (15.06±1.86 years) who visited the department three or more times were included in the study. Approximately 15.64% of the 1,355 evaluations conducted during the specified period consisted of recurrent visits. The patient with the highest number of visits had a total of 19 visits. 62.5% of the girls (N=20) and 27.8% of the boys (N=5) were attending formal education. The proportion of boys

discontinuing formal education was significantly higher(p=0,018). The first psychiatric complaints in girls started 19.50±16.45 months, and in boys, 25.56±25.11 months before, and the girls had been followed up in psychiatry for 13.52±14.51 months, while the boys had been followed up for 13.23±25.10 months. The current CGAS scores for functionality were 37.53±13.45 for girls and 40.72±16.84 for boys. Among the adolescents, 62% (N=31) had mood disorders, 24% (N=12) had anxiety disorders, 38% (N=19) had ADHD, 16% (N=8) had conduct disorder, 16% (N=8) had conversion disorder, 6% (N=3) had psychosis, and 6% (N=3) had substance use disorders. 59.4% of the girls (N=19) and 55.6% of the boys (N=10) had psychiatric comorbidities. Among the females, 56.3% (N=18) had a diagnosis of depressive disorder, 31.3% (N=10) had ADHD, 31.3% (N=10) had anxiety disorder, 21.9% (N=7) had conversion disorder, 9.4% (N=3) had intellectual disability, 9.4% (N=3) had conduct disorder, 6.3% (N=2) had bipolar disorder, 6.3% (N=2) had psychosis, 6.3% (N=2) had obsessive-compulsive disorder (OCD), 6.3% (N=2) had oppositional defiant disorder (ODD), 3.1% (N=1) had dissociative disorder, 3.1% (N=1) had substance use disorder, 3.1% (N=1) had tic disorder, and 3.1% (N=1) had post-traumatic stress disorder (PTSD). Among the males, 50% (N=9) had ADHD, 38.9% (N=7) had depressive disorder, 27.8% (N=5) had conduct disorder, 22.2% (N=4) had bipolar disorder, 16.7% (N=3) had intellectual disability, 11.1% (N=2) had substance use disorder, 11.1% (N=2) had anxiety disorder, 11.1% (N=2) had obsessive-compulsive disorder (OCD), 5.6% (N=1) had psychosis, 5.6% (N=1) had oppositional defiant disorder (ODD), 5.6% (N=1) had autism spectrum disorder, 5.6% (N=1) had tic disorder, 5.6% (N=1) had dissociative disorder, 5.6% (N=1) had gender dysphoria, and 5.6% (N=1) had conversion disorder. The rate of suicide attempts was statistically significantly higher in girls compared to boys (p=0,012). Among the participants, 53.1% of females (N=17) and 16.7% of males (N=3) had attempted suicide at least once. In emergency psychiatric interventions, short-acting injections were used significantly more often in male adolescents(p=0,016). 62% (31 patients) of the patients were using SSRIs, 86% (43 patients) were using atypical antipsychotics, 2% (1 patient) was using typical antipsychotics, 12% (6 patients) were using methylphenidate, 14% (7 patients) were using mood stabilizers, and 14% (7 patients) were using benzodiazepines. Regression analysis revealed that the predictors of CGAS scores were psychiatric comorbidities and suicide attempts.

Discussion:

In our study, the clinical features and associated factors of repeated visits among adolescents who presented to the Marmara University Child Psychiatry Emergency Clinic were examined. This study included 32 girls (14.60 ± 1.77 years) and 18 boys (15.06 ± 1.86 years) who presented to the Marmara Child Emergency Clinic with psychiatric complaints three or more times between September 2022 and September 2024. To contribute to the literature on the clinical characteristics of repeated visits, the patients' clinical diagnoses, sociodemographic data, medication usage, family psychiatric history, duration of psychiatric complaints, total number of visits to the emergency department at the time of presentation, history of self-harm behavior, and number of suicide attempts were examined.

In our study, the majority of the patients were females (64%, N=32). Previous studies conducted in Turkey are consistent with our findings, showing that the proportion of females presenting to psychiatric emergency services is higher (4). The rate of suicide attempts was 53.1% (N=17) in girls and 16.7% (N=3) in boys. In our study, it was observed that female adolescents had a statistically significant higher rate of suicide attempts compared to male adolescents. The higher rate of suicide attempts in females compared to males highlights gender differences in emergency psychiatric admissions. Additionally, the greater use of short-acting injections for intervention in male adolescents indicates that different approaches may be needed in emergency management. It is believed that depression diagnoses are more frequently associated with repeated emergency psychiatric visits in females, while behavioral problems are more commonly associated with such visits in males (5). In our study, the frequent diagnosis of depression in females and the higher use of short-acting injections in males suggest a potential link between behavioral problems and repeated admissions. Moreover, it was observed that 62.5% (N=20) of females and only 27.8% (N=5) of males continued formal education, with the rate of not continuing education being significantly higher in males. This highlights the importance of exploring the relationship between educational continuity and mental health. The non-continuation of formal education can be interpreted as both a risk factor for mental health issues and a consequence of mental illnesses affecting functionality, indicating a bidirectional relationship.

The retrospective nature of our data collection, the lack of a control group, and the single-center design are limitations of our study. The findings suggest that a more comprehensive treatment and follow-up strategy is needed to manage the mental health issues of adolescents with repeated emergency psychiatric visits.

References

1. Gill PJ, Saunders N, Gandhi S, Gonzalez A, Kurdyak P, Vigod S, Guttmann A. Emergency department as a first contact for mental health problems in children and youth. J Am Acad Child Adolesc Psychiatry. 2017;56(6):504-511. doi: 10.1016/j.jaac.2017.03.012
2. Poyraz Fındık OT, Fadıloğlu E, Ay P, Perdahlı Fiş N. Emergency mental health care for children and adolescents outside of regular working hours: 7 years outcomes from a tertiary hospital. Am J Psychiatry. 2022;179(5):438-445. doi: 10.1016/j.ajp.2022.103103.
3. Cushing AM, Liberman DB, Pham PK, et al. Mental health revisits at US pediatric emergency departments. JAMA Pediatr. 2023;177(2):168-176. doi:10.1001/jamapediatrics.2022.4885.
4. Mutlu C, Kılıçoğlu AG, Güneş H, et al. Characteristics of pediatric psychiatric emergency population in a mental health hospital. Eurasian J Emerg Med. 2015;14(3):123-130. doi:10.5152/eajem.2015.71354.
5. Rosic T, Duncan L, Wang L, et al. Trends and predictors of repeat mental health visits to a pediatric emergency department in Hamilton, Ontario. BMC Pediatr. 2019;19(1):228. doi:10.1186/s12887-019-1632-1.

0394 - Is The Therapeutic Effect of Vortioxetine Mediated Through Hypothalamic Neurogenesis in A Rat Model of Experimental Depression?

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Abstract

Objective: A chronic recurring mental illness, depression causes impairment with negative consequences on general health, emotions, and behavior. Major depressive disorders has been linked to aberrant neurogenesis and modifications in complex signaling networks. Particularly, studies on antidepressants have shown to increase hippocampus neurogenesis and neurotrophic elements. This data led us to aim to investigate the effect of one of the new generation antidepressants, vortioxetine, on depressed-like behaviours in rats induced with a social isolation model of depression and ascertain how it affects cell proliferation and hypothalamic peptide levels in the hypothalamus.

A complicated mental disorder, depression influences many neuropeptides and components of the hypothalamus. IGF1R is associated with energy balance and metabolism in the hypothalamus. Studies show that IGF1R can reduce depressive symptoms and promote neurogenesis. FGF2 plays an important role in the hypothalamic system and has strong effects on neurogenesis. Higher levels of FGF2 may boost hippocampus neurogenesis; in this regard, FGF2 levels have been shown to be changed in depressed individuals. It is thought that FGF2 may affect the effects on appetite by modulating the release of neuropeptides such as POMC and NPY. NPY plays an important role in the regulation of energy balance and appetite. Chronic stress conditions can alter NPY expression. The changes observed during depression may strengthen the tendency of individuals to overeat. In addition, POMC is defined as a neuropeptide that reduces appetite and increases energy expenditure. Impairments in the function of POMC neurons may contribute to brain dysfunctions associated with depression. GLUT2 is a critical transporter in glucose metabolism and is associated with energy balance in the hypothalamus. Low expression of GLUT2 has been associated with obesity and related depression.

There is evidence that depression impairs hippocampal neurogenesis and that this condition can be improved with antidepressant treatments. Antidepressants can reduce depression-like behaviors by increasing neurogenesis. It has also been suggested that this effect may be independent of HPA axis regulation. Based on this information, we aimed to investigate the effect of vortioxetine, one of the new generation antidepressants, on depressive-like behaviors in rats with a social isolation model of depression and to determine how it affects cell proliferation and hypothalamic peptide levels in the hypothalamus.

Methods: The study was approved by Kütahya Health Sciences University Animal Ethics Committee with the number on 2023.11.03. 40 adult male Wistar albino rats were used in the study. The rats were kept in standard care cages with a 12-hour light/dark cycle in an appropriate environment. 40 adult male Wistar albino rats were divided into groups as Control (C), Depression (D), Depression + vortioxetine (DV) and vortioxetine (V). The D+DV group was kept in social isolation for 14 days. Rats selected for the social isolation group were placed in cages with one rat in each cage and the outside of the cages was made opaque by wrapping them with black gelatin. During this process, the rats were prevented from seeing, smelling and making physical contact with each other. The open field test (OFT) and forced swim test (FST) were performed to check whether the animals were depressed. Starting from the 17th day, vortioxetine (10 mg/kg/day) was administered i.p. for 15 days. was applied. Behavioral tests were performed. Locomotor activity test was performed to test the animal's motor activity using the open field test apparatus in OFT. Behavioral parameters were evaluated using the OFT apparatus. FST was performed in two stages as pretest and test. The immobility period, swimming time and climbing time values of the animals were calculated. At the end of the experiment, the animals were anesthetized by ketamine (75 mg/kg) and xylazine (10 mg/kg) ip injection and their blood was transferred to gel tubes by cardiac puncture. IGF1R, FGF2, GLUT2, NPY,

POMC levels from hypothalamus tissue were analyzed by ELISA. Gene expression levels were analyzed by quantitative RT-PCR. Statistical evaluations were made using ANOVA.

Result: In OFT, the number of transitions to the center and the time spent in the center decreased in groups D and C and V. In FST, there was an increase in the immobility time in group D and an increase in swimming behavior in groups DV and V. When FST parameters were evaluated, the immobility time varied between the groups. While group D exhibited the longest immobility time, groups C and V showed lower immobility times. The lowest immobility time was observed in group V. While swimming time decreased significantly in groups C and D, groups V and DV showed longer swimming times. The highest swimming time was recorded in group DV. Climbing time varied between the groups, with groups C and V exhibiting longer times compared to group D. Group D had the shortest climbing time among all groups (Table 1). The results revealed significant differences among the groups for FGF2, POMC, NPY, and GLUT2 levels, whereas IGF1R levels did not show a statistically significant difference ($p = 0.841$). FGF2 levels were significantly higher in group V compared to group C ($p = 0.029$), in group K compared to group D ($p = 0.046$), in group V compared to group D ($p = 0.001$), and in group DV compared to group D ($p = 0.01$).POMC levels were significantly increased in group V compared to group D ($p = 0.001$), in group K compared to group D ($p = 0.021$), and in group DV compared to group D ($p = 0.003$). NPY levels were significantly higher in group V compared to group C ($p = 0.026$), in group V compared to group D ($p = 0.001$), and in group DV compared to group D ($p = 0.027$). Additionally, GLUT2 levels demonstrated a statistically significant difference among the groups ($p = 0.004$), though pairwise comparisons were not provided. When the groups were compared in terms of gene expression, a significant decrease in FGF2 and NPY gene expression was observed in the hypothalamus of group D animals ($p < 0.05$).

Table 1. Behavioral parameters

Behavioral measure	AM±SE	C	D	DV	V
Immobility time (s)	16th day	66.80±17.98	157.00±8.49	189.00±14.37	94.50±15.94
	34th day	56.00±12.51	221.66±11.18	84.50±24.51	50.0±15.32
Swimming time (s)	16th day	139.50±14.48	30.44±7.53	31.50±27.18	103.50±11.73
	34th day	107.50±14.71	7.77±2.90	171.50±27.85	166.50±22.08
Climbing time (s)	16th day	93.7±8.13	101.44±14.78	79.50±7.54	107.50±8.66
	34th day	137.00±14.08	70.55±9.66	44.00±12.44	84.50±13.32

Discussion: There is no study in the literature examining the effects of vortioxetine on behavioral paradigms, changes in brain neurochemistry, and hypothalamic neurogenesis in rats modeled with social isolation depression. It has been reported that vortioxetine improves chronic mild stress-induced depressive symptoms. Various antidepressant drugs have been shown in the literature to improve depressive-like behaviors caused by social isolation. When the findings of our study are examined, it has been shown that vortioxetine, a drug with multimodal activity, improves depressive-like behaviors caused by social isolation.

Studies using various depression models beyond social isolation have shown that vortioxetine could be beneficial particularly for hippocampus neurogenesis. Vortioxetine has been shown to induce structural development of hippocampal neurons by increasing dendritic branching and spine number, raise levels of molecules linked with neuroplasticity, and strengthen neurogenesis and synaptic connections by raising hippocampal BDNF levels. Studies conducted in the literature on neurogenesis in the hypothalamus reveal the potential of omega-3 fatty acids to increase hypothalamic neurogenesis. It has been shown that these fatty acids positively affect the neurogenesis process by reducing inflammation and supporting certain types of neurons such as POMC neurons. In addition, it has been emphasized that the melanocortin system plays important roles in antidepressant effects and that increasing the levels of neurotrophic factors may promote hippocampal neurogenesis.

Table 2. ELISA results

	C	D	DV	V	P value
IGF1R	111.95±8.15	114.71±3.89	113.00±7.13	120.28±8.11	0.841
FGF2	950.08±45.53	756.33±41.29	997.16±56.42	1159±48.48	**0.001***
POMC	449.06±18.25	345.73±16.87	477.06±32.01	496.40±20.51	**0.001***
NPY	270.80±22.21	188.40±10.99	288.66±34.82	371.52±16.40	**0.001***
GLUT2	17.86±1.04	22.54±1.18	19.15±1.95	25.06±0.91	0.004

ANOVA was used in the analysis of numerical variables. Tukey test was performed for multiple compari sons

FGF2: V>C p=0.029; K>D p=0.046; V> D p=0.001; DV> D p=0.01

POMC: V>D p=0.001; K>D p=0.021; DV> D p=0.003

NPY: V>C p=0.026; V>D p=0.001; DV> D p=0.027

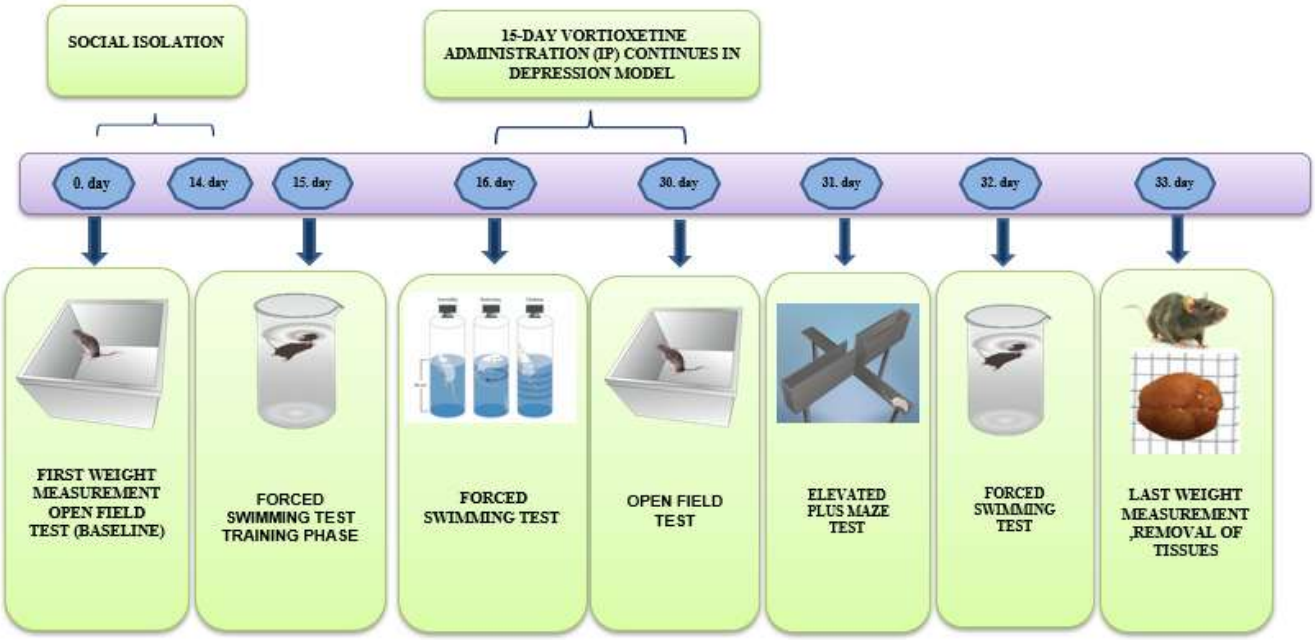


Figure 1. Schematic representation of experimental protocol

In a study conducted with a chronic mild stress depression model, it was reported that sertraline might have a positive regulatory effect on both the formation of neural precursor cells and the survival of newly formed neurons in the hypothalamus. It was also stated that newly formed neurons in the hypothalamus might express NPY, POMC, GLUT2 neurons related to food intake. In another study investigating the effect of NPY1R agonist on depression in depressed rats using a chronic mild stress model, it was reported that a decrease in IGF1R, FGF2, POMC, NPY and GLUT2 gene expression in the hypothalamus of depressed group animals, while NPY1R treatment caused an increase in NPY gene expression. No study was found in the literature directly investigating the effect of vortioxetine on hypothalamic neurogenesis. In the light of all the data, in our study, a significant decrease in FGF2 and NPY gene expression in the hypothalamus of group D animals, and an increase in FGF2 and NPY levels in the DV group, which are again important findings of our study; This supports our hypothesis that

depression caused by social isolation will decrease peptide gene expression levels in the hypothalamus, while vortioxetine administration will increase neurogenesis markers and positively change behavioral parameters.

Our study is the first to examine the effects of vortioxetine on hypothalamic neurogenesis in behavioral paradigms in rats modeled with social isolation for depression. A better understanding of the relationship between hypothalamic neurogenesis and the HPA axis will shed light on the biological basis of depression and enable the development of new treatment approaches.

Keywords: FGF2, Hypothalamus, Neurogenesis, Neuropeptide Y, Social Isolation

References:

1. Solak H, Gormus Z, Koca RO, Gunes CE, Iyisoy MS, Kurar E, Kutlu S. The effect of neuropeptide Y1 receptor agonist on hypothalamic neurogenesis in rat experimental depression model. *Metab Brain Dis.* 2025;40(1):1-17.
2. Ünal GÖ, Erkılınç G, Öztürk KH, Doguç DK, Özmen Ö. The beneficial effects of vortioxetine on BDNF, CREB, S100B, β amyloid, and glutamate NR2b receptors in chronic unpredictable mild stress model of depression. *Psychopharmacology (Berl).* 2023;240(12):2499-2513.
3. Kim Y, Bi S. Knockdown of neuropeptide Y in the dorsomedial hypothalamus reverses high-fat diet-induced obesity and impaired glucose tolerance in rats. *Am J Physiol Regul Integr Comp Physiol.* 2016;310(2):R134-R142. doi:10.1152/ajpregu.00174.2015.
4. Solak H, Gormus ZIS, Koca RO, Gunes CE, Kutlu S. Does sertraline affect hypothalamic food intake peptides in the rat experimental model of chronic mild stress-induced depression? *Neurochem Res.* 2022;47(5):1299-1316.

0419 - Evaluation of the Child and Adolescent Psychiatric Inpatient Consultations

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Children and adolescents with physical illnesses frequently present with psychiatric symptoms, requiring consultation-liaison psychiatric services. Understanding the characteristics of these consultations is crucial for improving mental health support in hospital settings.

This study aims to examine the distribution of inpatient psychiatric consultations for children and adolescents at Antalya Training and Research Hospital, considering age, gender, referring department, reasons for consultation, psychiatric diagnoses, and prescribed treatments.

A retrospective analysis was conducted on 378 inpatient children and adolescents who were referred for psychiatric consultation at Antalya Training and Research Hospital. Patient files were reviewed, and data were collected on demographics, referring departments, consultation reasons, psychiatric diagnoses, and treatments provided. The statistical analysis was performed using SPSS.

Among the 378 patients consulted, 176 were male and 202 were female. The mean age of the sample was 12.68 years (SD = 4.22), with no significant difference between genders in terms of age distribution. The most frequent referring departments were Pediatric Hematology (22.5%), Pediatric Intensive Care Unit (16.4%), and General Pediatric Service (11.4%). The primary reasons for consultation included complaints of malaise, crying, social withdrawal (16.7%), agitation and aggression (15.3%), diagnostic evaluation, treatment follow-up, and pre-discharge treatment regulation (15.1%).

Additionally, 11.6% of consultations were due to post-suicide evaltuation. Psychiatric diagnoses were identified in 65.6% of the cases. The most common psychiatric disorders diagnosed were behavioral and emotional disorders with onset usually occurring in childhood and adolescence (27.4%), anxiety disorders (21%), adjustment disorders (19%), and depressive disorders (14.9%). Regarding treatment, 35.5% of patients received psychoeducation and recommendations, 32.3% were prescribed antidepressants, and 16.5% were started on antipsychotic medication.

The findings indicate a high prevalence of psychiatric symptoms among hospitalized children and adolescents requiring psychiatric consultation. Pediatric hematology and intensive care units had the highest rates of referrals, with emotional and behavioral disorders being the most commonly diagnosed conditions.

The results highlight the need for enhanced collaboration between pediatric and psychiatric services to ensure timely identification and intervention for mental health issues in hospitalized children and adolescents. Establishing structured psychiatric consultation protocols may help improve mental health outcomes in pediatric inpatient settings.

Keywords: Inpatient treatment, child and adolescent, consultation

References

1. Gokcen C, Celik YI. The Evaluation Of Child And Adolescent Psychiatry Consultations from other Inpatient Clinics in a Training Hospital. Sak Med J 2011; 1: 140-144
2. Çolpan M, Eray Ş, Vural P. Uludağ Üniversitesi Hastanesinde Son Bir Yılda İstenen Çocuk ve Ergen Psikiyatrisi Konsültasyonlarının Değerlendirilmesi. Güncel Pediatr 2013; 11: 101-106.
3. Shaw RJ, Pao M, Holland JE, DeMaso DR. Practice Patterns Revisited in Pediatric Psychosomatic Medicine. Psychosomatics 2016:57:576-585
4. Sheldrick RC, Merchant S, Perrin EC. Identification of developmental-behavioral problems in primary care: a systematic review. Pediatrics 2011;128:356-363

0428 - Parental Alienation Syndrome in Custody Cases: A Clinical Assessment Based on Gardner's Criteria

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Objective: Parental alienation (PA) has been increasingly discussed in the context of child custody disputes, with many authors omitting the term "syndrome" and framing it as a disorder, despite its absence from major diagnostic systems such as the ICD-11 and DSM-5-TR1. The main reason behind its non-classification is the limited number of studies in the scientific literature supporting the validity of the concept. Although the scientific literature suggests that PA is a real phenomenon that affects the mental health of thousands of children and their families, it is still not recognized in many countries, and evidence-based interventions specifically targeting PA are lacking. Various definitions of PA have been proposed; however, the most comprehensive remains that of Dr. Richard Gardner, who described PA as a child's unjustified and exaggerated criticism and deprecation of one parent, often resulting from a combination of manipulation by the other parent and the child's own involvement in this dynamic2. These two factors often reinforce each other, creating a damaging cycle. Furthermore, due to insufficient published research, PA continues to be excluded from the DSM-5-TR and ICD-11.

This study aims to examine Parental Alienation Syndrome (PAS) and its associated factors in children involved in custody disputes, utilizing Gardner's eight criteria to assess the behavioral and psychological patterns of children whose parents are divorced.

Methods: Children and adolescents who sought custody cases at the Child and Adolescent Psychiatry outpatient clinic between May 2020 and June 2021 were included in this study. A comprehensive psychiatric interview was conducted with the children and their families regarding the issues surrounding the custody dispute, and families were followed for at least six months. All children underwent the Kiddie Schedule for Affective Disorders and Schizophrenia (K-SADS) clinical interview 3. To better understand the children's relationships with each parent, two separate interviews were conducted: one in the presence of the mother and another in the presence of the father. This allowed for an observational assessment of the child's interactions with both parents.

To assess the presence of parental alienation (PA), the diagnostic criteria proposed by Gardner were used as a reference framework4. According to Gardner, children affected by PA typically exhibit a specific set of behavioral and emotional characteristics. These include: (a) a persistent campaign of denigration toward the alienated parent, despite a previously healthy relationship; (b) weak, frivolous, or irrational justifications for the rejection of that parent; (c) a polarized view of parents, where one is idealized while the other is unjustifiably rejected (lack of ambivalence); (d) the "independent-thinker" phenomenon, where the child insists that their rejection is self-derived and not influenced by the alienating parent; (e) automatic, unwavering support for the alienating parent; (f) absence of guilt regarding mistreatment of the alienated parent; (g) use of "borrowed scenarios," such as language or narratives inconsistent with the child's developmental level, indicating possible coaching; and (h) generalized animosity toward the extended family or friends of the alienated parent.

For statistical analysis, descriptive statistics, t-tests and Pearson's correlation was applied to explore the relationship. A multiple regression analysis identified key predictors of PAS scores, including custody type.

Results: A total of 33 children participated, consisting of 17 girls (51.5%) and 16 boys, with a mean age of 8.45 years (SD = 4.18, range: 2–18 years). Regarding socioeconomic status, 39.4% (n = 13) of families were classified as low economic status, while the remaining 20 families had moderate to high economic status. In terms of psychiatric conditions, 27.3% (n = 9) of the children were diagnosed with a disorder, most commonly depression and anxiety, followed by ADHD. Regarding custody arrangements, 72.4% (n = 24) of children were placed in maternal custody, largely due to domestic violence by the father. Conversely, paternal custody cases were primarily driven by maternal infidelity and departure from the home. The mean PAS score across all children was 4.94 ± 3.37 (range: 0–8). For children in maternal custody, the mean PAS score was 3.79 ± 3.28, while for those in paternal custody, PAS scores were significantly higher, with an average of 8 ($p = 0.000$). Children with psychiatric disorders (n = 9) had significantly higher PAS scores (M = 7.44, SD = 1.67) compared to those without psychiatric

disorders (n = 24), who had lower PAS scores (M = 4.00, SD = 3.39). This difference was statistically significant (F = 10.304, p = 0.003). Regression analysis revealed that both the presence of psychopathology (B = -2.565, p = 0.022) and custody type (B = 3.491, p = 0.003) were significant predictors of PAS scores.

Discussion: This study aimed to evaluate the presence and severity of Parental Alienation Syndrome (PAS) in children involved in custody disputes, using Gardner‘s criteria as a clinical framework. Despite ongoing debates over its conceptualization, the present results emphasize that PA represents a real and observable phenomenon with significant clinical implications.

Our results indicate that PAS symptoms were more pronounced in children placed under paternal custody, with significantly higher PAS scores compared to those in maternal custody. One possible explanation for this could be the contextual factors underlying the custody decisions. In our sample, maternal custody was predominantly associated with histories of paternal domestic violence, whereas paternal custody was mostly due to maternal infidelity or abandonment. These findings suggest that the emotional dynamics and narratives surrounding the custody transition may heavily influence the development of alienating behaviors and the child‘s psychological alignment with one parent.

Furthermore, the significant association between PAS scores and the presence of psychiatric disorders such as depression, anxiety, and ADHD is noteworthy. Children diagnosed with psychiatric disorders had significantly higher PAS scores, suggesting a potential bidirectional relationship. On one hand, exposure to alienating behaviors and inter-parental conflict may exacerbate psychological vulnerabilities. On the other, children with pre-existing psychopathology might be more susceptible to the emotional manipulation and loyalty conflicts characteristic of parental alienation dynamics. This highlights the importance of considering the broader mental health context when evaluating suspected cases of PA.

Regression analysis further identified both custody type and presence of psychopathology as significant predictors of PAS severity. These findings underscore the complex interplay between familial structures and child mental health outcomes. They also support the growing body of literature advocating for early identification of PA-related dynamics during custody evaluations, as delayed recognition may contribute to long-term emotional and relational impairments in the child.

The observed behavioral patterns in children—such as unjustified rejection of one parent, borrowed narratives, lack of guilt, and the idealization of one parent over the other—align closely with Gardner‘s original conceptualization of PAS. While criticisms have been raised regarding the operationalization and legal misuse of this concept, our clinical observations confirm that these patterns can be reliably identified and assessed in a structured, multi-informant evaluation process.

Despite these insights, the study has several limitations. The relatively small sample size and the single-center nature of the study may limit the generalizability of the findings. Moreover, while Gardner‘s criteria were systematically applied, no standardized or validated scale exists for PAS, which may introduce subjectivity into the assessment process. Future studies should aim to develop structured diagnostic tools and explore longitudinal outcomes of children exposed to alienating behaviors.

In conclusion, this study contributes to the growing evidence base supporting the clinical relevance of parental alienation in custody disputes. Given the observed associations with custody type and psychiatric comorbidities, clinicians, legal professionals, and policymakers should be encouraged to adopt a multidisciplinary and child-centered approach to early recognition and intervention. Only through broader acknowledgment and further research can effective prevention and treatment strategies for PA be developed.

Keywords: Parental Alienation Syndrome, PAS, custody disputes, Gardner‘s criteria, psychopathology, emotional impact, child psychology, maternal infidelity, paternal custody, early intervention.

References

1. Tavares A, Crespo C, Ribeiro MT. What Does it Mean to be a Targeted Parent? Parents‘ Experiences in the Context of Parental Alienation. *J Child Fam Stud.* 2021;30(5):1370-1380. doi:10.1007/s10826-021-01914-6
2. Gardner RA. *The Parental Alienation Syndrome: A Guide for Mental Health and Legal Professionals.* Cresskill, NJ: Creative Therapeutics.; 1998.
3. Gökler B, Ünal F, Pehlivantürk B, Kültür EÇ, Akdemir D, Taner Y. Reliability and validity of schedule for affective disorders and schizophrenia for school age children-present and lifetime version – Turkish version (K-SADS-PL-T). *Turkish J Child Adolesc Ment Heal.* 2004;11:109-116.
4. Gardner RA. Parental Alienation Syndrome vs. Parental Alienation: Which Diagnosis Should Evaluators Use in Child-Custody Disputes? *Am J Fam Ther.* 2002;30(2):93-115. doi:10.1080/019261802753573821

Comparison of Suicide and Non-Suicidal Self-Injury Behaviors with Sleep in Adolescents Diagnosed with Depressive Disorder

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Introduction

Sleep disturbances are a core diagnostic criterion for Major Depressive Disorder (MDD) [1]. Since the 1990s, numerous studies have examined the relationship between sleep and depression [2]. The risk of developing depression increases during adolescence, and sleep alterations linked to depression in this stage are increasingly recognized as consistent biological evidence [3]. These findings indicate a potential link between vulnerability to depression and sleep disturbances [4]. Furthermore, the recognition of sleep as an important factor for emotional regulation and cognitive processes has supported the hypothesis of a connection between sleep and self-harming behaviors [5].

Existing literature suggests that sleep disturbances are linked to the severity of depressive episodes, self-injurious behaviors, and a heightened risk of suicidal behavior (Wong et al., 2011). Additionally, a higher risk of NSSI has been correlated with more severe insomnia symptoms, reduced sleep duration, prolonged sleep latency, frequent nocturnal awakenings, and poorer overall sleep quality [5].

This study aimed to investigate the sleep characteristics of adolescents with MDD, assess the prevalence of sleep disturbances and comorbidities, and examine whether subjective sleep patterns linked to depression in adolescents contribute to NSSI, suicidal ideation, and suicide attempts.

Materials and Methods

The study was performed in the Child and Adolescent Psychiatry Department at Dokuz Eylül University Hospital, with 43 adolescents aged 13 to 18 who diagnosed with MDD. Diagnosis of MDD and comorbidities were utilized using KSADS-PL (Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version). Children's Depression Rating Scale-Revised Form (CDRS-R), Clinical Global Impressions-Severity Index (CGI-SI) form and sociodemographic data form were applied to all participants. Participants were categorized into two case groups: 25 individuals with a history of NSSI only and 18 individuals with a history of SA only in the last year. NSSI was questioned by using the Inventory of Statements About Self-Injury (ISAS). Suicidal attitudes were evaluated using the Columbia-Suicide Severity Rating Scale (C-SSRS). Adolescents were filled out the Pittsburgh Sleep Quality Index (PSQI) and their parents/caregivers were filled out the Children‘s Sleep Habits Questionnaire (CSHQ).

All statistical analyses were conducted using SPSS (Statistical Package for the Social Sciences; SPSS Inc., Chicago, IL) version 26.0. Descriptive statistics were reported as frequencies (n) and percentages (%) for categorical variables, while continuous variables were presented as mean ± standard deviation for parametric data and as median with minimum-maximum values for non-parametric data. Depending on the data distribution, Pearson‘s chi-squared test, Fisher‘s exact test, independent samples t-test, Mann-Whitney U test, and Pearson‘s and Spearman‘s correlation tests were applied. A p-value of <0.05 was considered statistically significant for all analyses.

Results

The mean age of the participants was 16.04 ± 1.4 years, and 90.7% of the participants were female. All participants in our study were diagnosed with MDD, with 69.8% presenting at least one comorbidity. The most prevalent comorbidity was anxiety disorder, affecting 53.5% of the participants. There were no statistically significant differences between the groups in terms of age, gender, academic achievement, peer relationships, mother and father education levels, comorbid psychiatric diagnoses, psychotropic medication use (except using antipsychotic), and presence of insomnia or hypersomnia. Antipsychotic use is significantly higher in the suicide attempt group compared to the NSSI group ($\chi^2=4.37$, df=1, $p=0.04$).

Table 1: Comparison of descriptive variables between case groups

	Non-suicidal Self Injury ***(n=25)***	**Suicide Attempt** ***(n=18)***	**p**
Age (Mean ± SD)	16.06 ± 1.50	16.02 ± 1.29	0.93[1]
Gender (F/M) (n)	23/2	16/2	
Academic achievement (n)	good: 7 moderate: 6 bad:12	good: 10 moderate: 4 bad:4	0.14[2]
Peer relationship (n)	good: 10 moderate: 9 bad:6	good: 9 moderate: 4 bad:5	0.62[2]
Mother education level			0.35[3]
Father education level			0.36[3]
Family history of psychiatric illness (n,)	11	6	0.48[2]
Using medications (n) Antipsychotic Antidepressant	14 10 13	14 13 9	0.14[2] **0.04**[2] 0.89[2]
Psychiatric comorbidity (n)	17	13	0.77[2]
Insomnia (n)	12	7	0.55[2]
Hypersomnia (n)	3	1	0.44[3]

[1]Independet Samples t-testi, [2]Pearson Chi-Square, [3]Fisher's exact test.

Table 2: Comparison of scale scores between case groups

	Non-suicidal Self Injury ***(n=25)***	**Suicide Attempt** ***(n=18)***	**p**
PSQI score (Mean rank)	24.80	18.11	0.08[2]
PSQI component-1 (Mean ± SD)	2.04 ± 0.68	1.6 ± 0.69	**0.049**[1]
CSHQ score (Mean rank)	25.72	16.83	**0.02**[2]
CDRS-R total score (Mean rank)	22.62	21.14	0.70[2]
CGI-SI (Mean rank)	17.90	27.69	**0.01**[2]

[1]Independet Samples t-test, [2]Man Whitney U.

Table 3a: Inter-scale correlation in the depressive youth of non-suicidal self injury and suicide attempt

	CDRS-R	CGI-SI
PSQI score	r = 0.35 **p = 0.02**	r = 0.01 p = 0.96
CSHQ score	r = 0.41 **p = 0.01**	r = 0.03 p = 0.85

Pearson Corelation

Table 3b: Inter-scale correlation in the depressive youth of non-suicidal self injury and suicide attempt

	PSQI score	CSHQ score	CDRS-R	CGI-SI
Severity of suicidal ideation, lifetime	r = 0.27 p = 0.11[1]	r = 0.23 p = 0.13[1]	r = 0.12 p = 0.46[2]	r = -0.15 p = 0.34[2]
Severity of suicidal ideation, last month	r = 0.32 **p = 0.03[1]**	r = 0.25 p = 0.10[1]	r = 0.66 **p = 0.00[2]**	r = 0.17 p = 0.27[2]
Number of suicide attempts, lifetime	r = -0.02 p = 0.88[2]	r = -0.17 p = 0.26[2]	r = 0.04 p = 0.81[2]	r = 0.42 **p = 0.05[2]**
Number of suicide attempts, last 3 months	r = -0.26 p = 0.09[2]	r = -0.31 p = 0.05[2]	r = -0.9 p = 0.56[2]	r = 0.25 p = 0.10[2]
Number of NSSIs	r = 0.36 **p = 0.02[2]**	r = 0.56 **p = 0.00[2]**	r = 0.28 p = 0.06[2]	r = 0.17 p = 0.28[2]

[1]Pearson Corelation, [2]Spearman Corelation.

No significant difference was found between the two groups regarding the CDRS-R t-score (U = 205.5, p = 0.70). However, a statistically significant difference was observed in the CGI-SI scores, with the NSSI group showing lower scores compared to the SA group (U = 122.5, p = 0.01).

In study, 88% of the participants reported poor sleep quality, 86% exhibited impaired sleep habits, 44% experienced insomnia, and 9.3% had hypersomnia. CSHQ and PSQI component-1 (subjective sleep quality) scores were statistically significantly higher in the NSSI group compared to the SA group. (p=0.02, p=0.049; respectively).

PSQI score was moderately correlated with the CDRS-R total score (p=0.007, r=0.40) whereas CSHQ score was poorly correlated (p=0.021, r=0.35). CSHQ score was moderately correlated with the number of NSSI behaviors (p<0.01, r=0.56) while PSQI score was poorly correlated (p=0.016, r=0.36). PSQI score was poorly correlated with the severity of suicidal ideation in the last month (p=0.034, r=0.32).

Discussion

According to our findings, the sociodemographic characteristics of the NSSI and suicide attempt groups were found to be similar. Differently, the use of antipsychotics is significantly more common in the suicide attempt group, which may reflect clinicians' efforts to mitigate the potential risks associated with impulsive behaviors in this population. Consistent with our study and as discussed in lectures, approximately two-thirds of adolescent depression cases involve a comorbid diagnosis, most commonly an anxiety disorder [8].

This study found that the severity of depression was similar across our case groups. Based on the available data, establishing a correlation between NSSI or suicidal behavior and depression severity seems unlikely. However, illness severity, as assessed by the CGI-SI, was significantly lower in individuals with NSSI alone compared to other groups. This may be related to clinicians perceiving suicide attempts as a more severe presentation.

In our study, poor sleep quality and disturbed sleep habits were observed in over 80% of the participants, consistent with the literature [9]. An important finding of our study is that when comparing NSSI and SA, the NSSI group showed worse subjective sleep quality and sleep habits. Although no study in the literature directly compares these two, the relationship between sleep disorders and NSSI has been demonstrated multiple times in the literature [10–12].

Our findings indicate that 44% of the participants experienced insomnia, while 9.3% had hypersomnia. Existing literature suggests that insomnia is the most common sleep disorder among children and adolescents with depression, affecting more than 50% of this population, whereas hypersomnia is observed in approximately 9% [13].

A significant finding of our study is that more disrupted sleep patterns and poorer sleep quality were linked to a higher frequency of NSSI. Similarly, previous research has identified a connection between family-reported sleep disturbances and NSSI [14]. Additionally, it is well-established that poor sleep quality contributes to an increased risk of engaging in NSSI [10,15].

Another significant finding of our study was that poorer sleep quality was associated with increased suicidal ideation in the past month, but not over a lifetime. Existing literature supports the idea that the link between sleep disturbances and suicidality is more pronounced when the assessment focuses on the past six months [16]. Furthermore, even after adjusting for depressive symptoms, poor sleep quality remains a strong predictor of suicidal thoughts in adolescents [7].

Poor sleep quality has consistently been linked to an increased risk of suicidal behaviors [17–20]. However, the current study did not identify a significant association between sleep quality and suicide attempts within the past three months or over a lifetime. This may be attributed to the lower prevalence of suicide attempts compared to suicidal ideation, which makes detection more difficult. As such, a larger sample size may offer a more thorough assessment. Moreover, factors such as treatment, medication use, and social support may play a role in preventing suicidal thoughts from escalating into actual attempts.

In our study found no statistically significant correlation between disrupted sleep patterns and the severity of suicidal ideation or the frequency of suicide attempts. This lack of association may be due to the limited observation of adolescents' sleep behaviors by their parents.

The limitations of our study include the relatively small overall sample size and the predominance of female participants, which may limit the generalizability of the findings. Additionally, the cross-sectional design of the study prevents the establishment of a causal relationship between the observed outcomes. Sleep-related data were collected through self-report scales completed by both adolescents and their families. The presence of comorbid conditions and concurrent medication use within the patient population may have introduced confounding variables that could have influenced the sleep assessments.

Conclusion

Despite the evident overlap in characteristics between NSSI and suicide attempts, recent theoretical perspectives suggest that these phenomena represent distinct concepts. Identifying the factors that differentiate these groups, along with recognizing adolescents at higher risk of developing significant sleep difficulties, could provide a valuable target for interventions aimed at addressing NSSI and suicidal ideation. Additionally, assessing sleep disturbances should be incorporated into the evaluation of NSSI and suicide risk. Adolescents may be more willing to discuss sleep-related concerns than more sensitive topics, such as depression and substance use.

References

1. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. American Psychiatric Association; 2013. doi:10.1176/appi.books.9780890425596
2. Adrien J. Neurobiological bases for the relation between sleep and depression. Sleep Med Rev. 2002;6(5):341-351. doi:10.1016/S1087-0792(01)90200-X
3. Kaufman J, Martin A, King RA, Charney D. Are child-, adolescent-, and adult-onset depression one and the same disorder? Biol Psychiatry. 2001;49(12):980-1001. doi:10.1016/S0006-3223(01)01127-1
4. Rao U. Sleep disturbances in pediatric depression. Asian J Psychiatr. 2011;4(4):234-247. doi:10.1016/j.ajp.2011.09.001
5. Khazaie H, Zakiei A, McCall WV, et al. Relationship between Sleep Problems and Self-Injury: A Systematic Review. Behavioral Sleep Medicine. 2021;19(5):689-704. doi:10.1080/15402002.2020.1822360
6. Wong MM, Brower KJ, Zucker RA. Sleep problems, suicidal ideation, and self-harm behaviors in adolescence. J Psychiatr Res. 2011;45(4):505-511. doi:10.1016/j.jpsychires.2010.09.005
7. Pigeon WR, Pinquart M, Conner K. Meta-analysis of sleep disturbance and suicidal thoughts and behaviors. J Clin Psychiatry. 2012;73(9):e1160-e1167. doi:10.4088/JCP.11R07586
8. Ford T, Goodman R, Meltzer H. The British Child and Adolescent Mental Health Survey 1999: the prevalence of DSM-IV disorders. J Am Acad Child Adolesc Psychiatry. 2003;42(10):1203-1211. doi:10.1097/00004583-200310000-00011
9. Roberts RE, Lewınsohn PM, Seeley JR. Symptoms of DSM-III-R major depression in adolescence: evidence from an epidemiological survey. J Am Acad Child Adolesc Psychiatry. 1995;34(12):1608-1617. doi:10.1097/00004583-199512000-00011
10. Liu X, Chen H, Bo QG, Fan F, Jia CX. Poor sleep quality and nightmares are associated with non-suicidal self-injury in adolescents. Eur Child Adolesc Psychiatry. 2017;26(3):271-279. doi:10.1007/S00787-016-0885-7
11. McGlinchey EL, Courtney-Seidler EA, German M, Miller AL. The Role of Sleep Disturbance in Suicidal and Nonsuicidal Self-Injurious Behavior among Adolescents. Suicide Life Threat Behav. 2017;47(1):103-111. doi:10.1111/SLTB.12268
12. Hysing M, Sivertsen B, Stormark KM, O'Connor RC. Sleep problems and self-harm in adolescence. Br J Psychiatry. 2015;207(4):306-312. doi:10.1192/BJP.BP.114.146514
13. Liu X, Buysse DJ, Gentzler AL, et al. Insomnia and hypersomnia associated with depressive phenomenology and comorbidity in childhood depression. Sleep. 2007;30(1):83-90. doi:10.1093/SLEEP/30.1.83
14. Singareddy R, Krishnamurthy VB, Vgontzas AN, et al. Subjective and objective sleep and self-harm behaviors in young children: A general population study. Psychiatry Res. 2013;209(3):549. doi:10.1016/J.PSYCHRES.2013.03.036
15. Chung MS, Chiu HJ, Sun WJ, et al. Association among depressive disorder, adjustment disorder, sleep disturbance, and suicidal ideation in Taiwanese adolescent. Asia Pac Psychiatry. 2014;6(3):319-325. doi:10.1111/APPY.12112

16. Harris LM, Huang X, Linthicum KP, Bryen CP, Ribeiro JD. Sleep disturbances as risk factors for suicidal thoughts and behaviours: a meta-analysis of longitudinal studies. Sci Rep. 2020;10(1):13888. doi:10.1038/s41598-020-70866-6

17. Bailly D, Bailly-Lambin I, Querleu D, Beuscart R, Collinet C. Le sommeil des adolescents et ses troubles [Sleep in adolescents and its disorders. A survey in schools]. Encephale. 2004;30(4):352-359. doi:10.1016/S0013-7006(04)95447-4

18. Nrugham L, Larsson B, Sund AM. Specific depressive symptoms and disorders as associates and predictors of suicidal acts across adolescence. J Affect Disord. 2008;111(1):83-93. doi:10.1016/J.JAD.2008.02.010

19. Becker SP, Dvorsky MR, Holdaway AS, Luebbe AM. Sleep Problems and Suicidal Behaviors in College Students. J Psychiatr Res. 2018;99:122. doi:10.1016/J.JPSYCHIRES.2018.01.009

20. Holdaway AS, Luebbe AM, Becker SP. Rumination in relation to suicide risk, ideation, and attempts: Exacerbation by poor sleep quality? J Affect Disord. 2018;236:6-13. doi:10.1016/J.JAD.2018.04.087

Investigation of the Effects of Agomelatine on Lipopolysaccharide-Induced Inflammation in a Microglial Cell Line

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Introduction: Microglia are the resident myeloid cells of the brain and play a crucial role in the immune defense of the central nervous system (CNS). Under physiological conditions, M2-polarized microglia help maintain CNS homeostasis and promote neurogenesis. In the early stages of CNS diseases, microglial activation contributes to tissue repair by clearing pathogens and cellular waste. However, biological and psychosocial stressors, such as infections, trauma, or chronic stress, can drive microglia toward the proinflammatory M1 phenotype, leading to increased production of pro-inflammatory cytokines such as IL-1β, IL-6, and TNF-α (1). Lipopolysaccharide (LPS), a major inflammatory component of gram-negative bacterial cell walls, interacts with toll-like receptor 4 (TLR4) on microglia, triggering an inflammatory cascade (2). The effects of LPS on the CNS are generally mediated by cytokines. IL-10, a key anti-inflammatory cytokine, plays a crucial role in controlling excessive inflammation in the CNS. It suppresses proinflammatory mediator production through multiple mechanisms, including destabilizing proinflammatory cytokine mRNA, downregulating TLR signaling, and inhibiting inflammasome activation (3). Depression is widely recognized as a mood disorder triggered by environmental stressors. Pathologically, it involves structural and functional alterations in specific brain regions. Key contributors to neuronal damage include neuroinflammation, dysregulated autophagy, and apoptosis. Effective treatment is crucial to preventing neuronal injury and promoting repair in affected brain regions. Agomelatine (AGO) is a novel antidepressant with potent agonistic activity at melatonin receptors (MT1 and MT2) and antagonistic activity at 5-HT2C receptors. However, the pathways through which AGO modulates neuronal intracellular signaling via 5-HT2C receptor antagonism have yet to be thoroughly investigated. Additionally, AGO has been reported to enhance hippocampal neurogenesis, upregulate brain-derived neurotrophic factor expression, and protect against oxidative damage and neuroinflammation in the brain (4). The study aimed to determine the impact of AGO, a 5-HT2C receptor antagonist antidepressant, on microglial inflammation, utilizing HMC3 cells as a model microglial cell line.

Methods:

HMC3 cells were seeded in well plates containing EMEM supplemented with 10% fetal bovine serum (FBS) and 1% penicillin-streptomycin. The cells were incubated at 37°C in a humidified atmosphere comprising 95% air and 5% CO_2. An MTT assay was completed to evaluate the toxic effects of AGO alone or in combination with LPS on the HMC3 cell line. To assess the direct cytotoxicity of AGO, HMC3 cells were treated with varying concentrations of AGO (1, 5, and 10 µM), followed by an MTT assay after 24 hours. Additionally, to examine the potential protective effects of AGO (1, 5, and 10 µM) against LPS-induced toxicity, cells were pre-incubated with LPS (10 µg/mL) for 24 hours before AGO treatment. Levels of TNF-α, IL-1β, and IL-10 cytokines in HMC3 cells were quantified using Human ELISA kits, following the manufacturer's instructions. A one-way analysis of variance (ANOVA) followed by Tukey's post-hoc test was conducted to perform multiple comparisons. Statistical significance was set at p value< 0.05. (*p<0.05, **p<0.01, and ***p<0.001).

Results: The results of the MTT assay are presented in Figure 1. AGO treatment at the specified doses (1, 5, and 10 µM) did not exhibit significant toxicity in HMC3 cells (Fig. 1a). However, when AGO (1, 5, and 10 µM) was administered to cells pre-exposed to LPS, significant dose-dependent differences in cell viability were observed (Fig. 1b). Notably, AGO at 10 µM significantly enhanced cell viability compared to the LPS-only group (**p<0.01), whereas LPS treatment alone markedly reduced cell viability relative to the control (***p<0.001). Based on the MTT assay results, the 10 µM dose was selected to assess the anti-inflammatory effects of AGO on LPS-treated HMC3 cells. Following LPS administration, cells were treated with AGO for 24 hours, collected, and analyzed for cytokine levels using an ELISA kit. The results are presented in Figure 2. LPS treatment significantly increased IL-1β (**p<0.01) and TNF-α (**p<0.01) levels compared to the control, while significantly reducing IL-10 levels (***p<0.001). Compared to the LPS-only group, AGO treatment significantly reduced LPS-induced

increases in IL-1β (*p<0.05) and TNF-α (***p<0.001) levels (Fig 2a,b). Conversely, AGO treatment restored IL-10 levels (**p<0.01), which had been decreased by LPS exposure (Fig 2c).

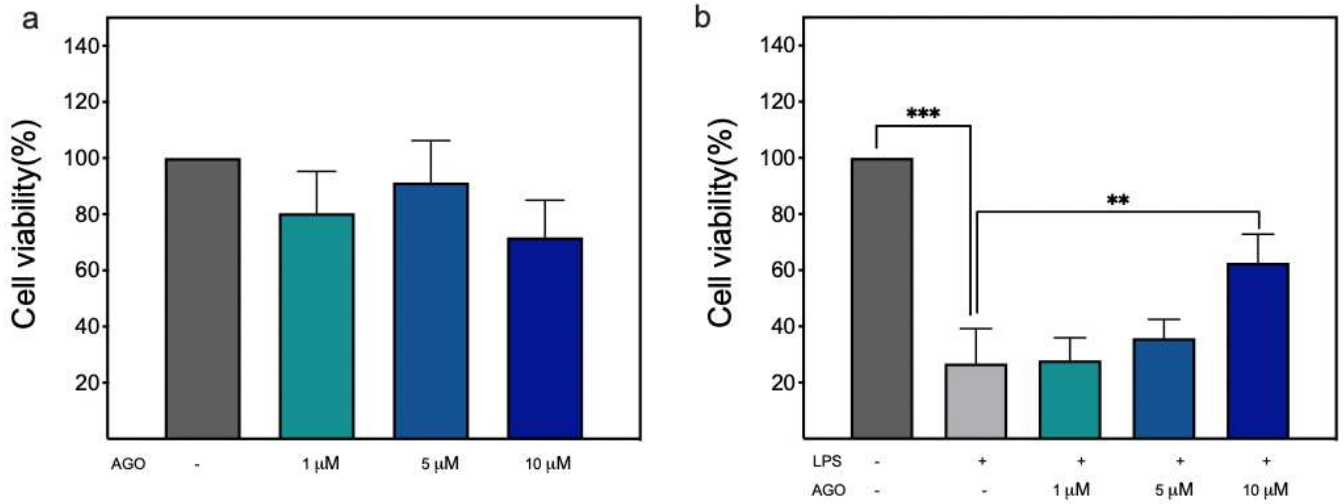


Figure 1. MTT assay to determine the cell viability of AGO, (a) Ago-treated HMC3 cells without LPS treatment, (b) AGO-treated HMC3 cells after 24 h of LPS treatment. Data represent the mean ± standard error of the mean (n = 5). Significance differences were found at **p<0.01, and ***p<0.001 between groups.

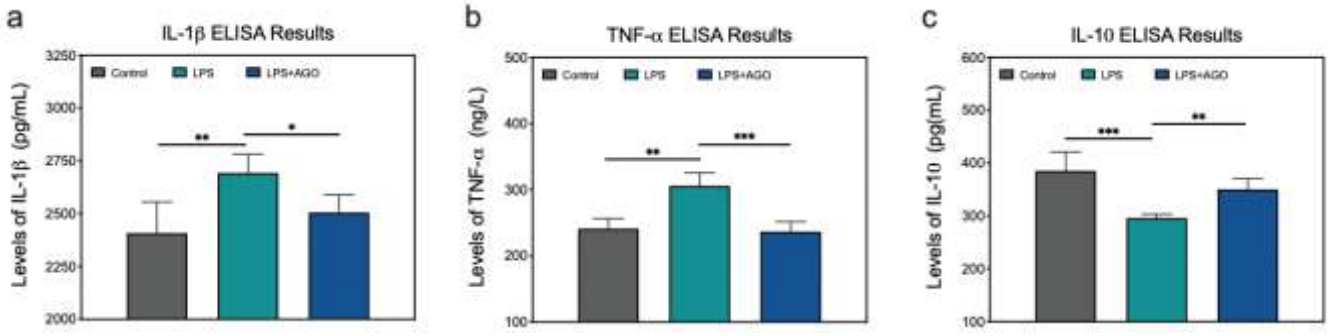


Figure 2. (a) IL-1β, (b) TNF-α, and (c) IL-10 levels on the HMC3 microglial cell line treated with AGO. Data represent the mean ± standard error of the mean (n = 5). Significance differences were found at *p<0.05, **p<0.01, and ***p<0.001 between groups.

Discussion: Neuroinflammation plays a critical role in neurodegenerative diseases and mood disorders, including depression. It is initiated when an inflammatory stimulus activates microglia and/or astrocytes in the CNS. LPS, a known neurotoxin, can induce an inflammatory cascade both in vivo and in vitro. Depression is a complex neuropsychiatric disorder, highlighting the need for more effective and well-tolerated antidepressants. AGO, a relatively novel antidepressant approved for clinical use, has been reported to enhance dopamine production in the prefrontal cortex, promote cell proliferation in the hippocampus, and support neuronal growth and survival. However, despite findings from various studies, the precise molecular mechanisms underlying the neuroprotective effects of AGO remain to be elucidated (4). In this study, microglial inflammation was induced by treating the HMC3 cell line with LPS, and the effects of AGO on inflammation were investigated. The results demonstrated that AGO mitigated LPS-induced microglial apoptosis and enhanced cell viability. Additionally, AGO reduced the

levels of pro-inflammatory cytokines IL-1β and TNF-α while increasing the expression of the anti-inflammatory cytokine IL-10. These findings suggest that AGO may exert protective effects against microglial inflammation.

Conclusion: In conclusion, our findings have shown that AGO can suppress LPS-induced inflammation by inhibiting the expression of proinflammatory cytokines such as TNF-α and IL-1β in microglia cells and strengthens this effect by increasing the levels of IL-10, an anti-inflammatory cytokine. Further studies are warranted to elucidate the underlying molecular mechanisms.

References

1- Gao J, Su G, Liu J, Zhang J, Zhou J, Liu X, Tian Y, Zhang Z. Mechanisms of Inhibition of Excessive Microglial Activation by Melatonin. Journal of Molecular Neuroscience 2020;70:1229–1236.

2- Mariani N, Everson J, Pariante CM, Borsini A. Modulation of microglial activation by antidepressants. Journal of Psychopharmacology 2022, Vol. 36(2) 131–150.

3- Wang Y, Yu P, Li Y, Zhao Z, Wu X, Zhang L, Feng J, Hong J-S. Early-Released Interleukin-10 Significantly Inhibits Lipopolysaccharide-Elicited Neuroinflammation In Vitro. Cells 2021;10(9):2173.

4- Lan T, Wu Y, Zhang Y, Li S, Zhu Z, Wang L, Mao X, Li Y, Fan C, Wang W, Yu SY. Agomelatine rescues lipopolysaccharide-induced neural injury and depression-like behaviors via suppression of the Gαi-2-PKA-ASK1 signaling pathway. 2022;19:117.

From Traditional Scales to Artificial Intelligence: Large Language Models in Psychometric Assessment

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Abstract

Background and AIM: The first examples of psychometric assessment in the form of self-report were developed by Robert S. Woodworth during World War I. Since then, these assessments have been continuously utilized and refined by mental health professionals for over a century. However, challenges such as the extensive number of questions, prolonged administration time, cognitive load on participants, and reduced motivation to respond accurately make it difficult to achieve efficient outcomes. Additionally, issues related to measurement repeatability and practical difficulties associated with regularly monitoring individuals experiencing mental health problems highlight significant limitations of existing approaches. Various methods have been developed to shorten these scales to address these shortcomings. In recent years, artificial intelligence–based algorithms have introduced a new paradigm into this process. Specifically, tree-based algorithms select appropriate questions dynamically, based on participants‘ responses, utilizing information entropy principles to construct effective models. This study aims to develop a novel and more efficient assessment method by integrating decision tree models based on the Beck Depression Inventory into a Large Language Model.

Methods: In this study, the Beck Depression Inventory (BDI) scores of 807 individuals were collected. Participants were categorized into four levels minimal, mild, moderate, and severe based on their total scale scores, and appropriate labels were assigned accordingly. Thus, the dataset was effectively structured with clearly defined labels. The dataset was then divided into two subsets: 80% training and 20% testing. Several tree-based machine learning algorithms, including Decision Trees, Random Forest, Random Tree, XGBoost, LightGBM, and Extra Trees, were applied to identify the algorithm with the highest accuracy and the most suitable model structure. structure.

Results: In the analyses, the initial accuracy rates of the classification algorithms were as follows: Random Tree 80.25%, Decision Trees 81.48%, Random Forest 90.12%, XGBoost 90.12%, LightGBM 90.74%, and Extra Trees 91.98%. Subsequently, all tree-based algorithms underwent an optimization process focusing on usability. After optimization, the accuracy of the Decision Trees algorithm increased to 83.95%, making it the most optimal model due to its improved usability and interpretability, with a manageable range of 3 to 12 questions. Conversely, the accuracy rates of other algorithms decreased, or they became suboptimal in terms of usability, leading to their exclusion from further use. The selected Decision Trees model was then converted into a digital survey form and subsequently developed into a language model (digital interviewer), enabling direct question-answer interaction. Based on the successful outcomes achieved by this system, an additional empathic language model was created. This empathic model analyzes patients' open-ended responses, selects the most appropriate questions based on the decision tree structure derived from the Beck Depression Inventory, completes the interview, and classifies the severity of depression accordingly.

Conclusion: The developed system significantly reduces the disadvantages frequently encountered in traditional psychometric assessments. Preserving the semantic integrity of the scale questions, selecting the most appropriate responses from patients own expressed words and adopting an empathic evaluation can be considered as an innovative step in mental health practices. Additionally, its capability to select relevant questions based on patient

responses, mimicking physician-like approach provides practical ease of use. The proposed system aims to address existing shortcomings, particularly in clinical situations requiring patient follow-up and regular monitoring, thereby providing more effective assessments. In the future, the integration of natural language processing and semantic analysis methods is anticipated to enhance the system‘s ability to handle open-ended assessments, while person-specific active learning approaches will enable more sensitive and accurate results.

Key Words: Psychometric Assessment, Artificial Intelligence, Large Language Models, Beck Depression Inventory

Introduction

The first examples of self-report scales, which allow individuals to directly provide information about their feelings, thoughts, or behaviors, were developed by Robert S. Woodworth during World War I (Gibby, R., 2008). Since then, such scales have been utilized by mental health professionals for over 100 years and continue to be regularly updated and improved. In particular, the Beck Depression Inventory, developed in 1961 and still widely used today, has represented an important milestone, significantly increasing the adoption and advancement of self-report scales in psychiatry (Beck, A., 1988; Gökalp, Z. Ş., 2023). Although these scales have become popular due to their practicality, brief administration time, and cost-effectiveness, they also possess some disadvantages. Among these, the most prominent issues are scale length and administration duration. Lengthy scales can place significant time demands on participants and practitioners, resulting in participant fatigue, distraction, and reduced response quality. Research has demonstrated that as questionnaire length increases, response refusal rates rise and response reliability decreases (Burchell, B., 1992). In real-life settings, this can lead to incomplete or careless responses. This is particularly problematic in children and adolescents, whose attention spans are shorter and who often struggle with lengthy questionnaires due to limited self-control skills (Sieving et al., 2001). Similarly, depressive patients frequently have difficulty concentrating and become easily fatigued, making long scales less effective for these populations as well (Boyle, G., 1985).

Most scales measure psychological states at a single point in time; however, psychological states tend to fluctuate (Mengelkoch et al., 2023; Rossi, V., 2012). This discrepancy creates a gap between instantaneous measurements and actual variability. In addition to fluctuations in psychological states, scales often demonstrate limited test-retest reliability, posing significant challenges for regularly monitoring symptoms in individuals with mental health problems and highlighting a critical limitation of psychometric scales.

Another difficulty associated with self-report scales is social desirability bias. Individuals frequently tend to portray themselves more positively, distorting their answers due to social desirability concerns. Social desirability bias significantly threatens the validity of data, particularly in surveys and scales addressing sensitive topics (Durmaz et al., 2020). To mitigate this effect, subscales or control questions are commonly included. However, while these approaches somewhat reduce social desirability bias, they also extend the length of the scales, exacerbating practical application difficulties. Consequently, scale length and administration complexity remain substantial challenges. Various scale-shortening techniques have been developed to address these issues, and artificial intelligence-based algorithms have recently introduced a promising new paradigm in this area (Gonzalez O., 2021).

Short form development is typically based on item analysis and factor loadings. The scale is shortened by selecting items with the highest factor loadings or the strongest correlations with the total score. Forms created using this method significantly reduce administration time and lessen participant burden (González-Carrasco et al., 2025). However, if not applied carefully, this method carries the risk of altering the scale‘s factor structure. Additionally, the external criterion validity of the scale may be compromised. In fact, some studies have emphasized that carelessly developed short forms may fail to fully represent the original content, leading to changes in either the factor structure or the relationships between scale scores and external criteria (Rentzsch et al., 2021). Such validity issues can result in misinterpretation of test results and potentially erroneous clinical decisions. Another strategy for creating short forms is to build a supervised machine learning model that targets the total score of the long form. Machine learning-based approaches have been quite successful in reducing the scale length by up to 20% without compromising its total score, which is seen as an advantage that facilitates the adoption of the short form (Gonzalez O., 2021). Another approach in scale-shortening studies involves tree-based machine learning methods and IRT-based computerized adaptive testing. In these models, questions are selected based on participants‘ previous answers, enabling each individual to be evaluated with fewer items that match their specific abilities and

conditions. Among machine learning techniques, decision tree algorithms are considered one of the simplest methods to understand and interpret. These algorithms classify data using a series of progressive questions—similar to those posed during a clinical diagnostic process—and branch into different paths according to each response. In this way, they classify patients with straightforward rules focused on certain symptoms or characteristics, much like psychiatric diagnostic flow charts. Decision tree algorithms have become increasingly common in healthcare due to their ease of use, clarity, and interpretability (Asaf et al., 2024). Additionally, they are often preferred in AI-assisted scale evaluations to achieve faster, more accurate results by asking fewer questions. Studies indicate that these models can produce outcomes comparable to those of classical tests, while using fewer questions and without compromising the scale‘s reliability (Young-Afat et al., 2019). The decision tree model shortens the scale and offers significant convenience in terms of practical application. Its assurance of anonymity and frequent reproducibility can also encourage participants to provide responses that more accurately reflect their clinical status. In this study, the aim was to develop a decision tree model based on the Beck Depression Inventory, following the information entropy principle, and to create a novel, more efficient evaluation method by integrating the resulting decision tree model into a Large Language Model.

Method

a. Dataset

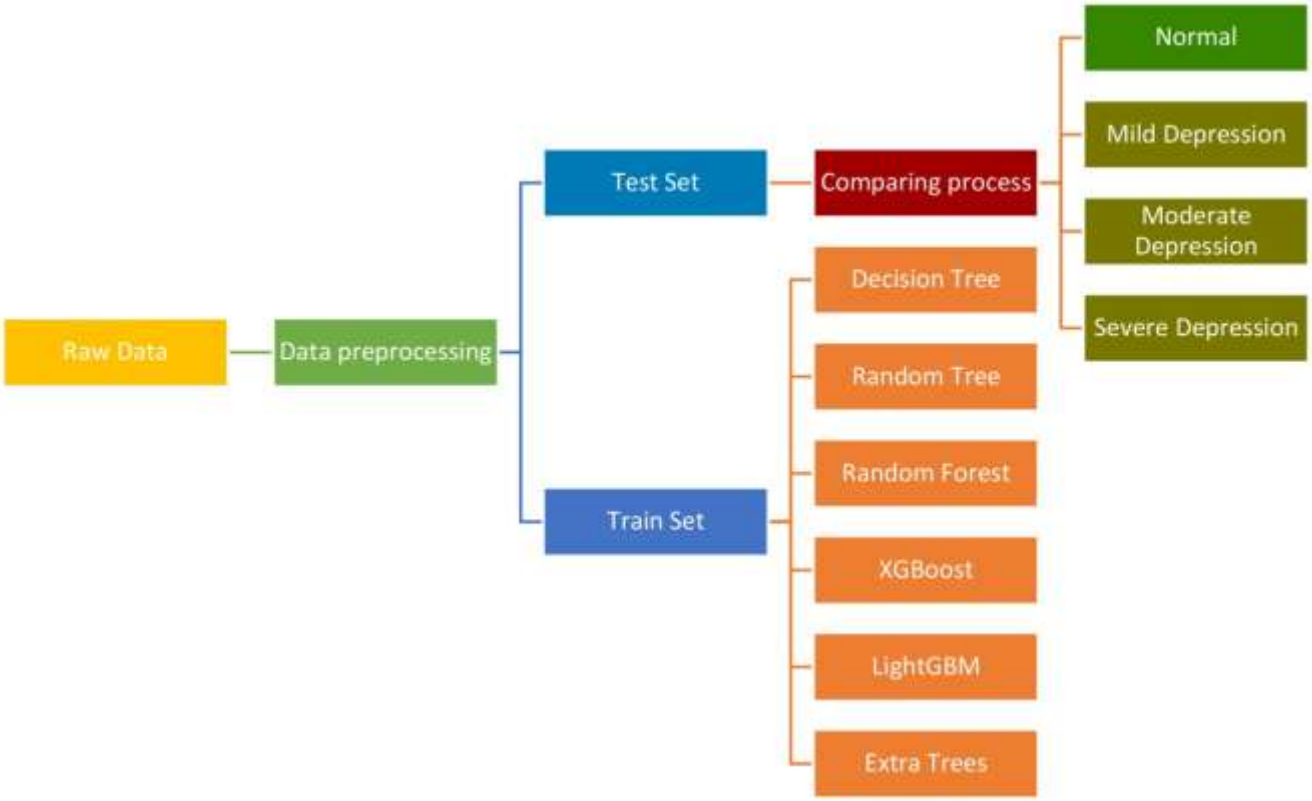
For this study, the scale scores of 807 participants who completed the Beck Depression Inventory (BDI) were retrospectively obtained to create a dataset. Then the depression categories of the participants —normal, mild depression, moderate depression, and severe depression —were included in the dataset based on their total scores of BDI (Table 1). No missing data correction was made in the study. Those with missing data were removed from the study. Finally, the scale's total scores were removed from the dataset, leaving only the categorical labels.

Table 1: Dataset

	N	Mean
Normal	452	4,08 ±3,046
Mild Depression	186	12,51 ±1,967
Moderate Depression	119	21,66 ±3,403
Severe Depression	50	36,08 ±6,186

b. Separation of data and machine learning process

The dataset was split into two subsets, with 80% used for training and 20% for testing. Next, tree-based machine learning algorithms—Decision Trees, Random Forest, Random Tree, XGBoost, LightGBM, and Extra Trees—were applied to identify both the highest accuracy rate and the most optimal model structure (Figure 1).



Picture 1: Machine learning process

c. Evaluating performance

Generally, measuring classifier success in classification models is calculated by comparing the class values labeled by the classifier with the true class values.

Tablo 2: Evaluating Performances

		True Valuables			
		Normal	**Mild Depression**	**Moderate Depression**	**Severe Depression**
Data classified by the system	**Normal**	N_N	M_N	MD_N	S_N
	Mild Depression	N_M	M_M	MD_M	S_M
	Moderate Depression	N_{MD}	M_{MD}	MD_{MD}	S_{MD}
	Severe Depression	N_S	M_S	MD_S	S_S

N_N: Normal, classified as Normal, **N_M:** Normal, Classified as Mild Depression, **N_{MD}:** Normal, classified as Moderate Depression
MD_{MD}: Moderate Depression, classified as Moderate Depression
True Positives: N_N, M_M, MD_{MD}, S_S

$$\boldsymbol{Accuracy} = \frac{Total\ True\ Valuables}{Total\ Valuables}$$

$$\boldsymbol{Accuracy} = \frac{N_N + M_M + MD_{MD} + S_S}{N_N + N_M + N_{MD} + N_S + M_N + M_M + M_{MD} + M_S + MD_N + MD_M + MD_{MD} + MD_S + S_N + S_M + S_{MD} + S_S} \times 100$$

$$Precision_i = \frac{True\ Positive_i}{True\ Positive_i + False\ Positive_i}$$

$$Recall_i = \frac{True\ Positive_i}{True\ Positive_i + False\ Negative_i}$$

$$F1\ Score_i = 2 \times \frac{Precision_i \times Recall_i}{Precision_i + Recall_i}$$

Table 3: List of Abbreviations

Presicion$_i$	Prescision value of related field
Recal$_i$	Recall value of related field
F1 Score$_i$	F1 Score of related field
True Positive$_i$	True positive value of related field
False Positive$_i$	False positive value of related field
False Negative$_i$	False negative value of related field

d. Model Optimization

The optimization process for the developed decision tree models was carried out based on three main criteria: (1) a relatively simpler tree structure, (2) maintaining or improving classification accuracy, and (3) achieving similar accuracy using fewer questions. First, the decision trees were trained using the parameter criterion="entropy", and each model‘s accuracy, maximum depth, number of nodes, and number of features used were evaluated. Then, cost-complexity pruning was applied to reduce model complexity and prevent overfitting. Sub-models derived using different alpha values were compared through this method, aiming to achieve simpler structures without causing a significant drop in accuracy. In each decision tree model, the entropy-based feature importance values of the items used were also calculated. In this calculation, the contribution of each item to the total information gain in the decision tree was taken into account, and the items with low information gain were removed from the data set and the model's training and optimization process was repeated. At the end of this process, it was aimed to shorten the scale and develop a more optimal decision tree model. (Figure 2).



Figure 2: Model Optimization Process

In the final stage, the model with the fewest items and simplest structure—without compromising accuracy—was identified and selected as the optimal decision tree model for the study..

Results

a. Confusion Matrices

Decision Trees, Random Forest, Random Tree, XGboost, LightGBM and Extra Trees algorithms were classified using the attributes obtained from the data. As a result of the classification, the test performance is as shown in the confusion matrix below (Figure 3).

b. Performance comparison of Machine Learning techniques

In the research, the accuracy rates are respectively Random Tree 80,25%, Decision Tree 81,48%, Random Forest 90,12%, XGBoost 90,12%, LightGBM 90,74% and Extra Trees 91.98% as shown in the table below (Table 4).

Development of the Optimal Model

a. Feauture Importances

After the decision tree model was developed, feature importance was calculated based on each item's contribution to the total information gain in the classification process. In particular, which questions were used as more discriminative by the model, and in which splits they appeared, are shown below. The obtained importance values reflect each item's discriminative power in the classification (Figure 4).

b. Comparisions of Models after pruning

First, the decision tree model was trained using all 21 items from the Beck Depression Inventory. Then, a cost-complexity pruning method was applied to obtain simplified models at various levels of complexity. Next, as shown in Figure 2, each pruned model was further evaluated in terms of classification accuracy, tree depth, and total number of nodes by systematically reducing the number of items. During this process, items with near-zero importance values were removed, while those providing high information were retained. Consequently, simpler and more effective models were achieved by considering both model performance and measurement validity. Afterward, the resulting models were compared, and the one that preserved classification success, offered high interpretability, and maintained a simple structure was selected as the most optimal. Although Extra Trees and LightGBM initially displayed the highest accuracy rates, they showed a rapid decline in performance during simplification, leading to their exclusion. Meanwhile, XGBoost and Random Forest maintained their performance but were not chosen as the optimal model due to their complexity and reduced applicability. Consequently, the

Decision Tree algorithm was selected as the most optimal model, achieving an accuracy rate of 83.95% with a minimum of 3 and a maximum of 12 questions, all without any loss in performance.

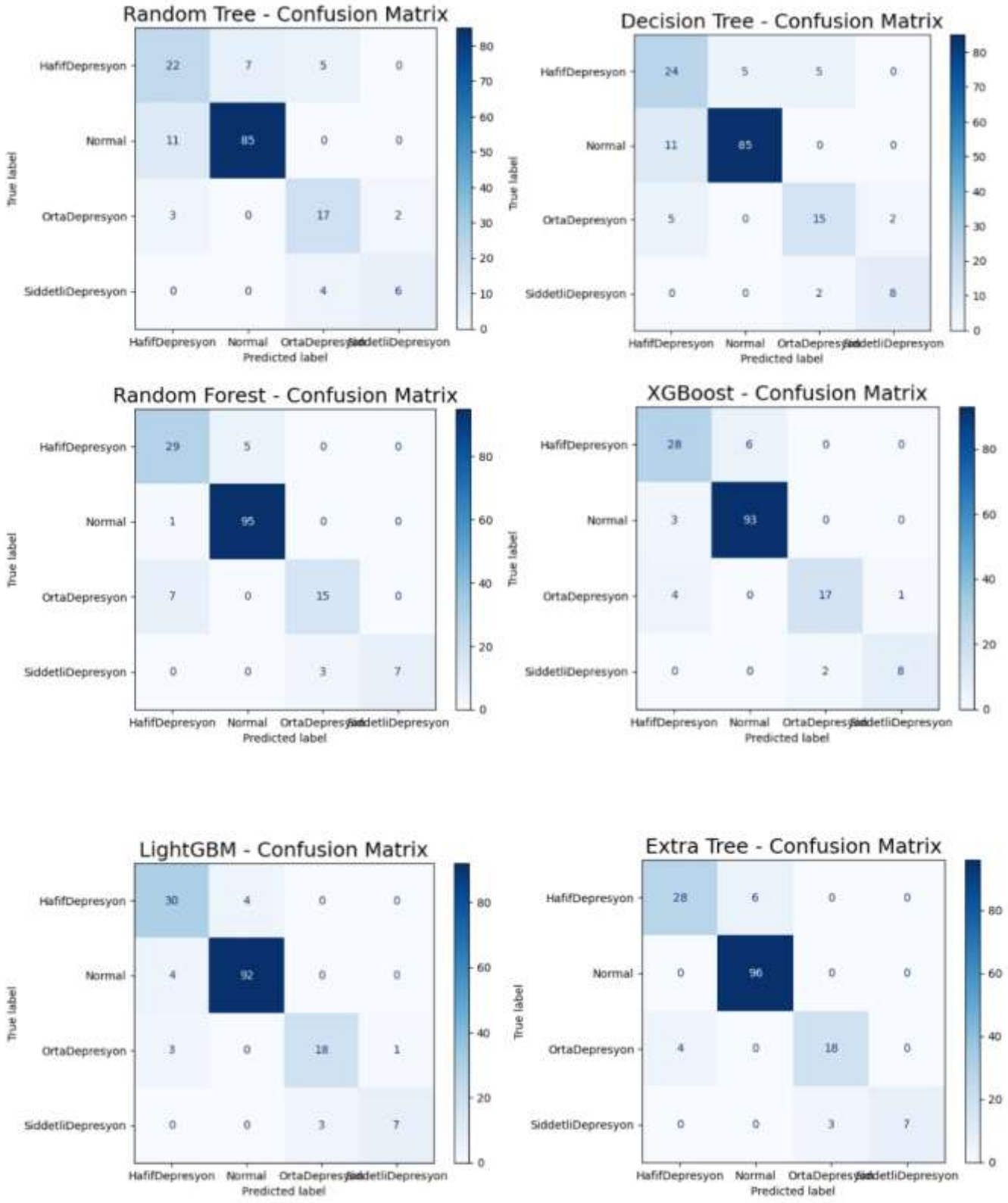
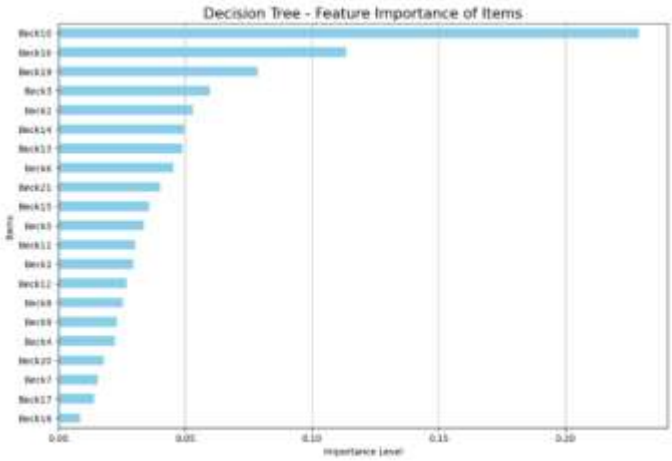
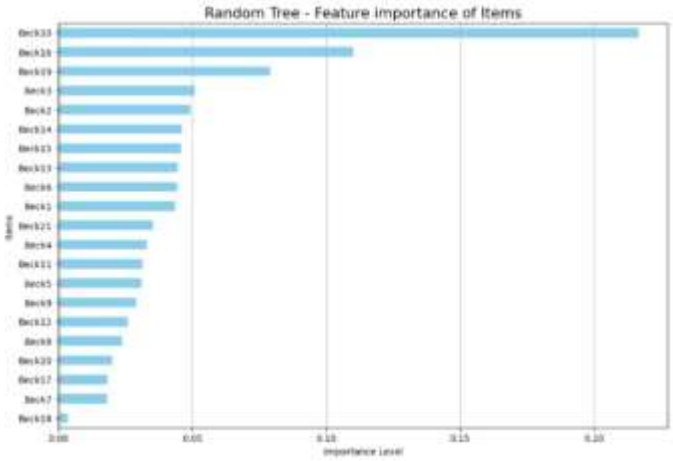


Figure 3: Confusion matrices of machine learning algorithms

Table 4: Learning algorithms and classification performances

Learning Algorithm	Accuracy	Precision	Recall	F1 Score	
Random Tree	0.8025	0.92	0.89	0.90	Normal
		0.61	0.65	0.63	Mild Depression
		0.65	0.77	0.71	Moderate Depression
		0.75	0.60	0.67	Severe Depression
Decision Tree	0.8148	0.94	0.89	0.91	Normal
		0.60	0.71	0.65	Mild Depression
		0.68	0.68	0.68	Moderate Depression
		0.80	0.80	0.80	Severe Depression
Random Forest	0.9012	0.95	0.99	0.97	Normal
		0.78	0.85	0.82	Mild Depression
		0.83	0.68	0.75	Moderate Depression
		1.00	0.70	0.82	Severe Depression
XGBoost	0.9012	0.94	0.97	0.95	Normal
		0.80	0.82	0.81	Mild Depression
		0.89	0.77	0.83	Moderate Depression
		0.89	0.80	0.84	Severe Depression
LightGBM	0.9074	0.96	0.96	0.96	Normal
		0.81	0.88	0.85	Mild Depression
		0.86	0.82	0.84	Moderate Depression
		0.88	0.70	0.78	Severe Depression
Extra Trees	0.9198	0.94	1.00	0.97	Normal
		0.88	0.82	0.85	Mild Depression
		0.86	0.82	0.84	Moderate Depression
		1.00	0.70	0.82	Severe Depression





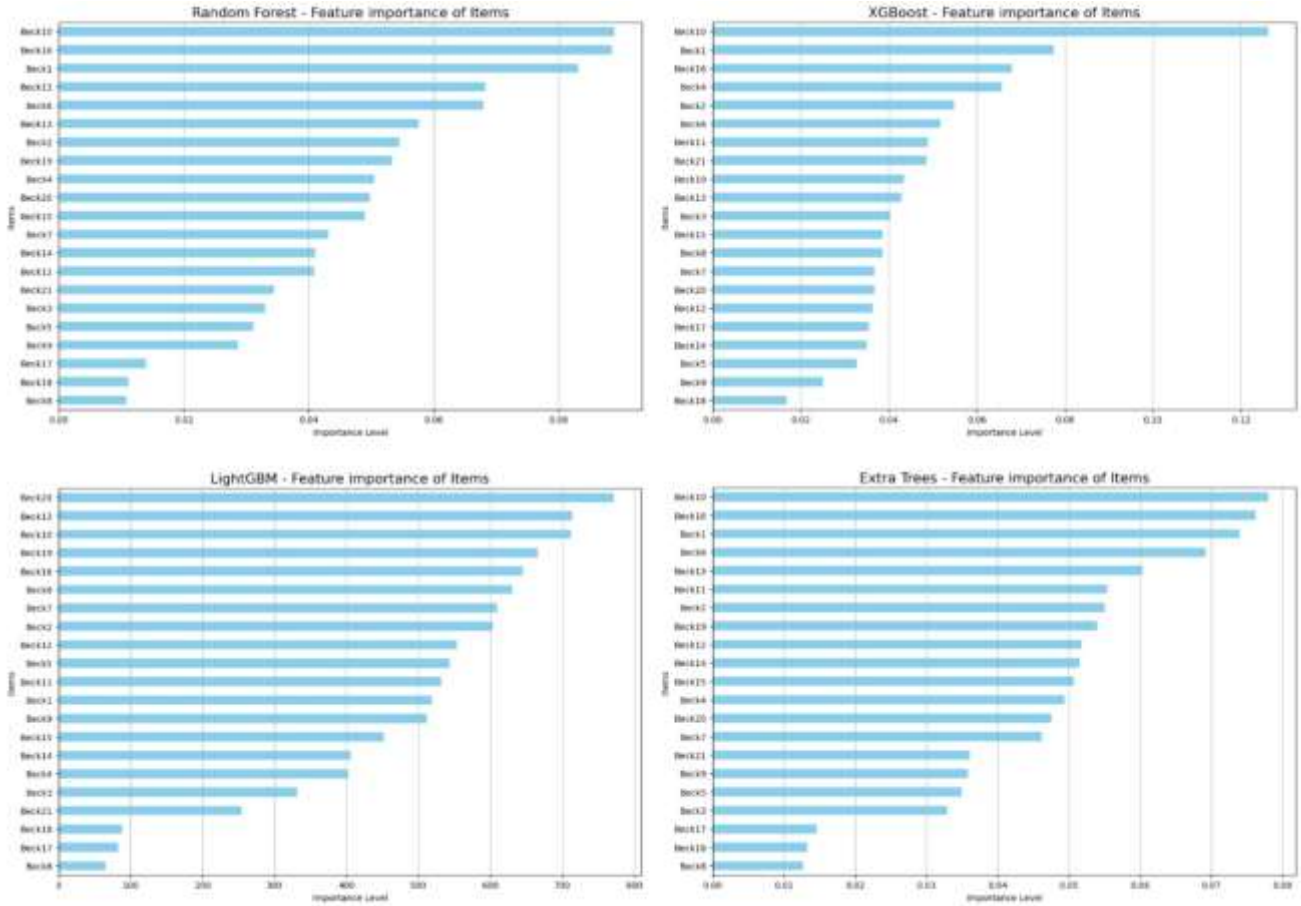
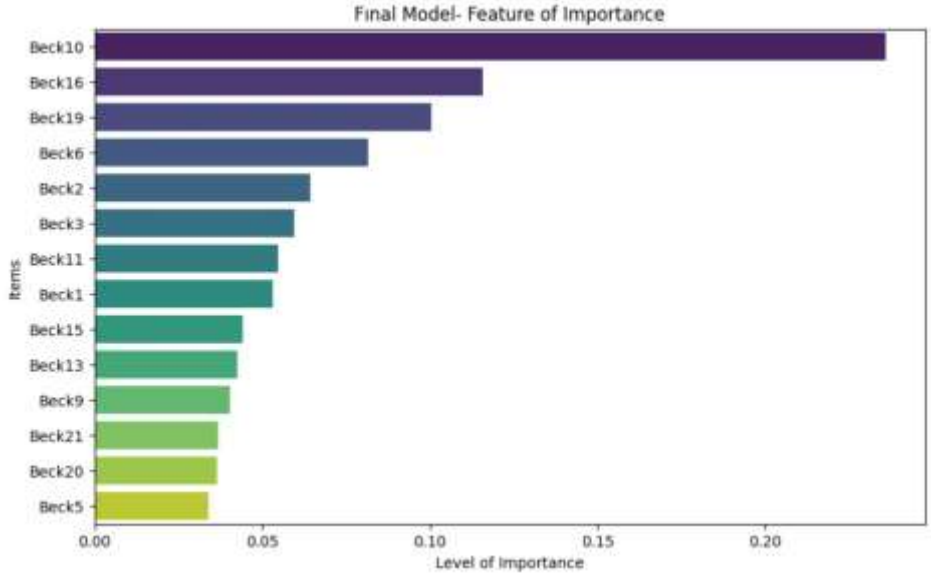


Figure 4: Feature Importance of Items in Trained Decision Tree Models

c. Characteristics of the Final Model

It is noteworthy that when the decision tree model removes low-importance questions during optimization, its accuracy rate increases compared to the initial state. It can also be observed that the model uses a total of 14 items from the Beck Depression Inventory when deciding between 3 and 12 questions (Figure 5 and Figure 8).



Picture 5: Feature Importance of Items in Final Model

The performance metrics, alongside the increased overall accuracy rate following the improvement, are shown below (Table 5 and Figure 6).

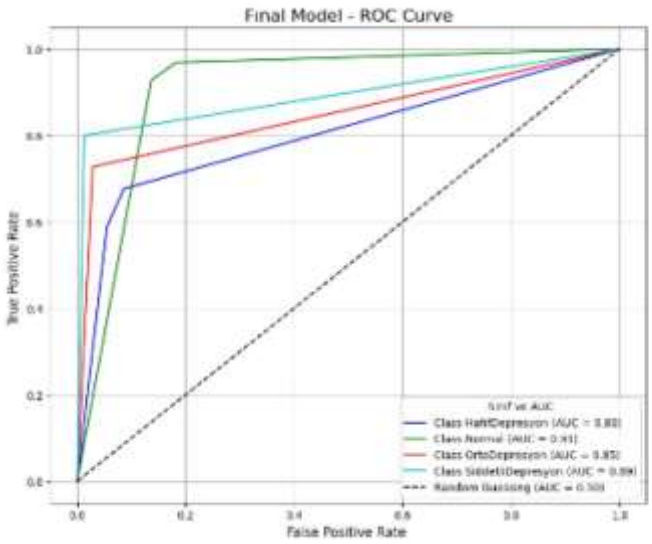


Table 5: Classification Performance of Final Model

	Precision	Recall	f1-Score
Normal	0.91	0.93	0.92
Mild Depression	0.68	0.68	0.68
Moderate Depression	0.80	0.73	0.76
Severe Depression	0.80	0.80	0.80
Accuracy		%83.95	

Picture 5: ROC Curve of Final Model

Development of Digital Survey Form

The resulting decision tree model was first converted into a digital survey form suitable for user interaction. It was then made available to users via the online platform. The link to the application form is provided below.

https://docs.google.com/forms/d/e/1FAIpQLSfuvRkYFHSdo_LD1qWx-JO-t5WGkcVT_OF1SGDMvQl25jfx5w/viewform

Development of a Large Language Model (LLM)

To enhance the effectiveness of the decision tree model, which had been transformed into a digital survey form, it was initially converted into a language-based, AI-supported interviewer that operated in a direct question–answer format, requiring clear responses to closed-ended and directive questions. In this version, the system functioned as a speaking version of the digital survey. However, it was later assessed that this approach could be limiting and inefficient in terms of user experience. Therefore, it was decided to design a more flexible language model with empathetic language capabilities.

a. Making Decision Tree Outputs Suitable for LLM

The item codes in the developed optimal decision tree model were first reformulated as direct textual questions and then presented as guiding prompts for the LLM model, making them suitable for human–machine interaction.

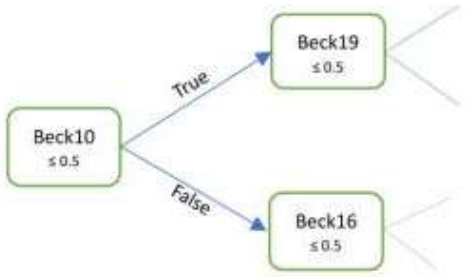


Figure 6: Traditional Decision Tree Model

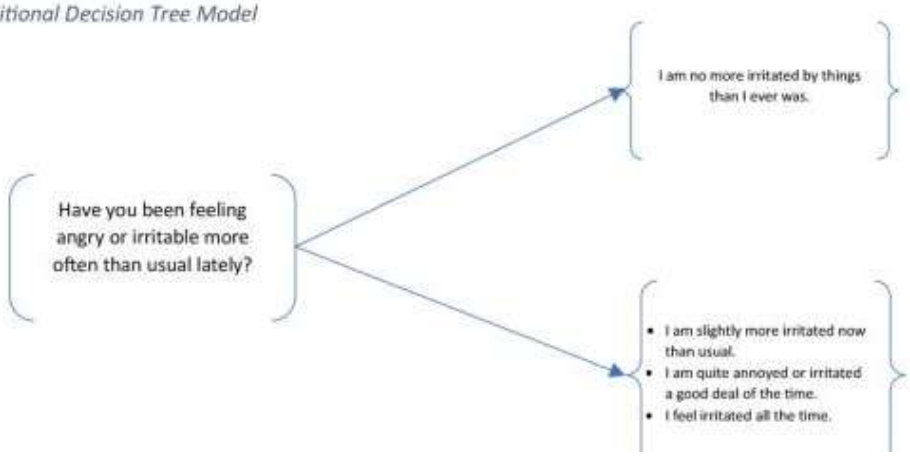


Figure 7: Transformed decision tre model for LLM education

b. Vocabulary Enrichment to Enhance Semantic Clarity

In order to enhance the contextual understanding capacity of the LLM, key concepts from the original questions and answers were expanded using semantically similar words and expressions. In this context, synonyms, related terms, and natural language patterns were generated for each item and response variant and presented to the model. This approach increased data diversity and enabled the model to generate more flexible and accurate responses to varying expression styles encountered in real-life interactions. (Table 6).

Table 6: Sample expression and enriched expressions

The item included in the scale	Enriched item
"I am no more depressed or irritable than I usually am."	*"I feel as calm and peaceful as ever."* *"I am no more irritable or upset than usual."* *"I haven't noticed any negative changes in my mood lately."* *"I am the same as usual; neither irritable nor depressed."* *"I am not feeling restless or tense."* *"My morale and patience are at their usual levels."* *"I feel in the emotional balance I am used to."* *"I am neither depressed nor irritable, everything is normal."*

c. Dataset Creation and LLM Training

The decision tree model prepared for LLM training was converted to —₹sonl" file format and used in the training process. The developed language model analyzes the open-ended responses of the patients, determines the most appropriate response according to the decision tree model derived from the Beck Depression Inventory, directs the interview and classifies the severity of depression.

The LLM model can be accessed via the link provided below. At this stage, access is limited to GPT Plus subscribers, but it will be open to all users who wish to explore it during the conference

https://chatgpt.com/g/g-679e25d7556c8191bee9107d1276ff47-depresyon-degerlendirme-asistani



Discussion

In this study, two main outputs were obtained. The first is a decision tree model developed based on a specific depression scale; the second is a large language model trained using data derived from this decision tree model. The literature shows that artificial intelligence and machine learning techniques are becoming increasingly widespread in the healthcare field, particularly for adapting and shortening psychometric tests (Colledani et al., 2024). Unlike other machine learning algorithms, decision trees offer an explainable and transparent structure, allowing for dynamic question selection based on patient responses. This feature enables the development of an interactive and personalized approach to depression assessment. However, the efficiency of a decision tree model depends heavily on data quality and the patient profiles studied (Sebban et al., 2000).

The decision-tree model developed in this study differs from the classical scale-shortening methods found in the literature by selecting questions dynamically according to each patient‘s responses. Many scale-shortening studies rely on a fixed set of identical questions for all participants, which limits the ability to tailor assessments to the individual. By contrast, our approach can be considered innovative because it offers a more interactive and patient-centered validation process. Although the accuracy achieved is comparable to similar studies in literature, the model we developed was affected by the following limitations:

1. Imbalanced Dataset

In psychiatric assessments, the underrepresentation of individuals exhibiting severe depression or intense symptoms is a common issue. This imbalanced distribution can restrict the model‘s performance and generalizability. Balancing the data or applying statistical weighting methods could help the decision-tree model produce more effective results.

2. Lack of Demographic Information

The developed decision-tree model did not incorporate key demographic variables such as age, gender, and education level. Although these data are not always included in psychometric scales, they are known to be important factors in mental health. Integrating this information could allow the model to follow a more nuanced path and deliver a more personalized assessment for each patient.

3. Lack of Large Samples and Field Studies

The developed system has not yet been extensively tested through field studies or with real patient samples. Because the model has been validated only on the existing data set, it does not provide direct insight into how it will perform in actual clinical settings. Testing the system across different sample groups and comparing it with parallel scales is essential to enhance the application‘s validity and reliability.

In this study, a language model was developed as a second output, independent of the decision tree. Unlike a digital survey, this model engages patients in a more empathetic and interactive manner. Although the literature frequently reports studies that effectively shorten psychometric assessments, approaches that combine natural-language support with a decision-tree-based depression evaluation are extremely limited (Xu et al., 2024; Ignashina et al., 2025). In this respect, our work offers an original method and makes an innovative contribution to literature.

One of the model‘s key advantages is its ability to generate responses that preserve the semantic integrity of the questions while taking the patient‘s natural language into account. This not only saves time in clinical settings but also substantially improves the user experience. In addition, by providing physician-like dynamic question selection, it enables personalized assessment and offers practical ease of use. Nevertheless, the language model also has certain limitations:

1. Limited Use of Natural Language Processing (NLP) and Semantic Analysis

Although the current system makes decisions based on the user‘s responses, its ability to process those responses at the linguistic, semantic, and contextual levels remains limited. At times, when faced with ambiguous answers, the system must follow both branches of the tree and has difficulty selecting one. Integrating advanced NLP and semantic‑analysis techniques could help the model deliver more accurate assessments.

2. Cultural and Personal Differences in Daily Language Use

Difficulties in understanding and interpreting responses, arising from different cultural backgrounds or diction variations, could reduce the model‘s success rate. Expanding the participant base and collecting more data will be necessary to update the system so that it can dynamically manage these differences.

In future studies, the system is planned to be improved by integrating natural language processing and semantic analysis methods, enabling it to respond effectively to open-ended assessments. Additionally, personalized active learning approaches can refine the questions selected by the scale, enhancing their sensitivity and achieving a higher level of model generalizability. To increase applicability in real-world settings, it is recommended to conduct trials across diverse cultural and demographic samples, diversify data to address imbalances, and validate the results using parallel measurements.

In summary, the decision‑tree‑based digital depression assessment system is noteworthy for providing a user‑friendly interaction while introducing an innovative method to the scale‑shortening process.

However, its theoretical and technical maturation will require the incorporation of demographic factors, the resolution of linguistic and cultural differences, and the use of larger data sets.

Conclusion

The system developed in this study has the potential to mitigate significant limitations of traditional psychometric assessments. Thanks to its advantages in dynamic question selection and empathetic communication, it has been possible to determine the most appropriate response from the patient's own words while preserving the semantic integrity of the scale's questions. This approach brings a physician-like practicality to mental health applications and aims to provide a more effective assessment in clinical situations that require regular patient monitoring and follow-up. It is believed that by combining artificial intelligence techniques such as decision trees and large language models, the developed system could open new horizons in psychometric measurement.

In the future, the system‘s assessment capacity with open‑ended questions is planned to be enhanced by integrating natural language processing (NLP) and semantic‑analysis techniques. Moreover, personalized active‑learning approaches could yield more precise results and allow the scale‘s selected questions to be dynamically adapted. Psychometric scales widely used in clinical psychology and mental health carry various drawbacks related to validity, reliability, social‑desirability bias, and cultural appropriateness. Although short forms and adaptations have become routine over the years to mitigate these disadvantages, fundamental issues—particularly self‑report bias—have not been fully resolved.

Artificial intelligence and machine learning techniques can play a complementary and transformative role in enhancing the sensitivity and user-friendliness of psychometric assessments. Scale shortening using ML algorithms has the potential to save time in both research and practical applications, while delivering effective results without compromising measurement validity. In this study, depression severity was successfully classified with an accuracy of 83.95% using a shortened interview flow consisting of at least three and no more than twelve questions. If supported by further studies with larger sample sizes, these findings could bolster the integration of AI-based approaches into clinical practice.

In conclusion, further development and broader adoption of the proposed system could not only offer a brief yet effective assessment but also support the goal of creating an empathetic and personalized patient experience. This, in turn, would make it possible for faster, more accurate, and more user‑friendly depression assessment tools to become widespread.

References

Asaf, A., Balibey, H., Yildirim, T., Talo, T., & Pamukçu, E. (2024). Development of a machine learning-based clinical decision support system for mental health services for healthcare workers. *International Conference of Data Science and Applications* (p. 41). ISBN 978-605-72045-3-0

Beck, A., Steer, R., & Carbin, M. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review,* 8, 77-100. https://doi.org/10.1016/0272-7358(88)90050-5.

Boyle, G. (1985). Self-report measures of depression: some psychometric considerations. *The British journal of clinical psychology,* 24 (Pt 1), 45-59 . https://doi.org/10.1111/J.2044-8260.1985.TB01312.X.

Burchell, B., & Marsh, C. (1992). The effect of questionnaire length on survey response. *Quality and Quantity,* 26, 233-244. https://doi.org/10.1007/BF00172427.

Colledani, D., Robusto, E., & Anselmi, P. (2024). Shortening and Personalizing Psychodiagnostic Assessments with Decision Tree-Machine Learning Classifiers: An Application Example Based on the Patient Health Questionnaire-9. *International Journal of Mental Health and Addiction,* 1-21.

Durmaz, A., Dursun, İ., & Kabadayi, E. (2020). Mitigating the Effects of Social Desirability Bias in Self-Report Surveys., 146-185. https://doi.org/10.4018/978-1-7998-1025-4.ch007.

Gibby, R., & Zickar, M. (2008). A history of the early days of personality testing in American industry: an obsession with adjustment. *History of psychology,* 11 3, 164-184. https://doi.org/10.1037/a0013041.

Gonzalez O. (2021). Psychometric and Machine Learning Approaches to Reduce the Length of Scales. *Multivariate behavioral research,* 56(6), 903–919. https://doi.org/10.1080/00273171.2020.1781585

Gökalp, Z. Ş., & Haktanir, A. (2023). An evaluation of the self-report instruments assessing self-control: A systematic review. *Scandinavian Journal of Psychology,* 64(2), 238-251.

Ignashina, M., Bondaronek, P., Santel, D., Pestian, J., & Ive, J. (2025). LLM Assistance for Pediatric Depression. *arXiv preprint arXiv:2501.17510.*

Mengelkoch, S., Moriarity, D., Novak, A., Snyder, M., Slavich, G., & Lev-Ari, S. (2023). Using Ecological Momentary Assessments to Study How Daily Fluctuations in Psychological States Impact Stress, Well-Being, and Health. *Journal of Clinical Medicine,* 13. https://doi.org/10.3390/jcm13010024.

Sebban, M., Nock, R., Chauchat, J., & Rakotomalala, R. (2000). Impact of learning set quality and size on decision tree performances. *Int. J. Comput. Syst. Signals,* 1, 85-105.

Sieving, R., Beuhring, T., Resnick, M., Bearinger, L., Shew, M., Ireland, M., & Blum, R. (2001). Development of adolescent self-report measures from the National Longitudinal Study of Adolescent Health. *The Journal of adolescent health: official publication of the Society for Adolescent Medicine,* 28 1, 73-81 . https://doi.org/10.1016/S1054-139X(00)00155-5.

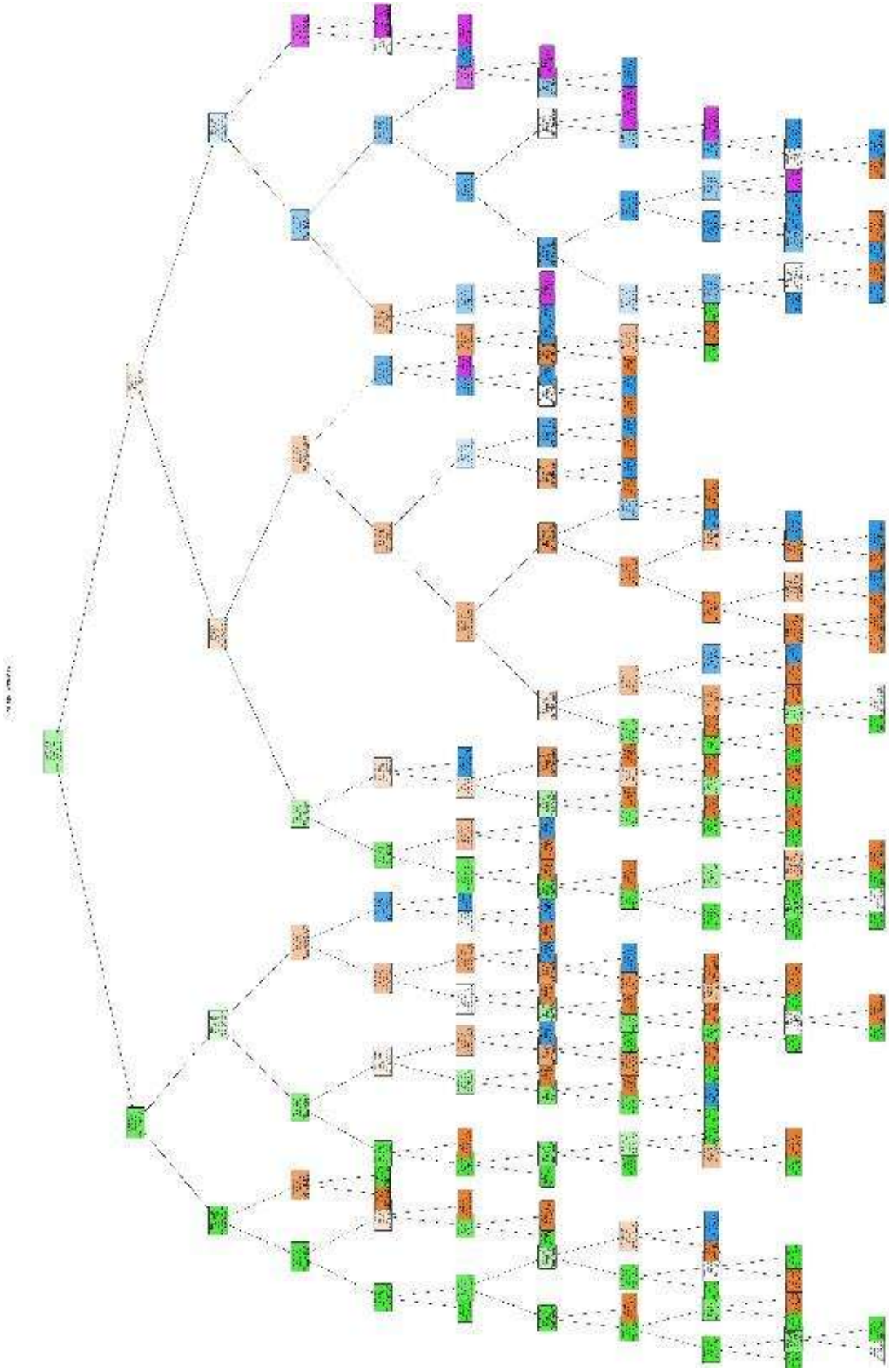
Rentzsch, K., Erz, E., & Schütz, A. (2021). Development of Short and Ultra-Short Forms of the Multidimensional Self-Esteem Scale. *European Journal of Psychological Assessment.* https://doi.org/10.1027/1015-5759/A000660.

Rossi, V., & Pourtois, G. (2012). Transient state-dependent fluctuations in anxiety measured using STAI, POMS, PANAS or VAS: a comparative review. *Anxiety, Stress, & Coping,* 25, 603 - 645. https://doi.org/10.1080/10615806.2011.582948.

Young-Afat, D., Gibbons, C., Klassen, A., Vickers, A., Cano, S., & Pusic, A. (2019). Introducing BREAST-Q Computerized Adaptive Testing: Short and Individualized Patient-Reported Outcome Assessment following Reconstructive Breast Surgery. *Plastic and Reconstructive Surgery,* 143, 679–684. https://doi.org/10.1097/PRS.0000000000005314.

Xu, X., Jiang, R., Zheng, S., Wang, M., Ju, Y., & Li, J. (2024). Classification of Chronic Dizziness Using Large Language Models. *Journal of healthcare informatics research,* 9(1), 88–102. https://doi.org/10.1007/s41666-024-00178-1

Figure 8: Final Decision Tree Model



Autoimmune Encephalitis or Postpartum Psychosis? A Diagnostic Challenge in a Postpartum Case

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Introduction

The postpartum period poses a significant risk for the onset or recurrence of psychiatric illnesses, including mood, anxiety, and psychotic disorders. Postpartum psychosis is most commonly seen in first-time mothers with no prior psychiatric history and typically emerges abruptly within the first four weeks after childbirth. The core symptoms are severe and primarily affective, encompassing acute mania, depression, or a mixed state. Psychotic symptoms almost always occur alongside significant mood instability. As a result, postpartum psychosis is generally classified as a bipolar-spectrum mood disorder rather than a primary psychotic disorder. However, unlike typical bipolar-spectrum illnesses, it is also characterized by a delirium-like presentation. Women experiencing postpartum psychosis often display atypical cognitive symptoms (disorientation, difficulty recognizing familiar individuals), hallucinations, delusions, confusion, disorganized behavior and speech up to delirium. (1-2)

Autoimmune encephalitis is a rare, recently described group of diseases associated with specific circulating autoantibodies targeting neuronal proteins.(3) Psychiatric symptoms, often predominant in these cases, may include anxiety, delusions, agitation, irritability, hallucinations, psychomotor excitement, confusion, catatonic features, depression, and insomnia. (4) This case highlights the overlap between psychiatric manifestations in autoimmune encephalitis and postpartum psychosis, emphasizing the need for a multidisciplinary approach in diagnosis and management. (5)

Case Presentation

A 29-year-old woman (Mrs. K) with epilepsy treated with levetiracetam (1000 mg/day) and no prior psychiatric history presented with postpartum onset of severe psychiatric and neurological symptoms. While hospitalized in the obstetrics and gynecology department, she exhibited shouting, crying, irritability, insomnia, inability to fulfill self-care, difficulty recognizing familiar individuals, whole-body convulsions, and jaw locking. Progressive confusion, dysarthria, urinary incontinence, and further convulsions prompted neurology evaluation. Initial diffusion brain MRI excluded acute central pathologies. Despite normal findings from neurological and infectious disease evaluations, her symptoms persisted, necessitating transfer to psychiatry for further evaluation.

Comprehensive diagnostic workup included:

- Contrast-enhanced brain MRI, MR venography, and MR angiography
- Electroencephalogram
- Pituitary hormone panel
- Coagulation and rheumatological parameters
- Ophthalmologic examination
- Epilepsy panel test
- Lumbar puncture (cerebrospinal fluid analysis for autoimmune encephalitis)

During her hospitalization in psychiatry, a comprehensive diagnostic investigation revealed minimal abnormalities.

- Extensive infectious and autoimmune testing yielded negative results, including:
- Viral nucleic acids (herpes simplex virus 1 & 2, varicella-zoster virus, enterovirus, parvovirus)
- Fungal cultures and Cryptococcus antigen testing
- Bacterial and mycobacterial cultures (Gram staining, acid-fast bacilli)

• Blood and urine cultures (no bacterial, viral, or fungal pathogens detected)

• Bronchial alveolar lavage PCR panel (negative for influenza A/B, RSV, parainfluenza, metapneumovirus, enterovirus, rhinovirus, human coronaviruses, and adenovirus)

• Autoimmune encephalitis panel (Negative for NMDA, AMPA 1-2, GABA-B, DPPX, CASPR2, LGI1 autoantibodies)

Despite these negative findings, autoimmune encephalitis could not be definitively ruled out. The absence of detectable auto antibodies does not exclude the diagnosis, underscoring the complexity of autoimmune-mediated neurological disorders.

Initially, no significant findings were detected. However, the patient exhibited catatonic symptoms (mutism, negativism, stereotypic movements) and impaired self-care. High-dose diazepam was initiated, later replaced with lorazepam. She underwent seven sessions of electroconvulsive therapy (ECT) over ten days, resulting in motor function improvement but no significant cognitive recovery. Subsequent lumbar puncture revealed elevated IgG (6.4 g/L) and IgG index (4.5). Considering verbal impairment, retrograde amnesia, apraxia, and autonomic instability, autoimmune encephalitis became the leading diagnosis, prompting transfer to neurology.

Further investigations revealed that the patient underwent brain positron emission tomography (PET) with a preliminary diagnosis of NMDA receptor encephalitis. PET findings supported autoimmune encephalitis, showing hypometabolism in the bilateral prefrontal medial lobes, more pronounced on the left, and mild asymmetric hypometabolism in the left anterior cingulate cortex.

Informed consent was obtained from the patient and her relatives for this case report.

Discussion

The autoimmune encephalitis diagnosis may sometimes be overlooked by the clinician due to the very rapid progress of the disease or the presence of another existing neurological disorder of the patient, in this case it was epilepsy. Initially, the focus on whether the symptoms were due to epilepsy-related seizures or a newly emerging psychotic disorder narrowed the scope of the differential diagnosis.

Over the past two decades, medicine has increasingly shifted toward hyper-specialization. While clinicians in the past were often confident in managing a wide spectrum of neurological and psychiatric conditions, the sheer number of diagnostic tools and treatment options available today has made this far more challenging if not impossible. For patients, specialized clinics and expert guidance have become essential for effective care. However, it is important to acknowledge a potential downside to this trend: the risk of losing the ability or even the inclination to recognize the broader significance of common symptoms that extend beyond traditional disease classifications. (5)

Considering that 30% (13 out of 42) of proteins linked to neurodegenerative diseases are also implicated in psychiatric disorders, a broader perspective is essential in symptom evaluation. Furthermore, the protein-protein interactions between psychiatric and neurodegenerative disease-associated proteins occur 2.6 times more frequently than expected by chance. Collectively, these findings indicate that psychiatric and neurodegenerative conditions share common genetic and molecular mechanisms, which carries significant implications for early intervention and the development of new therapies. (6)

When psychiatric symptoms are accompanied by verbal impairment, memory loss, apraxia, or autonomic instability, underlying neurological conditions—such as autoimmune encephalitis—should be considered. A multidisciplinary approach and a comprehensive differential diagnosis are crucial for accurate management.(7)

References

1. Payne, Jennifer. (2024). *Postpartum psychosis: Epidemiology, clinical features, and diagnosis.* UpToDate. https://www.uptodate.com/contents/postpartum-psychosis-epidemiology-clinical-features-and-diagnosis
2. Veerle Bergink, M. D., Thaís Armangue, M. D., Maarten J. Titulaer, M. D., Sander Markx, M. D., Josep Dalmau, M. D., Steven A. Kushner, M. D., Veerle Bergink, M. D., Thaís Armangue, M. D. F. the E. M. C., Maarten J. Titulaer, M. D., Sander Markx, M. D. F. the E. M. C., Josep Dalmau, M. D., & Steven A. Kushner, M. D. (2015, September 1). *Autoimmune encephalitis in postpartum psychosis.* American Journal of Psychiatry. https://psychiatryonline.org/doi/full/10.1176/appi.ajp. 2015.14101332
3. Honnorat, J., & Plazat, L. O. (2018). *Autoimmune encephalitis and psychiatric disorders – science direct.* Science Direct. https://www.sciencedirect.com/science/article/abs/pii/S0035378717307440
4. Reddy, M. S. S., Thippeswamy, H., Ganjekar, S., Nagappa, M., Mahadevan, A., Arvinda, H. R., Chandra, P. S., & Taly, A. B. (2018, February 7). *Anti-NMDA receptor encephalitis presenting as postpartum psychosis-a clinical description and Review - Archives of Women's Mental Health.* SpringerLink. https://link.springer.com/article/10.1007/s00737-018-0816-3#citeas
5. Masud Husain, Transdiagnostic neurology: neuropsychiatric symptoms in neurodegenerative diseases, *Brain,* Volume 140, Issue 6, June 2017, Pages 1535–1536, https://doi.org/10.1093/brain/awx115
6. Wingo, T. S., Liu, Y., Gerasimov, E. S., Vattathil, S. M., Wynne, M. E., Liu, J., Lori, A., Faundez, V., Bennett, D. A., Seyfried, N. T., Levey, A. I., & Wingo, A. P. (2022, July 26). *Shared mechanisms across the major psychiatric and neurodegenerative diseases.* Nature News. https://www.nature.com/articles/s41467-022-31873-5
7. Granerod, J., Titulaer, M. J., Dalmau, J., Al-Diwani, A., Kuppuswamy, P. S., Shi, Y. C., Schimmel, M., Li, W., Jang, Y., Szots, M., Lancaster, E., Lin, J., Kim, T. J., Warren, N., Rogers, J. P., Wesselingh, R., Jackson, A., Abboud, H., Huppatz, C., … Wang, D. (2022, July 15). *Psychiatric manifestations of autoimmune encephalitis.* Autoimmunity Reviews. https://www.sciencedirect.com/science/article/abs/pii/S156899722200115X

The Effects of Prenatal Carbamazepine Exposure on Behavioural Functions in Three Different Stages of Development in Rats

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Objective: Epilepsy is one of the most common chronic neurological disorders affecting individuals of all age groups and is characterized by recurrent seizures. These seizures can lead to various neurobiological, cognitive, psychological, and social consequences [1,2]. Carbamazepine (CBZ) is among the four most frequently preferred antiepileptic drugs used in the treatment of epileptic pregnant women [3,4,5]. However, despite being classified as pregnancy category C, there are conflicting findings in the literature regarding its teratogenic effects on the fetus. Prenatal exposure to CBZ has been shown to cause neuronal loss in key brain regions associated with learning and memory, such as the hippocampus and cortex. However, cognitive tests have not revealed significant impairments in learning or memory. Instead, CBZ-exposed animals exhibited anxiety-like behaviors, impaired social interaction, and growth retardation. Additionally, CBZ has been reported to be associated with neural tube defects, craniofacial malformations, and developmental delays, highlighting its potential teratogenic effects. Therefore, CBZ use during pregnancy should be carefully evaluated, and alternative treatment options should be considered. The inconsistencies in the literature regarding the teratogenic effects of CBZ underscore the need for further research on this topic [6,7]. This study aims to investigate the effects of prenatal CBZ exposure on cognitive, social, and sensorimotor gating functions in rats during childhood, adolescence, and adulthood. Additionally, the study examines proinflammatory cytokine alterations in brain regions such as the prefrontal cortex and hippocampus following prenatal CBZ exposure. Cognitive and memory functions were assessed using the novel object recognition test and Y-maze test; social behavior and social recognition deficits were evaluated using the social interaction test; and sensorimotor gating function was examined using the prepulse inhibition test. Proinflammatory cytokine changes were determined by measuring IL-1β, IL-6, and TNF-α levels in the prefrontal cortex and hippocampus. This study provides significant insights into the neurodevelopmental and neurobehavioral effects of prenatal CBZ exposure, emphasizing the necessity of further comprehensive research on this subject.

Methods: All experiments conducted in this study were approved by the Erciyes University Animal Research Ethics Committee. The rats used in this study were produced and provided by Erciyes University, Experimental Research and Application Center (DEKAM). Experimental procedures were conducted at the Brain Research Unit in the DEKAM. All animals were brought to the laboratory one week before behavioral tests. Standard care procedures, including corn cob bedding, constant temperature (22 ±1 ◦C), 12/12 light (from 7 a.m. to 7 p.m.) and dark cycle, no restriction for feeding (standard rat food pellets), and water were applied in our experiments. All experiments were conducted during the light period (10 a.m. to 3 p.m.) of the light/dark cycle. Pregnant Wistar albino rats were used in the study and the rats were divided into control, carbamazepine (10 mg/kg), carbamazepine (25 mg/kg) and carbamazepine (50 mg/kg) groups. A total number of 32 rats (n=8 in each group) were used in our study. Carbamazepine was administered intraperitoneally once a day between days 1 and 20 of pregnancy. The injection volume of chemicals was 0.1 mL/100 g. Behavioral tests were conducted at postnatal weeks 5 (childhood), 7 (adolescence), and 14 (adulthood), including the novel object recognition test, Y-maze test, locomotor activity test, social interaction test, and prepulse inhibition (PPI) test. The rats were decapitated 24 h after the last behavioral investigate stable changes in the rat brains. The frontal cortex and hippocampus were dissected for ex vivo analysis and stored at − 80 ◦C until molecular analyses. To evaluate the long-term effects of carbamazepine administration in pregnant rats on the offspring during childhood, adolescence, and adulthood, IL-1β, IL-6, and TNF-α levels were measured using ELISA, and total protein content was determined by the BCA method. Statistical analyses were performed using GraphPad Prism 8.0 with ANOVA and Student‘s t-test.

Result: Discrimination index in childhood, adolescence and adulthood in carbamazepine (25 mg/kg) ($p<0.05$; $p<0.05$; $p<0.05$) and carbamazepine (50 mg/kg) ($p<0.001$; $p<0.001$; $p<0.001$) groups decreased compared to the control group. Similarly, the percentage of alternation in childhood, adolescence and adulthood in carbamazepine (25 mg/kg) ($p<0.05$; $p<0.01$; $p<0.05$) and carbamazepine (50 mg/kg) ($p<0.001$; $p<0.001$; $p<0.001$) groups diminished compared to the control group (Figure 1).

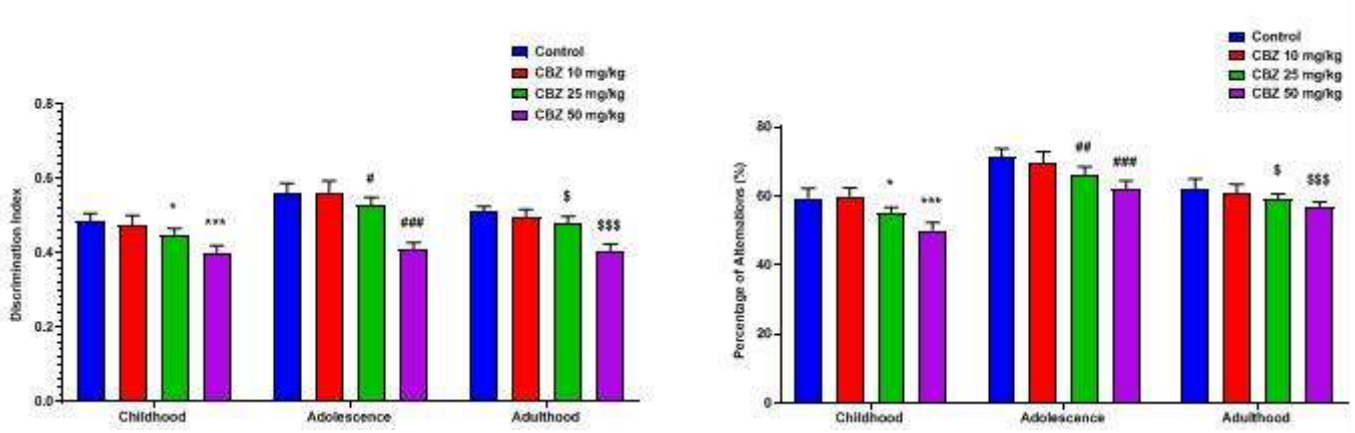


Figure 1. The discrimination index in the novel object recognition test and the alternation percentage in the Y-maze test were compared with the control groups (n=8 in each group). Values are expressed as mean ± SEM. Comparisons between groups were made using one-way ANOVA and post hoc Dunnett's test. *:p<0.05, **:p<0.01 and ***:p<0.001 in the childhood group compared to the control; #:p<0.05, ##:p<0.01 and ###: p<0.001 in the adolescent group compared to the control group; $:p<0.05, $$:p<0.01 and $$$: p<0.001 in the adult group compared to the control group.

Sniffing in childhood, adolescence and adulthood was reduced in the carbamazepine (25 mg/kg) ($p<0.05$; $p<0.01$; ns) and carbamazepine (50 mg/kg) ($p<0.001$; $p<0.001$; $p<0.001$) groups compared to the control group. Following in childhood, adolescence and adulthood was reduced in the carbamazepine (25 mg/kg) ($p<0.01$; $p<0.05$; ns) and carbamazepine (50 mg/kg) ($p<0.001$; $p<0.01$; $p<0.01$) groups compared to the control group. Climbing in childhood, adolescence and adulthood was reduced in the carbamazepine (25 mg/kg) (ns; ns; $p<0.05$) and carbamazepine (50 mg/kg) ($p<0.01$; ns; $p<0.01$) groups compared to the control group. Avoiding in childhood, adolescence and adulthood was reduced in the carbamazepine (25 mg/kg) ($p<0.01$; $p<0.05$; ns) and carbamazepine (50 mg/kg) ($p<0.001$; $p<0.01$; $p<0.001$) groups compared to the control group (Figure 2).

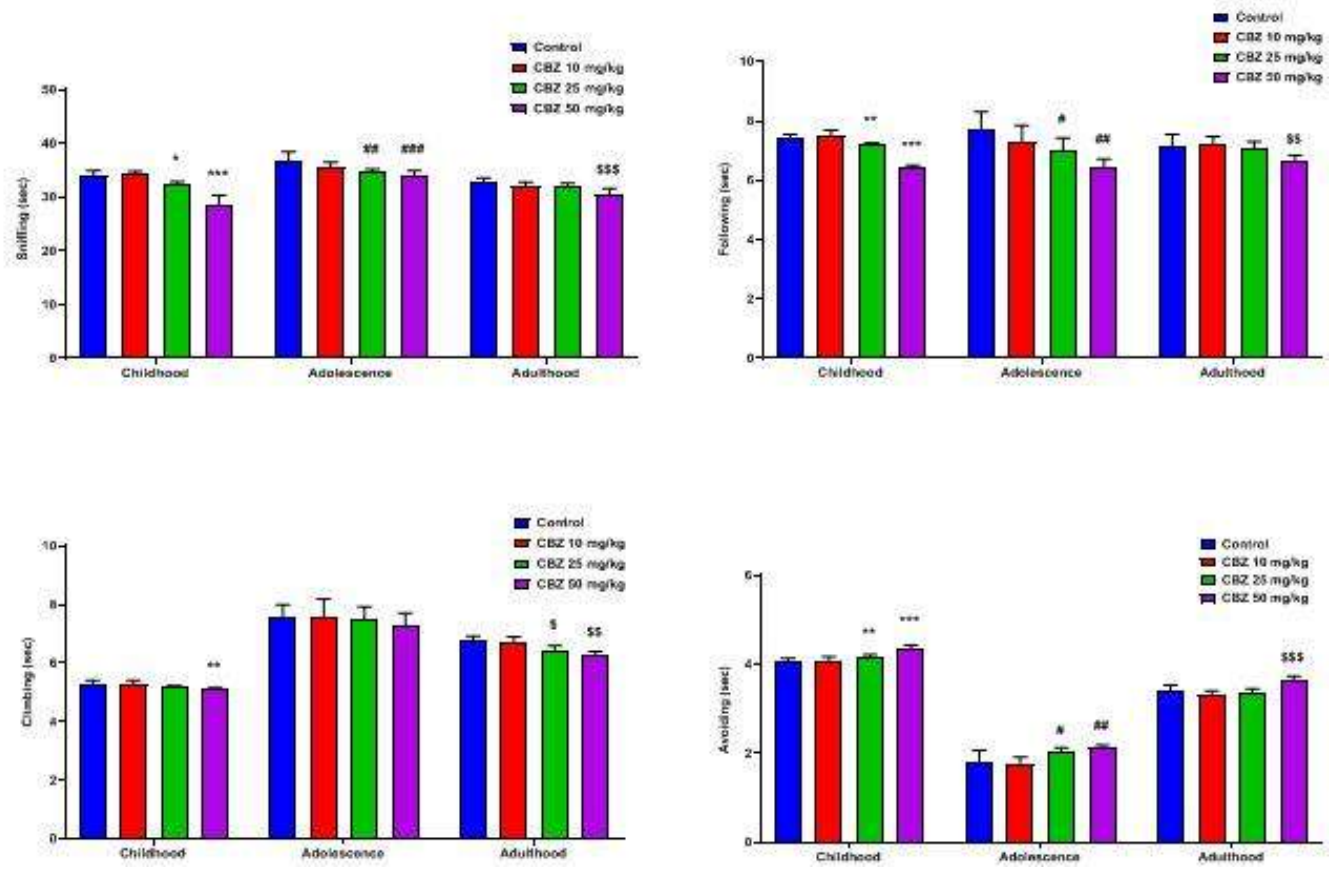


Figure 2. Comparison of sniffing, following, climbing and avoiding times in social interaction test compared to control group (n=8 in each group). Values are expressed as mean ± SEM. Comparisons between groups were made using one-way ANOVA and post hoc Dunnett's test. *:p<0.05, **:p<0.01 and ***:p<0.001 in the childhood group compared to the control; #:p<0.05, ##:p<0.01 and ###: p<0.001 in the adolescent group compared to the control group; $:p<0.05, $$:p<0.01 and $$$: p<0.001 in the adult group compared to the control group.

Carbamazepine (25 mg/kg) and carbamazepine (50 mg/kg) significantly reduced the total distance traveled, rearing and the time spent in the center during childhood, adolescence and adulthood (Figure 3).

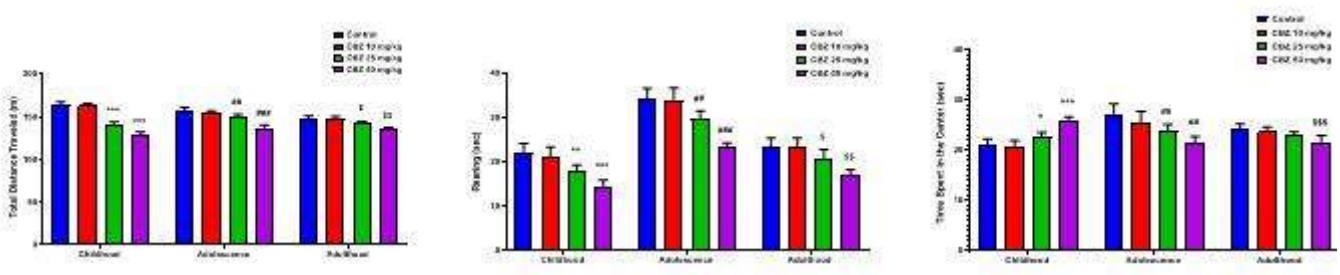


Figure 3. In the locomotor activity test, total distance traveled, rearings and time spent in the center were compared with the control groups (n=8 in each group). Values are expressed as mean ± SEM. Comparisons between groups were made using one-way ANOVA and post hoc Dunnett's test. *:p<0.05, **:p<0.01 and ***:p<0.001 in the childhood group compared to the control; #:p<0.05, ##:p<0.01 and ###: p<0.001 in the adolescent group compared to the control group; $:p<0.05, $$:p<0.01 and $$$: p<0.001 in the adult group compared to the control group.

The percentage of prepulse inhibition in childhood, adolescence and adulthood in carbamazepine (25 mg/kg) ($p<0.001$; $p<0.001$; $p<0.001$) and carbamazepine (50 mg/kg) ($p<0.001$; $p<0.001$; $p<0.001$) groups declined compared to the control group (Figure 4).

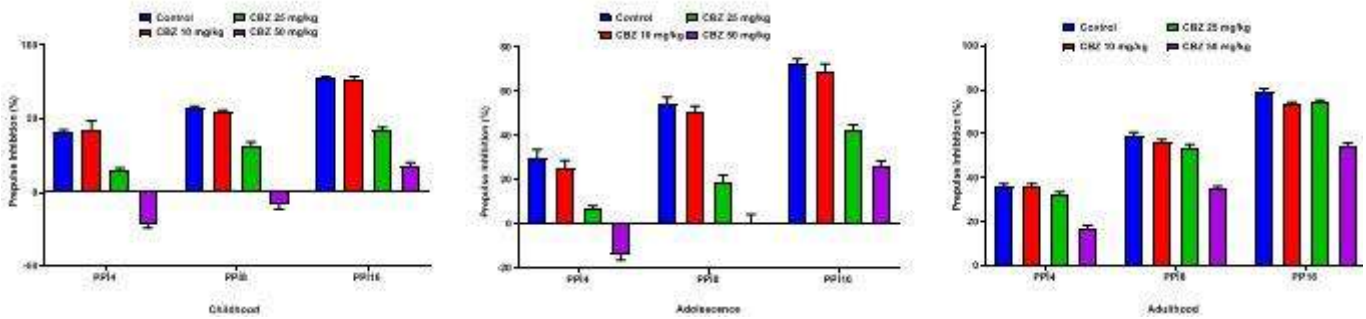


Figure 4. Comparison of effect on percentage inhibition in PPİ test compared to control group (n=8 in each group). Values are expressed as mean ± SEM. Comparisons between groups were made using one-way ANOVA and post hoc Dunnett's test. *:p<0.05, **:p<0.01 and ***:p<0.001 in the childhood group compared to the control; #:p<0.05, ##:p<0.01 and ###: p<0.001 in the adolescent group compared to the control group; $:p<0.05, $$:p<0.01 and $$$: p<0.001 in the adult group compared to the control group.

The IL-1β level in the prefrontal cortex significantly increased in childhood, adolescence, and adulthood in the carbamazepine (25 mg/kg) group ($p<0.001$; $p<0.05$; $p<0.01$) and was even more pronounced in the carbamazepine (50 mg/kg) group ($p<0.001$; $p<0.001$; $p<0.001$) compared to the control group. Similarly, the IL-1β level in the hippocampus was also significantly elevated in childhood, adolescence, and adulthood in the carbamazepine (25 mg/kg) group ($p<0.001$; $p<0.05$; $p<0.01$), with a more substantial increase observed in the carbamazepine (50 mg/kg) group ($p<0.001$; $p<0.001$; $p<0.001$) compared to the control group (Figure 5).

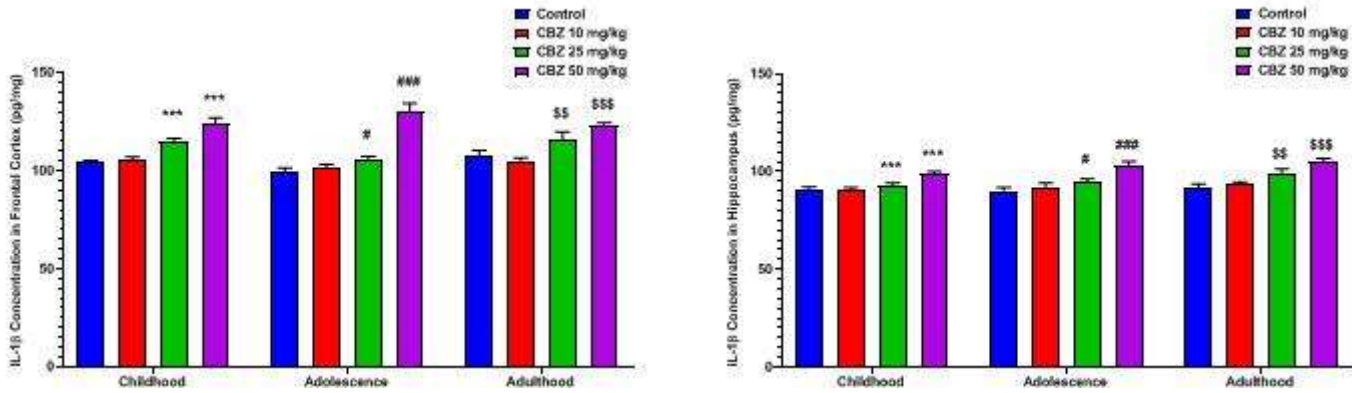


Figure 5. Comparison of IL-1β concentrations in frontal cortex and hippocampus compared to control group (n=4 in each group). Values are expressed as mean ± SEM. Comparisons between groups were made using one-way ANOVA and post hoc Dunnett's test. *:p<0.05, **:p<0.01 and ***:p<0.001 in the childhood group compared to the control; #:p<0.05, ##:p<0.01 and ###: p<0.001 in the adolescent group compared to the control group; $:p<0.05, $$:p<0.01 and $$$: p<0.001 in the adult group compared to the control group.

The IL-6 level in the prefrontal cortex significantly increased in childhood, adolescence, and adulthood in the carbamazepine (10 mg/kg) group ($p<0.05$; $p<0.001$; $p<0.01$) and the carbamazepine (25 mg/kg) group ($p<0.001$; $p<0.001$; $p<0.001$), with an even greater elevation observed in the carbamazepine (50 mg/kg) group ($p<0.001$;

p<0.001; p<0.001) compared to the control group. Similarly, the IL-6 level in the hippocampus was significantly elevated across childhood, adolescence, and adulthood in the carbamazepine (10 mg/kg) group (ns; ns; p<0.01) and the carbamazepine (25 mg/kg) group (p<0.01; p<0.001; p<0.001), with the most substantial increase observed in the carbamazepine (50 mg/kg) group (p<0.001; p<0.001; p<0.001) compared to the control group (Figure 6).

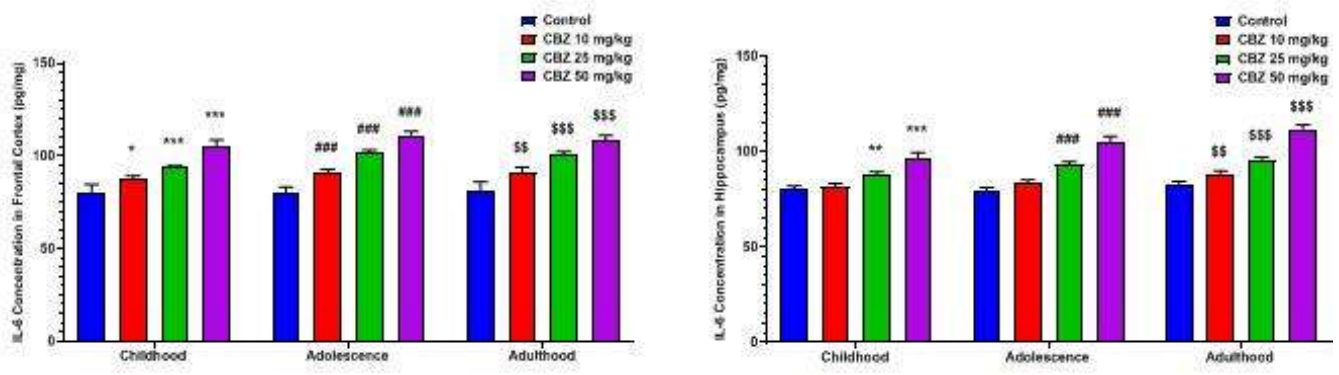


Figure 6. Comparison of IL-6 concentrations in frontal cortex and hippocampus compared to control group (n=4 in each group). Values are expressed as mean ± SEM. Comparisons between groups were made using one-way ANOVA and post hoc Dunnett's test. *:p<0.05, **:p<0.01 and ***:p<0.001 in the childhood group compared to the control; #:p<0.05, ##:p<0.01 and ###: p<0.001 in the adolescent group compared to the control group; $:p<0.05, $$:p<0.01 and $$$: p<0.001 in the adult group compared to the control group.

The TNF-α level in the prefrontal cortex significantly increased in childhood, adolescence, and adulthood in the carbamazepine (25 mg/kg) group (p<0.01; p<0.01; p<0.01), with an even greater elevation observed in the carbamazepine (50 mg/kg) group (p<0.001; p<0.001; p<0.001) compared to the control group. Similarly, the TNF-α level in the hippocampus was significantly elevated across childhood, adolescence, and adulthood in the carbamazepine (10 mg/kg) group (ns; p<0.01; ns) and the carbamazepine (25 mg/kg) group (p<0.05; p<0.001; p<0.001) and increase observed in the carbamazepine (50 mg/kg) group (p<0.01; p<0.05; p<0.01) compared to the control group (Figure 7).

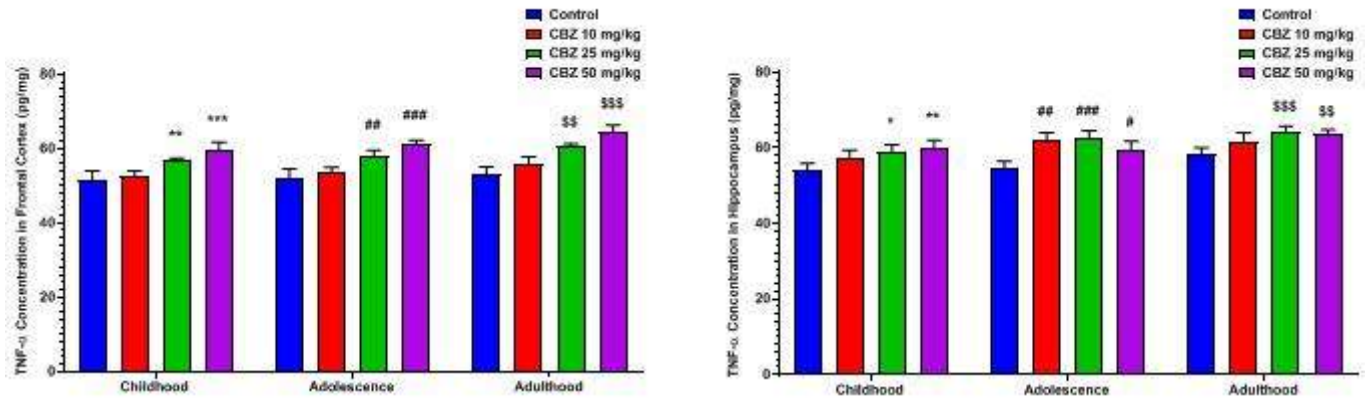


Figure 7. Comparison of TNF-α concentrations in frontal cortex and hippocampus compared to control group (n=4 in each group). Values are expressed as mean ± SEM. Comparisons between groups were made using one-way ANOVA and post hoc Dunnett's test. *:p<0.05, **:p<0.01 and ***:p<0.001 in the childhood group compared to the control; #:p<0.05, ##:p<0.01 and ###: p<0.001 in the adolescent group compared to the control group; $:p<0.05, $$:p<0.01 and $$$: p<0.001 in the adult group compared to the control group.

Conclusion: This study investigated the effects of prenatal carbamazepine exposure on cognitive, social, and sensorimotor gating functions across different developmental stages, along with its impact on proinflammatory cytokine levels in key brain regions. Our findings indicate that prenatal exposure to carbamazepine leads to significant impairments in cognitive performance, social behavior, and sensorimotor gating function, as demonstrated by decreased discrimination index, alternation percentage, prepulse inhibition, and social interaction measures. Additionally, locomotor activity was reduced, with a significant decline in total distance traveled, rearing, and time spent in the center. At the molecular level, IL-1β, IL-6, and TNF-α levels were significantly elevated in the prefrontal cortex and hippocampus, indicating a proinflammatory response that may underlie the observed behavioral deficits. The severity of these changes was dose-dependent, with higher doses of carbamazepine (50 mg/kg) causing more pronounced effects. Overall, our results suggest that prenatal carbamazepine exposure induces long-term neurobehavioral deficits and neuroinflammation, which may have implications for its use during pregnancy. Given the inconsistencies in the literature regarding its teratogenic effects, further research is needed to confirm these findings in different rodent models and to explore the underlying molecular mechanisms.

References

[1] Huntsman, R. J., Tang-Wai, R., Shackelford, A. E., 2020. Cannabis for Pediatric Epilepsy. Journal of clinical neurophysiology: official publication of the American Electroencephalographic Society, 37(1), 2–8.

[2] Menon, S., Siewe Fodjo, J. N., Weckhuysen, S., Bhwana, D., Njamnshi, A. K., Dekker, M., & Colebunders, R., 2019. Women with epilepsy in sub-Saharan Africa: A review of the reproductive health challenges and perspectives for management. Seizure, 71, 312–317.

[3] Bath, K. G., & Scharfman, H. E., 2013. Impact of early life exposure to antiepileptic drugs on neurobehavioral outcomes based on laboratory animal and clinical research. Epilepsy & behavior: E&B, 26(3), 427–439.

[4] Nie, Q., Su, B., & Wei, J., 2016. Neurological teratogenic effects of antiepileptic drugs during pregnancy. Experimental and therapeutic medicine, 12(4), 2400–2404.

[5] Batum, M., Kısabay, A., Yılmaz, H., How should antiepileptic drugs be selected during pregnancy. Turkish Epilepsy Society. 2017; 23(2): 41–50.

[6] Åberg, E., Holst, S., Neagu, A., Ögren, S. O., Lavebratt, C., 2013. Prenatal exposure to carbamazepine reduces hippocampal and cortical neuronal cell population in new-born and young mice without detectable effects on learning and memory. PloS one, 8(11), e80497.

[7] Güler, H., Esen, E. E., Balcıoğlu, E., Göktepe, Ö., Yılmaz, H., Yay, A. H., Nisari, M., Al, Ö., Uçar, S., Güçlü Ekinci, H. K., Tokpınar, A., Yılmaz, S., 2022. Bone development in offspring of pregnant rats treated with carbamazepine: Evaluation by three different methods. Epilepsia, 63(12), 3066–3077.

Association of Methamphetamine Use Disorder and Methamphetamine-induced Psychosis with Minor Physical Abnormalities

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Background and Aım: Psychotic symptoms are commonly observed experienced inindividuals who use methamphetamine [1]. Methamphetamine-induced psychosis (MIP) has been associated with various environmental and genetic risk factors, including higher frequency, severity, and duration of abuse, a family history of psychosis [2-3]. Minor physical anomalies (MPAs) are functionally nonsignificant failures of morphogenesis, which develop during the first and early second trimesters of gestation and persist into adulthood[4].

Since the central nervous system (CNS) and skin originate from the same ectodermal layer during gestation, cutaneous MPAs are thought to provide information about brain development and can be used to investigate neurodevelopmental susceptibility to schizophrenia and psychotic disorders[5-6].

In this study, we investigated the association between MPAs in MIP and Methamphetamine Use Disorder (MUD).

Methods: The study included 19 patients diagnosed with MUD and 29 patients diagnosed with MIP. Approval from Ethical Committee and informed consent of the participants were obtained. Hamilton Depression Rating Scale, Hamilton Anxiety Rating Scale, Addiction Profile Index, SAPS (Scale for the Assessment of Positive Symptoms), and SANS (the Scale for the Assessment of Negative Symptoms) were administered. MPAs measurements were conducted by two independent clinicians using a modified Waldrop MPA scale. Inter-rater reliability of clinicians was assessed with cohen‘s kappa test ($p < 0.001$). Analyses were conducted at alpha=0.05 level.

Results: No significant differences were observed in sociodemographic and substance use characteristics between the MIP and MUD group. When MPA items were analyzed individually, statistically significant increases were observed in the frequency of sandal gap, low-seated ears, and intercanthal distance in the psychosis group ($p < 0.05$). When measurable MPAs were analyzed using the Mann-Whitney U test, the intercanthal distance and sandal gap were significantly wider ($p < 0.05$), the position of the low-seated ears was significantly lower ($p < 0.05$), and the total MPA score was significantly higher ($p < 0.001$) in MIP. A significant correlation was also found between total MPA scores and SAPS-SANS scores ($p < 0.05$).

Conclusıons: Our study is the first study to examine MFAs in patients with MUD and MIP. Methamphetamine abuse can act as a stressor that triggers acute psychosis in vulnerable individuals, consistent with the stress-diathesis model of schizophrenia[7]. The association between schizophrenia and MPAs is well-documented in the literature. In a recent meta-analysis, the total MPA score was significantly higher in schizophrenia compared to controls ($p<0.001$) and also qualitative items such as low-seated ears, sandal gap were more frequent as in our study[8]. In a study that investigate the relationship between MPAs and clinical features in patients with schizophrenia spectrum disorders; the positive scale of the PANSS and the Waldrop scale were found to be correlated ($p<0.05$) as our study, but in our study the SANS score, representingthe severity of negative symptoms was also correlated with total number of MPAs[9]. In this context, our study results are consistent with the literature in terms of psychotic features, and further research is needed to examine whether MPAs are associated with disease severity and other clinical features in MIP.

Keywords: Amphetamine, abuse, addiction, drug use, psychotic

Results of countable MPAs items in MUD and MIP

	MUD Med (Q1-Q3)	MIP Med. (Q1-Q3)	p
Total frequency of minor physical anomalies	1,00 (0,00-2,00)	3,00 (1,00-4,00)	<0,001
Head circumference	56,50 (56,00-57,50)	57,00 (55,00-57,50)	0,865
Intercanthal distance (mm)	27,00 (25,00-28,00)	29,00 (27,00-33,00)	0,013
Low seated ear (cm)	,25 (,10-,30)	,40 (,20-,50)	0,024
Sandal gap (cm)	,50 (,35-,55)	,60 (,45-,70)	0,036
Height	175,00 (170,00-179,00)	177,00 (172,00-180,00)	0,440

*MUD: Methamphetamine Use Disorder
*MIP: Methamphetamine-Induced Psychosis
*MPAs: Minor Physical Anomalies

References:

1. Glasner-Edwards S, Mooney LJ. Methamphetamine psychosis: epidemiology and management. CNS Drugs. 2014 Dec;28(12):1115-26. doi: 10.1007/s40263-014-0209-8. PMID: 25373627; PMCID: PMC5027896.
2. Arunogiri S, Foulds JA, McKetin R, Lubman DI. A systematic review of risk factors for methamphetamine-associated psychosis. Aust N Z J Psychiatry. 2018 Jun;52(6):514-529. doi: 10.1177/0004867417748750. Epub 2018 Jan 16. PMID: 29338289.
3. Arunogiri S, Foulds JA, McKetin R, Lubman DI. A systematic review of risk factors for methamphetamine-associated psychosis. Aust N Z J Psychiatry. 2018 Jun;52(6):514-529. doi: 10.1177/0004867417748750. Epub 2018 Jan 16. PMID: 29338289.
4. Chen CK, Lin SK, Sham PC, Ball D, Loh el-W, Murray RM. Morbid risk for psychiatric disorder among the relatives of methamphetamine users with and without psychosis. Am J Med Genet B Neuropsychiatr Genet. 2005 Jul 5;136B(1):87-91. doi: 10.1002/ajmg.b.30187. PMID: 15892150.
5. Bora E. Minor physical anomalies in bipolar disorder in comparison to healthy controls and schizophrenia: A systematic review and meta-analysis. Eur Neuropsychopharmacol. 2022 Dec;65:4-11. doi: 10.1016/j.euroneuro.2022.08.007. Epub 2022 Sep 20. PMID: 36150369.
6. Akabaliev VH, Sivkov ST, Mantarkov MY. Minor physical anomalies in schizophrenia and bipolar I disorder and the neurodevelopmental continuum of psychosis. Bipolar Disord. 2014 Sep;16(6):633-41. doi: 10.1111/bdi.12211. Epub 2014 May 3. PMID: 24798215.
7. Bramness JG, Gundersen ØH, Guterstam J, Rognli EB, Konstenius M, Løberg EM, Medhus S, Tanum L, Franck J. Amphetamine-induced psychosis--a separate diagnostic entity or primary psychosis triggered in the vulnerable? BMC Psychiatry. 2012 Dec 5;12:221. doi: 10.1186/1471-244X-12-221. PMID: 23216941; PMCID: PMC3554477.
8. Sut E, Akgül Ö, Bora E. Minor physical anomalies in schizophrenia and first-degree relatives in comparison to healthy controls: A systematic review and meta-analysis. Eur Neuropsychopharmacol. 2024 Sep;86:55-64. doi: 10.1016/j.euroneuro.2024.05.007. Epub 2024 Jun 28. PMID: 38943776.
9. Franco JG, Valero J, Labad-Alquezar A. Anomalias fisicas menores y caracteristicas clinicas en pacientes con trastornos del espectro de la esquizofrenia [Minor physical abnormalities and clinical features in patients with schizophrenia spectrum disorders]. Rev Neurol. 2012 Apr 16;54(8):468-74. Spanish. PMID: 22492099.

The Effect of Electroconvulsive Therapy on Inflammation Markers and Clinical Symptoms in Depression Patients

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Background and Aım: The presence of inflammation in the etiology of depressive disorder and changes in the levels of inflammation markers with electroconvulsive therapy have been shown. Inourstudy, the effect of electroconvulsive therapy on clinical symptoms and its relation ship within the levels of inflammation markers (Procalcitonin, IL-6, IL-8, TNF-a, Homocysteine, CRP, Erythrocyte Sedimentation Ratio, Neutrophil/Lymphocyte Ratio) in patients with unipolar depression were investigated.

Methods: With the letter dated 24.06.2021 and numbered B.30.2.ATA.0.01.00/336 of the Atatürk UniversityFaculty of Medicine Clinical Research Ethics Committee, it was unanimously decided that there was no scientific and ethical objection in conducting our research in accordance with the ethical standards accepted in the 1964 Helsinki Declaration. Inaddition, ourwork was supported by Atatürk University ScientificResearch Projects Coordination Unit with the Project code TTU-2022-9716.26. Patients diagnosed with depressive disorder and treated with electroconvulsive therapy and 26 healthy volunteers were included in our study. Although the sociodemographic data form was filled by all the participants; The Montgomery and Åsberg Depression Scale was completed by the clinician before, after the fifth session and at the end of electro convulsive therapy in patients with depressive disorder, when it is done only once for healthy controls. Procalcitonin, IL-6, IL-8, TNF-a, Homocysteine, CRP, Erythrocyte Sedimentation Rate and Neutrophil/Lymphocyte Ratio parameters were measured and recorded simultaneously fromall participants.

Results: When the linear regression analysis (Stepway Method) of the percent difference between the MADRS-1 and MADRS-3 scores of the patients with the parameter levels measured before ECT was performed in a gender-specific manner, a negative correlation was found between TNF alpha and MADRS percent difference in women. No significant relationship was detected for men.NLR of depressed patients was higher than healthy controls in allmeasurements. While PRC and Homocysteinelevels were high before or during ECT, they returnedto the same levels as healthy controls at theend of the treatment. While TNF alphawas at the samelevels in depressed patients before and during ECT with healthy controls, it was lower than healthy controls at theend of treatment. In addition, IL-6 levels in depressed patients were found to be lower than healthy controls, while IL-8 levels were found to be higher than healthy controls.

Conclusions: Lower levels of TNF alpha before ECT were found to be a predictor of clinical improvement in women. Ifthisfinding is replicated in larger samples in future studies, it supports the role of TNF alpha in the pathogenesis of MDD and the mechanism of action of ECT, and mayalsoguide the selection of treatment modalities for patients with severe MDD.

Keywords: Depressive disorder, electroconvulsive therapy, inflammation markers

Sociodemographic Characteristics

Sociodemographic Characteristics	PATİENT (n=26)	CONTROL (n=26)	p
1. Age (year)	28-82 (min-max)	26-82 (min-max)	0,560
a. Mean	53,81±15,72	51,38±14,01	
b. Median	55	52,5	
2.Gender			1
a. Female	17	17	
b. Male	9	9	
3. Marital status			0,248
a. Single	0	1	
b. Married	20	23	
c. Dıvorced/Widow	6	2	
4. Educational Status			0,213
a. primary school dropout	4	5	
b. primary school graduate	14	7	
c. secondary school graduate	3	5	
d. high school graduate	1	3	
e. university graduate	3	2	
f. Master's/PhD degree	1	4	
5. Smoking			0,510
a.no	21	19	
b.yes	5	6	
6. Psychiatric Medication Use			0
a.no	8	26	
b.yes	18	0	

Comparison of the percentage difference between pre- and post-ECT MADRS total scores and pre-ECT inflammation marker levels according to gender

		Univariate analysis	Univariate analysis	Multivariate analysis	Multivariate analysis
	Gender	Standardized Coefficients	p	Standardized Coefficients	p
Pre-ECT Neutrophil/lymphocyte ratio	female	-0,106	0,788		
Pre-ECT Neutrophil/lymphocyte ratio	male	-0,151	0,698		
Pre-ECT Erythrocyte sedimentation rate	female	-0,024	0,958		
Pre-ECT Erythrocyte sedimentation rate	male	0,307	0,421		
Pre-ECT CRP	female	0,215	0,557		
Pre-ECT CRP	male	0,321	0,400		
Pre-ECT Homocysteine	female	-0,089	0,803		
Pre-ECT Homocysteine	male	0,115	0,769		
Pre-ECT IL 6	female	0,540	0,805		
Pre-ECT IL 6	male	0,286	0,456		
Pre-ECT IL 8	female	-0,022	0,988		
Pre-ECT IL 8	male	0,358	0,344		
Pre-ECT Procalcitonin	female	-0,101	0,932		
Pre-ECT Procalcitonin	male	0,352	0,352		
Pre-ECT TNF-alfa	female	-0,918	0,673	-0,489	0,046
Pre-ECT TNF-alfa	male	0,408	0,275		

Note to Editor:

1. Valkanova V, Ebmeier KP, Allan CL. CRP, IL-6 and depression: A systematic review and meta-analysis of longitudinal studies. J Affect Disord. 2013 Sep 25; 150(3): 36–44.
2. Gay F, Romeo B, Martelli C, Benyamina A, Hamdani N. Cytokines changes associated with electroconvulsive therapy in patients with treatment-resistant depression: a Meta-analysis. Psychiatry Res. 2021 Mar 1; 297: 113735.
3. Poletti S, Vai B, Mazza MG, Zanardi R, Lorenzi C, Calesella F, et al. A peripheral inflammatory signature discriminates bipolar from unipolar depression: A machine learning approach. Prog Neuropsychopharmacol Biol Psychiatry. 2021 Mar 8;105:110136.
4. Strawbridge R, Arnone D, Danese A, Papadopoulos A, Herane Vives A, Cleare AJ. Inflammation and clinical response to treatment in depression: A meta-analysis. Eur Neuropsychopharmacol J Eur Coll Neuropsychopharmacol. 2015 Oct; 25(10): 1532–43.
5. Sorri A, Järventausta K, Kampman O, Lehtimäki K, Björkqvist M, Tuohimaa K, et al. Low tumor necrosis factor-α levels predict symptom reduction during electroconvulsive therapy in major depressive disorder. Brain Behav. 2018 Apr; 8(4): e00933.

32 Adherence to Treatment and Associated Factors in Individuals Residing in Nursing Homes and Receiving Long-Acting Injectable Antipsychotic Therapy

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Abstract

Introduction: Antipsychotic drugs (APD) are fundamental components in the treatment of schizophrenia and other psychotic disorders. Traditionally classified as first-generation (FGAP) and second-generation antipsychotics (SGAP), these medications can also be categorized based on their route of administration in clinical practice (1).

In addition to oral forms, intramuscularly administered injectable formulations are available. Long-acting injectable antipsychotics (LAI-APDs) ensure stable plasma drug levels over time, making them an important treatment option for patients with poor adherence to regular medication use (2).

These medications offer significant advantages in terms of treatment adherence and disease management. LAI-APDs help maintain stable plasma drug concentrations, reducing fluctuations that could lead to symptom relapse (3).

They are particularly beneficial for patients who struggle with medication compliance and have been associated with lower hospitalization rates, reduced treatment discontinuation, and a decreased risk of suicide However, some patients may be reluctant to receive intramuscular injections, and their preferences for medication administration play a crucial role in treatment adherence. (4)

Another critical aspect to consider is the cost of treatment. The costs of LAI-APDs, especially in the SGAP group, are significantly higher compared to oral formulations. This economic burden on healthcare systems can be a disadvantage for both patients and medical institutions (5).

However, given the individual, familial, and societal burden of psychosis, these costs may be justified in the long run. Particularly, the ease of administration and monitoring associated with LAI-APDs may render them cost-effective when carefully evaluated.(6)

This study aims to investigate the treatment adherence and medication administration preferences of individuals receiving long-acting injectable antipsychotic treatment in a nursing home setting. The study seeks to understand patients‘ perspectives on injectable medication use and how these preferences impact their treatment process.

Methods: This cross-sectional and descriptive study was conducted in nursing homes located in Sungurlu and Çorum, Turkey, involving 36 participants diagnosed with psychotic disorders who had been using APDs for at least one month. Participants were aged between 29 and 63, had an education level of at most high school, and voluntarily agreed to participate.

Data were collected regarding patients' age, education level, gender, smoking status, duration of stay in the nursing home, comorbidities, type and dosage of antipsychotic drugs used, and adherence to treatment. The Positive and Negative Syndrome Scale (PANSS-6), a widely used tool for assessing psychotic symptoms, was applied (7).

Statistical analyses were performed using SPSS 20.0 software. Normality tests were conducted to determine whether parametric or non-parametric tests should be applied. Categorical variables were analyzed using the chi-square test, while the Mann-Whitney U and Kruskal-Wallis tests were used to compare different groups. A significance level of 95% was used.

The study was approved by the Non-Interventional Research Ethics Committee of Çorum Hitit University Faculty of Medicine.

Meeting Date: 17/12/2024 Ethics Committee Approval Number: 2024-138

Results: The majority of participants were male (72.7%) and between 41-50 years old (36.4%). Educationally, 51.5% had only completed primary school, and 66.7% were smokers. Regarding psychiatric diagnoses, 75.8% had schizophrenia, and 87.9% had no additional comorbidities.

The most commonly used medication was Xeplion (paliperidone palmitate) at 36.4%, followed by Clopixol, Trevicta, and different doses of Xeplion. However, 45.5% of participants were undecided about medication use, another 45.5% expressed unwillingness to use APDs, and only 9.1% reported a preference for LAI-APDs.

According to PANSS-6 results, the overall symptom severity among participants was classified as "mild" (2.96 ± 0.189). Negative symptoms were more pronounced compared to positive symptoms, particularly among male patients ($p<0.05$).

An age-based analysis showed that patients in the 31-40 age group had higher PANSS scores compared to those in the 41-50 age group. Additionally, patients who had stayed in the nursing home for 1-5 years had higher PANSS scores than those who had been institutionalized for 6-10 years. However, no significant relationship was found between PANSS scores and variables such as smoking or the presence of comorbid conditions.

Discussion: The study findings indicate that a significant portion of psychiatric patients residing in nursing homes exhibit reluctance or indecision regarding antipsychotic treatment. Negative symptoms were found to be more severe in male patients, and younger patients had higher PANSS scores, suggesting that symptoms may decrease with prolonged institutionalization.

To assess whether participants' PANSS levels varied based on their Medication Adherence Level (MAL), the data were analyzed. The results indicated no statistically significant difference between the variables. Participants only selected the options "regular use with assistance" and "irregular use or use with persuasion," and no difference in PANSS levels was observed between the two patient groups.

To improve treatment adherence, individualized approaches should be developed. Education programs should be implemented to inform patients about medication use and to encourage better compliance. Additionally, collaboration between healthcare professionals, patients, and caregivers should be strengthened to ensure proper medication adherence.

One limitation of this study is its cross-sectional design. Longitudinal studies are needed to better understand how preferences for APD administration evolve over time. Further research should also evaluate the impact of psychosocial interventions on LAI-APD adherence.

Ultimately, while LAI-APDs offer advantages in terms of adherence and monitoring, they are not preferred by all patients. If a patient demonstrates good adherence, transitioning to oral antipsychotic therapy may be considered as a cost-effective alternative. This study provides valuable insights into the treatment approaches used in psychiatric nursing home settings and highlights the need for more personalized and cost-effective strategies in antipsychotic treatment.

For regular medication follow-up, cooperation between healthcare personnel and patients' relatives should be ensured. Additionally, in order to validate and generalize the findings obtained in this study more comprehensively, similar studies should be conducted with larger sample groups and in different regions. Moreover, conducting long-term follow-up studies would be beneficial in evaluating changes in patients' responses to treatment over time.

In addition to antipsychotic treatments, integrating psychosocial interventions such as psychotherapy, occupational therapy, and family therapy into treatment processes may enhance patients' overall well-being and treatment adherence. Therefore, it is essential to develop and implement treatment plans with a multidisciplinary approach.

These recommendations, based on the study's findings, aim to organize the treatment processes of patients with schizophrenia and similar psychotic disorders more effectively and in a way that meets individual needs.

Keywords: Depot antipsychotic, Medication Compliance, Psychotic Disorder, Nursing Home

References

1. Binbay, T., et al. (2011). Epidemiology of psychosis in Turkey: A systematic review on prevalence estimates and admission rates. *Turk Psikiyatri Derg*, 22(1), 40-52.
2. Binbay, T., et al. (2012). Lifetime prevalence and correlates of schizophrenia and disorders with psychotic symptoms in the general population of Izmir, Turkey. *Turk Psikiyatri Dergisi,* 23(3).
3. Ministry of Health & Refik Saydam Hygiene Center Directorate. (2006). Turkey Burden of Disease Study 2004. Ankara: Refik Saydam Hygiene Center School of Public Health.
4. Hasan, A., et al. (2020). Revised S3 guidelines on schizophrenia: Developmental process and selected recommendations. *Der Nervenarzt,* 91, 26-33.
5. Filiz, U.C. (2022). Comparison of long-acting injectable antipsychotics and oral antipsychotics in terms of social performance, side effects, caregiver burden, and cognition in patients with schizophrenia and similar psychotic disorders. *Bursa Uludağ University* (Turkey).
6. American Psychiatric Association. (2020). *The American Psychiatric Association Practice Guideline for the Treatment of Patients with Schizophrenia.* American Psychiatric Publishing.
7. Yıldız, M., & Cerit, C. (2006). Annual cost of schizophrenia treatment: A cost calculation based on university hospital data. *Bulletin of Clinical Psychopharmacology,* 16(4).

Oral and Poster Research Presentations

Oral Research Presentations

[Abstract:0004]

Association Between HERC2 (rs12913832 Polymorphism) Gene Coding Light Eye Color and Schizophrenia

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BACKGROUND AND AIM: Schizophrenia is a chronic and severe mental disorder (1). The fact that neuroleptics which block postsynaptic dopaminergic receptors play an effective role in treatment and that agents such as cocaine and amphetamine which cause dopaminergic discharge may lead to psychotic pictures supports the assumption of dopamine in the etiology (2). It has been suggested that genetic variations related to dopamine functions may be associated with the risk of schizophrenia and many predisposition genes have been shown. Another molecule synthesized from the same precursor as dopamine is melanin, which is responsible for human pigmentation. Eye color is determined by the type and amount of melanin pigment in the iris cells. Siyli et al. reported a relationship between blue eye color and schizophrenia and its clinical features in their thesis study (3). HERC2 (rs12913832 polymorphism) gene is one of the genes responsible for the genetics of light eye color (4). In light of this information, the relationship between HERC2 (rs12913832 polymorphism), which plays a role in the dopaminergic system and is associated with light eye color, and schizophrenia was examined.

METHODS: The study included 98 patients being followed up in a university hospital with a diagnosis of schizophrenia and 102 healthy individuals without any psychiatric disorder. Genomic DNAs of the patients and healthy controls were isolated from the peripheral blood of the patients using a DNA Extraction Kit. HERC2 gene rs12913832 polymorphisms were analysed by Realtime PCR method. The chi-square test was used in the analyses of HERC2 gene data. Ethical approval was obtained from the Pamukkale University Ethics Committee dated 03.03.2015 and numbered 03.

RESULTS: HERC2 gene polymorphisms were examined from DNA analyses of peripheral samples of 200 individuals. The chi-square analysis found that there was no significant relationship between HERC2 gene AA, AG, GG polymorphisms and schizophrenia (χ2:0,203, p=0,903).

CONCLUSIONS: The discovery of key genes and associated biochemical pathways in schizophrenia influences the design of neurobiological studies of this disorder, which in turn guides pharmacotherapeutic research strategies (5). In studies related to deletions and inversions in chromosomes, it has been reported that schizophrenics have 22q11 deletion and repetitive sequences in 2q13 (6). The fact that chromosomal anomalies in Prader Willi and Angelman syndromes are HERC2-related has suggested that a similar variation may be present in schizophrenia. Considering the dopamine dysfunction in schizophrenia, it can be hypothesized that an effect on this pathway may also affect other protein production processes. HERC2 (rs12913832 polymorphism) related to melanin was analyzed in this respect. In our study, no significant difference was found between schizophrenics and the healthy control group in terms of HERC2 variations therefore, these theories were not supported. There may be a difference at the receptor level rather than a biochemical effect on dopamine pathways. It has been reported that drug resistance, relapse despite medication, and supersensitivity psychosis may be indicators of this (7). Although it is known that many genes may be predisposing to schizophrenia, HERC2 variations do not seem to be among them.

Keywords: schizophrenia, eye color, genetics, HERC-2

AuthorToEditor: 1. Heinrichs DW, Hanlon TE, Carpenter WT. The quality of life scale: An instrument for rating the schizophrenic deficit syndrome. Schizophr Bull. 1984; 10: 388-389. 2. Orikabe L, Yamasue H, Inoue H, et al. Reduced amygdala and hippocampal volumes in patients with methamphetamine psychosis. Schizophr Res. 2011: 132(2-3): 183-9. 3. Siyli B. The Relationship Between Schizoprenia and Schizoaffective Disorder and Light Eye Color. Dissertation. University of Pamukkale; 2020. 4. Beleza S, Johnson NA, Candille SI, et al. Genetic architecture of skin and eye color in an African-European admixed population. PLoS Genet. 2013; 9(3):e1003372. doi: 10.1371/journal.pgen.1003372. 5. Harrison P. Recent genetic findings in schizophrenia and their therapeutic relevance. J Psychopharmacol. 2015; 29(2): 85–96. 6. Costain G, Lionel AC, Merico D, et al. Pathogenic rare copy number variants in community-based schizophrenia suggest a potential role for clinical microarrays. Hum Mol Genet. 2013; 22(22):4485-4501. 7. Amato D, Vernon AC, Papaleo F. Dopamine, the antipsychotic molecule: A perspective on mechanisms underlying antipsychotic response variability. Neurosci Biobehav Rev. 2018; 85: 146-159.

[Abstract:0007]

Emotional Eating and Adult Separation Anxiety in Bariatric Surgery Candidates

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BACKGROUND AND AIM: Obesity is a complex clinical condition characterized by an excess accumulation of body fat and progressive weight gain. Its global prevalence has been steadily increasing, with sedentary lifestyles and rising consumption of fast food contributing to this growth (1, 2). Preventing obesity is as critical as treating it, and understanding the underlying mechanisms and risk factors is essential for its prevention (3). Emotional eating, defined as eating in response to emotions—whether positive or negative—rather than hunger, is linked to behaviors such as eating when feeling distressed, anxious, or even happy, often leading to weight gain (4). Research examining the relationship between obesity, adult separation anxiety, and emotional eating remains limited. However, adult separation anxiety may elevate anxiety levels, potentially heightening the risk of emotional eating and related eating disorders. This study seeks to explore the link between emotional eating, adult separation anxiety, and obesity. Investigating these underlying causes is vital in addressing obesity, an increasingly pressing global health issue.

METHODS: The study was conducted at Recep Tayyip Erdogan University Training and Research Hospital, in the Mental Health and Diseases outpatient clinic. A total of 72 patients with morbid obesity and 70 healthy controls, all meeting the inclusion criteria, participated. The patient group included individuals seeking bariatric surgery with a body mass index (BMI) of 35 or above, while the control group comprised randomly selected healthy individuals. Each participant completed a sociodemographic data form, the Eating Attitudes Test, the Adult Separation Anxiety Inventory, and the Emotional Eating Scale.

RESULTS: The study sample included 72 patients and 70 controls, with an age range of 20 to 69 years and a mean age of 36.99 (±10.7). Among the patients, 54 (75%) were female, and 18 (25%) were male. Comparisons of scale scores between the patient and control groups revealed that the patient group had significantly higher scores on the Eating Attitudes Test ($p=0.000$) and the Adult Separation Anxiety Inventory ($p=0.037$). However, no significant difference was found between the groups on the Emotional Eating Scale ($p=0.100$).

CONCLUSIONS: This study found that patients in the obese group scored higher on both the Eating Attitudes Test and the Adult Separation Anxiety Inventory compared to the control group. Obesity may, therefore, be associated with altered eating behaviors (5). This study focused on patients specifically seeking bariatric surgery—a unique subset of individuals with morbid obesity who often face significant challenges due to their weight. Psychiatric evaluations and treatment plans addressing mental health conditions are essential components in the holistic management of obesity for bariatric surgery candidates. Research into obesity treatment and prevention remains invaluable, and further studies examining the relationship between weight and psychological symptoms are urgently needed.

Keywords: Obesity, body mass index, bariatric surgery, emotional eating, adult separation anxiety

[Abstract:0038]

Translating a Subtyping Neurobiomarker into Precision Neuromodulation for Youths with a Major Depressive Episode: A Double-Blind, Randomized Controlled Trial

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BACKGROUND and OBJECTIVE: Major depressive episode (MDE) has emerged as a leading contributor to the global disease burden, particularly among the youth population. As a complex clinical syndrome, re-delineating heterogeneous MDE populations into more homogeneous neurobiological subtypes could promote the effectiveness with which patients get treated. Furthermore, as a non-invasive form of brain stimulation, repetitive transcranial magnetic stimulation (rTMS) could directly target dysfunctional brain regions, and has been indicated as one of the most promising antidepressant therapies for achieving precision. However, the scientific findings of the current field have not been extensively transformed into exercisable clinical paradigms. By promoting and validating a neuroimaging-based subtyping and precise rTMS strategy, the current study aims to advocate a translational idea regarding how biologically distinct subtypes could be more objectively differentiated and treated in youths with MDE.

METHOD: Firstly, using dimensionality reduction and clustering algorithms, we identified and validated a subtyping neurobiomarker across different MDE populations including one large-scale Discovery Center (n=1037) and two replication centers (n1=536, n2=755); notably, the second replication center was composed of youths with mood disorder experiencing MDE and young healthy controls. Secondly, we conducted a randomized controlled trial (RCT) in 219 youths with MDE; patients were divided into neuroimaging subtypes and randomly received either active or sham stimulation for two weeks. The dorsomedial prefrontal cortex (dmPFC) and occipital cortex (OCC) were separately identified as subtype-specific rTMS targets based on our prior open-label, single-arm clinical trial. The depressive symptom improvement was evaluated as HAMD-17 score reduction using the intention-to-treat analyses in linear mixed-effect models. Thirdly, we sought to explore the biological mechanisms underlying personalized neuromodulation by analyzing the association between neurobiological changes and symptomatic improvements using the Pearson correlation analyses.

RESULTS: We firstly identified and validated the functional imbalance along the sensorimotor-association (S-A) axis as an objective neurobiomarker for differentiating the archetypal and atypical subtypes across distinct MDE populations. Secondly, for 219 youths with MDE who were recruited in the RCT and received 2-week precise rTMS, depressive symptoms of active treatment were significantly improved compared with sham treatment in both subtypes. Thirdly, we found that symptomatic improvements of precise rTMS were linked to functional alterations along the S-A cortical spectrum, both in the archetypal and atypical subtypes. Specifically, for the archetypal subtype, the active group showed significant functional improvement in the primary visual cortex compared to the sham group, suggesting that dmPFC-targeted rTMS may influence the primary cortex along the S-A axis.

CONCLUSION: To the best of our knowledge, current work is the first attempt to translate a subtyping neurobiomarker into precise neuromodulation for MDE using RCT design. Our findings facilitated the psychiatric field to approach precision medicine by refining an objective biomarker to subtype, treat, and evaluate MDE beyond symptomatic measure.

Keywords: Major depressive episode, Transcranial magnetic stimulation, Resting-state functional MRI, Machine learning, Youth, Precision medicine

[Abstract:0041]

Side Effects of Antipsychotic Drugs: A Qualitative Study

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Backgrond And Aim: Medical treatment is one of the most widely used and effective therapeutic interventions for many mental illnesses. Antipsychotic drugs are critical in the pharmacological management of psychotic disorders.Antipsychotic use, especially when used in combination, is associated with a number of problems, including a higher than recommended overall dose and the potential for increased frequency, range, and severity of side effects. Sedation, dizziness, postural hypotension, sexual dysfunction, and extrapyramidal and anticholinergic effects are common dose-related side effects that can be common. Side effects that develop over a long period of time include significant weight gain, metabolic syndrome, parkinsonism, and tardive dyskinesia. In this qualitative study of the side effects of antipsychotic use, our aim is to understand the subjective experiences of schizophrenia patients regarding the side effects of regularly used antipsychotic drugs.

Methods: Data were collected from patients who applied to Fatsa State Hospital and were found suitable for the study in terms of inclusion and exclusion criteria. Semi-Structured Interview Form was used as the data collection tool. Data collection process was terminated when the data reached saturation. 22 participants were included in the study. Interviews were conducted face-to-face in the hospital polyclinic. Audio recordings were made throughout the interviews. After all interviews were completed, audio recordings were documented. Then, the transcripts were subjected to content analysis, which is an analysis method suitable for qualitative research. Within the scope of content analysis, the transcripts were examined repeatedly and coding was performed first. After coding, categories and then themes were created. Ethical approval was obtained from the Ondokuz Mayıs University Clinical Research Ethics Committee (2024/345-2024000345-1)

Results: Twelve of the participants were male and 10 were female. The average age was 38.3. The most frequently used medication was olanzapine (59%). The 93 codes created were grouped under three themes: “Why do I use medication?”, “Medication side effects” and “Approach to side effect”. Information on themes and subthemes and the frequency of the codes are given in the Table. Weight gain, dizziness and fatigue were the most frequently coded side effects.When the theme of "Approach to side effects" was examined, it was shared that patients generally do not share drug side effects with their doctors, doctors are insensitive to drug side effects, and drug use is seen as something that must be done even if it is not wanted.

"It's like we don't have sexual intercourse since I started taking the medication. The medication takes away my manhood" (P12).
"The words I read float in the air. I can't continue for more than half a page." (P20)
"Why should I tell you? He will eventually write the prescription again" (P3)
CONCLUSIONS:This study showed that the side effects of antipsychotics are observed differently by physicians and patients. It is clear that good clinical observation for schizophrenia patients can be achieved by taking a more careful look at the side effects of antipsychotics.

Keywords: schizophrenia, antipsychotic, side effect, qualitative study

Thema	Subthema	f
Why do I use medication?	It doesn't work	9
	Makes it worse	5
	No other methods have been tried	3
Medication side effects	Weight gain	12
	Drowsiness	9
	Fatigue	8
	Agitation	5
	Dizziness	4
	Impaired concentration	4
	Decreased sexual desire/Erection difficulties	4
	Constipation	3
	Anxiety	3
	Menstrual irregularity	2
	Increased salivation	1
	Unresponsiveness	9
	Sharing with doctor	7
	Stopping the medication	5

f:frequens

[Abstract:0049]

Cognitive Impairments, Depression and Quality of Life 1 Year After COVID-19 Hospital Discharge

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BACKGROUND AND AIM: Following the acute phase of COVID-19, numerous patients have reported persistent physical and neuropsychiatric symptoms, irrespective of the initial severity of their illness. Prominent concerns, including fatigue, depressive symptoms, and cognitive impairments, pose significant challenges to psychosocial functioning and quality of life. This study seeks to investigate the prevalence of cognitive impairments and depressive symptoms one-year post-discharge from hospitalization for COVID-19 and their impact on quality of life.

METHODS: Individuals hospitalized with mild to moderate COVID-19 were invited to take part in a follow-up assessment lasting 12 months. A cohort of 60 recovered patients was evaluated for cognitive functions, depressive symptoms, and quality of life. These outcomes were compared with those of an age- and education-matched healthy control group with no history of COVID-19 infection.

RESULTS: One year after discharge, cognitive impairments were observed in 21.7% of the COVID-19 patients, as measured by the Montreal Cognitive Assessment (MoCA). In contrast, only 3.3% of the non-COVID-19 control group displayed similar impairments. Despite this, the quality of life scores were largely comparable between the two groups. Depressive symptoms emerged as the primary factor influencing the quality of life in COVID-19 patients.

While cognitive impairments may persist for up to a year following hospitalization, they did not appear to significantly impact the quality of life in this cohort of patients with mild to moderate disease severity. In contrast, depressive symptoms were identified as the critical determinants of quality of life outcomes.

CONCLUSIONS: While cognitive impairments may persist for up to a year following hospitalization for mild to moderate COVID-19, they do not appear to significantly affect overall quality of life. Instead, depressive symptoms are the dominant determinant of quality of life, highlighting the need for targeted mental health interventions in post-COVID care. Addressing these psychological challenges could be crucial for improving long-term outcomes in this population.

Keywords: Cognitive impairment, COVID-19, quality of life, depression

[Abstract:0051]

Trends in Early Intervention for Autism Spectrum Disorder: An Analysis of 2019-2024 ÇÖZGER Data

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BACKGROUND AND AIM: Autism Spectrum Disorder (ASD) is a neurodevelopmental condition requiring early diagnosis and timely intervention to optimize developmental outcomes.[1] Over recent years, advancements in diagnostic tools, increased awareness, and the expansion of screening programs have facilitated earlier identification of ASD, leading to improved access to specialized education and intervention services.[2] Despite these advancements, regional variations in early intervention trends remain underexplored..[3] This study focuses on Malatya, Turkey, analyzing data from the Special Needs Report for Children (ÇÖZGER) issued between 2019 and 2024. The aim is to investigate trends in ASD diagnoses and initial referrals for special education, emphasizing year-to-year changes and their implications for early intervention practices.

METHODS: This retrospective study evaluated 7,562 ÇÖZGER reports issued between 2019 and 2024. To align with the study's objectives, only the initial reports of ASD-diagnosed patients were included. Reports issued for renewal purposes or those indicating no health issues were excluded. After applying exclusion criteria, 5,018 reports were deemed eligible for analysis, and detailed data were extracted from 762 ASD-diagnosed patients. Among these, 268 patients were included in the study after being contacted via phone and agreeing to participate. The patients‘ ages at their first referral to special education were obtained through interviews with their families. Median and interquartile range (IQR) values were calculated for diagnosis and special education referral ages, and the relationship between birth year and age at referral to special education was analyzed using the Spearman correlation test.

RESULTS: The median age at the first referral to special education for the 268 ASD-diagnosed patients included in the study was 80 months (66-102). A moderate negative correlation was found between birth year and age at referral to special education (Spearman rho = -0.63, $p < 0.001$). These findings indicate significant improvements over time in the early referral of ASD-diagnosed children to special education. Notably, children born between 2016 and 2022 were referred to special education at younger ages compared to those born in earlier years.

CONCLUSIONS: This study demonstrates a progressive decrease in the age at which ASD-diagnosed children are referred to special education. Factors contributing to this trend include increased awareness, widespread use of advanced diagnostic tools, and the expansion of screening programs. The literature consistently emphasizes the positive impact of early diagnosis and intervention on the developmental outcomes of children with ASD.[3] Our findings align with this body of evidence, showing that faster diagnosis processes enable children to benefit from special education at earlier ages. However, the subjective nature of family-reported data and potential gaps in records should be considered as limitations. Broader-scale prospective studies are needed in the future. This study highlights a significant decrease in the age at which ASD-diagnosed children are referred to special education over time. The findings underscore the importance of early diagnosis and intervention while emphasizing the need for awareness-raising initiatives to further improve these processes. Expanding early diagnosis and intervention efforts is critical for enhancing the quality of life for children with ASD.

Keywords: Autism Spectrum Disorder, Early Intervention Trends, Special Education Referral, ÇÖZGER Reports, Diagnosis Age Correlation

Flow Diagram of the Analysis and Included Data of ÇÖZGER Reports Between 2019 and 2024

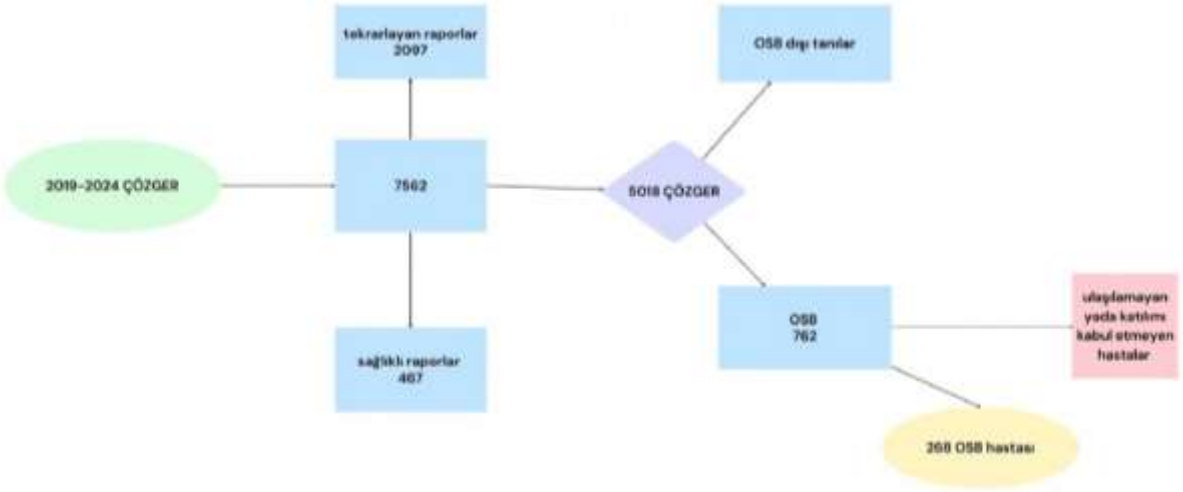


Table 1. Descriptive Statistics of ASD-Diagnosed Patients

Variable	n (%)	Median (IQR)	Range
Total Patients	268 (100%)		
Gender			
- Male	172 (64.2%)		
- Female	96 (35.8%)		
7Age (Months)		80 (66-102)	28-144
Age at First Special Education (Months)		52 (42-60)	28-108

AuthorToEditor: 1. Daniolou S, Pandis N, Znoj H. The Efficacy of Early Interventions for Children with Autism Spectrum Disorders: A Systematic Review and Meta-Analysis. J Clin Med. 2022 Aug 30; 11(17):5100. doi: 10.3390/jcm11175100. PMID: 36079029; PMCID: PMC9457367. 2. Okoye C, Obialo-Ibeawuchi CM, Obajeun OA, Sarwar S, Tawfik C, Waleed MS, Wasim AU, Mohamoud I, Afolayan AY, Mbaezue RN. Early Diagnosis of Autism Spectrum Disorder: A Review and Analysis of the Risks and Benefits. Cureus. 2023 Aug 9;15(8):e43226. doi: 10.7759/cureus.43226. PMID: 37692637; PMCID: PMC10491411. 3. Abubakar A, Kipkemoi P. Early intervention in autism spectrum disorder: The need for an international approach. Dev Med Child Neurol. 2022 Sep;64(9):1051-1058. doi: 10.1111/dmcn.15327. Epub 2022 Jun 23. PMID: 35735125; PMCID: PMC7613578.

[Abstract:0052]

The Efficacy of Methylphenidate Use in Children Diagnosed with Attention Deficit Hyperactivity Disorder with Emotional Impulsivity Symptoms

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BACKGROUND AND AIM: Emotional dysregulation (ED) is characterized by an inability to engage in harmonious and goal-oriented behavior due to individuals being unable to manage their emotional states. ED have been shown in addition to basic symptoms such as inattention and hyperactivity/impulsivity in 24-50% of children diagnosed with ADHD.

The purpose of this study was to investigate the effect of methylphenidate therapy on the emotional impulsivity profile, an ED subtype, in children with pure ADHD. The potential effects of sociodemographic variables and clinical characteristics of ADHD on emotional impulsivity profile score differences were also examined.

METHODS: In the first stage, the files of 321 children aged 6-12 years diagnosed with ADHD following DSM 5-based diagnostic interviews with a child and adolescent psychiatry specialist were scanned retrospectively. In the second stage, ED scores were calculated using the CBCL (4-18) completed by the parents during the diagnostic interviews, and the distributions of ED subgroups were determined. The data for 34 patients meeting the subgroup criteria defined as an emotional impulsivity profile by Biederman et al. were employed in the study. In the third stage, post-treatment ED emotional impulsivity profile scores were calculated using the CBCL (4-18) completed by the parents following effective dose methylphenidate therapy.

RESULTS: Thirty-four children diagnosed with ADHD were enrolled. In terms of clinical manifestations of ADHD, 79.4% of the patients exhibited combined type and 20.6% predominantly inattentive presentation characteristics. Responses to treatment based on CGI improvement scores revealed that 20.6% of patients were very much improved, 55.9% were much improved, and 23.5% were slightly improved. CGI side-effect scores showed that 47.1% of patients had no side-effects, while side-effects that did not significantly affect the patient‘s functioning were observed in 52.9%. Comparison of pre- and post-treatment CBCL_emotional impulsivity scores revealed statistically significant decreases in CBCL_emotional impulsivity scores ($p<0.001$).

Linear regression was applied to examine independent variables capable of affecting pre- and post-treatment CBCL_emotional impulsivity scores, and the model was found not to be statistically significant ($F=1.742$; $p=0.136$).

CONCLUSIONS:A better understanding and differentiation of ED subtypes may also differentiate therapeutic approaches. Biederman et al.‘s focusing on different subtypes in the context of ED represents a new perspective for examination of this field.

In cases of pediatric bipolar disorder, a severe clinical manifestation of ED, it is recommended that the bipolar mood disorder symptoms should first be stabilized, after which stimulants can be added if ADHD continues to create functional losses, although the direct use of stimulants is not recommended. Some studies have shown the effectiveness of methylphenidate in improving ‗irritability‘ and ‗emotional lability,‘ some of the basic signs of emotional impulsivity, in people with ADHD. In the present study, the use of methylphenidate in the ADHD cases with no comorbidity emerged as effective in the symptoms of the emotional impulsivity ED subtype. To the best of our knowledge, this is the first study to investigate the effect of methylphenidate on symptoms of the ED subtype emotional impulsivity in a sample consisting of children diagnosed with ADHD with no comorbid psychiatric disease.

Keywords: Attention deficit hyperactivity disorder, emotional dysregulation, emotional impulsivity, methylphenidate

[Abstract:0056]

Functional Variations Across Domains in Adolescents with ADHD: Predictors and Subdomain-Specific Findings

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BACKGROUND AND AIM: Attention-Deficit/Hyperactivity Disorder (ADHD) profoundly impacts adolescents' functionality across various domains. This study aimed to examine functional variations across subdomains and explore the influence of emotional and behavioral problems on these variations. Additionally, the study investigated the roles of age and gender in functional impairment.

METHODS: The study included 63 adolescents aged 11–17 years (mean age: 14.7 ± 1.69; 58.7% male). Sociodemographic data were collected from parents, while adolescents completed the Weiss Functional Impairment Rating Scale-Self Report (WFIRS-S) and the Strengths and Difficulties Questionnaire Self Report (SDQ) to assess functional impairment and emotional-behavioral problems. Statistical analyses included repeated measures ANOVA to evaluate differences across functionality subdomains, linear regression to identify predictors of impairment, and subgroup analyses based on treatment types (medication only, combined therapy, and no treatment).

RESULTS: Repeated measures ANOVA revealed significant variability in impairment across functional domains ($F[3.08, 190.87] = 16.2$, $p < .001$, $\eta^2p = 0.207$). The greatest impairments were observed in self concept (mean = 1.24 ± 1.06) and family functioning (mean = 1.16 ± 0.643), while the lowest were in risky activities (mean = 0.467 ± 0.542). Post-hoc analyses demonstrated significant differences between domains, such as family vs. social activities ($p < .001$) and self concept vs. risky activities ($p < .001$). Linear regression analyses indicated that emotional problems ($\beta = 0.088$, $p < .001$) and inattention/hyperactivity ($\beta = 0.069$, $p = .005$) were significant predictors of overall functional impairment, explaining 52.9% of the variance ($R^2 = 0.529$). Examining the impact on academic functionality revealed that emotional problems ($\beta = 0.092$, $p < .001$) and inattention/hyperactivity ($\beta = 0.074$, $p = .004$) were the most significant predictors, explaining 48.7% of the variance in school functionality impairment ($R^2 = 0.487$). Peer problems negatively impacted functioning in self concept ($\beta = -0.174$, $p = .002$), while social problems showed no significant effects. Assessment of functional impairment based on age and gender did not yield statistically significant findings. Among treatment groups, the no-treatment group exhibited the highest functional impairment scores, while the medication-only group demonstrated the lowest impairment. However, these group differences were not statistically significant ($F[2, 23.5] = 1.86$, $p = .177$).

CONCLUSIONS: This study underscores the differential impact of ADHD across functional domains, highlighting the necessity of targeted interventions in various functioning areas such as self concept and school. Emotional problems and inattention/hyperactivity emerged as pivotal contributors to overall functional impairment. These findings emphasize the critical importance of individualized treatment strategies to address the unique functional challenges experienced by adolescents with ADHD.

Keywords: ADHD, adolescents, emotional problems, functional impairment, inattention/hyperactivity

[Abstract:0059]

Comparison of Serum Vitamin D, Folate, and Vitamin B12 Levels Between Children With Autism Spectrum Disorder and Healthy Controls

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BACKGROUND AND AIM: Autism Spectrum Disorder (ASD) is a complex neurodevelopmental disorder influenced by genetic, environmental, and nutritional factors. In recent years, it has been suggested that deficiencies in certain vitamins may be associated with the development of autism. Specifically, variations in the levels of vitamin D, folate, and vitamin B12 in children with autism have been reported, but findings remain inconsistent. This study aims to compare the serum levels of vitamin D, folate, and vitamin B12 between children with autism and healthy controls and to examine the relationship between vitamin levels and the severity of autism.

METHODS: A total of 61 children with autism, aged 3-8 years, and 50 age and sex matched healthy controls were included in the study. Children with psychiatric disorders, chronic systemic diseases, or those receiving psychotropic medications or vitamin supplements were excluded. Serum vitamin D, folate, and B12 levels were measured in both groups. Autism severity was assessed using the Childhood Autism Rating Scale (CARS) and the Clinical Global Impressions (CGI) scale. Data were analyzed using a significance level of $p < 0.05$.

RESULTS: The results showed that serum vitamin D levels were significantly lower in children with autism compared to healthy controls ($p < 0.05$). However, no significant differences were observed between the groups for serum folate and vitamin B12 levels. Additionally, no significant correlation was found between autism severity (as assessed by CARS and CGI scales) and serum vitamin D, folate, or B12 levels.

CONCLUSIONS: The lower serum vitamin D levels observed in children with autism suggest a role for vitamin D in the pathophysiology of autism. Vitamin D is involved in brain development, immune function, and neuronal communication, all of which are linked to autism. The lack of significant findings for folate and vitamin B12 is consistent with studies questioning the role of these vitamins in autism.

Vitamin D deficiency is more prevalent in children with autism, and its role in neurodevelopment has been emphasized in recent research. Studies highlight vitamin D deficiency‘s impact on brain development and neurological function in children with autism. Furthermore, a systematic review found no significant correlation between vitamin D levels and autism severity, which aligns with the findings of this study.

The importance of vitamin D and other vitamin supplementation in children with autism has been increasingly recognized. Vitamin D plays a role in neurological development and immune function. Deficiency in vitamin D is more common in children with autism and may impact brain function. Supplementation of this vitamin may provide therapeutic benefits, particularly for vitamin D-deficient children with autism. Other vitamins, particularly B12 and folate, are also important for brain health, though findings regarding their role in autism remain inconsistent. Nevertheless, vitamin supplementation may improve overall health, behavioral development, and learning processes in individuals with autism. Monitoring vitamin levels and addressing deficiencies could offer significant therapeutic advantages.

Keywords: Autism Spectrum Disorder (ASD), Vitamin D deficiency, Folate levels, Vitamin B12 levels, Serum vitamin levels, Vitamin supplementation

AuthorToEditor: 1. DiPiazza, A., Ballato, S. R., & Lee, Y. (2022). "The Role of Vitamin D in Neurodevelopment and Autism Spectrum Disorder: A Review of Recent Evidence." Journal of Clinical Medicine, 11(11), 3214-3229. 2. Groven, K. S., Jensen, E. L., & Nielsen, J. M. (2023). "Vitamin D Deficiency and Autism Spectrum Disorder: An Updated Review." Journal of Autism and Developmental Disorders, 53(4), 1487-1501. doi:10.1007/s10803-022-05529-z. 3. Lee, S., Choi, T. Y., & Kim, Y. (2021). "Associations Between Vitamin D Levels and Severity of Autism Spectrum Disorder: A Systematic Review." Nutrients, 13(9), 3056-3065. doi:10.3390/nu13093056. 4.Mehta, D., & Zaid, M. (2021). "Folate and Vitamin B12 in Autism Spectrum Disorder: A Comprehensive Review." Neurobiology of Disease, 153, 105302. doi:10.1016/j.nbd.2021.105302. 5.Parker-Athill, E. C., et al. (2013). "Nutritional Deficiencies in Autism Spectrum Disorders: A Review." Journal of Pediatric Research, 11(4), 245-250. doi:10.1097/jpr.0b013e3181bbfd57.

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[Abstract:0061]

The Role of Metacognition, Ruminative Thought, and Anxiety in the Formation of Suicidal Ideas in Major Depression Patient

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BACKGROUND AND AIM: Depression is a significant public health issue associated with increased mortality and morbidity. Suicidal ideation is a critical precursor to suicide attempts and completed suicides, emphasizing the need for early diagnosis and intervention. This study investigates the roles of depression, anxiety, rumination, and metacognition in suicidal ideation among patients with major depressive disorder (MDD).

METHODS: The study included 47 patients (25 males, 22 females) diagnosed with MDD according to DSM-5 criteria, aged 18-65 years. Patients with comorbid neurological or organic mental disorders were excluded. The participants completed the Beck Depression Inventory (BDI), Beck Suicide Ideation Scale (BSSI), State-Trait Anxiety Inventory (STAI), Ruminative Thought Style Questionnaire (RTSQ), and Metacognitions Questionnaire (MCQ-30). Correlation and regression analyses were conducted to examine the relationships between depression, anxiety, rumination, metacognition, and suicidal ideation.

RESULTS: Depression, state anxiety, and rumination were significantly associated with suicidal ideation. Among these, depression emerged as the strongest predictor of suicidal ideation. A moderate correlation was observed between rumination and suicidal ideation, with the highest association found in the "Active Suicidal Desire" subscale. State anxiety demonstrated a moderate relationship with suicidal ideation, particularly passive suicidal thoughts, suggesting that patients with heightened state anxiety may experience passive suicidal ideation driven by a desire to escape anxiety. Metacognition showed a mixed impact; the "Positive Beliefs" subscale was inversely associated with suicidal ideation, indicating a potential protective role. However, other subscales, such as "Need to Control Thoughts" and "Uncontrollability and Danger," did not exhibit significant relationships with suicidal ideation.

CONCLUSIONS: Depression, rumination, and state anxiety play significant roles in the formation of suicidal ideation in MDD patients. While maladaptive metacognitive beliefs exacerbate distress and perpetuate negative thought patterns, positive beliefs about worry may offer some protective benefits. The findings underscore the need for metacognitive therapy to address dysfunctional thinking patterns and reduce suicidal ideation. Further longitudinal studies are warranted to explore the dynamic interplay between anxiety, metacognition, rumination, and suicidal ideation.

Keywords: Suicidal Ideation, Major Depressive Disorder, Cognitive Attentional Syndrome, Metacognition, Rumination

AuthorToEditor: 1) Hallard RI, Wells A, Aadahl V, Emsley R, Pratt D. Metacognition, rumination and suicidal ideation: An experience sampling test of the self-regulatory executive function model. Psychiatry Res. 2021;303:114083. 2) Ozcelik, H. S., Ozdel, K., Bulut, S. D., & Orsel, S. (2015). The reliability and validity of the Turkish version of the beck scale for suicide ideation (Turkish BSSI). Bulletin of Clinical Psychopharmacology, 25(2), 141-150. 3) Yılmaz, A. E., Sungur, M. Z., Konkan, R. ve Şenormancı, Ö. (2015). Ruminasyonla ilgili üstbiliş ölçeklerinin klinik ve klinik olmayan Türk örneklemlerindeki psikometrik özellikleri. Türk Psikiyatri Dergisi, 26(4), 268-78 4) Yazıhan, N. T., Çınar, O., Canbaz, H., & Ak, M. (2019). Metacognitive beliefs and coping strategies of suicide attempters. Psychiatry and Behavioral Sciences, 9(1), 34. 5) Karatepe, H. T. (2010). Ruminatif Düşünce Biçimi Ölçeğinin Türkçe uyarlaması, geçerlik ve güvenirlik çalışması (Tıpta uzmanlık tezi). Sağlık Bakanlığı, İstanbul Bakırköy Prof. Dr. Mazhar Osman Ruh Sağlığı ve Sinir Has. Eğt. ve Arş. Hastanesi, İstanbul.

[Abstract:0073]

Stick the Needle into Yourself Before You Thrust the Packing-Needle into Others: Bibliometric Analysis of the Stigmatizing Term ‘Schizophrenic’

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BACKGROUND AND AIM: The term ‗schizophrenic‘ can be used in society for the purpose of insult and humiliation. In scientific studies, it can often be used to refer to individuals diagnosed with schizophrenia, although this is not intentional. Whatever the reason, this usage leads to the normalization and spread of stigmatizing language. In this study, a bibliometric analysis of publications containing the term 'schizophrenic' was performed.

METHODS: Articles published between 2005 and 2024 that contained the term ‗schizophrenic‘ were retrieved from the Web of Science database. Characteristics of the articles (e.g., year, author, institution, country, keyword, scientific category, and citation per article) were analysed. VOSviewer software was used to visualize various bibliographic coupling networks on related data.Ethics committee approval was obtained for this study (Adıyaman University, Date: April 16, 2024; Number: 2024/4-31).Since it did not involve human subjects, it did not require informed consent.

RESULTS: The search for the term ‗schizophrenic‘ resulted in 34,506 documents in the all fields category at all times. After excluding non-original/review articles, documents not in SCI-E, not in English, and published before 2005, 7,836 articles remained. While the number of articles containing the term ‗schizophrenic‘ was 581 in 2005, this number decreased to 126 in 2024. While the number of citations to articles containing the term 'schizophrenic' was 279 in 2005, this number increased to 14,689 in 2024. The author with the most articles containing the term ‗schizophrenic‘ was Xiang Yang Zhang. Hans-Juergen Moeller's articles containing the term 'schizophrenic' received the most reference. The institutions with the most articles containing the term ‗schizophrenic‘ were the University of London, King's College London, and University of Harvard, respectively. The journals that published the most articles containing the term ‗schizophrenic‘ were Schizophrenia Research, Psychiatry Research, and Progress in Neuro-Psychopharmacology and Biological Psychiatry, respectively. The scientific categories included the most articles containing the term ‗schizophrenic‘ were Psychiatry, Neurosciences Neurology, and Pharmacology Pharmacy, respectively.

CONCLUSIONS: This study is the first bibliometric analysis that examines articles containing the term 'schizophrenic' with various features. Scholars have a great responsibility in the reduction/prevention of stigmatization in schizophrenia. They should begin by avoiding using the term 'schizophrenic' in scientific studies.

Keywords: Bibliometric analyses, schizophrenia, stigma, stigmatization

AuthorToEditor: Dear Editor, This study was written with the aim of increasing the awareness of scholars involved in studies on schizophrenia regarding the stigmatization through the use of the term 'schizophrenic'.We would be honored to have our study presented in your congress. Sincerely

[Abstract:0078]

The Interplay Between Premenstrual Syndrome, Impulsivity, and Couple Dynamics: Insights from Women Attending Psychiatry Clinics

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BACKGROUND AND AIM: The quality of life and relationship dynamics of women of childbearing age are affected by social expectations, hormonal changes and psychiatric conditions. The effects of psychiatric symptoms on adjustment, sexual satisfaction and couple adjustment have been shown. Premenstrual symptoms, which are not frequently the reason for referral due to their cyclical nature, are one of these conditions. The aim of our study is to examine the relationships between sexual satisfaction, couple adjustment, premenstrual syndrome (PMS) and impulsivity among female patients with partners who apply to the psychiatry outpatient clinic.

METHODS: The study sample consists of women with partners aged 18-45 who continue to menstruate and apply to the psychiatry outpatient clinic. The Dyadic Adjustment Scale (DAS), Golombok-Rust Sexual Satisfaction Scale (GRISS), Barratt Impulsivity Scale (BDI) and Premenstrual Syndrome Scale (PMSS) were applied to the participants. Data were analyzed using IBM SPSS 25 software. After the normality test, t-test was used for normally distributed data and Mann Whitney U test was used for those that did not show distribution. In addition, the relationships between variables were evaluated with Pearson correlation analysis.

RESULTS: It was determined that premenstrual symptom severity and impulsivity levels were higher in those with a past psychiatric diagnosis than in those without a diagnosis. It was determined that couple harmony was lower and impulsivity levels and premenstrual symptoms were higher as age progressed. It was observed that low GRRS scores were associated with low PMSS scores and couple harmony was high in this group. It was determined that problems such as lack of sexual communication, touch problems and vaginismus were more common in individuals with low couple harmony. It was shown that anorgasmia was associated with low couple harmony and low satisfaction, and that it did not have a significant relationship with expression of love and consensus. It was noted that consensus increased with increasing income level, but it did not have a significant effect on sexual satisfaction parameters.

CONCLUSIONS: The fact that PMS symptoms and impulsivity levels are higher in those with a past psychiatric diagnosis indicates that emotional regulation difficulties are evident in these individuals. The lack of a significant relationship between couple adjustment and the severity of PMS and impulsivity may indicate the protective role of partner support. The low couple adjustment at older ages can be explained by the decrease in the level of tolerance with aging. The fact that couple adjustment is better in those with milder PMS symptoms reveals the effect of this situation on the dynamics of the relationship. The fact that anorgasmia is negatively correlated with satisfaction and the lack of a significant relationship with expression of love and consensus supports the view that social relationship dynamics and sexual dysfunctions are independent. These results support the view that interventions aimed at increasing psychosocial well-being should be addressed in this complex manner.

Keywords: Couple adjustment, Impulsivity, Premenstrual syndrome, Psychiatric diagnosis

AuthorToEditor: Spanier, G. B. (1976). Measuring Dyadic Adjustment: New Scales for Assessing the Quality of Marriage and Similar Dyads. Journal of Marriage and the Family, 38(1), 15-28. Rust, J., & Golombok, S. (1986). The GRISS: A psychometric instrument for the assessment of sexual dysfunction. Archives of Sexual Behavior, 15(2), 157-165. Moeller, F. G., Barratt, E. S., Dougherty, D. M., Schmitz, J. M., & Swann, A. C. (2001). Psychiatric aspects of impulsivity. American Journal of Psychiatry, 158(11), 1783-1793. Heiman, J. R. (2002). Sexual satisfaction in relationships. Journal of Sex Research, 39(3), 180-193.

[Abstract:0081]

Perfectionism, Rumination and Memory in Obsessive-Compulsive Disorder Patients

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BACKGROUND AND AIM: Obsessive-compulsive disorder (OCD) is an important mental disorder in terms of the disability caused by the disease. The main symptom of the disease is involuntary and intrusive thoughts and behaviours to reduce the feeling of distress caused by these thoughts (1). Perfectionism and rumination have recently attracted more attention as findings accompanying mental illnesses. Perfectionism can be defined as a personality trait in the form of intolerance to deficiencies from an all-or-nothing perspective. Rumination can be defined as excessive thinking about negative life events (2, 3). In our study, we investigated whether rumination and perfectionism symptoms affect memory in OCD patients.

METHODS: Our study was conducted with 42 patients diagnosed with OCD who applied to Recep Tayyip Erdoğan University Training And Research Hospital. The patients who agreed to participate in the study were administered Ruminative Thinking Style Scale and Frost Multidimensional Perfectionism Scale. In addition, Wecshler Memory Scale was administered to the patients by the same practitioner. Ethics committee approval of the research was obtained (decision no: 2023/69).

RESULTS: A total of 42 patients with OCD were included in the study. When the relationship between the sociodemographic data of the patients and the scale scores was examined, a negative relationship was found between age and the logical memory ($r=-0.369$ $p=0.016$), attention ($r=-0.536$ $p<0.001$), memory (visual recall) ($r=-0.460$ $p=0.002$), associative learning ($r=-0.329$ $p=0.033$) sub-dimensions of the Wecshler Memory Scale. Memory performance decreased with increasing age of the patients. There was a positive correlation between the obsession and compulsion scores of the patients and the anxiety of making mistakes ($r= 0.324$ $p=0.036$; $r=0.633$ $p=<0.001$, respectively), familial expectations ($r=0.497$ $p=0.00$; $r= 0. 521$ $p<0.001$ respectively), and a positive correlation was found between obsession scores and the sub-dimension of unsure perfectionism of the Frost Multidimensional Perfectionism Scale ($r=0.319$ $p=0.040$). No significant correlation was found between the obsession and compulsion scores of the patients and Weschler memory scale scores and rumination scores.

CONCLUSIONS: In our study, the relationship between obsessions and compulsions, memory rumination and perfectionism levels of OCD patients was investigated. When the literature is examined, there are studies investigating the relationship between OCD and memory. Studies have reported that OCD patients have more memory impairment and lower neurocognitive capacity than healthy control group. However, the findings of these data are limited (4). It is unclear whether OCD patients have memory problems because of uncertainty or lack of confidence in their memory or because of a genuine neurocognitive deficit (5, 6). In our study, no relationship was found between memory and obsessions and compulsions.In a study investigating rumination levels in OCD patients, rumination was reported to be associated with OCD. However, studies investigating this relationship in the literature are also limited (7). Perfectionism has been associated with many mental illnesses and has been investigated as a predictor of illness severity in mental illnesses. Studies have reported a relationship between OCD and perfectionism (8). Identification of symptoms and more detailed evaluation of patients in this direction are important in treatment and follow-up processes.

Keywords: Memory, Obsessive compulsive disorder, perfectionism, rumination

[Abstract:0088]

Investigation of Substance Use, Shame, Guilt, and Readiness for Change in Patients Followed at the Probation Clinic

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BACKGROUND AND AIM: In our country, the legal processes regarding the use of narcotic and/or stimulant substances are regulated under Article 191 of the Turkish Penal Code (TPC) No. 5237. According to Article 191/1 of the TPC, "Anyone who purchases, accepts, or possesses narcotic or stimulant substances for personal use shall be sentenced to imprisonment from one to two years." The second paragraph of the same article regulates the application of probation. Accordingly, if the offender is a person who uses narcotic or stimulant substances, the court may order treatment and probation measures. This regulation aims to ensure the treatment and rehabilitation of individuals with substance use disorder within society. In substance use disorder, environmental interactions can influence individuals' desire for change through emotions like shame and guilt, even during the pre-contemplation stage. Shame and guilt are conceptualized as negatively evaluated emotions triggered when individuals engage in behaviors considered morally and socially unacceptable. The primary purpose of this research is to examine the substance use profile of individuals referred to our Alcohol and Drug Addiction Treatment Center (ADATC) for treatment under probation measures and to investigate their feelings of shame and guilt, as well as their readiness for change and treatment.

METHODS: This cross-sectional study included 100 patients who applied to the ADATC Probation outpatient clinic. The study participants were literate, aged 18-65, and capable of providing informed consent. The Sociodemographic Information Form, the Addiction Profile Index Clinical Form (API-C), the Trait Shame and Guilt Scale (TSGS), and the Stages of Change Readiness and Treatment Eagerness Scale-Substance (SOCRATES-S) were administered to the participants. Ethical approval was obtained from the Ankara Training and Research Hospital Ethics Committee (date: 06/09/2023, no: E-23-1372).

RESULTS: According to the study findings, significant positive relationships were identified between SOCRATES-S, API-C, and the shame and guilt subdimensions of the TSGS. When comparing the scale means of patients in terms of quitting substance use, it was found that shame and guilt scores were significantly higher in the "not quitting" group. Additionally, individuals who quit substance use after probation were found to have significantly higher pride scores.

CONCLUSIONS: Research indicates that individuals undergoing court-mandated substance treatment tend to have lower personal motivation compared to those in voluntary treatment outside the justice system. They are less likely to acknowledge a substance use problem or seek help. Studies show that patients with both intrinsic and extrinsic motivation tend to stay in treatment longer, while those with low intrinsic motivation often leave prematurely. To fully develop motivation, extrinsic factors (e.g., fear of imprisonment) must transition into intrinsic ones (e.g., the desire to avoid substance-related difficulties). Shame, initially linked to imprisonment fear, may transform into intrinsic motivation through guilt, enhancing treatment adherence and success. In our study, the differences in shame and guilt scores among patients under probation measures, despite no differences in SOCRATES-S scores, can be interpreted within this framework.

Keywords: Treatment motivation, probation, subtance use, guilt, shame

[Abstract:0090]

Evaluation of the immune system in Autism Spectrum Disorder

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BACKGROUND AND AIM:Autism Spectrum Disorders, typically starting in the early years of life characterized by impairment in social interactions, communication deficits, and restricted repetitive interests and behaviors. ASD etiology remains unclear. Immune system is a community of cells which protects body from pathogens and malign cells. Increasing numbers of evidence pointed the relationship between ASD and immune system. In our study, we aimed to compare immune profile, intracellular cytokine and NK cell cytotoxicity.

METHODS:Plasma levels of CD45, CD4, CD8, CD19, CD16+56, CD3+HLA-DR, intracellular cytokine (IL-4, IL-10, IFN- γ) and natural killer cell cytotoxicity (NKCC) were measured in 29 ASD children and 13 typically-developing age-matched children. The severity of ASD was assessed with Childhood Autism Rating Scale.

RESULTS:CD45 (p:0.002), CD3 (p<0.001), CD4 (p:0.022), CD8(p<0.001), IFN- γ+ CD4+T cell (p<0.008), NK cytotoxic activity (p<0.001) values were significantly lower, IL-4+ CD4+T cell (p<0.001) value was significantly higher in the patient group. Correlated with severity of Autism; there were higher and negative correlation of CD45, CD4 and CD3, lower and negative correlation of CD19, CD3+HLA-DR+ T cells, higher and positive correlation of IL-4+ CD4+ T cells moderate and negative correlation of IFN-γ+ CD4+ T cells, higher and negative correlation of NK cytotoxicity. There were no difference in immunologic parameters between regressed and non-regressed patient groups.

CONCLUSIONS:Our study provides further evidence showing immune dysregulation is present in ASD. Immun system changes may play a role in the ethyopathogenesis or are secondary to chronic stress; the mechanism remains unclear.

Keywords: autism spectrum disorder, immunology, immune system

[Abstract:0092]

Treatment Profiles and Associated Factors of Patients Diagnosed with Schizophrenia and Schizoaffective Disorder

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BACKGROUND AND AIM: Schizophrenia and other psychotic disorders are characterized with cognitive, behavioral, and emotional dysfunction and progress with significant losses in social functionality. Given the complex nature of these disorders, understanding the factors influencing treatment approaches is crucial for optimizing patient care. This study aimed to comprehensively investigate the pharmacological treatment patterns of patients diagnosed with schizophrenia and schizoaffective disorder in an outpatient clinic setting, as well as the relationship between these treatment patterns, the sociodemographic characteristics of the patients, and the clinical features of the disease.

METHODS: The records of the patients who were regularly followed up in the Psychotic Disorders Unit of the Psychiatry Department of the University and applied between June-November 2021 were retrospectively reviewed in detail. The sociodemographic and disease-related characteristics documented in the patients' records, along with the results of the Brief Psychiatric Rating Scale (BPRS), Positive and Negative Syndrome Scale (PANSS), Global Assessment of Functioning Scale (GAF), and Calgary Depression Scale for Schizophrenia (CDSS) at their last clinical application, were comprehensively evaluated. All relevant variables were documented by the authors and subsequently subjected to statistical analysis.

RESULTS: A total of 114 patients diagnosed with schizophrenia and schizoaffective disorder were included in the study. The rates of antipsychotic drug use among all the patients were systematically examined; 65.7% were using one antipsychotic, 31.5% were using two antipsychotics, 0.8% were using three antipsychotics concurrently, and 1.7% of the patients were not using any antipsychotic medications at all. The average number of antipsychotic drugs used by the patients was determined to be 1.32±0.52, based on a thorough analysis of collected data. The most frequently used antipsychotic was found to be aripiprazole at a rate of 30.7%, followed by olanzapine at 28.1%, and clozapine at 25.4%. The rate of use of depot antipsychotics was 18.4 %. The antipsychotic polypharmacy group exhibited a significantly higher rate of unemployment and a longer duration of illness compared to the monotherapy group. Furthermore, the clozapine group displayed a longer duration of illness, a higher number of hospitalizations, and greater employment rates compared to the group not using clozapine. Multivariable analysis revealed that the likelihood of clozapine use increased significantly with the duration of illness and higher PANSS-N scores.

CONCLUSIONS: The results of this study indicate that antipsychotic polypharmacy is predominantly utilized in patients with more severe illness characteristics, such as longer disease duration, highlighting its role in treatment-resistant cases where monotherapy is insufficient. Larger-scale studies are needed to evaluate the long-term effects, side effects, and patient outcomes of antipsychotic polypharmacy use, especially in treatment-resistant patients. Such comprehensive studies could significantly contribute to the development of more effective and safer treatment strategies aimed at balancing the benefits and risks of antipsychotic polypharmacy.

Keywords: Antipsychotic polypharmacy, Prescribing patterns, Psychotic disorder, Schizoaffective disorder, Schizophrenia

Utilization rates of antipsychotic in patients

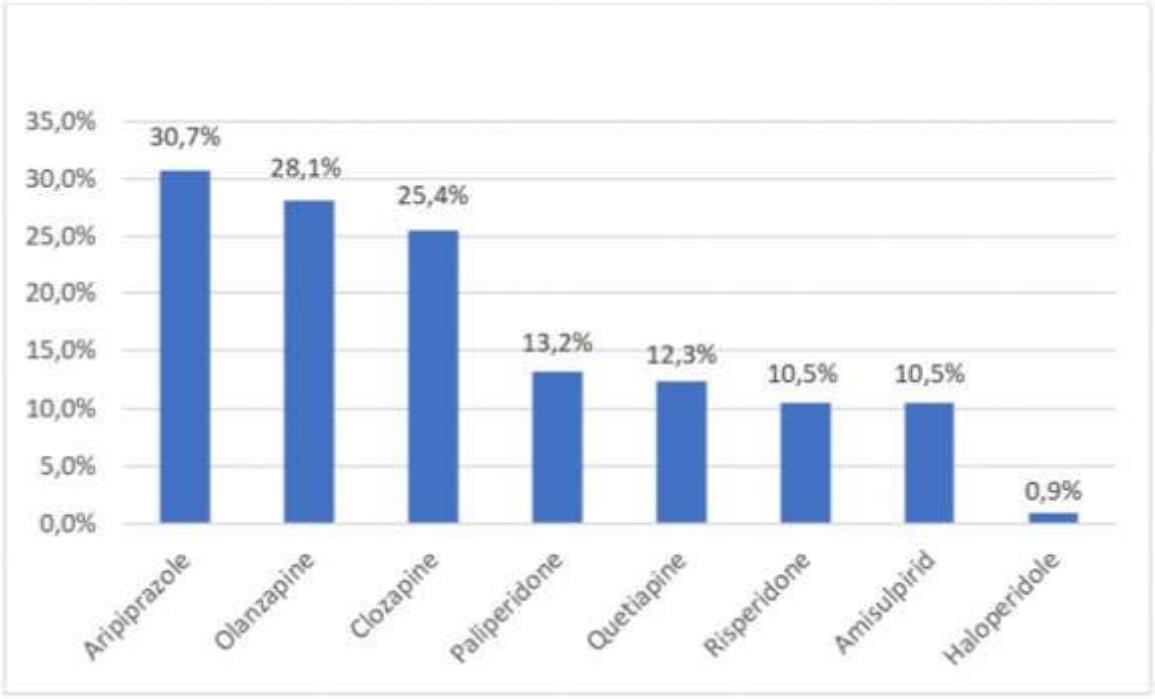


Fig. 1. Utilization rates of antipsychotic in patients

[Abstract:0095]

Sociodemographic and Clinical Characteristics of Cases Evaluated for Criminal Responsibility in a High Security Forensic Psychiatry Clinic

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BACKGROUND AND AIM: Forensic psychiatry links mental health and law. Assessing criminal responsibility is a primary application of forensic psychiatry. This study aimed to examine the sociodemographic characteristics, crime-related features, clinical profiles, psychiatric diagnoses, and expert opinions on criminal responsibility of cases referred to a high-security forensic psychiatry clinic.

METHODS: The files of 286 cases referred by courts to the high-security forensic psychiatry clinic for criminal responsibility evaluations were retrospectively analyzed. Sociodemographic data, crime-related information, psychiatric diagnoses based on DSM-5 criteria, and expert opinions on criminal responsibility were evaluated. Statistical analyses were performed using SPSS.

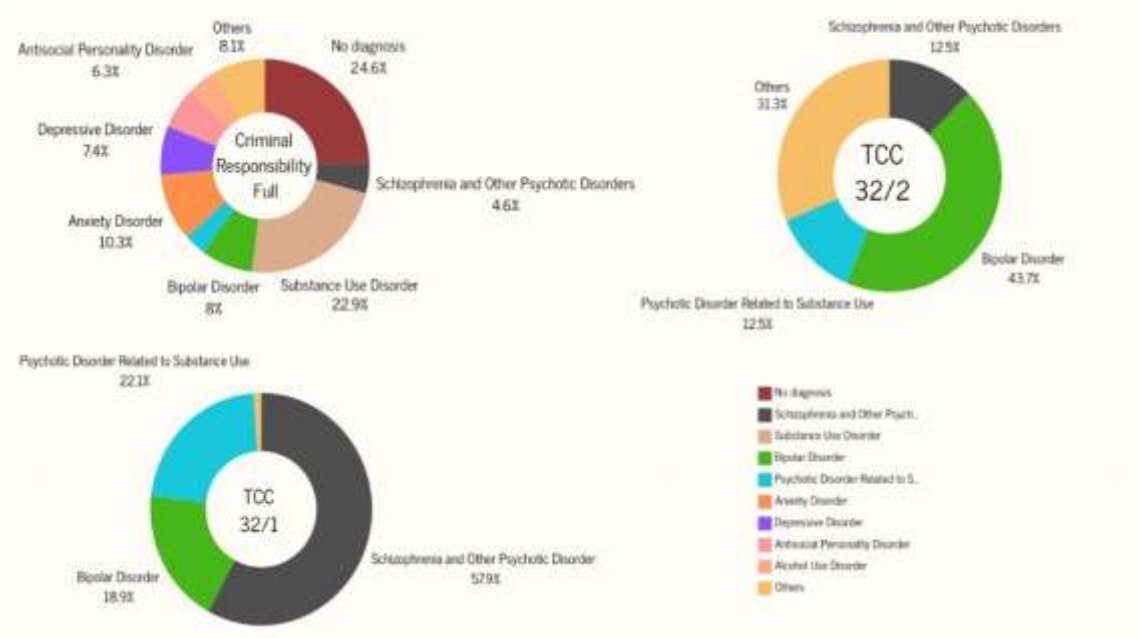
RESULTS: Among the evaluated participants, 17.8% were women (n=51) and 82.2% were men (n=235), with a mean age of 36.57±10.52 years. A total of 69.2% (n=198) were evaluated outpatient under Article 32 of the Turkish Criminal Code (TCC), while 30.8% (n=88) were observed inpatient under Article 74 of the Criminal Judgement Code (CJC), with decisions taking an average of 16.49±5.88 days. Evaluations found that 61.2% (n=175) were fully criminally responsible, 33.2% (n=95) not responsible, and 5.6% (n=16) were partially responsible. Of the cases, 32.5% had a prior criminal history, and 28.3% had repeated offenses. Crimes against individuals made up 60.5%, and 53.8% of victims were strangers. Among 381 crimes, 26.2% were against bodily and sexual integrity, 31% against honor, freedom, and privacy, 21.3% against property, 10.2% against public health and morality, and 11.3% against public trust, the nation, and the state. The most common diagnosis was schizophrenia and other psychotic disorders (22.7%). Among those fully responsible, 24.6% had no psychopathology, followed by 22.9% with substance use disorders. Among those not responsible, 57.9% had schizophrenia, followed by psychotic disorders due to substance use. Cases with diminished responsibility were mostly (43.8%) bipolar disorder.

CONCLUSIONS: This study identifies risk factors associated with crime, consistent with the literature, such as male gender, single or divorced/widowed status, low education level (9.71±3.84 years), and unemployment. Alcohol (5.9%) and substance use (28.7%) during the crime were found to be significant and should be considered in criminal responsibility assessments. Suicidal attempts were detected in 35.7% of cases, which can be linked to increased criminal tendencies due to high impulsivity. Crimes against individuals accounted for 60.5% of the cases, aligning with similar studies. Unlike previous studies, 53.8% of the victims were strangers, possibly due to the heterogeneous distribution of diagnoses. Crimes against honor, freedom, and privacy were the most common, consistent with the literature. Schizophrenia and other psychotic disorders were the most diagnosed conditions, reflecting the judiciary's focus on this group in criminal responsibility evaluations. Full criminal responsibility was assessed in 61.2% of cases, with no psychopathology in 24.6%. Among those without responsibility, 57.9% had schizophrenia or other psychotic disorders, linking impaired judgment and behavior regulation to increased criminal tendencies. Bipolar disorder accounted for 43.8% of those without responsibility, often explained by partial judgment impairment during hypomanic episodes.

Our study findings are similar to the literature. Studies on the assessment of criminal responsibility are insufficient in our country. Our study will shed light on future studies on this subject.

Keywords: Forensic psychiatry, criminal responsibility, sociodemographic characteristics

The Ratio of Psychiatric Disorders According to Decision on Criminal Liability



Sociodemographic and Clinical Characteristics

Gender	Female Male	N 51 235	% 17,8 82,7
Marital Status	Married Single Divorced/Widowed	79 126 81	27,6 44,1 28,3
Employment Status	Working Not working Retired Student	86 182 14 4	30,1 63,6 4,9 1,4
Alcohol Use	Yes No	42 244	14.7 85.3
Substance Use	Yes No	109 177	38.1 61.9
Form of Judicial Application	TCC 32 CJC 74	198 88	69,2 30,8
Conviction at the Time of Application	Yes No	53 233	18.5 81.5
History of Psychiatric Disease in the Family	Yes No	72 214	25,2 74,8
Hospitalization for Psychiatric Reasons	Yes No	106 180	37.1 62.9
History of Suicide	Yes No	102 184	35,7 64,3
Prison History	Yes No	138 148	48,3 51,7

N: number, TCC: Turkish Criminal Code, CJC: Criminal Judgement Code

Some Clinical and Sociodemographic Data

Age (years)	Mean ± SD 36,57±10,52	Min.- Max. 18,00-70,00
Duration of education (years)	9,71±3,84	3,00-18,00
Observation Period (days)	16,49±5,88	6,00-42,00
Age of disease onset	27,13±10,54	9,00-65,00
Duration of psychiatric illness (years)	9,69±6,32	1,00-30,00
Total number of hospitalizations for psychiatric reasons	2,71±2,19	1,00-15,00
Total length of hospital stay for psychiatric reasons (days)	94,78±88,59	3,00-458,00
Length of stay in prison (months)	31,01±44,48	1,00-248,00

SD: Standard Deviation, Min.: Minimum, Max.:Maximum

Characteristics of Crimes

Past Crime Story	Yes No	N 93 193	% 32,5 67,5
Repetition of Crime	Yes No	81 205	28,3 71,7
Nature of Crime	Against Human Against Goods Against People and Property Against Animal	173 83 28 2	60,5 29 9,8 0,7
Against whom the crime was committed	1st and 2nd Degree Relatives Familiar Foreign and Other	77 55 154	27 19,2 53,8
Substance Use During Crime	Yes No	82 204	28,7 71,3
Alcohol Use During Crime	Yes No	17 269	5,9 94,1
Decision on criminal liability	Criminal Responsibility Full TCC 32/1 TCC 32/2	175 95 16	61,2 33,2 5,6
Types of Crimes	Total Number of Criminal Acts	381	
Crimes against Life, Body Immunity and Sexual Offenses		100	26,2
Crimes against Honor, Liberty and Private Life		118	31
Crimes Against Property		81	21,3
Crimes Against Society, Public Health and Public Morals		39	10,2
Crimes against Public Trust, the Nation and the State		43	11,3

N: number, TCC: Turkish Criminal Code

Data on Psychiatric Diagnoses and Criminal Responsibility

	Total	Total	Criminal Responsibility Full	Criminal Responsibility Full	TCC 32/1	TCC 32/1	TCC 32/2	TCC 32/2
Psychiatric Diagnoses	N	%	N	%	N	%	N	%
No diagnosis	43	15	43	100	0	0	0	0
Schizophrenia and Other Psychotic Disorders	65	22,7	8	12,3	55	84,6	2	3,1
Substance Use Disorder	40	14	40	100	0	0	0	0
Bipolar Disorder	39	13,6	14	35,9	18	46,2	7	17,9
Psychotic Disorder Related to Substance Use	29	10,1	6	20,7	21	72,4	2	6,9
Anxiety Disorder	18	6,3	18	100	0	0	0	0
Depressive Disorder	13	4,5	13	100	0	0	0	0
Antisocial Personality Disorder	11	3,8	11	100	0	0	0	0
Alcohol Use Disorder	8	2,8	8	100	0	0	0	0
Others	20	6,6	14	70	1	5	5	25

N: number, TCC: Turkish Criminal Code

AuthorToEditor: 1- Gürkan, Ş., Can, K. C., Hasan, K. A. Y. A., Yüksel, R. N., & Erol, G. Ö. K. A. (2021). Retrospective evaluation of cases examined to determine criminal responsibilities. Archives of Neuropsychiatry, 58(4), 321. 2- İnan, S., Yıldızhan, E., & Öncü, F. (2018). İnsana yönelik ciddi suç işleyen adli psikiyatri olgularının hastalık öyküleri, sosyodemografik ve suç özellikleri. Turk Psikiyatri Derg, 29(4), 258-68. 3- Stålenheim, E. G. (2001). Relationships between attempted suicide, temperamental vulnerability, and violent criminality in a Swedish forensic psychiatric population. European psychiatry, 16(7), 386-394. 4- Bayramoğlu, E. P., & Demir, N. Adli Olguların Ceza Hukuku Bağlamında Psikiyatrik Değerlendirmesi; Sosyodemografik Özellikler, Klinik Tanılar ve Suç İlişkileri: Retrospektif Bir Çalışma. Batı Karadeniz Tıp Dergisi, 8(2), 185-195. 5- Yumru, M., Haluk, A., Tutkun, H., Herken, H., Karasu, M., & Dülger, H. E. (2005). Gaziantep Üniversitesi nde adli psikiyatrik açıdan incelenmi olan olguların de erlendirilmesi: Yüksek oranda alkol-madde kullanımı. Anadolu Psikiyatri Dergisi, 6, 30-35.

[Abstract:0098]

Comparison of Women's Pain Beliefs and Cognitive Flexibility with Their Depression and Anxiety Levels and Their Effects on Pregnancy: Pre-Study

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BACKGROUND AND AIM: In terms of maternal and infant health, normal birth is advocated as the mode of birth. However, in recent years, it has been observed that births in our country and the world are mostly cesarean. When the rate of cesarean births in all births is examined; Turkey is seen as the country with the highest cesarean birth rate with 60.1%, and Israel is seen as the country with the lowest cesarean birth rate with 14.3%. According to the World Health Organization WHO), the target cesarean birth rate is 10%-15%. Determining the factors affecting the birth preferences of pregnant women is important in terms of increasing normal birth rates and taking measures to reduce cesarean birth rates. Çuhadaroğlu defines cognitive flexibility as the ability of an individual to adapt to a new situation when faced with an unexpected event and to produce alternative solutions. To the best of our knowledge, no study has been conducted on whether individuals with low cognitive flexibility levels have low problem-solving skills and whether this affects their birth mode preferences during pregnancy. The aim of this study is to compare the pain beliefs and cognitive flexibility of women who have normal birth and cesarean birth and to examine their relationship with depression and anxiety levels.

METHODS: The research sample, The sample consists of 84 women who will be selected by random sampling method from women who have given birth before and reached online. Sociodemographic data form, Cognitive flexibility scale(CFS), Pain Beliefs Questionnaire(PBQ), Beck Depression Scale and Trait Anxiety Scale(TAS) were used.

RESULTS: Of the 84 volunteers included in the study, 30 women had normal births and 54 women had cesarean births. The average age of the volunteers was found to be 34.56 (8.78). 17 (20.2%) of the participants had a high school or lower education level, while 67 (79.8%) had a university or higher education level. While 69 (82.1%) of the participants were employed, 15 (17.9%) were unemployed. As a result of the correlation analysis; CFS-A showed a positive significant correlation with CFS-C ($r=0.465$, $p<0.001$) and a negative significant correlation with BDI ($r= -0.273$ $p=0.012$). CFS-C subscale scores also had a negative significant correlation with both TAS ($r=-0.507$, $p<0.001$) and BDI ($r=-0.604$, $p<0.001$) scores. PBQ-O and PBQ -P scale scores had no significant correlation with any of the scale results measured in the study. No significant difference was found between the normal birth and cesarean birth groups in terms of CFS-C ($p=0.104$) and PBQ -P ($p=0.322$). Additionally, no statistically significant difference was found between the groups in terms of CFS-A ($U=625,000$, $p=0.083$, $Z=-1.735$), PBQ-O ($U=715,000$, $p=0.374$, $Z=-0.889$), BDI ($U=796,500$, $p=0.900$, $Z=-0.126$) and TAS ($U=666,000$, $p=0.177$, $Z= -1.350$).

CONCLUSIONS: According to the data obtained in our study, no significant difference was found between women who had normal birth and cesarean section in terms of cognitive flexibility and pain beliefs.

Keywords: Cesarean birth, Cognitive flexibility, Normal birth

[Abstract:0109]

The Relationship Between Internalized Stigma and Psychopathology Severity, Resilience, and Inflammation in Patients with Bipolar Disorder

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BACKGROUND AND AIM: This study aimed to examine the relationship between dimensions of internalized stigma and psychopathology severity, remission status, resilience, and inflammation in outpatients with bipolar disorder (BD).

METHODS: This cross-sectional descriptive study included outpatients who were followed up in the psychiatry clinic of Karadeniz Technical University Medical Faculty Department of Psychiatry and diagnosed with BD according to DSM-5. All patients were evaluated with the Internalized Stigma of Mental Illness (ISMI) Scale, Montgomery-Asberg Depression Rating Scale (MADRS), Hamilton Depression Rating Scale (HAM-D), Young Mania Rating Scale (YMRS), The Resilience Scale for Adults (RSA), Bipolar Disorder Functioning Questionnaire (BDFQ) and Beck Scale for Suicide Ideation (BSSI). Blood neutrophil-lymphocyte ratio (NLR), platelet-lymphocyte ratio (PLR), and monocyte-lymphocyte ratio (MLR) values were calculated. Approval was obtained from the scientific research ethical committee of Karadeniz Technical University Medical Faculty before the study's commencement (no. 2024/103).

RESULTS: Thirty-six patients were included in the study. Eighteen patients (50%) of the participants were female. The mean age of the patients was 43.3±10.6 years and the mean disease duration was 16.3±8.2 years. The patients' mean ISMI score was 48.3±12.7. There was no significant relation between ISMI dimensions and age and marital status. When gender differences were evaluated, only the ISMI stigma resistance was significantly higher in female patients than in males (p=0.017). The duration of illness was positively correlated with ISMI alienation (r=.358, p=0.032), discrimination experience (r=.358, p=0.032), and social withdrawal (r=.334, p=0.046). Patients with multiple previous hospitalizations had higher ISMI discrimination experience scores compared to those with a single hospitalization (p=0.005). In the correlation analysis, a significant positive correlation was found between ISMI discrimination experience and HAM-D and MADRS scores (r=.427 p=0.009; r=.348 p=0.038) and between ISMI social withdrawal and HAM-D and MADRS scores (r=.493, p=0.002; r=.532 p=0.001). A strong negative correlation was found between the ISMI social withdrawal score and BDFQ functionality total score (r=-.658 p<0.001). RSA resilience score significantly negatively correlated with ISMI subdimensions of social withdrawal (r=-.558 p<0.001) alienation (r=-.450 p=0.006) and discrimination experience (r=-.442, p=0.010). According to HAM-D≤7, MADRS≤8, and YMRS≤6 points, 18 patients met the criteria for remission. Non-remitted patients had significantly higher ISMI social withdrawal (p=0.001), discrimination experience (p=0.013), and alienation (p=0.039) scores compared to those in remission. When we evaluated the relationship between peripheral immune markers and ISMI dimensions, we found a significant correlation only between the stigma resistance scores and the NLR (r=-0.455, p = 0.005) and MLR (r=-0.415, p = 0.012) values.

CONCLUSIONS: This study found that experiences of discrimination and social withdrawal related to stigmatization were significantly associated with the severity of depressive symptoms and patients' remission status. The significant connection between social withdrawal and functionality indicates that social withdrawal should be a primary therapeutic focus for patients with BD. Our results suggest that self-stigma worsens during the illness course and with repeated hospitalization. Resilience may play a preventive role in the development of self-stigma and could be an essential component of anti-stigma interventions. Poor stigma resistance may contribute to increased peripheral inflammation in patients with BD.

Keywords: Bipolar disorder, internalized stigma, psychopathology, resilience, inflammation

[Abstract:0111]

Systemic Immune Inflammation Index and Systemic Inflammatory Response Index as Indicators of Inflammation in Patients with Methamphetamine Use Disorder

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BACKGROUND AND AIM: Methamphetamine is a synthetic amphetamine derivative with strong psychostimulant and addictive properties. Due to these characteristics, its misuse is widespread, making it a significant global public health concern. Chronic methamphetamine use induces neurotoxicity in the central nervous system, leading to treatment-resistant psychosis, neurodegeneration, and cognitive impairment. These adverse outcomes are believed to involve mechanisms such as increased dopamine release, blood-brain barrier disruption, and immune-inflammatory system alterations. Previous studies have shown the effects of chronic methamphetamine use on systemic inflammation through parameters like pro-inflammatory cytokines and the C-reactive protein/albumin ratio. Easily accessible and affordable indicators such as neutrophil, monocyte, lymphocyte, and platelet levels, which change during inflammation, are crucial for monitoring. The Systemic Immune Inflammation Index (SII) and Systemic Inflammatory Response Index (SIRI) are novel markers calculated by combining routine peripheral blood cell counts to better reflect immune response and inflammation. These indices have been used in various studies to indicate subclinical inflammation and prognosis. This study aimed to examine the relationship between methamphetamine use disorder and inflammation using SII and SIRI.

METHODS: This retrospective study was conducted by reviewing the records of patients diagnosed with methamphetamine use disorder according to DSM-5 criteria at the AMATEM Clinic of Elazığ Mental Health and Diseases Hospital. The clinical, sociodemographic characteristics, and complete blood count results of 61 male patients were analyzed. A control group of 71 healthy males with a similar age distribution was included. SII was calculated as (platelet count × neutrophil/lymphocyte ratio), and SIRI as (monocyte count × neutrophil/lymphocyte ratio).

RESULTS: The mean ages of the patient and control groups were 26.49±4.52 and 27.84±6.31, respectively, with no significant difference ($p=0.156$). SII levels in the patient and control groups were 621.24±279.83 and 460.02±199.28, respectively, while SIRI levels were 1.37±0.77 and 1.14±0.55, respectively. Both SII and SIRI were significantly higher in patients with methamphetamine use disorder compared to the controls ($p<0.001$ and $p=0.044$, respectively).

CONCLUSIONS: This study aligns with previous findings indicating an association between methamphetamine use and increased inflammation. SII and SIRI, which can be easily derived from complete blood counts, can be utilized to evaluate this inflammation.

Keywords: Methamphetamine use disorder, inflammation, systemic immune inflammation index, systemic inflammatory response index

Comparison of the patient and control groups

	Hasta n=61	Kontrol n=71	p
Age	26.49 ±4.52	27.84±6.31	0.156
Disease duration (year)	3.52±1.51		
Number of hospitalizations	1.75±1.09		
Duration of METH Use (year)	2.27±0.60		
Platelets	284±54	249.71±57.83	0.001
Neutrophils	4.69±1.25	4.24±1.20	0.039
Lymphocytes	2.33±0.70	2.48±0.83	0.282
Monocyte	0.63±0.19	0.61±0.16	0.619
SII	621.24±279.83	460.02±199.28	<0.001
SIRI	1.37±0.77	1.14±0.55	0.044

METH: Methamphetamine SII: Systemic Immune Inflammation Index SIRI: Systemic İnflammatory Response Index

AuthorToEditor: 1,2 Oxidative Stress and Inflammatory Biomarkers in People with Methamphetamine Use Disorder1-2 3 Associations between impulsivity and fecal microbiota in individuals abstaining from methamphetamine 4,5,6Oxidative Stress and Inflammatory Biomarkers in People with Methamphetamine Use Disorder 3-4-5 7,8 Oxidative Stress and Inflammatory Biomarkers in People with Methamphetamine Use Disorder 43-44 9 Wei, Yanyan, et al. "Investigation of systemic immune-inflammation index, neutrophil/high-density lipoprotein ratio, lymphocyte/high-density lipoprotein ratio, and monocyte/high-density lipoprotein ratio as indicators of inflammation in patients with schizophrenia and bipolar disorder." Frontiers in Psychiatry 13 (2022): 941728. 10 İnaltekin, Ali, and İbrahim Yağcı. "Evaluation of simple markers of inflammation and systemic immune inflammation index in schizophrenia, bipolar disorder patients and healthy controls." Turkish Journal of Psychiatry 34.1 (2023): 11. 11. Wei, L., Xie, H., & Yan, P. (2020). Prognostic value of the systemic inflammation response index in human malignancy: a meta-analysis. Medicine, 99(50).

[Abstract:0105]

The Relationship Between Parental Body Satisfaction And Parental Attitudes With Body Image, Self-Esteem, And Social- Emotional Behavioral Problems In Adolescents

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BACKGROUND AND AIM: This study aims to analyze the relationships between the body image, self-esteem, anxiety, and depression of parents who apply for elective aesthetic surgery and the body image, self-esteem, and social-emotional-behavioral problems of their children aged 12–18 years. The research explores how parental body satisfaction and attitudes influence adolescent psychological and behavioral outcomes.°

METHODS: A descriptive cross-sectional study was conducted with 173 parents and their children who applied to the Plastic, Reconstructive, and Aesthetic Surgery Clinic of Göztepe Prof. Dr. Süleyman Yalçın City Hospital for cosmetic elective aesthetic surgery between October 15, 2023, and March 15, 2024. Various standardized scales were used for assessment:
-Parents: Body Satisfaction Scale, Rosenberg Self-Esteem Scale, Hospital Anxiety and Depression Scale, and Strengths and Difficulties Questionnaire Parent Form.
-Children: Body Image Scale, Rosenberg Self-Esteem Scale, Strengths and Difficulties Questionnaire Child Form, and Family Assessment Device. Demographic and clinical characteristics, including prior psychiatric treatment and previous cosmetic surgery experiences, were analyzed.

RESULTS: Among the parents, 90.2% were women, and among the children, 57.8% were girls. Key findings included:
-Higher self-esteem and body image scores in children of parents with previous cosmetic surgery experience or a history of psychiatric treatment ($p<0.05$).
-Significant associations between parental education and communication sub-dimension scores of the Family Assessment Device ($p=0.034$).
-Parental psychiatric history and family dynamics (communication and roles sub-dimensions) significantly influenced children's body image ($p<0.001$) and self-esteem ($p<0.05$).
-Adolescents of working parents exhibited lower scores in the required attention sub-dimension ($p=0.024$).
-Emotional responsiveness and behavior-control scores varied with parental history of psychiatric treatment and the number of children ($p<0.05$).

CONCLUSIONS: Adolescents' psychological well-being and self-perception are closely influenced by their parents' body image, self-esteem, and interactions within the family. Parental experiences with cosmetic surgery and psychiatric treatment significantly affect adolescents' body image, self-esteem, and family dynamics. These findings emphasize the importance of addressing family-level factors in interventions targeting adolescent mental health.

Keywords: Parent, Adolescent, Aesthetic Surgery, Body Satisfaction, Body Image, Self-Esteem

Tables and the Legends

Table 1. Demographic and Clinical Characteristics of Parents and Adolescents

Variable	Category	n	%
Marital Status of the Parents	Married	140	80.9
	Divorced/Widowed	33	19.01
Education Level	Primary School (including middle school)	18	10.04
	High School	65	37.6
	University	82	47.4
Employment Status	Employed	91	52.6
	Unemployed	82	47.4
Income Level	Low	30	17.03
	Moderate	89	51.4
	High	54	31.2
Residence	Periphery	63	36.4
	Urban	110	63.6
Family Integrity	Both parents alive	111	64.2
	Only mother alive	45	26.0
	Only father alive	5	2.09
	Neither parent alive	12	6.09
Total Number of Children	1	37	21.04
	2	88	50.9
	3 or more	48	27.07
Number of Children Aged 12–18	1	130	75.1
	2	36	20.08
	3 or more	7	4.0
Underwent Cosmetic Surgery	Yes	45	26.0
	No	128	74.0
Received Psychiatric Treatment	Yes	39	22.05
	No	134	77.5
Psychiatric Diagnosis	Anxiety disorder	13	33.3
	Depression	18	46.2
	Other (OCD, schizophrenia)	8	20.05

Table 2. Descriptive Statistics and Comparative Analysis of Psychological Scales

Scale	Mean ± SD	Median (Min.–Max.)	Marital Status (p)	Education Level (p)	Employment Status (p)	Income Level (p)	Residence (p)	Family Integrity (p)	Total Number of Children (p)	No. of Children Aged 12–18 (p)	Underwent Cosmetic Surgery(p)	Received Psychiatric Treatment (p)
Child Self-Esteem Scale	20.36 ± 5.96	21.00 (10.00–40.00)	0.97	0.42	0.79	0.98	0.89	0.43	0.96	0.95	**0.04**	**0.00**
Child Body Image Scale	92.04 ± 31.49	87.00 (40.00–200.00)	0.61	0.61	0.21	0.32	0.51	0.89	0.42	0.88	**0.01**	**<0,001**
Family Assessment Device												
Problem Solving	12.59 ± 4.29	12.00 (6.00–24.00)	0.76	0.45	0.35	0.32	0.89	0.64	0.12	0.74	0.92	0.32
Communication	18.88 ± 5.06	18.00 (9.00–32.00)	0.46	**0.03**	0.78	0.98	0.27	0.46	0.74	0.75	**0.04**	0.16
Roles	23.66 ± 5.51	23.00 (13.00–38.00)	14	0.37	0.85	0.64	0.57	0.67	0.47	**0.02**	**0.02**	**0.01**
Emotional Responsiveness	11.31 ± 3.89	10.00 (6.00–24.00)	0.76	0.56	0.36	0.47	0.68	0.73	0.58	0.48	**0.03**	**0.03**
Showing Necessary Care	16.02 ± 2.80	16.00 (10.00–25.00)	0.63	0.64	0.56	0.98	0.99	0.9w	0.75	0.85	0.71	0.91
Behavior Control	19.08 ± 3.35	19.00 (12.00–31.00)	0.57	0.46	0.36	0.76	0.48	0.64	0.59	**0.03**	0.18	0.88
General Functioning	22.90 ± 7.85	20.00 (12.00–48.00)	0.67	0.37	0.57	0.57	0.38	0.57	0.79	0.75	0.15	**0.05**

[Abstract:0116]

Sociodemographic Characteristics And Psychiatric Assessment of Children And Adolescents Evaluated Under Health Precautions

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BACKGROUND AND AIM: The aim is to investigate the relationship between the sociodemographic and clinical characteristics of children and adolescents under health measures and psychiatric disorders.

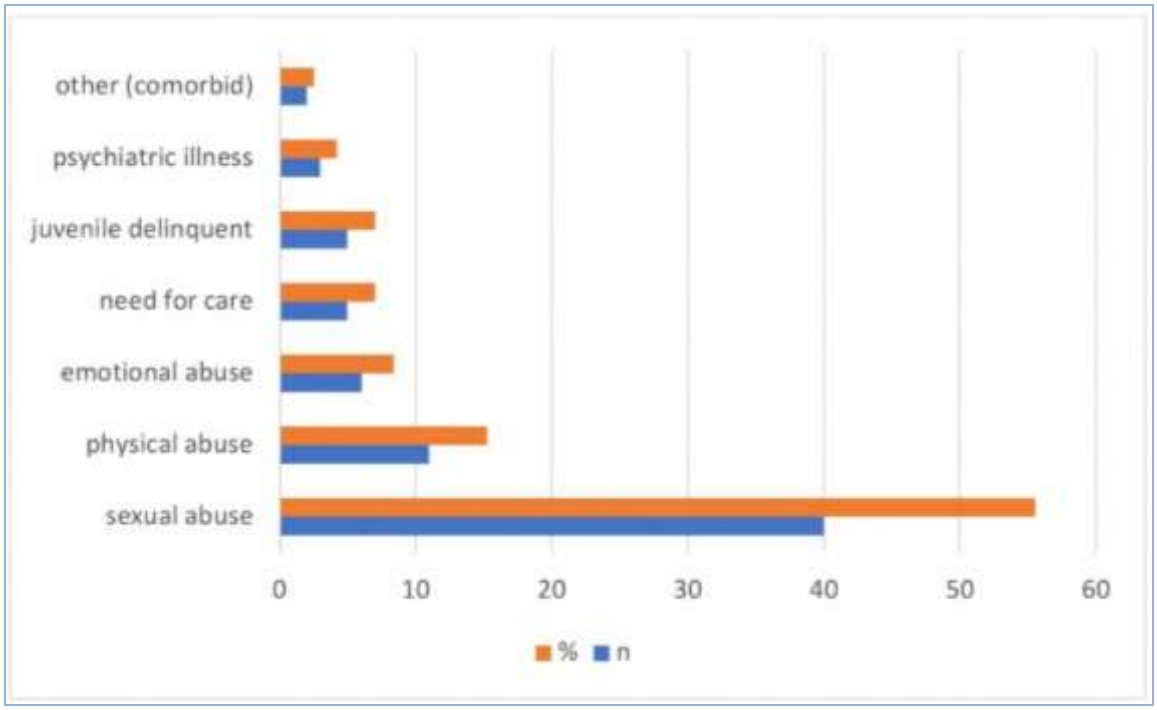
METHODS: The study included 72 child patients referred to the child psychiatry clinic under health measures between September 2021 and December 2023. The sociodemographic and clinical characteristics, parental features, and reasons for the health measures were retrospectively examined.

RESULTS: Of the cases, 43.1% (n=31) were girls, and 56.9% (n=41) were boys. Following the health measures, 76.4% of the cases received psychiatric diagnoses. PTSD was found in 25% (n=18), depression in 19.4% (n=14), ADHD in 8.3% (n=6), anxiety disorder in 6.9% (n=5), conduct disorder in 4.2% (n=3), cognitive impairment in 4.3% (n=3), and specific learning disability in 1.4% (n=1). The most common reason for health measures was sexual abuse (55.6%, n=40), followed by physical abuse (15.3%, n=11).

CONCLUSIONS: Implementing comprehensive psychosocial support and early intervention programs for abuse cases in children with health measures may minimize the likelihood of developing psychiatric disorders. There is a need for more protective health policies in this area.

Keywords: Protective health policies, children and adolescent, sexual abuse, psychiatric disorders

Figure 1: Reasons for taking health measures



[Abstract:0128]

The Mediating Role of Impulsivity in the Relationship Between Childhood Traumas and Disease Severity in Patients with OCD

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BACKGROUND AND AIM: Obsessive-compulsive disorder (OCD) is a psychiatric disorder characterized by recurrent obsessive thoughts and compulsive behaviors. The development and severity of OCD can be influenced by genetic, environmental, and psychological factors. The impact of childhood traumas on OCD severity has gained increasing attention in recent studies. Impulsivity, frequently observed in individuals with OCD, is regarded as a factor that exacerbates symptom severity and may play a crucial role in treatment processes. This study aims to examine the relationship between childhood traumas and OCD severity in individuals diagnosed with OCD and to explore the mediating role of impulsivity in this relationship.

METHODS: The study included 85 OCD patients aged 18–65 who were either newly diagnosed or under follow-up at Silifke State Hospital. Childhood trauma histories were assessed using the Childhood Trauma Questionnaire (CTQ), while OCD severity was measured with the Yale-Brown Obsessive Compulsive Scale (Y-BOCS). Impulsivity levels were determined using the Barratt Impulsiveness Scale (BIS). Appropriate statistical analysis methods were applied to the data. Ethical approval was obtained for the study (24.12.2024/212).

RESULTS: The mean age of participants was 29.65 ± 9.24 years, with 34 (40%) females and 51 (60%) males. A significant positive correlation was found between Y-BOCS and CTQ scores (excluding sexual abuse). In the first regression analysis, CTQ scores significantly predicted the BIS mediator variable ($\beta = 0.506$, SE = 1.060, $p = 0.047$). In the second regression analysis, BIS was found to have a significant effect on Y-BOCS scores ($\beta = 0.538$, SE = 3.047, $p = 0.002$). Additionally, while the direct effect of CTQ on Y-BOCS was not statistically significant ($\beta = 0.309$, SE = 0.578, $p = 0.056$), BIS was identified as a mediator in the relationship between CTQ and Y-BOCS.

CONCLUSIONS: Our findings highlight the importance of considering childhood traumas and impulsivity in OCD treatment. Interventions targeting impulsivity may influence the severity of OCD symptoms and could be beneficial when integrated into treatment protocols. More research is needed to uncover the relationship between childhood trauma and OCD.

Keywords: Childhood, Compulsion, Impulsivitiy, Obsession, Trauma

[Abstract:0149]

Trends in Substance Use Disorders: A Retrospective Analysis of Outpatient Data from a University Hospital in Turkey (2018–2023)

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BACKGROUND AND AIM: Substance use disorders (SUD) are a significant public health concern and financial burden,with trends influenced by demographic, societal and policy changes. Understanding variations in the prevalence and demographic characteristics of patients is crucial for developing effective prevention and intervention strategies. This retrospective study examines trends in the prevalence of substance use disorder diagnoses from 2018 to 2023 in an outpatient addiction clinic, alongside the analysis of age and gender dynamics.

METHODS: Data from 5.231 patients attending our outpatient addiction clinic between 2018 and 2023 were retrospectively analyzed. Diagnoses were categorized according to ICD-10 codes for cannabinoids (F12), sedatives or hypnotics (F13), cocaine (F14), stimulants (F15), and multiple substance use (F19). Linear regression models were used to evaluate annual trends in prevalence rates for each substance use disorder, alongside changes in gender ratios. A one-way ANOVA test was applied to assess age differences across the years. All statistical analyses were conducted with SPSS v.25. The study was conducted in accordance with the Declaration of Helsinki. Ethics Committee approval number: 2024-3626 24-10T/53

RESULTS: A total of 2.475 (%47.3) patients applied to our outpatient clinic with substance use disorder. While multiple substance use disorder displayed a significant increase, with an annual growth rate of 6.57% ($p = 0.00114$, $R^2 = 0.94$), cannabis use disorder and cocaine use disorder demonstrated a significant yearly decline, decreasing by an average of 3.21% per year ($p = 0.00652$, $R^2 = 0.87$) for cannabinoid use and an average of 1.00% per year ($p = 0.00614$, $R^2 = 0.87$) for cocaine use. Sedatives or hypnotics use disorder showed a modest but non-significant increase ($p = 0.0607$, $R^2 = 0.63$), while stimulant use disorder exhibited fluctuating rates without a clear trend ($p = 0.4683$, $R^2 = 0.14$). Analysis of gender trends revealed a statistically significant increase in the proportion of female patients diagnosed with substance use disorders, with the female ratio rising by 1.79% annually ($p = 0.0208$, $R^2 = 0.77$). Age analysis using one-way ANOVA showed no significant differences in the mean age of patients across the years ($p = 0.657$), indicating stability in the age distribution of the clinic‘s population.

CONCLUSIONS: This study identifies a significant increase in multiple substance use disorder rates and a decline in cannabis use disorder prevalence, while sedative or hypnotics use disorder and stimulant use disorder trends remain less pronounced. This increasing trend is important because multiple substance use increases the risk of overdose, depression, suicide, psychosis, cardiac arrhythmias, and death. Notable demographic shifts, including a steady increase in the proportion of female patients, underscore the evolving nature of substance use disorders and highlight the need for gender-specific prevention and treatment approaches. The stability in age distribution suggests consistent access to services across age groups. These findings emphasize the importance of continuous monitoring and targeted interventions to address changing patterns of substance use and patient demographics. Future research should explore underlying factors contributing to these trends, including sociocultural influences, policy changes, and treatment accessibility, to inform public health strategies better.

Keywords: Addiction, prevalence, substance use disorder.

[Abstract:0152]

Assessment of Sensory Processing Patterns in Adolescents with CDS Symptoms

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BACKGROUND AND AIM: Cognitive Dissociation Syndrome (CDS) is characterized by symptoms such as excessive daydreaming, mental fog, slow thinking, and low activity levels. Sensory processing affects individuals' cognitive, social, and emotional skills. (1) It has been suggested that difficulties commonly associated with CDS, such as inattention, anxiety/depression, and social withdrawal, are related to low or high physiological arousal (2). Low physiological arousal may be a potential biological mechanism for symptoms such as drowsiness, social withdrawal, and sluggishness(3). This study aims to investigate the sensory profile characteristics of adolescents exhibiting CDS symptoms

METHODS: The study sample consists of 107 adolescents aged 11-17 who applied to the Child and Adolescent Psychiatry Department of Göztepe Prof. Dr. Süleyman Yalçın City Hospital and scored 3 or higher on the CDS screening questions (mean age = 15.74, SD = 2.67). Participants included in the study underwent a structured diagnostic interview using the KSADS-PL (Kiddie Schedule for Affective Disorders and Schizophrenia - Present and Lifetime Version) with a clinician. Data were collected through a sociodemographic form and the CDS Scale filled out by parents, the CDS Self-Report Scale and the AASP(Adolescent-Adult Sensory Profile Scale) filled out by adolescents. The normality assumptions of the variables were assessed using the Kolmogorov-Smirnov test. Since the normality assumptions were unmet, the relationships between continuous variables were analyzed using Spearman correlation analysis (Spearman's rho). All analyses were conducted using IBM SPSS.25 software at a significance level of $p < 0.05$.

RESULTS: The majority of participants were female (72.9%), and the most commonly observed psychiatric diagnoses were ADHD (56%) and anxiety disorder (43.9%). A weak positive correlation was found between the CDS Scale (Parent Form) slow subscale and sensory sensitivity ($r=0.192$, $p=.048$) and low registration ($r=0.283$, $p=.003$). Additionally, a weak positive correlation was observed between the drowsy subscale and low registration ($r=0.192$, $p=.047$). A weak positive correlation was seen between the total score of the CDS Scale parent form and low registration ($r=0.017$, $p=.017$). For the total score of the CDS Self-Report Scale, weak positive correlations were found with sensory avoidance ($r=0.342$, $p<.001$), sensory sensitivity ($r=0.555$, $p<.001$), and sensory seeking ($r=0.195$, $p<.001$), while a strong positive correlation was found with low registration ($r=0.641$, $p<.001$).

CONCLUSIONS: This study hypothesizes a potential relationship between CDS symptoms and sensory processing. In our study, the positive relationship found particularly between CDS and the low registration profile suggests that the symptoms of slowness, drowsiness, hypoactivity, and inattentiveness in CDS may be linked to these individuals responding less to environmental stimuli This situation may affect other functional areas in CDS. For example, a reduced response to social stimuli may be one of the underlying reasons for social withdrawal in CDS. With this preliminary study, we present initial data that we believe will help explain the relationship between sensory processing, CDS, and internalizing comorbid conditions, as well as the differences between CDS and ADHD.

Keywords: ADHD, Sensory Processing, Adolescent

AuthorToEditor: 1. Cheng, S. S., & Boggett-Carsjens, J. (2005). Consider sensory processing disorders in the explosive child: Case report and review. Canadian Child and Adolescent Psychiatry Review, 14(2), 44–48. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2542921/ 2. Yung, T. W. K., Lai, C. Y. Y., & Chan, C. C. H. (2022). Abnormal physiological responses toward sensory stimulus are related to the attention deficits in children with sluggish cognitive tempo. Frontiers in Neuroscience, 16.https://doi.org/10.3389/fnins.2022.875064 3. Miller, L. J., Anzalone, M. E., Lane, S. J., Cermak, S. A., & Osten, E. T. (2012). Sensory Processing Measure–Preschool (SPM-P): Development and validation. American Journal of Occupational Therapy, 66(2), 204–210. https://doi.org/10.1080/19411243.2011.573245 4. Fabio, R. A., Orsino, C., Lecciso, F., Levante, A., & Suriano, R. (2024). Atypical sensory processing in adolescents with Attention Deficit Hyperactivity Disorder: A comparative study. Research in Developmental Disabilities, 135, 104674. https://doi.org/10.1016/j.ridd.2024.104674

[Abstract:0153]

Neurodevelopmental Disorders in the Digital Age: The Role Of ChatGPT for Parents and Professionals

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BACKGROUND AND AIM: Nowadays, AI-supported language models have become important tools to facilitate access to information in healthcare. Parents seeking information on neurodevelopmental disorders may face various difficulties in accessing accurate and reliable resources. AI-based systems such as ChatGPT have the potential to provide fast and accessible information based on large data pools. This study evaluates the potential of ChatGPT, a promising and innovative artificial intelligence program, to provide accurate, up-to-date and accessible information about neurodevelopmental disorders for parents and experts, and examines its reliability, advantages and limitations. The place of artificial intelligence in health communication and its possible future uses are also discussed.

METHODS: In this study, the most frequently asked questions by families to mental health professionals about the common neurodevelopmental disorders Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorder (ASD) and Specific Learning Disorder (SLD) were posed to ChatGPT using two separate accounts defined as parent/caregiver and an experienced professional. The answers provided by ChatGPT were independently evaluated by two experts for accuracy, clarity and inclusiveness.

RESULTS: Our study results show that the information provided by the ChatGPT on common neurodevelopmental disorders is highly accurate and comprehensive. There are no significant differences between neurodevelopmental disorders in the accuracy, clarity and comprehensiveness of the answers provided by ChatGPT to the questions. However, in contrast to responses to an experienced professional, responses to a parent/caregiver seeking information about neurodevelopmental disorders may be less clear and understandable due to medical jargon and excessive detail. In addition, the accuracy scores of the responses to basic knowledge questions about neurodevelopmental disorders were significantly higher than the accuracy scores of the responses to questions about the treatment area where individual approach is important ($p<0.05$).

CONCLUSIONS: While current findings suggest that ChatGPT can provide accurate and comprehensive information, concerns about its potential to cause health anxiety and confusion, particularly in the context of mental disorders, indicate that it is not yet suitable to be recommended as the sole source of medical information for non-experts and requires further development. Additionally, the lack of real-time validation by healthcare professionals raises concerns regarding misinformation and misinterpretation.To enhance its reliability and usability in the field of neurodevelopmental disorders, ChatGPT should be integrated with expert-reviewed medical databases and structured in a way that prioritizes evidence-based guidance. Future research should focus on assessing the long-term impact of AI-generated medical information on users‘ decision-making processes and psychological well-being. While ChatGPT has the potential to serve as a valuable supplementary tool for parents and professionals, its role should be clearly defined within a framework that ensures accuracy, safety, and ethical considerations in health communication.

Keywords: Artificial intelligence, ChatGPT, neurodevelopmental disorders, artificial intelligence in psychiatry

[Abstract:0160]

Investigation of the Relationship Between Smartphone Addiction and Empathy and Aggression Levels of Children with Attention-Deficit Hyperactivity Disorder and Their Mothers

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BACKGROUND AND AIM: Smartphone addiction is associated with many health problems and clinical factors in children and adolescents and its prevalence is increasing day by day. Attention-deficit hyperactivity disorder (ADHD) is a common neurodevelopmental disorder in childhood and is associated with addictions. However, there are few studies examining smartphone addiction and related factors in ADHD. The aim of this study was to investigate the relationship between smartphone addiction and empathy and aggression levels in children with ADHD and their mothers, and to investigate the relationship of mothers' smartphone addiction, aggression and empathy levels and these variables in children.

METHODS: The study included 114 children aged 7-12 years with ADHD diagnosed according to DSM-5 diagnostic criteria without any comorbidities and their mothers. Children and mothers completed The Smartphone Addiction Scale Short Version (SAS-SV), Buss-Perry Aggression Questionnaire (BPAQ) and sociodemographic data form that also assesses smartphone usage habits, also children completed Bryant's Empathy Index for Children (BEI) and mothers completed The Toronto Empathy Questionnaire (TEQ). The study was approved by the ethics committee of university.

RESULTS: The mean age of the cases was 9.70±1.46 and 83 (72.8%) of them were boys. Among the patients, 67 (58.8%) were using methylphenidate, 12 (10.5%) were using atomoxetine and 11 (9.6%) were using combination therapy. 24 (21.1) of the patients were not taking any medication. While the daily smartphone usage time of children was 2.35±1.76 hours, this time was 3.58±3.05 hours for their mothers. Children most frequently used smartphones to play online games (85.1%), while mothers most frequently used them to make phone calls (92.9%). Pearson correlation analysis revealed a negative correlation between SAS-SV and BEI scores ($r=-0.187$, $p=0.046$) and a positive correlation between SAS-SV and BPAQ scores ($r=0.282$, $p=0.002$) in children. Similarly, there was a negative correlation between SAS-SV and TEQ scores ($r=-0.388$, $p<0.001$) and a positive correlation between SAS-SV and BPAQ scores ($r=0.286$, $p=0.002$) in mothers. No correlation was found between the scale scores of the children and mothers.

CONCLUSIONS: In this study, significant relationships were found between smartphone addiction and aggression and empathy levels in both children with ADHD and their mothers. Increased smartphone use may be associated with decreased empathy and increased aggression, or smartphone use can be reduced with interventions that focus on empathy and aggression. However, studies with a larger population are needed to understand the association of these clinical factors with smartphone addiction in children with ADHD, as well as the interrelationship of these clinical components in mothers and children.

Keywords: ADHD, aggression, empathy, smartphone addiction

[Abstract:0161]

Investigation of Psychological Factors Associated with Craving in Patients with Alcohol Use Disorder

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BACKGROUND AND AIM: Craving is a subjective impulse that can lead an individual to resume alcohol or substance use(1).In alcohol use disorder, craving is considered a strong predictor of relapse, and high levels of craving are said to pose a risk for relapse in individuals with addiction(2).Our study aims to examine the factors related to alcohol consumption and the relationship between craving levels, psychological flexibility, and valued living in patients with Alcohol Use Disorder (AUD).

METHODS: A total of 38 participants aged between 18 and 65 years,who had been diagnosed with AUD according to DSM-5 criteria by a clinician,were included in the study.Participants were selected from patients who sought outpatient treatment or were hospitalized at the Treatment and Training Center for Alcohol and Substance Dependence clinics.Patients who had consumed alcohol in the last two weeks,exhibited signs of withdrawal or intoxication,used benzodiazepines were excluded from the study.Participants were administered the Sociodemographic Data Form, Penn Alcohol Craving Scale (PACS), Substance Use Stigma Mechanism Scale (SM-SUMS), Acceptance and Action Questionnaire for Substance Abuse (AAQ-SA), and Valuing Questionnaire (VQ).The data analysis involved descriptive statistics, correlation analyses and Mann-Whitney U test. RESULTS: Among the 38 participants,33 were male (86.8%). The average age of the participants was found to be 47.05(SD = 9.11). According to the correlation analysis, a moderate negative correlation was found between PACS and AAQ-SA (Rho = -0.466) as well as between PACS and VQ (Rho = -0.460). There was a strong positive correlation between AAQ-SA and VQ(r = 0.688), while a weak negative correlation was noted between AAQ-SA and SU-SMS(r = -0.346). No significant correlation was found between SU-SMS and PACS.

To evaluate differences between groups, SM-SUMS, VQ, and AAQ-SA scores were categorized into two groups (low and high); no statistically significant differences were found between the groups in terms of age and gender. To examine the differences in PACS levels among the groups, the Mann-Whitney U test was applied. There was no significant difference in PACS levels between the groups with low and high SM-SUMS (U=156.50,p=0.489). However, significant differences in PACS levels were found among groups classified by VQ and AAQ-SA scores (VQ:U=74.50, p=0.002; AAQ-SA: U=82.50, p=0.004). The group with high VQ levels exhibited lower PACS levels compared to the group with low VQ levels. Similarly, the group with high AAQ-SA levels also exhibited lower PACS levels compared to the group with low AAQ-SA levels.

CONCLUSIONS: Preliminary results show that craving levels are lower in groups with higher psychological flexibility and greater engagement in value-driven behaviors compared to those with lower flexibility and less involvement in valued activities. Implementing values-based interventions and enhancing psychological flexibility may help patients manage cravings and reduce the long-term risk of relapse. Understanding the psychological processes related to craving can guide the development of targeted, effective treatment strategies for AUD.

Keywords: Alcohol use disorder, craving, psychological flexibility, valued living

AuthorToEditor: Referanslar: 1. Ünal, S., & Çelikay Söyler, H. (2023). Alkol bağımlılığında nüksü yordayan faktörler: Aile ortamı ve özyeterlilik. Journal of Social, Humanities and Administrative Sciences, 9(67), 3268-3281. https://doi.org/10.29228/JOSHAS.70759. 2. Bottlender M, Soyka M. Impact of craving on alcohol relapse during, and 12 months following, outpatient treatment. Alcohol Alcohol. 2004 Jul-Aug; 39(4): 357-61. doi: 10.1093/alcalc/agh073. PMID: 15208171.

[Abstract:0166]

Alexithymia Predicts Weight Loss Success in Obese Women: No Mediating Role of Depression

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BACKGROUND AND AIM: Obesity, defined as a body mass index of 30 or more,is a multifactorial pathology characterised by complex interactions between biological and psychological factors [1]. Alexithymia is a term used to describe difficulties in recognising, defining and expressing emotions. Although not classified as a mental disorder in itself,it is often associated with other psychiatric disorders [2]. The underlying mechanisms linking alexithymia and obesity are not fully understood.The hypotheses of this study are that there is a negative relationship between the severity of alexithymia and weight loss success in obese patients,and that alexithymia has both direct and indirect effects on weight loss success through depression.

METHODS: This study was conducted at the obesity centre of a secondary state hospital in Ankara and patients were enrolled in a six-month diet and education programme.At baseline, the Toronto Alexithymia Scale (TAS) and the Beck Depression Inventory (BDI) were administered to assess levels of alexithymia and depression, respectively, and body mass index(BMI) was calculated. At the end of six months,the BMI were calculated again and the rate of change in BMI was calculated by dividing the difference in BMI by the baseline BMI. Data were analyzed with IBM SPSS v23.The mediating role of the BDI score in the effect of the TAS score on the rate of change in BMI was analysed using the Process v4.2 package by Andrew F.Hayes and model 4 was used. The bootstrap method was used to test the indirect effect.Significance level was taken as $p<0.05$. This study was conducted with the approval of Ankara University Faculty of Medicine Ethics Committee on 20.06.2024 (No: İ11-834-24), written informed consent was obtained from all participants.

RESULTS: The study included 49 obese women.There is a statistically significant negative correlation between the rate of change in BMI and the TAS score at baseline ($r=-0,756;p<0,001$); whereas there is no statistically significant correlation between the BDI score and the rate of change in BMI ($r=0,037;p=0,802$). The regression model assuming that alexithymia has both direct and indirect effects on the rate of change of BMI by increasing the level of depression was found to be statistically significant ($F=25,276;p<0,001$). According to this model, TAS score has an effect on the rate of change in BMI, and a one point increase in TAS score reduces the rate of change in BMI by 0.003 points. BDI score had no effect on the rate of change in BMI ($p=0,690$). The mediating role of the BDI score in the effect of the TAS score on the rate of change in BMI was assessed using the bootstrap method. The indirect effect of TAS score on the rate of change in BMI through depression was not significant.In other words, the effect of TAS score on the rate of change in BMI is not mediated by BDI score.

CONCLUSIONS: This study showed that the severity of alexithymia had an effect on weight loss in obese women, and that this effect was independent of the severity of depression. Considering that there are still unmet needs in the understanding and management of obesity, reducing alexithymia may be a potential target to be managed in this patient group.

Keywords: Alexithymia, depression, eating disorders, obesity

AuthorToEditor: References 1.Karasu, S.R., Of mind and matter: psychological dimensions in obesity. American journal of psychotherapy, 2012. 66(2): p. 111-128. 2.Westwood, H., et al., Alexithymia in eating disorders: Systematic review and meta-analyses of studies using the Toronto Alexithymia Scale. Journal of psychosomatic research, 2017. 99: p. 66-81.

[Abstract:0183]

Comparison of Auditory Performance of Children with Attention Deficit Hyperactivity Disorder to a Healthy Control Group

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BACKGROUND AND AIM: Hyperacusis is described as a reduced tolerance to sounds of average intensity, sometimes accompanied by painful sensitivity to ordinary environmental sounds, with perceptual, psychological, and social dimensions. While auditory processing disorders, especially hyperacusis, have been widely studied in individuals with autism spectrum disorder (ASD)(1), data on attention deficit hyperactivity disorder (ADHD)(2) are limited. The aim of this study is to examine whether children diagnosed with ADHD, as reported by their families, exhibit lower auditory performance compared to healthy controls.

METHODS: The study sample consists of 17 children and adolescents diagnosed with ADHD, who do not have hearing impairment, and who presented to the clinic of Dr. Rukiye Çolak Sivri between November 1, 2024, and December 1, 2024. The control group consists of children who visited the same clinic for consultation but had no active psychiatric disorders and hearing problem. In this study, the Children's Auditory Performance Assessment Scale (CİPDÖ) and the Conners Parent Rating Scale (CADÖ-48) were used. Statistical analyses were conducted using Student's t-test and Mann-Whitney U test for pairwise comparison of continuous variables.

RESULTS: In the ideal environment, the ADHD group had significantly lower auditory performance compared to the control group ($p = 0.017$). In the multiple stimuli condition, the ADHD group performed significantly worse than the control group ($p = 0.01$).In terms of auditory memory scores, the ADHD group showed a significant decrease ($p = 0.001$). In the noisy environment, the ADHD group had a significantly lower performance compared to the control group ($p = 0.006$). There were no significant differences between the groups in the silent environment ($p = 0.055$) and auditory attention ($p = 0.108$) scores ($p > 0.05$).

CONCLUSIONS: The results show that children diagnosed with ADHD have more difficulty in both ideal and noisy environments compared to the healthy control group. However, this difference was not detected in the quiet environment. This finding shows that auditory processing difficulties in ADHD are more pronounced in environments with external stimuli or noise rather than in quiet environments. Considering that children with ADHD are educated in noisy and multi-stimulus classroom environments, it should be kept in mind that this situation may affect attention and learning processes.

Keywords: Adhd, auditory processing disorders, hyperacusis

AuthorToEditor: 1. Thabet E.M, Zaghloul H.S. Auditory profile and high resolution CT scan in autism spectrum disorders children with auditory hypersensitivity. Eur. Arch. Otorhinolaryngol. 2013; 270: 2353–2358. [PubMed: 23580033] 2. Ralli M, Romani M, Zodda A, Yoshie Russo F, Altissimi G, Orlando MP, Cammeresi MG, Penge R, Turchetta R, Hyperacusis in Children with Attention Deficit Hyperactivity Disorder: A Preliminary Study. International Journal of Environmental Research and Public Health 2020;17(9):3045. [PubMed: 32349379]

[Abstract:0191]

The Impact of Chronotype on Anhedonia, Impulsivity, and Eating Behavior in Medical Students

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BACKGROUND AND AIM: Chronotype is defined as the expression of circadian rhythms of various mechanisms, such as body temperature, cortisol secretion, eating, and sleeping patterns. There is a well-documented bidirectional relationship between neurotransmitter systems and chronobiology, with these systems playing a crucial regulatory role in impulsivity, eating behavior, and hedonic processes. Medical students are at increased risk of mental health problems due to the escalating academic and social demands of young adulthood. This study aims to investigate the impact of various chronotypes on anhedonia, impulsivity, and eating behavior in this population. The findings may provide valuable insights for the development of tailored interventions to promote psychological well-being in medical students.

METHODS: This study was conducted online with the participation of 109 students of the Faculty of Medicine. This study was approved by Usak University Ethics Committee. The participants completed Morningness-Eveningness Scale (MES), Turkish version of the Temporal Experience of Pleasure Scale (TEPS-TR), Barratt Impulsivity Scale (BIS) and Dutch Eating Behavior Questionnaire (DEBQ).

RESULTS: Participants were categorised based on their chronotype scores as follows: 15 morning types, 67 middle types and 27 evening types. In terms of age and gender distribution, no significant differences were observed between these groups. Notably, the evening chronotype had the highest coffee consumption and the highest frequency of suicidal thoughts and behaviors. Participants with an evening chronotype were significantly more likely to live alone than those with other chronotypes. One of the most striking findings of the study was that anticipatory anhedonia was most pronounced in the evening chronotype group. There were significant differences between chronotypes in overall anhedonia, with the evening type having the highest association with anhedonia, followed by the middle and morning types. In terms of eating behavior, the morning chronotype scored highest on the external eating subscale of the DEBQ, while the evening type scored second.

CONCLUSIONS: This study provides novel insights into the psychological and behavioral implications of chronotype differences. While participants with an evening chronotype exhibit significantly higher levels of anticipatory anhedonia, no differences were observed between chronotypes in terms of consummatory anhedonia. This finding suggests that participants with evening types may experience deficits in reward anticipation and contextual motivation. Furthermore, given their higher caffeine consumption, greater likelihood of living alone, and higher prevalence of suicidal ideation and behavior, evening-types may represent a particularly vulnerable population in terms of mental health risks. These findings highlight the need for further research exploring the relationship between chronotype and the subdimensions of anhedonia. In terms of eating behaviour, results from the DEBQ indicate that participants with morning-type, who had the lowest levels of anhedonia, scored highest on external eating. This finding suggests that environmental cues may play a crucial role in shaping the eating behaviour of this group and may be associated with an increased susceptibility to overeating.

In conclusion, further investigation of the interplay between anhedonia and circadian rhythms may improve our understanding of the psychobiological role of chronotype in medical students. These findings could contribute to the development of individualised interventions to promote mental health and well-being in this population.

Keywords: Anhedonia, Chronotype, Medical Students, Eating Behavior

[Abstract:0195]

The Impact of Comorbid Learning Disorders on Problematic Technology Use in Youth with ADHD: A Cross-Sectional Study

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BACKGROUND AND AIM: Problematic technology use (PTU) has become one of the most common problems in child and adolescent psychiatry clinical practice.

In terms of PTU and Neurodevelopmental Disorders comorbidity, numerous research can be found in the literature, especially on ADHD and PTU. Some recent studies point that there may be a relationship between PTU and Learning Disorders (LD). Considering the high comorbidity rates between ADHD and LD, we believe that LD and PTU relationship should be further evaluated in detail, whether there‘s an independent interaction between them, or the previous findings might be related to the comorbid ADHD. Therefore, we conducted our study to examine the impact of learning disorders on problematic technology use among children and adolescents with ADHD.

METHODS: A total of 172 children and adolescents, aged 8 to 17, and their parents were interviewed. The study sample was divided into two groups; 86 were diagnosed with ADHD and LD, and 86 were diagnosed with only ADHD. Young Internet Addiction Scale, Internet Gaming Disorder Scale, Social Media Addiction Scale and Smartphone Addiction Scale were administered to the youth. Mathematical Literacy Assesment Scale (MLAS) was filled out by the parents to evaluate the LD symptom severity.

RESULTS: Screen time per day showed no difference between groups ($p=0.474$). The ADHD+LD group showed less variety in device usage ($t(170)=3.30$, $p=0.001$), with less preference of mobile phones ($X2(1)=4.79$, $p=0.029$) and computers ($X2(1)=7.07$, $p=0.008$). They also spent less time on texting ($p= 0.12$), watching movies ($p=0.15$) and videos ($p=0.029$), listening to music ($p=0.001$) and educative activities ($p<0.001$). Both groups had similar gaming participation rates, but Real-Time strategy ($p=0.001$), Multiplayer Online Battle Arena ($p<0.001$), and Puzzle& Platform ($p=0.001$) game genres were significantly less preferred by ADHD+LD group.

Evaluating the whole sample, positive-weak correlations were found between the number of screen-based devices owned and screen time per day ($r=0.204$,$p=0.007$), and device ownership duration and screen time per day ($r=0.282$,$p=<0.001$).

No significant difference was found in scale scores between groups.

Analysis of ADHD+LD group revealed that the MLAS scale scores did not show any correlation with the other scale scores or daily screen time.

CONCLUSIONS: Our findings indicate that despite the lack of significant differences in overall screen time and symptom severity between groups, LD seems to influence screen-based device usage patterns, leading to some variations.

Keywords: Child Psychiatry, Attention Deficit Hyperactivity Disorder, Learning Disabilities, Technology Addiction

[Abstract:0198]

Investigation of Post-Traumatic Growth and Quality of Life in Those Who Left the Disaster Area Following the February 6 Earthquakes 18 Months After the Earthquake

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BACKGROUND AND AIM: The devastating earthquakes in Turkey on February 6, 2023, were rare dual earthquakes worldwide. According to the evaluations made after the disaster, approximately 3.3 million people had to leave their settlements as of March 1, 2023. It has been shown that natural disasters negatively affect the psychological health of survivors. It has been shown that along with the devastating effects of disasters, some individuals experience positive changes called post-traumatic growth (PTG). PTG refers to the positive psychological changes that occur when an individual overcomes their struggle with difficult life events. Our study aimed to evaluate earthquake victims' PTG and quality of life 18 months after the February 6, 2023 earthquakes.

METHODS: 72 participants who applied to our psychiatry outpatient clinic 18 months after the February 6, 2023 earthquakes and agreed to participate were included in our study. This study aimed to evaluate the PTG and quality of life of displaced earthquake victims 18 months after the earthquake. The Post-Traumatic Growth Inventory (PTGI- subscores for change in self-perception, relationships with others, and change in philosophy of life and total score), Short Form-36 (SF-36; the physical component summary and the mental component summary. These dimensions were based on eight subscales: physical function; role limitations due to physical problems; bodily pain; general health; role limitations due to emotional issues; vitality; social functioning; mental health; and general health perception) results and socio-demographic data of the volunteers who accepted to participate in the study were noted. The ethics committee approval of the study was obtained from the Aksaray University Health Sciences Ethics Committee (2024/70).

RESULTS: 65,3% (47) of the participants were female and 34,7% (25) were male. PTGI total scores did not differ according to gender ($p>0,05$). Participants whose relatives had died had statistically significantly higher PTGI total scores, change in relationships with others, and change in philosophy of life subscores than participants with healthy relatives ($p<0,001$, $p=0,003$, $p<0,001$). It was found that earthquake victims whose houses were destroyed after the earthquake had higher PTGI total scores than earthquake victims whose houses were undamaged and damaged ($p=0,002$, $p=0,025$). A positive correlation was found between SF-36 mental component total scores and PTGI total scores ($p=0,031$; $r=0,255$).

CONCLUSIONS: Understanding the psychological reactions of those who left the region after disasters is at least as important as those who live in the region. Traumatic experiences can be a tool for individuals to find meaning in their lives. There is inconsistency in the literature regarding gender differences in PTG. The fact that no gender difference was found in PTG in our study can be explained by the fact that women and men similarly experience earthquakes in terms of displacement.PTG is known to increase the quality of life in many diseases. Our study emphasizes the relationship between PTG and quality of life in earthquake victims who are displaced after an earthquake.PTG after a disaster should be evaluated as a tool to improve the quality of life of disaster survivors. Post-earthquake healthcare providers need to focus on psychological growth and support it.

Keywords: Post-traumatic growth,quality of life, earthquake

AuthorToEditor: Teşekkürler Saygılarımla REFERENCES 1. Tedeschi RG, Calhoun LG. "Posttraumatic growth: conceptual foundations and empirical evidence". Psychological inquiry. 2004; 15:1-18. 2. Koçyiğit H, Aydemir Ö, Ölmez N, Memiş A. Validity and reliability of SF-36 Quality of Life Scale in Turkish Population. Journal of Medicine and Treatment. 1999; 12: 102-106. 3. Kağan M, Güleç M, Boysan M, Çavuş H. Hierarchical Factor Structure of Turkish Version of Post-Traumatic Growth Inventory in Normal Population. TAF Preventive Medicine Bulletin. 2012; 11. 4. IOM. 2023 Earthquakes Displacement Overview-Türkiye. DTM IOM Displacement Tracking Matrix. 1 March 2023. 5. Beaglehole B, Mulder RT, Frampton CM, et al. Psychological distress and psychiatric disorder after natural disasters: systematic review and meta-analysis. The British Journal of Psychiatry. 2018; 213:716-22.

[Abstract:0202]

Effects of Acute Liver Failure on Brain-derived Neurotrophic Factor and Anxiety-like Behaviors

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BACKGROUND AND AIM: Acute liver failure is a clinical picture of sudden onset in individuals without any known liver disease and causes severe problems. One of the etiologic factors is drug intoxication. In this study, we aimed to investigate the effect of acetaminophen-induced acute liver injury, one of the most frequently observed drug toxicities clinically, on brain-derived neurotrophic factor (BDNF) and anxiety-like behaviors in a rat model.

METHODS: 16 adult female Wistar albino rats were used in the study (n=8 in each group). Ethics committee approval was obtained from Ankara University (Decision no: 2023-9-78, Meeting date: 10/05/2023). The control group received 1 ml/kg of physiologic saline and the acute liver failure group received 750 mg/kg of acetaminophen i.p. After 23 hours, open field test and elevated plus maze were performed respectively. The subjects were sacrificed under 50 mg/kg sodium thiopental anesthesia. ALT and AST values were measured in serum. BDNF was analyzed from the prefrontal cortex and striatum by ELISA. As a statistical method, the Shapiro-Wilk test was performed to examine the distribution. Student's t-test was applied.

RESULTS: Anxiety behaviors were increased in both the open field test and the elevated plus maze in the model of acute liver failure. ALT and AST enzyme levels were significantly higher in the acute liver failure group ($p<0.0001$). BDNF levels in the prefrontal cortex ($p<0.02$) and striatum ($p<0.01$) were significantly reduced in the acute liver failure group compared to the control.

CONCLUSIONS: Acute liver failure is a common and critical health problem. In this preclinical animal model, anxiety-like behaviors were increased and brain BDNF levels were negatively affected. In particular metabolic debris generated during liver injury may cross the blood-brain barrier and cause these adverse effects. This relationship between the liver and the brain needs to be further investigated.

Keywords: Acute Liver Failure, BDNF, Elevated Plus Maze Test, Open Field Test.

[Abstract:0203]

Investigation of Medicinal Plants Used in Mental Health in Villages of Bursa and Balıkesir

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BACKGROUND AND AIM: Plants have been used for therapeutic purposes since the dawn of human history. Traditional medical practices remain highly significant, particularly for rural populations. This study aims to investigate the plants used in mental health by locals in the villages of Bursa and Balıkesir and to reveal the scientifically supported effects of these plants.

METHODS: The research was conducted in the villages of Bursa and Balıkesir between June and September 2018. Ethnobotanical surveys were completed by interviewing village residents to gather general information about the plants they used for mental health purposes, their local names, intended uses, utilized parts, preparation methods, applications, and dosages. The plant samples identified based on data obtained from 70 survey participants were collected and analyzed.

RESULTS: Plants identified with their scientific names and common local names include Valeriana montana (Valerian), Hypericum perforatum (St. John‘s Wort), Lavandula stoechas (French Lavender), Rosmarinus officinalis (Rosemary), Melissa officinalis (Lemon Balm), and Laurocerasus officinalis (Cherry Laurel). Among these, 50% belong to the Lamiaceae family (Rosmarinus officinalis, Lavandula stoechas, Melissa officinalis). The participants reported using 66% of these plants for anxiolytic purposes, 66% for sleep regulation and sedative effects, 16% as antidepressants, and 16% for mental fatigue.

CONCLUSIONS: This study underscores the integration of ethnobotanical knowledge with modern science and highlights the continued use of traditional medicinal practices in psychiatry. The findings scientifically support the beneficial effects of these traditionally used plants on mental health. However, further multidisciplinary studies involving psychiatrists and pharmacobotanists are needed to investigate the safety and efficacy of these medicinal plants for mental health applications.

Keywords: Herbal, medicinal plants, mental health, Valeriana montana (Valerian), Hypericum perforatum (St. John‘s Wort), anxiolytic

Figure 1: Lavandula stocheas (French Lavender)



Table 1: Plants Used by Participants for Mental Health and Their Properties

Familya	Tür	Yöresel Adı	Kullanılan Kısmı	Psikiyatride Kullanım Amacı
Lamiaceae	*Rosmarinus officinalis*	Rosemary	Leaf	Sleep disorders, mental fatigue
Lamiaceae	*Lavandula stoechas*	French Lavender	Herb, flower	Anxiety and headaches
Caprifoliaceae	*Valeriana montana*	Valerian	Root	Sleep disorders, anxiety
Hypericaceae	*Hypericum perforatum*	St. John's Wort	Flower	Sleep disorders, depression
Rosaceae	*Laurocerasus officinalis*	Cherry Laurel	Fruit	Anxiety
Lamiaceae	*Melissa officinalis*	Lemon Balm	Flower	Anxiety, sleep disorders

[Abstract:0208]

The Impact of Loneliness, Peer Relationships, and Perceived Parental Attitudes on Smartphone Addiction in Adolescents Diagnosed with Attention Deficit Hyperactivity Disorder

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BACKGROUND AND AIM:Chronic kidney disease (CKD) significantly impacts patients' quality of life, especially in its advanced stages requiring hemodialysis (HD). Depression, anxiety, and sleep disturbances are common in this population, further exacerbating their health outcomes. This study aims to explore the effects of depression and anxiety on sleep quality among HD patients and identify the demographic and clinical factors contributing to these associations. The findings aim to guide interventions to improve both psychological well-being and sleep quality in HD patients.

METHODS:This cross-sectional study was conducted in a single-center HD unit in Turkey. The study sample comprised 101 HD patients receiving treatment for at least three months and 100 age-, gender-, and marital status-matched healthy controls. Participants completed a battery of validated questionnaires, including the Hospital Anxiety and Depression Scale (HADS), Pittsburgh Sleep Quality Index (PSQI), Insomnia Severity Index (ISI), and Epworth Sleepiness Scale (ESS). Statistical analyses were performed using SPSS software (v26.0). Independent sample t-tests were used to compare HD patients and controls, while Pearson correlation and multiple regression analyses examined associations between variables and predictors of sleep quality.

RESULTS:The study revealed that HD patients had significantly poorer sleep quality compared to the control group. Among HD patients, 79.2% reported poor sleep quality (PSQI $\geq$ 6), significantly higher than in controls ($p<0.001$). Anxiety and depression scores were markedly elevated in HD patients (HADS-A: 11.17±4.58, HADS-D: 11.61±4.72) compared to the control group (HADS-A: 3.9±1.32, HADS-D: 4.77±1.43; $p<0.001$). Similarly, HD patients reported significantly higher levels of insomnia (ISI: 15.00±3.95 vs. 6.72±2.47, $p<0.001$) and daytime sleepiness (ESS: 11.68±3.42 vs. 6.98±2.31, $p<0.001$). Regression analyses identified anxiety (HADS-A, ß=1.051, $p<0.001$), depression (HADS-D, ß=-0.304, $p=0.006$), and marital status (ß=0.218, $p=0.005$) as significant predictors of PSQI scores, collectively explaining 56.8% of the variance in sleep quality. Married participants had better sleep quality compared to single participants, emphasizing the role of social support. Smoking and dialysis frequency were also associated with poor sleep quality. HD patients who smoked (95.9%) or underwent dialysis thrice weekly (83.3%) were more likely to report poor sleep compared to non-smokers and those receiving dialysis twice weekly. Anxiety and depression strongly correlated with poor sleep quality. HD patients with higher HADS-A and HADS-D scores reported significantly worse PSQI, ISI, and ESS scores. For instance, patients with poor sleep quality had mean HADS-A and HADS-D scores of 12.36±4.04 and 12.56±3.92, respectively, compared to 6.67±3.67 and 8.00±5.77 in those with normal sleep quality ($p<0.001$). These findings underscore the critical role of psychological distress in sleep disturbances among HD patients.

CONCLUSIONS:This study highlights the profound impact of depression and anxiety on sleep quality in HD patients. Psychological distress, coupled with factors such as smoking and frequent dialysis sessions, significantly contributes to poor sleep. These findings underscore the importance of integrating psychosocial support and mental health interventions into routine HD care. By addressing both physiological and psychological factors, healthcare providers can enhance the quality of life and clinical outcomes for HD patients.

Keywords: Chronic Kidney Disease, Hemodialysis, Depression, Anxiety, Sleep Quality

[Abstract:0208]

The Impact of Loneliness, Peer Relationships, and Perceived Parental Attitudes on Smartphone Addiction in Adolescents Diagnosed with Attention Deficit Hyperactivity Disorder

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BACKGROUND AND AIM: Adolescents with ADHD may be prone to excessive smartphone use due to symptoms such as distractibility, impulsivity and hyperactivity. In this study, we aimed to examine how smartphone addiction interacts with psychosocial factors such as loneliness, peer relationships, parental attitudes, depression, and anxiety in adolescents diagnosed with ADHD. Our research aims to shed light on potential interventions by revealing the impact of these factors on addiction levels.

METHODS: This study included 108 adolescents diagnosed with ADHD according to DSM-5 criteria during a clinician-conducted interview at the child and adolescent psychiatry outpatient clinic, as well as 108 adolescents without any psychopathological disorders as a control group. For diagnostic evaluation, a semi-structured interview titled "Affective Disorders and Schizophrenia Interview Schedule for School-Age Children- Current and Lifetime Version- Turkish Version" was conducted by the clinician with the participating adolescents, followed by the completion of a sociodemographic and clinical data collection form. The participating adolescents completed the "Smartphone Addiction Scale Short Version", "UCLA Loneliness Scale", "Peer Relations Scale", "Parenting Style Inventory", "Beck Depression Inventory" and "Beck Anxiety Inventory." Additionally, their parents filled out the "Conners Parent Rating Scale" and the "Screening and Evaluation Scale for Attention Deficit and Disruptive Behavior Disorders based on DSM-4".

RESULTS: It was found that the rate of adolescents diagnosed with ADHD receiving a diagnosis of smartphone addiction was higher compared to the control group. When participants were evaluated for psychosocial factors influencing smartphone addiction, it was observed that the ADHD group, compared to the control group, exhibited higher levels of loneliness, a tendency to use smartphones for gaming purposes, earlier age of first smartphone ownership, and higher rates of psychopathology in the family. In the ADHD group, factors predicting the level of smartphone addiction included a positive and highly significant relationship between loneliness and depression levels.

CONCLUSIONS: Smartphone addiction in adolescents diagnosed with ADHD is closely related to various psychosocial factors. Considering that factors such as loneliness and depression increase smartphone addiction, it is crucial to take these factors into account in interventions in this area. These findings highlight the need for developing holistic approaches to manage smartphone use in adolescents with ADHD.

Keywords: ADHD, smartphone addiction, lonelines, peer relationships, parental attitude.

Comparison of Participants

Variables	ADHD (n=108), Mean ± SD	HC (n=108), Mean ± SD	t	df	p
Smartphone Scale Score	33.36 ± 10.87	27.70 ± 8.20	-4.32	198.945	<0.001
Age of First Phone Use (years)	11.11 ± 1.86	11.94 ± 2.06	3.12	211.759	0.002
Duration of Phone Use (months)	19.18 ± 12.52	17.62 ± 13.05	0.894	214	0.372

(HC: Healthy Control, Mean: Average, SD: Standard Deviation, df: Degrees of Freedom, t: Independent Samples t-test) Accordingly, the smartphone scale score was found to be significantly higher in the ADHD group (33.36 ± 10.87) compared to the HC group (27.70 ± 8.20) ($t(198.945) = -4.32$, $p < 0.001$). Regarding the age of first phone use, participants in the ADHD group (11.11 ± 1.86) started using smartphones earlier than those in the HC group (11.94 ± 2.06) ($t(211.759) = 3.12$, $p = 0.002$). However, there was no significant difference between the two groups in terms of phone usage duration ($p > 0.05$).

Relationship Between Smartphone Scale Scores and UCLA Loneliness, BECK Anxiety, BECK Depression, and Peer Relationship Scale Scores in Participants with ADHD (n=108)

Variables a	UCLA	BECK-A	BECK-D	Peer Relationships Total
Smartphone Scale Score	0.678**	0.134	0.524**	-0.018

(BECK-A: Beck Anxiety Inventory, BECK-D: Beck Depression Inventory, UCLA: Loneliness Scale a. Pearson correlation analysis (r coefficients are presented in the table) *p < 0.05, *p < 0.001) The data on the relationship between smartphone scale scores and UCLA, BECK-A, BECK-D, and Peer Relationships Total scores for participants with ADHD are presented in Table 2. Accordingly, a significant positive and strong correlation was found between smartphone scale scores and UCLA loneliness scale scores ($r = 0.678$, $p < 0.001$). Additionally, a significant positive and strong correlation was observed between smartphone scale scores and BECK-D depression scores ($r = 0.524$, $p < 0.001$). However, no significant relationship was found between smartphone scale scores and BECK-A anxiety or Peer Relationships Total scores ($p > 0.05$).

Factors Predicting Smartphone Scale Scores in Participants with ADHD (n=108)

Variables	B	SE	Beta	t	p
UCLA	1.107	0.199	0.564	5.57	<0.001
BECK-D	0.113	0.089	0.126	1.27	0.206
Turgay-DE	0.110	0.134	0.067	0.82	0.414
Turgay-HA	-0.199	0.124	-0.134	-1.60	0.113

SE: Standard Error (Dependent Variable: Smartphone Scale Score, Model Information: $F(4,107) = 23.70$, $p < 0.001$, $R = 0.692$, $R^2 = 0.459$) The details of the multiple linear regression model designed to identify the factors predicting smartphone addiction levels are presented in Table 3. A regression model with four independent variables—loneliness level (UCLA), severity of inattention (Turgay-DE), severity of hyperactivity symptoms (Turgay-HA), and severity of depressive symptoms (BECK-D)—was established. Accordingly, the model significantly predicts changes in smartphone addiction levels ($F(4,107) = 23.70$, $p < 0.001$). The model explains 45.9% of the variance in smartphone addiction levels. Among the independent variables, loneliness levels were found to significantly predict smartphone addiction levels ($p < 0.05$). However, the other independent variables in the model did not make a significant contribution ($p > 0.05$).

AuthorToEditor: 1. Cheung K, Theule J. Parental psychopathology in families of children with ADHD: A meta-analysis. Journal of child and Family Studies. 2016;25:3451-61. 2. Kim S-G, Park J, Kim H-T, Pan Z, Lee Y, McIntyre RS. The relationship between smartphone addiction and symptoms of depression, anxiety, and attention-deficit/hyperactivity in South Korean adolescents. Annals of general psychiatry. 2019;18:1-8. 3. Hoza B. Peer functioning in children with ADHD. Journal of pediatric psychology. 2007;32(6):655-63. 4. Li K, Chen L, Wang K, Jiang X, Ji Y, Fang S, et al. Emotional problems mediate the association between attention deficit/hyperactivity disorder and obesity in adolescents. BMC psychiatry. 2023;23(1):381. 5. Nijmeijer JS, Minderaa RB, Buitelaar JK, Mulligan A, Hartman CA, Hoekstra PJ. Attention-deficit/hyperactivity disorder and social dysfunctioning. Clinical psychology review. 2008;28(4):692-708.

[Abstract:0224]

Psychometric Properties and Validation of the Turkish Version of the Depression Anxiety Stress Scale for Youth (DASS-Y)

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BACKGROUND AND AIM: The rising common internalizing symptoms like depression, anxiety, and stress in children and adolescents highlight the necessity for early diagnosis and intervention. The Depression, Anxiety, and Stress Scale (DASS) is widely used in adult populations, including among Turkish adults. However, the DASS-Y (the youth version) is a new scale designed specifically for children and adolescents, and its Turkish validation has not yet been conducted. This study aims to translate the DASS-Y into Turkish and evaluate its psychometric properties in both psychiatric and non-psychiatric populations of Turkish children and adolescents.

METHODS: A multicenter cross-sectional study was conducted in Child and Adolescent Psychiatry (CAP) (n=166) and Pediatric clinics (n=146). The study consisted of participants aged 8-17 years from the CAP outpatient clinic (n= 166; 66.9% girls; mean age: 14.40 ± 2.34) and the General Pediatrics outpatient clinic (n = 146; 65.1% girls; mean age: 14.01 ± 2.17). We performed a Confirmatory factor analysis (CFA) on the proposed initial DASS-Y three-factor model. The Cronbach alpha coefficient was employed to evaluate internal consistency. In addition to the DASS-Y form, patients completed the Children‘s Depression Inventory (CDI), the Revised Child Anxiety and Depression Scale-Child Version (RCADS-CV), and the Perceived Stress Scale (PSC) to assess convergent validity. Pearson's r value was used in correlation analyses.

RESULTS: The CFA results yielded a good model fit, as indicated by the following values in psychiatric and non-psychiatric samples, respectively: RMSEA = 0.051/0.035; CFI = 0.994/0.997; SRMR = 0.074/0.087; TLI = 0.993/0.996. The scale‘s internal consistency was satisfactory, with Cronbach‘s alpha coefficients of 0.895/0.835 for depression, 0.856/0.810 for anxiety, 0.826/0.853 for stress, and an overall alpha of 0.924/0.922 for psychiatric and non-psychiatric samples, respectively. The DASS-Y total scores exhibited significant correlations with equivalent scale scores from the CDI ($r = 0.777$, $r = 0.639$), RCADS-CV total ($r = 0.770$, $r = 0.741$), and PSC ($r = 0.723$, $r = 0.747$) in the psychiatric and non-psychiatric sample, respectively. In the psychiatric sample, the depression factor showed significant correlations with the anxiety and stress factors ($p < 0.001$), yielding correlation coefficients of 0.563 and 0.647, respectively. The anxiety factor also demonstrated a significant correlation with the stress factor, with a correlation coefficient of 0.562 ($p < 0.001$) in the psychiatric sample. A significant difference was observed in the DASS-Y total scores, and all subscales between the psychiatric and non-psychiatric samples (all p values < 0.001).

CONCLUSIONS: The Turkish version of the DASS-Y is a valid and reliable tool for assessing depression, anxiety, and stress among both psychiatric and non-psychiatric Turkish children and adolescents. Consequently, our findings support the DASS-Y's original conceptual framework, demonstrating its utility as a standard tool for research and clinical practice among Turkish youth.

Keywords: Anxiety, DASS-Y, Depression, Reliability, Stress, Validation

AuthorToEditor: 1.Szabo, Marianna, Lovibond, Peter (2022) Development and Psychometric Properties of the DASS-Youth (DASS-Y): An Extension of the Depression Anxiety Stress Scales (DASS) to Adolescents and Children. Frontiers in Psychology, 10.3389/fpsyg.2022.766890 2.Lovibond, P. F., and Lovibond, S. H. (1995a). The structure of negative emotional states: comparison of the Depression Anxiety Stress Scales (DASS) with the BeckDepression and Anxiety Inventories. Behav. Res. Ther. 33, 335–343.doi:10.1016/0005-7967(94)00075-u 3.Lovibond, S. H., and Lovibond, P. F. (1995b). Manual for the Depression Anxiety Stress Scales, 2nd Edn. Sydney, NSW: Psychology Foundation. 4.Cao, Ch., Liao, Xl., Gamble, J.H. et al. Evaluating the psychometric properties of the Chinese Depression Anxiety Stress Scale for Youth (DASS-Y) and DASS-21. Child Adolesc Psychiatry Ment Health 17, 106 (2023). 5.Yıldırım A, Boysan M, Kefeli MC. Psychometric properties of the Turkish version of the Depression Anxiety Stress Scale-21 (DASS-21). Br J Guidance Couns. 2018;46(5):582–95.

[Abstract:0225]

Does Maternal Vitamin and Omega-3 Fatty Acid Intake During Pregnancy and the Prepartum Period Impact Symptoms of Attention Deficit Hyperactivity Disorder and Behavioral Issues in Children Aged 3-6 Years?

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BACKGROUND AND AIM: Maternal nutrition plays a vital role in fetal brain development. Adequate nutrition before and during pregnancy supports gamete function, placental development, and provides the essential building blocks for brain formation. During this critical period, the brain is highly sensitive to environmental influences, and disruptions can increase the risk of neurodevelopmental disorders. Additionally, maternal nutrition may influence the fetus through epigenetic mechanisms, shaping resilience or susceptibility to neurological conditions later in life. Thus, maternal nutrition represents a key opportunity for early interventions to promote optimal neurodevelopment (1). The impact of folic acid and multivitamin use on the development of ADHD remains unclear. This study aims to determine whether the use of folic acid and multivitamins before and during pregnancy can prevent ADHD and behavioral problems.

METHODS: The study was multicenter, and 527 children aged 3–6 years, who were brought to the centers by their mothers for any reason over the course of one year and volunteered to participate, were included in the study. Children with neurometabolic diseases, cognitive delays, or autism spectrum disorder were excluded from the study. Exclusion was determined through clinical interviews based on DSM-5 criteria and the Denver Developmental Screening Test. Data collection was conducted using a sociodemographic data form prepared by the researchers based on parental self-report, the Child Adjustment and Parent Efficacy Scale, and Ercan Preschool Disruptive Behavior Disorders Rating Scale.

RESULTS: When comparing those who took folic acid during pregnancy to those who did not, statistically significant differences were observed in the behavioral problems, child adjustment, and parental self-efficacy subscales of the CAPES-TR, as well as in the scores Ercan Preschool Disruptive Behavior Disorders Rating Scale. Children of mothers who took folic acid during pregnancy were found to have fewer behavioral problems, lower child adjustment scores, higher parental self-efficacy, and lower disruptive behavior disorder scores.

CONCLUSIONS: Consistent with previous studies, our research found that children of mothers who used folic acid during pregnancy demonstrated better child adjustment and a lower incidence of ADHD development (2). In conclusion, our study suggests that maternal use of folic acid and multivitamins during pregnancy and pre-pregnancy may reduce the development of ADHD in children through epigenetic mechanisms.

Keywords: Adhd, omega 3, maternal nutrition, multivitamin

AuthorToEditor: 1. Stephenson J, Heslehurst N, Hall J, Schoenaker DAJM, Hutchinson J, Cade JE, et al. Before the beginning: nutrition and lifestyle in the preconception period and its importance for future health. The Lancet. 2018;391(10132):1830-41. 2. Virk J, Liew Z, Olsen J, Nohr EA, Catov JM, Ritz B. Pre-conceptual and prenatal supplementary folic acid and multivitamin intake, behavioral problems, and hyperkinetic disorders: A study based on the Danish National Birth Cohort (DNBC). Nutritional neuroscience. 2018;21(5):352-60.

[Abstract:0233]

The Relationship Between Impulsivity, Theory of Mind Dysfunction, and Medication Adherence in Bipolar Disorder

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BACKGROUND AND AIM: Bipolar disorder (BD) is a persistent disorder characterized by manic, depressive, and mixed periods. Subsyndromal symptoms continue throughout life, regardless of the disease stage, and over time, they negatively affect the person's functionality and cause disability. Cognitive impairment, characterized by loss of learning and sensory processing ability, is a common problem. Social cognition is the ability to understand and interpret the reflection of one's own emotions and the mental processes of the other person, such as emotions, intentions, and desires. Theory of Mind (ToM) is one of the most important parameters of social cognition and has been shown to be impaired in psychiatric disorders. This impairment in social cognition is characterized by weaker psychosocial relationships. Although impulsivity, which is seen as a reflection of weak psychosocial relationships, is associated with BD during manic episodes, the available data show that impulsivity is not specific to the disease period and may be a fundamental feature of the disease.
In this study, we aimed to examine the relationship between ToM, impulsivity, and medication compliance in bipolar disorder.

METHODS: The study included volunteers diagnosed with bipolar disorder, with a HAM-D score < 7, a YMRS score < 4, and who had not shown symptoms of mania, depression, or hypomania in the last 6 months. Participants were selected through clinical interviews by two experienced clinicians. Written consent was obtained from the participants stating that they were volunteers. The sociodemographic data form, Young Mania Rating Scale (YMRS), Hamilton Depression Rating Scale (HAM-D), and Reading the Mind in the Eyes test (RMTE) were applied to the participants by the clinician. The Barratt Impulsivity Scale (BIS), Morisky Medication Adherence Scale (MMAS) were filled out by the participants.

RESULTS: The mean age of the participants was 37.0±12.3 years and 48.5% (n=66) were female. There was a statistically significant relationship between RMTE and MMAS scores (r=0.327), but no significant relationship was found with BIS scores. There was a significant relationship between MMAS and BIS total and subscale scores ($p>0.05$). It was tested whether BIS mediated the relationship between RMTE and MMAS. Accordingly, in the first regression analysis, RMTE is a not statistically significant predictor of the BIS mediator variable (a) ($p=0.940$). In the second regression analysis, BIS mediator variable is a statistically significant predictor of the MMAS (b) ($p<0.001$). In addition, the direct effect of the independent variable RMTE
on MMAS (c') is statistically significant ($p<0.001$). The indirect effect of the mediator variable RMTE on the independent variable BIS and the dependent variable MMAS (axb) ($p=0.940$) is not statistically significant. More clearly, BIS is not the mediator variable for the effect of RMTE on MMAS.

CONCLUSIONS: In our study, the complex relationship between RMTE, MMAS and BIS in BD patients was examined. Accordingly, BIS does not mediate the relationship between RMTE and MMAS. However, RMTE is effective on MMAS. This may be a method that can be used to predict medication compliance in bipolar disorder patients. However, detailed follow-up studies are needed.

Keywords: Bipolar disorder, Impulsivity, Medication Adherence, Theory of Mind, Treatment

[Abstract:0240]

Treatment of Depression Associated with Mitochondrial Cytopathy with Sertraline: An Adolescent Case Report

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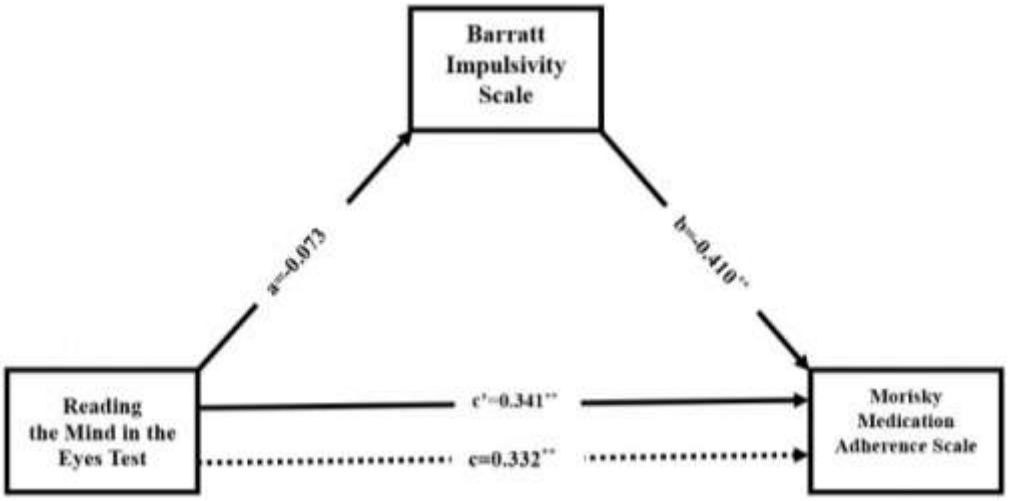
INTRODUCTION: Mitochondrial cytopathy is a rare group of disorders caused by mutations in mitochondrial or nuclear DNA, leading to deficits in energy production. These disorders primarily affect high-energy-demand organs, including the central nervous system, skeletal muscles, and the heart. Psychiatric conditions, such as major depression, bipolar disorder, schizophrenia, and anxiety disorders, are frequently reported in patients with mitochondrial cytopathy. Among these, depression is particularly common, likely due to mechanisms involving neuroinflammation, oxidative stress, and neurotransmitter imbalances.
Managing depression in mitochondrial cytopathy poses significant challenges. Altered cellular metabolism complicates the selection of appropriate medications, dosage adjustments, and predicting treatment responses. While selective serotonin reuptake inhibitors (SSRIs) are commonly used for depression, their efficacy and safety in mitochondrial disorders are not well-documented. To date, only one case report has described the use of escitalopram in children with mitochondrial disorders, and there are no published reports on the use of sertraline in this context.
This case report aims to address this gap by evaluating the efficacy and safety of sertraline in managing depression associated with mitochondrial cytopathy, with a focus on the importance of tailored treatment strategies for such complex cases.

CASE PRESENTATION: A 16-year-old male diagnosed with mitochondrial cytopathy and moderate intellectual disability presented with a one-year history of depressive symptoms, including social withdrawal, reluctance to leave home, and anhedonia. Following a thorough clinical evaluation, a diagnosis of depression was confirmed. Given his cognitive limitations, potential side effects, and symptom severity, sertraline was initiated at a low dose of 12.5 mg/day. After two weeks, the dose was titrated to 25 mg/day based on parental feedback and clinical assessment.
Over the first six weeks, the patient demonstrated significant symptom improvement. However, a partial relapse occurred after five months, prompting an increase in the sertraline dose to 50 mg/day, which was well-tolerated. Sustained remission was achieved over nine months of follow-up, as evidenced by reductions in Child Anxiety and Depression Scale–Parent Form (CADS-P) scores and notable improvements in quality of life.

CONCLUSION: Sertraline was selected in this case for its favorable pharmacological properties, including potent serotonergic effects, dopamine reuptake inhibition, low sedative potential, minimal pharmacokinetic interaction risk, and antioxidant properties. These features make it particularly suitable for addressing depressive symptoms and energy deficits in mitochondrial disorders.
This report demonstrates the effectiveness and safety of sertraline in treating depression associated with mitochondrial cytopathy. It highlights the complexities of managing psychiatric symptoms in mitochondrial disorders due to altered cellular metabolism and underscores the necessity of individualized treatment planning and careful dose titration. Given the limited existing literature, further studies are essential to refine therapeutic approaches for this unique patient population.

Keywords: Depression, Mitochondrial Cytopathy, Sertraline

The mediating role of the RMTE in the relationship between the BIS and YBOCS



Sociodemographic characteristics and scale scores of the participants

Age	37.0±12.3
Gender	Female= 66 (48.5%) Male= 70 (51.5%)
Working Status	Working= 52 (38.2%) Not-working= 52 (38.2%) Retired= 16 (11.8%) Student= 16(11,8%)
Marital Status	Single= 62 (45.6%) Married= 66 (48.5%) Divorced= 8 (5.9%)
Economic status	Low= 44 (32.6%) Middle= 64 (46.8%) High= 28 (20.6%)
Education year, mean±SD	12.0±3.69
Duration of illness; year, mean±SD	12.2±9.04
Number of hospitalizations; mean±SD	2.26±2.67
Mood stabilizer use	Yes= 116 (85.4%) No= 20 (14.6%)
Antipsychotic use	Yes= 113 (83.3%) No= 23 (16.7%)
Family history	Yes= 56 (41.2%) No= 80 (58.8%)
Reading Minds Through Eyes	20.7±3.84
Morisky Medication Adherence Scale	6.85±1,2
BIS Non-planning	6.85±1.12
BIS Motor	8.37±2.42
BIS Attention	8.72±2.56
BIS Total	26.9±6.86

BIS: Barratt Impulsiveness Scale

Correlation analysis of scale scores with RMTE-Total and MMAS

		Reading Minds Through Eyes-Total	Morisky Medication Adherence Scale
Reading Minds Through Eyes-Total	Pearson Correlation Sig. (2-tailed)	1	.327** .001
Morisky Medication Adherence Scale	Pearson Correlation Sig. (2-tailed)	.327** .001	1
BIS Non-planning	Pearson Correlation Sig. (2-tailed)	-.150 .082	-.353** .000
BIS Motor	Pearson Correlation Sig. (2-tailed)	-.013 .879	-.373** .000
BIS Attention	Pearson Correlation Sig. (2-tailed)	-.051 .556	-.235* .021
BIS Total	Pearson Correlation Sig. (2-tailed)	-.101 .240	-.410** .000

BIS: Barratt Impulsiveness Scale

[Abstract:0265]

Do the Recovery Subdomains Differ Over the Follow-up Period?

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BACKGROUND AND AIM: Clinical assessment in mental health should include the level of psychiatric symptoms, functionality, and patient satisfaction. Positive outcome of the treatment process implies a decrease in the individual's symptoms and an increase in functionality and the general quality of life. Nonetheless, alterations in the clinical course may not always be in linear order; accordingly, understanding the alterations throughout treatment is quite significant. In the light of these data, we aimed to evaluate whether the recovery subdomains differed during the treatment process.

METHODS: Our study included 1852 male and 1892 female patients aged 18-65 years who were admitted to the Moodist Hospital outpatient clinic with depressive symptoms between July 2024 and December 2024. All patients participating in the study completed 6 clinical assessment sessions, and the Moodist Outcome Inventory (MOI) was applied at each session. MOI is a 4-question scale that evaluates individuals in the areas of well-being, mood, relationships, and participation in life (work, school, home, and taking responsibility for oneself). This study was approved by the Istanbul Kent University Social Sciences and Humanities Research and Publication Ethics Committee.

RESULTS: When the MOI scores in the 6 clinical assessments were evaluated, the change in well-being and mental state was found to be statistically significant ($p<0,05$), while the change in the relationship and participation in life scores was not found to be statistically significant.

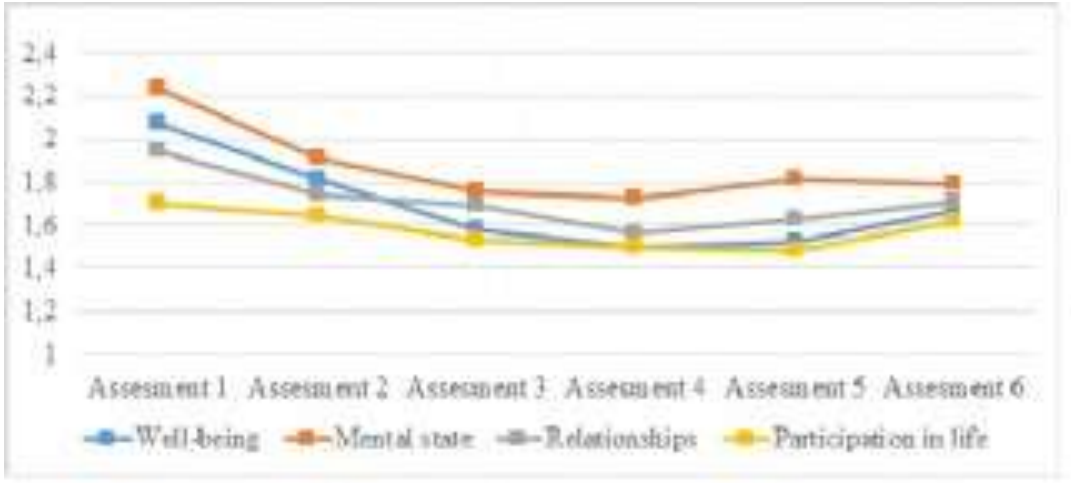
CONCLUSIONS: It has been shown that well-being and mental state improve more quickly in individuals treated for depression, but relationships and participation in life may recover later. Functioning is known to be an important factor determining the level of recovery, and if subdomains of recovery are not evaluated separately, limitations in the quality of life of individuals may be overlooked. Limitations of our study include the fact that the severity of depression of the participants was not the same and the time between clinical assesments varied.

Keywords: Follow-up, Outcome, Recovery

Figure 1: Change in total MOI scores at six clinical assessments



Figure 2: Change in MOI scores in six clinical assessments according to subdomains



AuthorToEditor: References: 1. Sederer LI, Hermann R, Dickey B. The imperative of outcome assessment in psychiatry. American Journal of Medical Quality. 1995; 10(3): 127-132. 2. Niessen LW, Grijseels EWM, Rutten FFH. The evidence-based approach in health policy and health care delivery. Social Science&Medicine. 2000; 51(6): 859-869. 3. Clapp JD, Grubaugh AL, Allen JG, et al. Modeling trajectory of depressive symptoms among psychiatric inpatients: A latent growth curve approach. J Clin Psychiatry. 2013; 74(5): 492-499. 4. Lambert MJ. Maximizing psychotherapy outcome beyond evidence-based medicine. Psychotherapy and Psychosomatics. 2017; 86(2): 80-89. 5. Ro E, Clark LA. Psychosocial functioning in the context of diagnosis: assessment and theoretical issues. Psychological Assessment. 2009; 21(3):313.

[Abstract:0268]

What Are the Levels and Interactions of Neuroligin-1, Neuroligin-3, and Inflammatory Cytokines (IL-6, IL-8) in Children Diagnosed with Autism Spectrum Disorder?

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BACKGROUND AND AIM: Autism spectrum disorder (ASD) is a group of complex, multifactorial neurodevelopmental disorders. It is characterized by a broad and variable range of neuropsychiatric symptoms, including deficits in social communication, narrow and restricted interests, and repetitive behaviors. Although its worldwide prevalence is difficult to estimate, it is estimated to affect 0.6 to 2% of the global population. The etiology of ASD is largely unknown, although a combination of environmental and genetic factors are hypothesized to contribute to its pathogenesis. Substantial evidence suggests that the immune system plays an important role in the pathogenesis of autism. Although there is no general consensus, individuals with ASD are thought to have higher concentrations of proinflammatory or lower concentrations of anti-inflammatory cytokines than healthy controls. On the other hand, a large number of candidate genes linked to ASD development have been highlighted, many of which encode synaptic proteins, including neuronal cell adhesion molecules (CAMs). These molecules are classified according to their structure, including the neurexin family, neuroligin family and immunoglobulin superfamily CAMs. Neuroligins are cell adhesion molecules anchored to the postsynaptic membrane that act as synaptic regulators involved in synapse identity specification and functional maturation. We aimed to evaluate the relationship between neuroligin-1 (NLGN-1) and neuroligin-3 (NLGN-3) levels, which are neuronal cell adhesion molecules (CAMs), and inflammatory cytokine (IL-6, IL-8) levels with disease severity and symptom clusters and with each other in children with ASD.

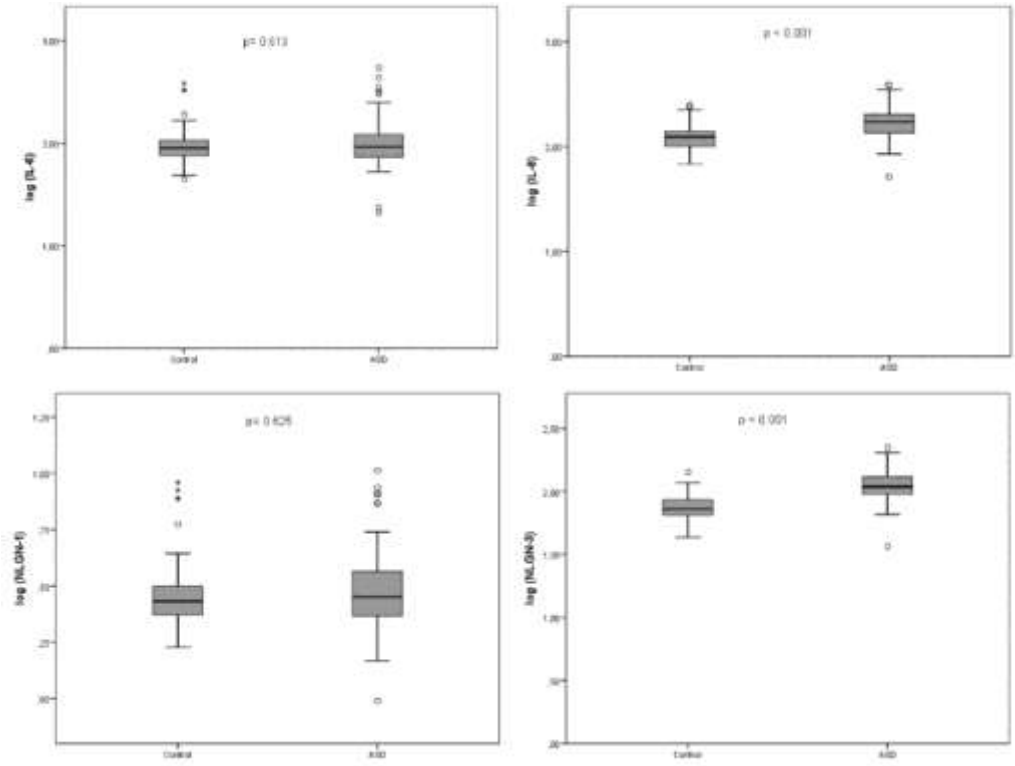
METHODS: Eighty children diagnosed with autism who met the inclusion criteria and sixty-five typically developing children matched for age and sex were included in the study. The children were evaluated psychiatrically through a semi-structured interview, DSM-5 criteria, the Childhood Autism Rating Scale (CARS), and the Social Communication Questionnaire (SCQ). IL-6, IL-8, NLGN-1, and NLGN-3 levels were analyzed in peripheral serum samples using human ELISA kits.

RESULTS: IL-8 and NLGN-3 levels were higher in the autism group ($p<0.001$, $p<0.001$). IL-6 was positively related to CARS and SCQ total scores ($p=0.021$, $p=0.040$, respectively). IL-8, and NLGN-3 were positively associated with the all subtests of the SCQ and the SCQ total score (all p values <0.001). NLGN-1, NLGN-3, and inflammatory cytokine (IL-6, IL-8) levels were positively correlated (all p values <0.001).

CONCLUSIONS: Neuroligins play a central role in the brain's ability to process information and maybe a key target in the pathogenesis of ASD. Further research is needed to determine whether, to what extent and how neuronal CAMs and immunity modulate each other and whether this contributes to ASD pathogenesis. Future studies should also be expanded to investigate the influence of variables such as oxidative stress, metalloproteases responsible for ectodomain shedding, or epigenetic regulation.

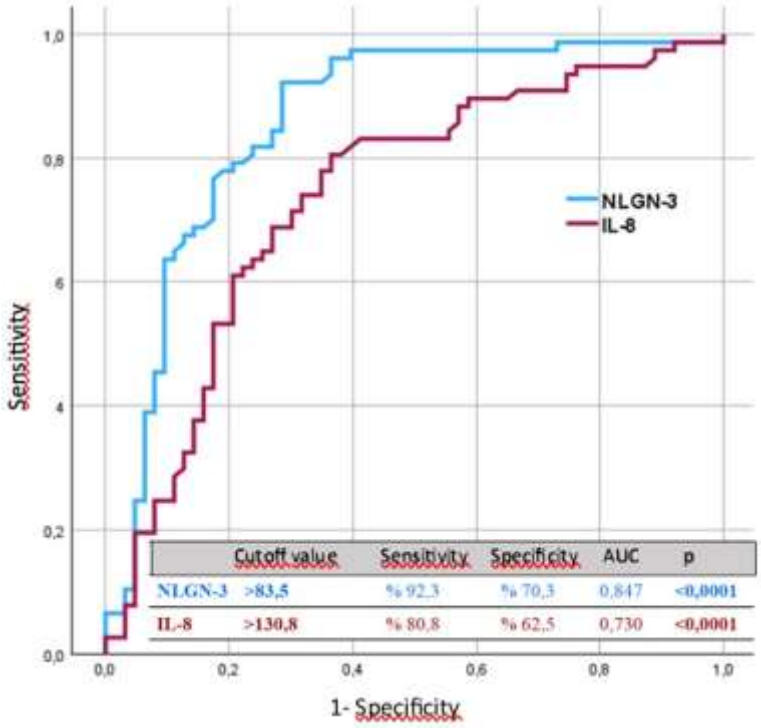
Keywords: Autism Spectrum Disorders, Inflammation, Interleukin, Neuroligin, Neuronal Adhesion Molecules

Figure 1



Box plots present the log-transformed values of IL-6, IL-8, NLGN-1, and NLGN-3 levels in serum samples of individuals with ASD and controls. Statistically significant elevation of IL-8 and NLGN-3 levels in the group with ASD is noteworthy ($p<0.001$, $p<0.001$).

Figure 2



ROC curves, sensitivity, and specificity for NLGN-3 and IL-8 (IL: Interleukin, NLGN: Neuroligin, CI: Confidence Interval, AUC: Area Under the Curve)

0370 - The Relationship between the Start of Treatment and Clinical Psychopathology in First-Episode Psychosis

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Background and Aım: It was aimed to evaluate the relationship between duration of untreated psychosis and prodrome duration and clinical psychopathology in patients aged 12-18 years (mean 15.69 ± 1.34) receiving inpatient or outpatient treatment.
Methods: Our study included 45 patients diagnosed with first episode psychosis aged 12-18 years. Written and verbal consent was obtained from the case and his family.Sociodemographic information was taken from children and their parents who were included in the study using a sociodemographic data form prepared by the researchers. The Kiddie Schedulefor Affective Disorders and Schizophrenia (K-SADS), Positive and Negative Syndrome Scale (PANSS), Scale for Assesment of Negative Symptoms (SANS), Brief Negative Symptom Scale (BNSS), The Children's Global AssessmentScale (CGAS) was applied to the cases. Clinical psychopathology was assessed at the start of treatment.
Results: The duration of psychosis without treatment was determined as minimum 0 and maximum 6 months, and prodrome duration was determined as minimum 0 and maximum 24 months. No significant correlation was found between prodrome duration and PANSS, SANS and BNSS. When the correlations between the duration of treatment-free psychosis and the scales were evaluated, a significant positive correlation was found with SANS and a negative correlation with CGAS.
Conclusıons: The fact that short untreated psychosis duration and prodrome duration are associated with shorter hospital stay and better functionality shows the importance of starting early treatment in terms of the course of the disease.

Keywords: child and adolescent, first episode psychosis, prodrome duration

[Abstract:0371

Perceived Social Support, Marital Satisfaction and Quality of Life Levels and Related Factors in Parents of Children with Attention Deficit and Hyperactivity Disorder

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Background And Aım: This study aimed to investigate the perceived social support, marital adjustment and quality of life levels and related factors of parents of children diagnosed with attention deficit and hyperactivity disorder.

Methods: Our study included 80 patient diagnosed with attention deficit hyperactivity disorder aged 6-18 years (mean 8.53).Written and verbal consent was obtained from the case and his family. years. Sociodemographic information was taken from children and their parents who were included in the study using a sociodemographic data form prepared by the researchers. World Health Organization Quality of Life Scale EUROHIS-QOL, Marital Satisfaction Scale, DSM-IV Based Diagnostic Screening and Rating Scale (Atilla Turgay), Multidimensional Perceived Social Support Scale was applied to the cases.

Results: 80% of the parents participating in the study were mothers.75 percent of the children were boys. The average age of all children was found to be 8.53.In our study, perceived social support, marital satisfaction and quality of life were negatively correlated with the severity of attention deficit hyperactivity disorder and the age of the child, It was found to be positively correlated with the father's education level and monthly income level.

Conclusıons: Our study suggests that factors such as ADHD severity, child's age, family income level and father's education level may be factors affecting parental quality of life, marital relationships and mental health. In addition to interventions for children, planning programs that will improve parents coping skills can increase the quality of life of parents and improve their mental health.

Keywords: Attention deficit and hyperactivity disorder, Quality of life, Parenting, Marriage

[Abstract:0277]

Comparison of Suicide and Non-Suicidal Self-Injury Behaviors with Sleep in Adolescents Diagnosed with Depressive Disorder

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BACKGROUND AND AIM: Suicide attempt (SA) and non-suicidal self-injury (NSSI) are common in adolescents with major depressive disorder (MDD), The idea that sleep may be an important parameter to improve outcomes of depression has been investigated for a long time (1). In this study, it was aimed to determine and compare the sleep habits and sleep quality of the groups with NSSI and SA in adolescents diagnosed with MDD.

METHODS: The study was performed with 43 adolescents aged 13-18 and diagnosed with MDD. Three case groups were categorized: 25 individuals with a history of NSSI only and 18 individuals with a history of SA only in the last year. Suicidal attitudes were evaluated using the Columbia-Suicide Severity Rating Scale (C-SSRS). NSSI was questioned by using the Inventory of Statements About Self-Injury (ISAS). Adolescents were filled out the Pittsburgh Sleep Quality Index (PSQI) and their parents/caregivers were filled out the Children‘s Sleep Habits Questionnaire (CSHQ).

RESULTS: In our study, 88% of the participants had poor sleep quality, 86% had impaired sleep habits and 44% of the participants had insomnia. There was no significant difference between the two groups in terms of sociodemographic variables (except using antipsychotic) and Children's Depression Rating Scale-Revised Form (CDRS-R) total score. CSHQ and PSQI component-1 score regarding sleep quality were statistically significantly higher in the NSSI group compared to the SA group. ($p=0.022$, $p=0.040$, respectively). PSQI score was moderately correlated with the CDRS-R total score ($p=0.007$, $r=0.40$) whereas CSHQ score was poorly correlated ($p=0.021$, $r=0.35$). CSHQ score was moderately correlated with the number of NSSI behaviors ($p<0.001$, $r=0.56$) while PSQI score was poorly correlated ($p=0.016$, $r=0.36$). PSQI score was poorly correlated with the severity of suicidal ideation in the last month ($p=0.034$, $r=0.32$).

CONCLUSIONS: In literature, NSSI and SA were compared in terms of sleep quality; sleep quality deterioration was found to be 71% in the suicide group and 62.3% in the NSSI group (2). Multiple sleep problems such as poor sleep quality have been associated with NSSI (3) and different studies have indicated that poor sleep quality increases the risk for suicidal ideation (4).

As a result, sleep problems may be an indicator of the severity of depression in adolescents presenting with depression. Although patients with NSSI and SA are thought to have similar characteristics, they may have different profiles with regard to sleep characteristics. Sleep problems show individual differences in these groups, and the relationship between depression and self-harm behavior is small and highly variable.

Keywords: Depression, Suicide, Non-Suicidal Self-Injury, Sleep

REFERENCES

1. Rao U. Sleep disturbances in pediatric depression. Asian J Psychiatr. 2011;4(4):234-247.
2. Jiao T, Guo S, Zhang Y, et al. Associations of depressive and anxiety symptoms with non-suicidal self-injury and suicidal attempt among Chinese adolescents: The mediation role of sleep quality. Front Psychiatry. 2022;13:1018525.
3. Khazaie H, Zakiei A, McCall WV, et al. Relationship between Sleep Problems and Self-Injury: A Systematic Review. Behavioral Sleep Medicine. 2021;19(5):689-704.
4. Gelaye B, Okeiga J, Ayantoye I, Berhane HY, Berhane Y, Williams MA. Association of suicidal ideation with poor sleep quality among Ethiopian adults. Sleep and Breathing. 2016; 20(4):1319-1326.

Table 1: Sociodemographic variables between depressive youth of non-suicidal self injury and suicide attempt

	Non-suicidal Self Injury (n=25)	Suicide Attempt (n=18)	p
Age (Mean ± SD)	16.06 ± 1.50	16.02 ± 1.29	0.93*
Sex (F/M) (n)	23/2	16/2	
Course success (n)	good: 7 moderate: 6 bad:12	good: 10 moderate: 4 bad: 4	0.14**
Peer relationship (n)	good: 10 moderate: 9 bad:6	good: 9 moderate: 4 bad:5	0.62**
Mother education level			0.35**
Father education level			0.36**
Family history of psychiatric illness (n,)	11	6	0.48**
Using medications (n)	14	14	0.14**
Antipsychotic (n)	10	13	0.04**
Antidepressant (n)	13	9	0.89**
Psychiatric comorbidity (n)	17	13	0.77**
Insomnia (n)	12	7	0.55**

*Independet Samples t-test **Pearson Chi-Square ** *Fisher's exact test

Table 2: Comparison of scale scores between depressive youth of non-suicidal self injury and suicide attempt

	Non-suicidal Self Injury (n=25)	Suicide Attempt (n=18)	p
PSQI score (Mean rank)	24.80	18.11	0.08**
PSQI component-1 (Mean ± SD)	2.04 ± 0.68	1.6 ± 0.69	0.049*
CSHQ score (Mean rank)	25.72	16.83	0.02**
CDRS-R total score (Mean rank)	22.62	21.14	0.70**
CGI-SI (Mean rank)	17.90	27.69	0.01**

* Independet Samples t-test **Man Whitney U

Table 3a: Inter-scale correlation between depressive youth of non-suicidal self injury and suicide attempt

	CDRS-R	CGI-SI
PSQI score	r = 0.35 p = 0.02	r = 0.01 p = 0.96
CSHQ score	r = 0.41 p = 0.01	r = 0.03 p = 0.85

Pearson Corelation

Table 3b: Inter-scale correlation between depressive youth of non-suicidal self injury and suicide attempt

	PSQI score	CSHQ score	CDRS-R	CGI-SI
Severity of suicidal ideation, lifetime	r = 0.27 p = 0.11	r = 0.23 p = 0.13	r = 0.12* p = 0.46*	r = -0.15* p = 0.34*
Severity of suicidal ideation, last month	r = 0.32 p = 0.03	r = 0.25 p = 0.10	r = 0.66* p < 0.01*	r = 0.17* p = 0.27*
Number of suicide attempts, lifetime	r = -0.02* p = 0.88*	r = -0.17* p = 0.26*	r = 0.04* p = 0.81*	r = 0.42* p = 0.05*
Number of suicide attempts, last 3 months	r = -0.26* p = 0.09*	r = -0.31* p = 0.05*	r = -0.9* p = 0.56*	r = 0.25* p = 0.10*
Number of NSSIs	r = 0.36* p = 0.02*	r = 0.56* p < 0.01*	r = 0.28* p = 0.06*	r = 0.17* p = 0.28*

Pearson Corelation *Spearman Corelation

[Abstract:0293]

Post-Traumatic Stress Symptoms and Tobacco Addiction in Disaster-Affected Communities

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BACKGROUND AND AIM: Following an earthquake, individuals often experience symptoms such as insomnia, anxiety, fear, and post-traumatic stress disorder (PTSD). PTSD leads individuals to interpret information with a constant perception of threat and causes memories to be detached from their context and perceived as if they were real. Dysfunctional coping strategies, such as thought suppression and avoidance, combined with factors like adverse life events and survivor's guilt, can trigger insomnia as well as tobacco, substance, and alcohol use disorders (Erskine et al., 2013; Lowe et al., 2019; Lee et al., 2020). This study aims to examine the relationship between tobacco addiction and post-traumatic stress symptoms among individuals residing in the earthquake-affected region and to assess their nicotine dependence status.

METHODS: This cross-sectional and descriptive study was conducted through face-to-face interviews with 159 earthquake survivors in Türkiye between October and November 2024, following the earthquake on February 6, 2023. The study was approved by the Adıyaman University Non-Interventional Clinical Research Ethics Committee (Decision number: 2024/8-6, dated 15/10/2024). Data collection instruments included the DSM-5 PTSD Checklist (PCL-5) and the Fagerström Test for Nicotine Dependence (FTND).

RESULTS: The sample consisted of 59.75% male participants (n=95) and 54.72% individuals aged between 20 and 25 years (n=87). The PCL-5 scores of individuals who lost a loved one in the earthquake were found to be statistically significantly higher compared to those who did not experience such a loss ($t=2.60$, $p<0.05$). Similarly, the PCL-5 scores of individuals who experienced financial losses due to the earthquake were found to be significantly higher compared to those who did not incur such losses ($t=23.26$, $p<0.05$). According to the results of the FTND, males were found to have significantly higher scores compared to females ($t=1.97$, $p<0.05$). Conversely, females exhibited significantly higher PCL-5 scores than males ($t=-3.36$, $p<0.05$). A statistically significant positive correlation was identified between the FTND scores and the PCL-5 scores ($r=0.152$, $p<0.05$). A simple regression analysis conducted to examine the predictive relationship between PCL-5 scores and FTND scores revealed that the model was statistically significant [$F(1,157) = 3.73$, $p<0.05$]. In the established model, the PCL-5 variable, which was found to be significant, accounted for 1.7% of the variance in Fagerström Nicotine Dependence Test scores (Adjusted $R^2 = 0.017$).

CONCLUSIONS: This study highlights that being female, experiencing the loss of a loved one, and incurring financial losses are associated with higher PTSD symptom severity among earthquake survivors. Additionally, higher nicotine dependence among married individuals and males may reflect the influence of prolonged stress and biological or social factors (Manimunda et al., 2012). The significant link between PTSD symptom severity and nicotine dependence underscores the role of traumatic stress in shaping addictive behaviors (Erskine et al., 2013; Fergussson et al., 2014). These findings emphasize the need for psychosocial support programs and interventions that promote positive coping mechanisms to reduce the risk of PTSD and addiction in disaster-affected populations.

Keywords: Addiction, Earthquake, Trauma, Tobacco.

[Abstract:0295]

Systemic Inflammation in Autism Spectrum Disorder: Evaluation of SII and SIRI Biomarkers

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BACKGROUND AND AIM: Autism spectrum disorder (ASD) is a neurodevelopmental disorder characterized by impairments in reciprocal social interaction and a tendency to engage in repetitive, stereotyped patterns of behavior, interests, and activities. ASD is a highly heritable neurodevelopmental condition, the etiology of which involves a complex interplay between genetic predisposition and environmental influences. Emerging evidence suggests that dysregulation of the immune system may contribute to the pathophysiology of autism. In this context, the concurrent assessment of neutrophil, monocyte, lymphocyte, and platelet levels in peripheral blood facilitates the identification of a microinflammatory state through the Systemic Immune-Inflammatory Index (SII) and the Systemic Inflammatory Response Index (SIRI), both of which serve as potential biomarkers of immune dysregulation. Both inflammatory indices have been widely utilized as prognostic markers in oncological, cardiovascular, and systemic inflammatory disorders. However, their potential relevance in psychiatric conditions remains underexplored. The present study aims to compare the levels of neutrophil-to-lymphocyte ratio (NLR), platelet-to-lymphocyte ratio (PLR), SII, and SIRI—all recognized as markers of peripheral inflammation—between children diagnosed with ASD and a typically developing control group. Furthermore, the study seeks to examine the association between these inflammatory markers and ASD symptom severity, as well as specific symptom clusters.

METHODS: The study cohort consisted of fifty children diagnosed with ASD who met the inclusion criteria, alongside sixty age- and sex-matched typically developing peers serving as controls. The psychiatric evaluation of participants was conducted using a semi-structured clinical interview based on DSM-5 diagnostic criteria, in conjunction with standardized assessment tools, including the Childhood Autism Rating Scale (CARS) and the Social Communication Questionnaire (SCQ). Peripheral blood samples were collected in tubes containing a standardized concentration of ethylenediaminetetraacetic acid (EDTA) and were promptly analyzed using a calibrated automated system within the hospital‘s central laboratory to ensure accuracy and consistency. Platelet counts, as well as absolute neutrophil, lymphocyte, and monocyte levels, were documented.

RESULTS: Statistical analysis revealed no significant differences between the ASD and control groups in terms of NLR, PLR, SII, and SIRI values ($p = 0.166$, $p = 0.614$, $p = 0.352$, $p = 0.307$, respectively). Upon evaluating the correlation between these inflammatory indices and clinical assessment scores within the ASD group, a statistically significant moderate positive correlation was observed between SIRI and the SCQ-Interaction subscale ($p = 0.016$, $r = 0.339$). However, no significant correlations were identified for the remaining parameters.

CONCLUSIONS: Both SII and SIRI are regarded as comprehensive and readily accessible biomarkers, with established validity across a broad spectrum of studies. Future large-scale and methodologically rigorous investigations will be essential to further elucidate their potential role in the pathophysiology of ASD.

Keywords: Autism Spectrum Disorders, Peripheral Inflammation, Systemic Inflammatory Response Index, Systemic Immune-Inflammatory Index

[Abstract:0297]

Clinical and Laboratory Parameters in Bipolar Disorder Patients Using Lithium and Valproic Acid: A Retrospective Comparison

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BACKGROUND AND AIM: Bipolar disorder is a significant condition characterized by episodes and resulting in functional impairment [1]. The etiology of the disease remains unclear [2]. Studies have suggested that inflammatory processes may influence the onset and progression of the disease. Research in this area has provided evidence linking elevated levels of C-reactive protein (CRP), an inflammatory marker, to bipolar disorder [3].

Studies on the inflammatory nature of bipolar disorder have focused on the effects of lithium on inflammation and treatment response, with some research showing that lithium reduces CRP levels [4].

Valproic acid, as another mood stabilizer, has been shown to reduce the levels of inflammatory markers in septic mice (5) and decrease CRP levels in patients with epilepsy (6). However, no studies evaluating the relationship between CRP levels and valproic acid in bipolar disorder have been identified.

The aim of this study is to investigate whether there are differences between the commonly used treatments of Lithium and valproic acid in bipolar disorder in terms of clinical outcomes and laboratory tests such as CRP levels.

METHODS: This retrospective study analyzes patients diagnosed with Bipolar Disorder and treated with lithium or valproic acid at Karabuk University Training and Research Hospital between 2018 and 2023. Demographic characteristics, clinical histories, and treatment processes of the included patients were retrospectively collected from the hospital‘s electronic medical record system. Differences between the two treatment groups were analyzed using independent samples t-tests for normally distributed continuous data, Mann-Whitney U tests for non-parametric data, and Fisher's Exact test for categorical data.

RESULTS: The comparison between the Lithium and Valproic acid groups revealed no significant differences in demographic characteristics, clinical history, or laboratory parameters. Gender distribution (p=0.804), age (p=0.450), white blood cell count (p=0.698), neutrophil count (p=0.403), hemoglobin levels (p=0.396), lymphocyte count (p=0.456), platelet count (p=0.337), urea (p=0.635), creatinine (p=0.398), liver enzymes (AST p=0.937, ALT p=0.664, GGT p=0.493), albumin levels (p=0.185), CRP levels (p=0.461), disease duration (p=0.296), number of attacks (p=0.171), and hospital admission frequency (p=0.542) showed no significant differences between the two groups.

CONCLUSIONS: The results of this study suggest that lithium and valproic acid treatments have similar effects on demographic, clinical, and laboratory parameters in patients with bipolar disorder. Lithium and valproic acid treatments may have similar biological effects (7,8). For instance, Calabrese et al. (2012) stated that the biological effects of lithium and valproic acid treatment on patients with bipolar disorder are generally similar (7). Moreover, the lack of a significant difference in CRP levels between the treatment groups does not contradict studies explaining the effects of these treatments on inflammation. Sevim et al. (2018) emphasize that inflammation in bipolar disorder may vary depending on the treatment process, and inflammatory markers such as CRP can change according to the treatment (9). However, given the retrospective nature of our study and the limited sample size, these results need to be validated by larger prospective studies.

Keywords: Bipolar Disorder, CRP, Lithium, Valproic acid.

AuthorToEditor: References: 1- Gitlin, M. J., & Miklowitz, D. J. The difficult lives of individuals with bipolar disorder: A review of functional outcomes and their implications for treatment. Journal of Affective Disorders, 2017:209, 147-154. 2- Rybakowski, J. (2021). Etiopathogenesis of bipolar affective disorder-the state of the art for 2021. Psychiatria polska, 55(3), 481-496. 3- Queissner, R., Fellendorf, F. T., Dalkner, N., Bengesser, S. A., Maget, A., Birner, A.,.. & Reininghaus, E. Z. (2024). The influence of chronic inflammation on the illnesscourse of bipolar disorder: A longitudinal study. Journal of Psychiatric Research, 174, 258-262. 4- Queissner, R., Lenger, M., Birner, A., Dalkner, N., Fellendorf, F., Bengesser, S.,.. & Reininghaus, E. Z. (2021). The association between anti-inflammatory effects of long-term lithium treatment and illness course in Bipolar Disorder. Journal of Affective Disorders, 281, 228-234. 5- Zheng, Q., Liu, W., Liu, Z., Zhao, H., Han, X., & Zhao, M. (2014). Valproic acid protects septic mice from renal injury by reducing the inflammatory response. Journal of Surgical Research, 192(1), 163-169. 6- Yuen, A. W., Bell, G. S., Peacock, J. L., Koepp, M. M., Patsalos, P. N., & Sander, J. W. (2010). Effects of AEDs on biomarkers in people with epilepsy: CRP, HbA1c and eGFR. Epilepsy research, 91(2-3), 187-192. 7- Calabrese, J. R., Ketter, T. A., & Sachs, G. S. (2012). Lithium and valproate in the treatment of bipolar disorder. Psychiatric Clinics of North America, 35(2), 413-425. 8- Tohen, M., Frank, E., & Bowden, C. L. (2000). Relapse prevention in bipolar disorder. Archives of General Psychiatry, 57(7), 686-694. 9- Sevim, S., & Öztürk, V. (2018). Inflammation and immune system in bipolar disorder: Role of CRP and other inflammatory markers. Journal of Affective Disorders, 229, 40-46.

[Abstract:0308]

Sociodemographic and Clinical Factors Associated with Compulsory Hospitalizations in Addiction

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BACKGROUND AND AIM: Compulsory hospitalization for psychiatric treatment can be life-saving and has been shown to be beneficial in the long term for some people. The experience of involuntary hospitalization can be traumatic, frightening, stigmatizing and in the long term can lead to avoidance of mental health support and increased risk of further coercion as an inpatient. (1) However, in studies, patients described this hospitalization experience positively. (2) In our country, there is one study including alcohol and substance addiction patients hospitalized in psychiatry service with compulsory hospitalization, but there is no study in the existing literature on closed AMATEM (Alcohol and Substance Treatment Clinic) service.(3)The aim of this study was to examine the sociodemographic and clinical characteristics, mean length of stay and reasons for hospitalization of patients who were hospitalized in a closed AMATEM ward with compulsory hospitalization within 1 year.

METHODS: Between 01.05.2023-01.05.2024, the data of patients who were hospitalized with compulsory hospitalization in closed AMATEM ward were retrospectively reviewed. In total, data of 477 patients were analyzed. These patients were analyzed in 3 groups as alcohol only (n=121), substance only (n=256) and comorbid (n=100). Data were analyzed with SPSS version 25.0.

RESULTS: In patients with alcohol use only, being married, having children, being employed, being admitted voluntarily, having an accompanying diagnosis of depression, and having an accompanying physical illness were found to be higher, while criminal offense and prison history were found to be lower, and the need for restriction during hospitalization was found to be lower. In patients with substance use only, living alone, having a comorbid diagnosis of psychosis, having no family history, having a hospitalization duration of more than 3 weeks were found to be higher, while having comorbid physical illness and family history were found to be lower. Being single, being unemployed and self-mutilation were found to be higher in the comorbid group.

CONCLUSIONS: The number of closed AMATEM wards is increasing in our country. Knowing the sociodemographic and clinical characteristics of patients hospitalized in these wards has an important role in the treatment organization and follow-up of patients.

Keywords: Addiction, Compulsory Treatment, Substance Use.

AuthorToEditor: Referances: 1.Walker S, Mackay E, Barnett P, Sheridan Rains L, Leverton M, Dalton-Locke C, Trevillion K, Lloyd-Evans B, Johnson S. Clinical and social factors associated with increased risk for involuntary psychiatric hospitalisation: a systematic review, meta-analysis, and narrative synthesis. Lancet Psychiatry. 2. Chau LW, Erickson M, Vigo D, Lou H, Pakhomova T, Winston ML, MacPherson D, Thomson E, Small W. The perspectives of people who use drugs regarding short term involuntary substance use care for severe substance use disorders. Int J Drug Policy. 2021 Nov; 97:103208. 3. Yüce Akalın B, Bilici R. The Effect of Attention Deficit and Hyperactivity Disorder on Treatment Compliance in Individuals Undergoing Probation Addiction Program Treatment. Alpha Psychiatry. 2021 Dec 30; 23(1): 33-39.

[Abstract:0318]

Examining the Mediating Role of Emotion Regulation in the Relationship Between Suicide Attempts in Adolescents, Adverse Life Events, and Parental Emotional Availability

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BACKGROUND AND AIM: To examine the relationship between parental emotional accessibility and negative life events in adolescents presenting to a child and adolescent mental health clinic with a suicide attempt. In addition, the study aims to elucidate the mediating role of emotion regulation difficulties in this relationship.

METHODS: Within the last month, 31 adolescents aged 12-18 years with a history of suicide attempts and 31 healthy adolescents of the same age were included in the study. The Columbia Suicide Severity Rating Scale was administered to the adolescents. The adolescents were also asked to complete a sociodemographic data form, the Emotion Regulation Difficulty Scale, and the Parental Emotional Accessibility Scale.

RESULTS: Of the 62 adolescents who participated in our study, % 67.7 were female (n=42) and % 32.3 were male (n=20). The case group showed higher rates of alcohol and cigarette use, physical illness, history of previous hospitalization, psychiatric referrals and psychiatric medication use. In contrast, school performance and monthly family income were lower. In addition, adolescents who attempted suicide had a higher prevalence of broken family structure, maternal physical illness, parental alcohol/substance use, parental self-harm and suicide attempts, and intrafamilial physical violence. It has been found that the suicide attempts of adolescents who have attempted suicide often do not involve a specific plan, lack preparatory behaviour and are carried out with the intention of ending pain. The actual lethality of suicide attempts was found to be low, but the potential lethality was high. However, a significant proportion of adolescents reported frequently having intense suicidal thoughts that were difficult to disregard or distance themselves from. In addition, among the adolescents who had attempted suicide in the previous month, there was evidence of previous self-harm behavior, a history of suicide attempts, and instances of attempts that were either thwarted or stopped spontaneously. Compared with healthy adolescents in the control group, adolescents who had attempted suicide had higher overall scores on the Emotion Regulation Difficulty Scale, as well as higher scores on all of its subscales. In addition, parents' emotional availability was found to be lower in the group of adolescents who attempted suicide. It determined that the emotional accessibility of both the mother and father influences the risk of suicide attempts through difficulties in emotion regulation. Both maternal and paternal emotional availability was lower in adolescents exposed to sexual abuse than in the control group. In adolescents exposed to physical violence, paternal emotional availability was lower and emotion regulation difficulties were higher compared to the control group.

CONCLUSIONS: To prevent the risk of suicidal behaviour, it is important to identify adverse life events in childhood during clinical assessment. Establishing a family environment where relationships with parents are regulated, allowing sharing of these events and assessing emotion regulation skills are crucial steps. In addition, the provision of functional methods to address and manage the emotional challenges associated with such experiences is essential.

Keywords: Suicide, adolescent, emotion dysregulation, parental emotional availability, negative life events

AuthorToEditor: Lim K-S, Wong CH, McIntyre RS, et al. Global lifetime and 12-month prevalence of suicidal behavior, deliberate self-harm, and non-suicidal self-injury in children and adolescents between 1989 and 2018: a meta-analysis. Int J Environ Res Public Health. 2019; 16: 4581. doi:10.3390/ijerph16224581. Raudales AM, Short NA, Schmidt NB. Emotion dysregulation as a prospective predictor of suicidal ideation in an at-risk mixed clinical sample. Arch Suicide Res. 2020; 24(sup2): S310-S322. Miu AC, Szentágotai-Tătar A, Balázsi R, et al. Emotion regulation as mediator between childhood adversity and psychopathology: A meta-analysis. Clin Psychol Rev. 2022; 93: 102-141. Nivison MD, Facompré CR, Raby KL, et al. Childhood abuse and neglect are prospectively associated with scripted attachment representations in young adulthood. Dev Psychopathol. 2021; 33(4): 1143-1155. Gruhn MA, Compas BE. Effects of maltreatment on coping and emotion regulation in childhood and adolescence: A meta-analytic review. Child Abuse Negl. 2020; 103: 104446.

[Abstract:0320]

Pediatric Hemato-oncology Patients from Psychiatric Perspective: Consultation Processes and Outcomes

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BACKGROUND AND AIM: Childhood cancers constitute less than 2% of all cancers diagnosed annually. In recent years, advancements in treatment modalities have significantly increased survival rates. However, the diagnosis of cancer and the stress associated with prolonged treatment processes increase the risk of psychiatric disorders in children and adolescents. The growing recognition of the importance of addressing mental health has led hematologists/oncologists to increasingly seek pediatric psychiatric consultations. Therefore, this study aims to evaluate the sociodemographic and clinical characteristics of pediatric psychiatric consultations requested from hematology/oncology clinics.

METHODS: This study was conducted retrospectively using data from consultations requested by the Pediatric Hematology/Oncology Department at Necmettin Erbakan University Medical Faculty between January 1, 2024, and January 1, 2025, to the Department of Child and Adolescent Psychiatry. Data recorded as part of the routine clinical liaison psychiatry service, including patients‘ previous and current psychiatric diagnoses, organic diagnoses, and treatments, were analyzed. Descriptive statistics, such as mean, standard deviation, frequency, and percentage, were calculated using SPSS 22.0 statistical software. Ethical approval for the study was obtained from the Non-Interventional Clinical Research Ethics Committee of Necmettin Erbakan University (24.01.2025 / 2025-5462).

RESULTS: The study included 83 participants, consisting of 48 boys and 35 girls. The participants‘ ages ranged from 3 to 18 years, with a mean age of 9.98 ± 5.13 years. While 79 participants had hematologic/oncologic diagnoses, 4 participants had additional organic conditions alongside their primary hematologic/oncologic diagnoses. The mean hospital stay was 19.66 ± 13.82 days.

Among hematologic/oncologic diagnoses, B-ALL was the most common (n = 63), followed by T-ALL (n = 9). It was found that 79.5% of participants had no history of psychiatric disorders prior to their hematologic/oncologic diagnosis, whereas 12% had a history of depression. Additionally, 81.9% of participants were not using any psychiatric medications before their hematologic/oncologic diagnosis. The most frequent reason for consultation was assessment for ÇÖZGER (Turkish Disability Health Board Report), accounting for 22 cases. This was followed by depressive symptoms and anger control/dysregulation issues, each observed in 14 participants, and treatment nonadherence/resistance in 19 participants.

Psychiatric evaluation revealed no active psychopathology in 37 participants, while adjustment disorder was diagnosed in 22 participants, and depressive disorder in 13 participants. The most commonly initiated treatment was SSRIs. No statistically significant difference was found between genders regarding consultation reasons (χ^2 = 0.880, p = 0.644).

CONCLUSIONS: This study underscores the significant overlap between pediatric hematology/oncology and psychiatry, emphasizing the necessity of a multidisciplinary approach to patient care. Pediatric hematology/oncology patients are at risk of psychiatric disorders due to their acute diagnoses and the challenges of the adaptation process. Early identification and intervention for psychological symptoms can help address frequent diagnoses, such as adjustment disorders, before they become more complex. Overall, our findings highlight the need for enhanced psychosocial support systems and collaborative care models to meet the unique needs of this vulnerable population.

Keywords: Consultation psychiatry, pediatic haemato-oncology, psychiatric evaluation.

[Abstract:0336]

The Relationship Between Medication Adherence and Insight, Clinical Symptom Severity, and Attitudes Toward Psychiatric Services in Patients with Psychotic Disorders

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BACKGROUND AND AIM: Adherence to antipsychotic treatment is essential for patients with psychotic disorders to achieve and maintain remission. Numerous studies indicate that patients with psychotic disorders frequently discontinue their treatment. Medication adherence can be adversely impacted by clinical symptoms, such as lack of insight, both positive and negative symptoms, as well as limited access to psychiatric services. This study aimed to identify factors linked to medication adherence in patients with psychotic disorders.

METHODS: The study included 96 patients diagnosed with psychotic disorders according to DSM-IV-TR criteria who were admitted to the Psychiatry Outpatient Clinic at Atatürk University Faculty of Medicine. All participants provided written informed consent. The researcher gathered data on patients' follow-up processes in psychiatric outpatient clinics, their attitudes toward community mental health centers, and sociodemographic and clinical characteristics from patients and their family members. Subsequently, all patients were administered the Morisky Medication Adherence Scale-8, Scale for Assessing the Three Components of Insight, Brief Psychiatric Rating Scale, and Clinical Global Impression Scale. Ethics committee approval for the study was obtained from the Atatürk University Faculty of Medicine Clinical Research Ethics Committee on 13 March 2019, with the reference number B.30.2.ATA.0.01.00/129.

RESULTS: In the study, a total of 96 patients were included, among which 36 (37.5%) were female and 60 (62.5%) were male. Among these patients, 65 (67.7%) were diagnosed with schizophrenia, 26 (27.1%) with schizoaffective disorder, and 5 (5.2%) with psychosis not otherwise specified. It was found that 79.2% of patients regularly attended their appointments at the psychiatry outpatient clinic, while 84.4% had never visited a community mental health center. After providing detailed information about the centers to patients and their families, it was observed that 65.6% of patients and 30.2% of their family members believed that receiving services from these centers was unnecessary. Medication adherence levels were low in 50%, moderate in 27.1%, and high in 22.9% of the patients. Patients' adherence to medication demonstrated a statistically significant positive correlation with insight levels while showing a negative correlation with the severity of clinical symptoms. Additionally, medication adherence showed a significant positive correlation with education levels and regular visits to psychiatric outpatient clinics. In logistic regression analysis, insight was the most effective variable in predicting patient adherence to medication.

CONCLUSIONS: These findings emphasize the importance of insight in treatment compliance. Therefore, clinicians should prioritize interventions to enhance insight. Strategies should be developed to increase patients' access to psychiatric treatment services. Future studies should comprehensively address clinical symptoms, particularly insight and sociodemographic characteristics in a larger sample size.

Keywords: Schizophrenia, psychotic disorder, medication adherence, insight

[Abstract:0339]

The Relationship Between Hyperfocus and Executive Functions in Adolescents Diagnosed with Attention Deficit Hyperactivity Disorder (ADHD)

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BACKGROUND AND AIM: Patients with Attention Deficit and Hyperactivity Disorder (ADHD) not only suffer from inability to focus, but also have problems at shifting their attention. That called ‗hyperfocus', a state of dense and restricted focus on a stimulus, especially if the subject is about their interests. That leads decreased awareness of the self, time and the surroundings.

People with ADHD have impairment at executive functions (EF). Previous researches indicated that EF may be associated with hyperfocus. Studies speculated that hyperfocus reflects difficulties in attentional control and EF, such as inhibition and task-switching.

We aimed to investigate the relationship between hyperfocusing and executive functions in ADHD. We hypothesize that individuals with greater difficulties in EF would have a higher inclination for hyperfocusing.

The second aim of the study was to compare hyperfocusing symptoms in ADHD patients with or without drug. So, it would be possible to understand whether hyperfocusing occurs due to psycho-stimulant use or a distinct part of the syndrome.

METHODS: The study included 52 adolescents diagnosed with ADHD, between the ages of 11-17, who applied to Bilkent City Hospital Child Psychiatry Outpatient Clinic. Patients were divided into 2 groups: those taking medication or not (for the last 1 week). All participants went through a clinical interview based on DSM-5. Parents filled the Sociodemographic Data Form, Conners Parent Rating Scale-Short Form and adolescents completed the Teenage Executive Functioning Inventory. Patients with autism spectrum disorder, mental retardation, psychotic disorder, bipolar disorder and epilepsy accompanying ADHD were not included in the study.

Statistics; SPSS 21.0 (IBM Corp.2012) was used in the analyses. $p < 0.05$ was accepted as the significance level.

RESULTS: The mean age of the medicated group was 13.9 years, while the mean age of the non-medicated group was 13.3 years. Among the participants, 28 were male and 24 were female.

The Executive Function Working Memory subscale of the medicated group showed a significant positive correlation with hyperfocus. (r; 0.445, p:0.029) The Executive Function Inhibition subscale of the medicated group showed a significant positive correlation with the total hyperfocus score (r: 0.712, $p<0.01$)

The Executive Function Working Memory subscale of the non-medicated group showed a significant positive correlation with hyperfocus.(r:0.480, p:0.011) The Executive Function Inhibition subscale of the non-medicated group showed a significant positive correlation with hyperfocus.(r:0.411, p: 0.033)

CONCLUSIONS: Our findings indicate that patients who exhibit more severe EF difficulties experience higher scores of hyperfocus regardless of psychostimulants usage.

Also, no relationship was shown between the use of psychostimulants and the severity of hyperfocus. In other words, hyperfocus in ADHD can be considered as a separate symptom, not a side effect of medication. Similar to our findings, in the literature, the phenomenon of hyperfocus has been considered as an entity independent of medication use in ADHD.

Keywords: ADHD, hyperfocus, executive functions, adolescent, psycho-stimulant

[Abstract:0342]

The Relationship Between Hyperfocus Phenomenon and Autistic Traits in Adolescents Diagnosed with Attention Deficit Hyperactivity Disorder (ADHD)

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BACKGROUND AND AIM: Patients with Attention Deficit and Hyperactivity Disorder (ADHD) not only suffer from inability to focus, but also have problems at shifting their attention from activities that interest them to another subject or situation. This situation is called ‗hyperfocus'. Individuals with Autism Spectrum Disorder may also experience excessive focus on situations, activities and objects that interest them for long periods of time. The presence of autistic symptoms in cases diagnosed with ADHD has been shown by various studies. Although it is a common complaint in patients with ADHD and a factor that impairs the patient's functionality, the number of studies investigating ‗hyperfocus' is scarce. This study aimed to investigate the relationship between hyperfocusing and autistic symptoms in ADHD.

METHODS: The study included 52 adolescents diagnosed with ADHD, between the ages of 11-17, who applied to Bilkent City Hospital Child Psychiatry Outpatient Clinic. Patients were divided into 2 groups: those using medication and those not using it (for the last 1 week). All participants were interviewed clinically based on DSM-5. Parents completed the Sociodemographic Data Form, Conners Parent Rating Scale-Short Form and Adolescent Autism Spectrum Questionnaire, while adolescents completed the Hyperfocusing Scale. Patients with autism spectrum disorder, mental retardation, psychotic disorder, bipolar disorder and epilepsy accompanying ADHD were not included in the study.

SPSS 21.0 (IBM Corp.2012) was used in the analyses. $p<0.05$ was accepted as the significance level.

RESULTS: The mean age of the medicated group was 13.9 years, while the mean age of the non-medicated group was 13.3 years. Among the participants, 28 were male and 24 were female.

A statistically significant positive correlation was found between the OSA shifting attention subscale and the Conners cognitive problems/inattention subscale ($r = 0.312$, $p = 0.026$).

The OSA communication subscale showed a statistically significant positive correlation with both the Conners cognitive problems/inattention subscale and the Conners ADHD index scores ($r = 0.424$, $p = 0.002$; $r = 0.408$, $p = 0.003$).

No significant relationship was found between OSA and the hyperfocus scale in ADHD ($p > 0.05$).

CONCLUSIONS: Autism spectrum disorders (ASD) and attention deficit hyperactivity disorder (ADHD) are neurodevelopmental disorders that begin in childhood. While there are some key differences, both ASD and ADHD exhibit similar challenges in developmental and cognitive areas. Recent research has revealed that between 20% and 30% of children with ADHD show signs of autism or autistic traits. Our study indicates a correlation between cognitive difficulties and attention problems in ADHD and the presence of autistic traits.

In our study, no significant relationship was found between hyperfocus and autistic traits in ADHD. This result may be due to our small sample size.

Keywords: ADHD, hyperfocus, autistic traits, adolescent, medication

[Abstract:0353]

The Effect of Somatic Symptoms on Relapse Risk in Depression

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BACKGROUND AND AIM: There are well-established risk factors for relapse in Major Depressive Disorder (MDD), including the number of episodes, the severity of the last episode, family history, residual symptoms, and genetic factors. The aim of this study is to compare the severity of somatic symptoms, as measured by the Level 2 Somatic Symptom Scale, between two groups of MDD patients—those who relapsed and those who did not—who were followed up in an outpatient clinic for 6 months.

METHODS: The present study included a sample of volunteers aged 18-65 years who had been regularly followed up with a diagnosis of Major Depressive Disorder (MDD) at the Psychiatric Outpatient Clinic of Izmir City Hospital for the previous 6 months. A total of 28 participants (Mean age: 38.30, SD = 9.77; Gender: 12 males, 16 females) were assigned to the remission group, while 24 participants (Mean age: 34.45, SD = 15.75; Gender: 9 males, 15 females) were assigned to the relapse group. The Level 2 Somatic Symptom Scale was administered to each participant. Independent samples t-tests were performed using IBM SPSS version 25.

RESULTS: A significant difference was observed between the groups in terms of Level 2 Somatic Symptom Scale scores ($p = 0.003$). The severity of somatic symptoms was significantly higher in the relapse group compared to the remission group.

CONCLUSIONS: Measuring the severity of somatic symptoms in the diagnosis of depression and considering treatment options for these symptoms is important. In this regard, psychotherapeutic, psychopharmacological, and psychosomatic treatments (such as ECT and rTMS) should be considered.

Keywords: Level 2 Somatic Symptom Scale, somatic symptoms, relapse, major depressive disorder

AuthorToEditor: Lye, M. S., Tey, Y. Y., Tor, Y. S., Shahabudin, A. F., Ibrahim, N., Ling, K. H., Stanslas, J., Loh, S. P., Rosli, R., Lokman, K. A., Badamasi, I. M., Faris-Aldoghachi, A., & Abdul Razak, N. A. (2020). Predictors of recurrence of major depressive disorder. PloS one, 15(3), e0230363. https://doi.org/10.1371/journal.pone.0230363 Annu. Rev. Clin. Psychol. 2022. 18: 329–57 First published as a Review in Advance on February 25, 2022 The Annual Review of Clinical Psychology is online at clinpsy.annualreviews.org https://doi.org/10.1146/annurev-clinpsy-072220- 021440 Zhu, T., Mu, D., Hu, Y., Cao, Y., Yuan, M., Xu, J., Ye, H. Q., & Zhang, W. (2024). Association of clinical phenotypes of depression with comorbid conditions, treatment patterns and outcomes: a 10-year region-based cohort study. Translational psychiatry, 14(1), 504. https://doi.org/10.1038/s41398-024-03213-2

[Abstract:0367]

Methamphetamine Use Disorder and Inflammation and Cognitive Impairment

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BACKGROUND AND AIM: Methamphetamine is a highly addictive drug abused by millions of users world wide, thus becoming a global health options (1). In this study, the relationship between inflammatory response, cognitive impairment predictors and substance addiction was investigated by evaluating the substance or substances used by the individuals who voluntarily applied to the Alcohol and Substance Addiction Treatment Center (AMATEM) polyclinic, routine biochemistry and peripheral hemogram parameters.

METHODS: 321 people who applied to AMATEM polyclinic between January 2019 and December 2024 were included in the study. The study was conducted retrospectively and in accordance with the Declaration of Helsinki. Patients diagnosed with Substance Use Disorder according to DSM 5 who were receiving outpatient treatment at AMATEM of the Education and Research Hospital were included in the study. Demographic data of all participants were determined. Laboratory parameters such as complete blood count, neutrophil-lymphocyte ratio (NLR), platelet-lymphocyte ratio (PLR), monocyte-lymphocyte ratio (MLR), monocyte/HDL, procalcitonin (PCT), Immatur granulocyte (IMG), IMG %, platelet-neutrophil/lymphocyte (SII) and CRP at the same time, the status of the values studied to be predictive of cognitive disorders (hemoglobin (g/L) × albumin (g/L) × lymphocytes (/L) /platelets (/L) (HALP), CRP × neutrophil/lymphocyte (IBI) in substance addiction were also evaluated.

Non-clinical studies ethics committee permission was obtained for the study.

RESULTS: It was determined that 284 (88.5%) of these individuals were male, 37 (11.5%) were female, the mean age was 33.61 ± 0.56, and the duration of substance use was 9.91 ± 0.78 years. While methamphetamine was found to be significantly higher in substance addiction, especially in the addiction group, no significance was found in other substance groups. In the patients who applied, methamphetamine, duration of methamphetamine use, gender, NLR, PLR, MLR, IMG, IMG, monosit/HDL, CRP, HALP, IBI, SII, uric acid / creatinine were found to be significantly different. In the regression analysis the significance between duration of methamphetamine use PCT (t: 2,278, p:0.026), and uric acid / creatinine (t: -2,657, p: 0.014) continued.

CONCLUSIONS: Studies linking inflammation with SUD are available in the literatüre. Blood biomarker studies are one of the most used methods. However, many of these biomarkers are difficult to collect or expensive to measure routinely (1,2) Recent studies have begun to emphasize routine biochemistry and peripheral hemogram parameters to evaluate the effects of inflammation and cognition in individuals with methamphetamine use disorder (2-5). In our study, it was thought that long-term methamphetamine use may have an effect on the inflammatory response and that methamphetamine addiction may affect the immune system. Long-term methamphetamine use is not only a marker but also may reveal long-term effects on health, where inflammation and immune system deterioration become more evident.

Keywords: Methamphetamine, Inflamatory marker, PCT, uric acid / creatinine, hemogram

AuthorToEditor: References 1. Davidson, M.; Mayer, M.; Habib, A.; Rashidi, N.; Filippone, R.T.; Fraser, S.; Prakash, M.D.; Sinnayah, P.; Tangalakis, K.; Mathai, M.L.; et al. Methamphetamine Induces Systemic Inflammation and Anxiety: The Role of the Gut–Immune–Brain Axis. Int. J. Mol. Sci. 2022, 23, 11224. 2. Gürbüzer N, Güler MC, Tör IBH. Methamphetamine Use Disorder and Inflammation: A Case-Control Study. Psychiatry Investig. 2024 May; 21(5): 513-520. 3. Dadouli K, Janho MB, Hatziefthimiou A, Voulgaridi I, Piaha K, Anag nostopoulos L, et al. Neutrophil-to-lymphocyte, monocyte-to-lympho cyte, platelet-to-lymphocyte ratio and systemic immune-inflammatory index in different states of bipolar disorder. Brain Sci 2022;12:1034 4. Yang R, Chang Q, Meng X, Gao N, Wang W. Prognostic value of sys temic immune-inflammation index in cancer: a meta-analysis. J Can cer 2018; 9: 3295-3302. 5. Buchanan JB, Sparkman NL, Johnson RW. A neurotoxic regimen of methamphetamine exacerbates the febrile and neuroinflammatory re sponse to a subsequent peripheral immune stimulus. J Neuroinflam mation 2010; 7:82.

[Abstract:0368]

The Role of Intolerance of Uncertainty and Attitudes Toward Psychological Help Seeking as a Mediator on Post-traumatic Growth in COVID-19 Survivors

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BACKGROUND AND AIM: The COVID-19 pandemic has significantly impacted physical and psychological health globally. Individuals diagnosed with COVID-19 may experience positive psychological changes, explored through the concept of post-traumatic growth. The pandemic has also heightened uncertainty, increasing stress and anxiety, especially in those with low tolerance for uncertainty. This study investigates the relationships between post-traumatic growth, intolerance of uncertainty, and attitudes toward seeking psychological help in COVID-19 survivors. It explores how these factors mediate post-traumatic growth.

METHODS: A total of 101 participants consisted of 51 individuals with history of COVID-19 (COVID-19 cases) as documented in their medical records and 50 individuals without history of COVID-19 infection (non-COVID-19 cases) were enrolled to study. All participants voluntarily provided sociodemographic characteristics and accomplished the following scales: the Intolerance of Uncertainty Scale (IUS-12), Post-Traumatic Growth Inventory (PTGI) and Attitudes Toward Seeking Professional Psychological Help Scale- Short Form (ATSPPH-SF). This study was approved by the Van Yüzüncü Yıl University Faculty of Medicine Non-Interventional Research Ethical Committee with the decision dated 12.01.2024 and numbered 2024/01-15.

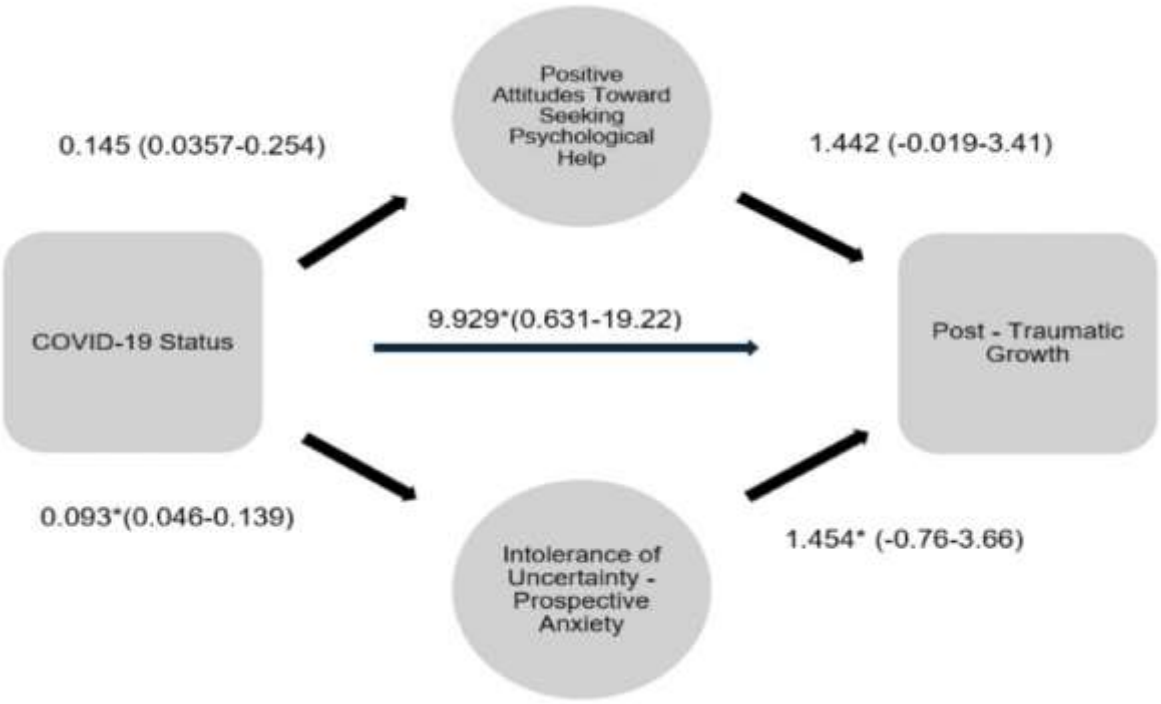
RESULTS: The mean age of the COVID-19 cases was 43.53±14.37 and non-COVID-19 cases was 40.36± 14.24. No significant difference was found in demographic variables such as age, gender, marital status and education level between two groups except family history of COVID-19 ($p = 0.001$). The scores of the change in philosophy of life, one of the post-traumatic growth subscales and total PTGI scores were significantly higher in COVID-19 cases compared to those who did not ($p<0.05$). The correlation analyses in COVID-19 survivors revealed statistically significant positive correlations between the change in PTGI self-perception and IUS-12 prospective anxiety and positive attitudes towards seeking psychological help ($p<0.01$). The change in philosophy of life of PTGI was positively correlated with IUS-12 prospective and inhibitory anxiety and total IUS-12 scores, and inversely correlated with negative attitudes towards seeking psychological help ($r=0.25$, $p=0.05$) $p<0.01$).

Mediation analysis revealed that positive attitudes toward seeking psychological help and prospective anxiety partially mediated the relationship between COVID-19 recovery and post-traumatic growth. Higher intolerance of uncertainty and help-seeking attitudes were linked to greater post-traumatic growth (Figure 1).

CONCLUSIONS: Addressing post-traumatic growth and intolerance of uncertainty is essential for psychological support programs targeting COVID-19 survivors. Encouraging positive help-seeking attitudes and managing uncertainty effectively can foster post-traumatic growth and resilience, offering valuable guidance for post-pandemic mental health interventions.

Keywords: COVID-19, intolerance of uncertainty, post-traumatic growth, seeking psychological help

The mediation analysis of the results



[Abstract:0380]

The Effects of Hospitalization Type, Clinical Features and Addiction Severity on Treatment Motivation in Substance Use Disorder

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BACKGROUND AND AIM: Substance use disorder (SUD) is a public health problem worldwide. Treatment motivation is an important factor in addiction treatment in terms of not starting treatment, dropping out, and relapses, and affects the course of treatment. The aim of the study is to examine the effect of hospitalization type, sociodemographic characteristics, substance use characteristics and addiction severity on the treatment motivation of the compulsory and voluntary inpatient groups through Article 432 of the Turkish Civil Code.

METHODS: 200 people who agreed to participate in the study were included in the study. People were included in the study after completing 14 days of detoxification treatment. Sociodemographic and clinical data form, Addiction Profile Index (API) and clinical form (API-K) and Treatment Motivation Questionnaire (TMQ) were applied to the participants. Statistical significance was taken as $p<0.005$.

RESULTS: In our study, it was found that the compulsory group was younger and sub-dimensions such as craving, impact on life, addiction severity, impulsivity, depression and anxiety were lower than the voluntary group.

It was found that the intrinsic motivation, help seeking and tma-total scores of the voluntary hospitalization group were significantly higher than the compulsory group. The extrinsic motivation of the compulsory patients was found to be significantly higher than the voluntary group. Trust in treatment was similar between the two groups. When the API and API-K were compared between the two groups, excitement seeking behavior was found to be similar, while all other subscales were found to be significantly higher in the voluntary group.

The TMQ scores of the four groups formed according to the severity of addiction and the type of hospitalization were compared with each other. Significant differences were found between the groups in intrinsic motivation, extrinsic motivation and tma-total scores. It was found that intrinsic motivation and tma-total scores were significantly lower in the compulsory and low-severity patient group than in the other groups. It was found that extrinsic motivation was significantly higher in the compulsory and high-severity patient group than in the other groups. It was found that the help seeking of the voluntary and severely addicted patients was very close to statistical significance.

When the correlation of the sociodemographic variables of the compulsory group with TMQ was examined, it was determined that the extrinsic motivation and help-seeking were higher in individuals receiving compulsory treatment who had a family history of substance use.

CONCLUSIONS: The fact that intrinsic motivation increases if the addiction severity of patients receiving compulsory treatment is high, but extrinsic motivation does not increase if the addiction severity is low, reveals the importance of addiction severity in motivation, independent of the type of hospitalization.

It has been shown that the type of hospitalization and the severity of addiction affect motivation dimensions. It was found that family history and living with the family increased extrinsic motivation in compulsory hospitalized patients. Increasing family support for patients with SUD and conducting motivational interviews aimed at showing the negative effects of substance use on their lives are important in the initial stage of addiction treatment.

Keywords: Addiction, voluntary, motivation, compulsory

[Abstract:0389]

Turkish Version of Moral Injury Event Scale (MIES)

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Introduction: Events that lead to moral injury (MI) are defined as "performing actions that violate one's moral principles and expectations, failing to prevent those actions, witnessing them, or learning that they have occurred". Repeated exposure to such events can result in moral injury (1). Healthcare professionals frequently face stressful situations that require critical decision-making, and they have been reported to experience moral injury(2). Moral injury can lead to various psychological issues, including depression, anxiety, anger management problems, re-experiencing moral conflicts, self-harming behaviors, suicide attempts, substance abuse, and social problems(3). The aim of this study is to adapt the Moral Injury Events Scale (MIES) into Turkish, to conduct validity and reliability analyses of the Turkish version, and to contribute the scale to the Turkish language.

Methods: The research sample consisted of 103 healthy volunteer nurses aged between 18- 65 who agreed to participate in the study. Of the participants, 77.7% were female, with a mean age of 27.84 years. The MIES was translated into Turkish by two individuals proficient in mental health terminology in both Turkish and English. The back-translation to English was carried out by an expert in the foreign language. Participants completed the Moral Injury Events Scale, the PTSD Checklist for DSM-5 (PCL-5), the Depression Anxiety Stress Scale Short Form (DASS-21), and the Rosenberg Self-Esteem Scale (RSES). Statistical analyses of the data included descriptive analysis, validity (Pearson correlations), reliability analyses (Cronbach's alpha), confirmatory factor analysis (CFA), and correlation analysis.

Results: In assessing the suitability for analysis, the Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin (KMO) measure yielded significant results (P<.001, Bartlett Chi-square=441.102; KMO=.755). Upon examining the results obtained from the CFA, it was determined that the $\chi 2/df$ ratio, which requires a value below 5, was at an acceptable level ($\chi 2/df=73.24/24=3.05$). The CFA confirmed a three-factor structure with a total of 9 items. In internal consistency analyses, the Cronbach's alpha coefficients were found to be 0.79 for the "perceived transgressions-others" subscale, 0.81 for the "perceived transgressions-self" subscale and 0.87 for “perceived betrayals” subscale and 0.86 for the overall scale. The item-total correlation analysis for scale reliability indicated that all items showed a positive correlation greater than 0.30.

Conclusion: Evaluating moral injury is essential for anticipating possible psychological issues that individuals may develop and for designing suitable interventions.The current empirical study supports that the Turkish version of the MIES is valid and reliable. Results obtained from the CFA confirm a three-factor structure of "transgressions-others", "transgressions-self" and "betrayals," consistent with the original scale (4). The internal consistency analysis showed that the Cronbach's alpha reliability coefficients for both subscales and the total scale score indicate acceptable and reliable internal consistencies(5). The findings validate the usability of the Turkish version of the MIES.

1-Litz, B. T., Stein, N., Delaney, E., Lebowitz, L., Nash, W. P., Silva, C., & Maguen, S. (2009). Moral injury and moral repair in war veterans: A preliminary model and intervention strategy. Clinical psychology review, 29(8), 695-706.
2- Ford EW. Stress, Burnout, and Moral Injury. J Healthc Manag. 2019;64(3):125–27.
3-Jinkerson, J. D. (2016). Defining and assessing moral injury: A syndrome perspective. Traumatology, 22(2), 122.
4-Bryan CJ, Bryan AO, Anestis MD, Anestis JC, Green BA, Etienne N, Morrow CE, Ray-Sannerud B. Measuring Moral Injury: Psychometric Properties of the Moral Injury Events Scale in Two Military Samples. Assessment. 2016 Oct;23(5):557-70.
5-Nunnally, J., & Bernstein, I. (1994). Psychometric Theory (3rd ed.). New York: McGraw-Hill.

[Abstract:0395]

The Effect of Second-Generation Long-Acting Injectable Antipsychotic Treatment on Hospitalization and Number of Episodes in Patients Diagnosed with Bipolar Disorder: A Mirror-Image Study

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BACKGROUND AND AIM: Bipolar disorder is a chronic psychiatric illness that leads to functional impairment. During episodes, hospitalization may sometimes be required for treatment. In maintenance therapy, along with mood stabilizers, antipsychotic medications are also sometimes used.This mirror-image study aims to examine the effect of second-generation long-acting injectable antipsychotic (LAI-AP) treatment on hospitalization and the number of episodes in patients diagnosed with bipolar disorder.

METHODS: Patients followed at Mersin City Training and Research Hospital, who had no missing medical records during the observation period and had been using second-generation LAI-AP for at least one year, were included in the study. All patients underwent a psychiatric interview. Data were collected from the patients themselves and their medical records. A one-year period before the initiation of LAI-AP treatment was compared with a one-year period after its initiation. The primary outcomes of the study were the rate of rehospitalization, the number of hospitalizations, and changes in the number of episodes. The secondary outcomes were based on patients' evaluations using the Young Mania Rating Scale (YMRS) and the Hamilton Depression Scale (HAM-D). Before the study commenced, ethical approval was obtained from the Toros University Scientific Research and Publication Ethics Committee with the decision number 135, dated 25.06.2024. The necessary permissions were also obtained from the hospital where the study was conducted.

RESULTS: A total of 74 patients were included in the study. Of these, 41 patients (55.40%) were using monthly paliperidone injections, while 33 patients (44.40%) were using monthly aripiprazole injections. The mean duration of illness was 16.14±8.56 years, and the mean duration of LAI-AP use was 3.72±2.15 years. A total of 53 patients (71.62%) were also using additional oral antipsychotics, with a mean chlorpromazine equivalent dose of 482.60±307.49 mg/day. Before LAI-AP treatment, 48 patients (64.9%) required inpatient hospitalization, whereas after LAI-AP treatment, this number decreased to 13 patients (17.6%) ($p<0.001$). The number of hospitalizations decreased from 0.92±0.10 before LAI-AP to 0.59±0.06 after LAI-AP ($p<0.001$). The number of days hospitalized decreased from 15.20±1.76 to 7.86±0.91 ($p<0.001$). The number of manic episodes decreased from 0.89±0.10 to 0.50±0.05 ($p<0.001$), while the number of depressive episodes decreased from 0.75±0.08 to 0.59±0.06 ($p=0.09$). The mean YMRS score was 2.60±3.62, and the mean HAM-D score was 5.12±3.98.

CONCLUSIONS: In patients diagnosed with bipolar disorder, the use of LAI-AP may have a positive impact on the course of the disease by reducing the number of hospitalizations and manic episodes. However, its effectiveness on depressive episodes has not been sufficiently proven.

Keywords: Bipolar disorder, long-acting injectable antipsychotics, maintenance treatment, mirror-image study

[Abstract:0406]

Assessment of Parental Attachment and Early Maladaptive Schemas in Juvenile Boy Offenders in Turkiye; A Case-control Study

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BACKGROUND AND AIM: One of the most important social and legal problems for societies all over the world is juvenile offending. Several studies have been carried out to develop juvenile offending prevention programs. As a result of these studies, various risk factors (individual, social or environmental factors) were identified. In addition to these risk factors, it is thought that parental attachment and early maladaptive schemas may have an impact on criminal behavior and that interventions targeting these factors may be effective in reducing offending. The vast majority of studies examining the relation between early maladaptive schemas and offending have been conducted with adult participants and sexual offenders, and the number of studies with adolescents was limited. Additionally, the studies investigating the association between parental attachment and early maladaptive schemas in juvenile offenders was limited in the literature. Moreover, to our knowledge, in our country, there is no study examining early maladaptive schemas in adolescent offenders. The current study aimed to evaluate the association between juvenile offending, early maladaptive schemas and parental attachment.

METHODS: Sixty-nine adolescents convicted for any offending, and 73 non-offender adolescents were assessed with the sociodemographic data form, Young Schema Questionnaire-Short Form 3 and the Short Form of Inventory of Parent and Peer Attachment.

RESULTS: The mean age of the juvenile delinquent and control groups was 16.15 (%50=16) and 16.13 (%50=16), respectively. There was no significant difference between the groups in terms of age ($Z = -0.85$, $p=0.926$). In the offending group, the two highest schema dimensions were enmeshment/dependence schema (median 26; IQR 19-31) and entitlement/insufficient self-control (median 23; IQR 20-31). The statistically significant difference found in the subdimensions of enmeshment/dependence ($p=0.001$), abandonment ($p=0.001$), failure ($p=0.039$), vulnerability to harm ($p=0.048$), defectiveness ($p=0.024$), self-sacrifice ($p=0.006$). On IPPA scale (for both mother and father), the control group had higher total and subscale scores than the offending group, but no statistically significant difference was shown. It was found that mother attachment had a negative correlation with failure (r: -0.310, $p = 0.01$), enmeshment/dependence (r:-0.238, $p = 0.049$), defectiveness (r:-0.285, $p = 0.018$), punitiveness (r:-0.238, $p = 0.049$) early maladaptive schemas-subdimensions. It was also determined that father attachment had a negative correlation with pessimism (r:-0.320, $p = 0.007$), vulnerability to harm (r:-0.265, $p = 0.028$), enmeshment/dependence (r:-0.281, $p = 0.019$), abandonment (r:-0.276, $p = 0.022$), social isolation/mistrust (r: -0.292, $p = 0.015$), defectiveness (r:-0.317, $p = 0.008$) early maladaptive schemas-subdimensions.

CONCLUSIONS: The results of the current study support that there is a significant association between early maladaptive schemas and youth offending. Moreover, the results suggest that in juvenile offenders, there is a correlation between parental attachment and early maladaptive schemas. Schema-focused therapy and family interventions may thus be an acceptable approach to assess and prevent juvenile offending.

Keywords: Adolescents, Early maladaptive schemas, offending, parental attachment

[Abstract:0408]

The Relationship Between Internet Gaming Disorder and Chronotype and Sleep Problems in Adolescents

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BACKGROUND AND AIM: With technological developments, digital games have become primarily leisure activities. The spread of the game playing feature on mobile phones, has made it possible to access the game at any time. The fact that individuals are overly interested in internet games and spend excessive time and energy for games in their daily life has revealed global problem of Internet gaming disorder (IGD). Increased time spent online gaming at night during adolescence contributes to circadian phase delays, affecting sleep timing, duration, continuity, and quality. It has been also determined that the light emitted from media screens before going to bed may delay the circadian rhythm. Chronic sleep loss and circadian misalignment reinforce developmental tendencies to increase reward sensitivity and impulsivity, increasing the likelihood of engaging in risky behaviours and making adolescence a high-risk period for substance abuse and behavioral addictions. The studies showing the relation between IGD and chronotype and sleep problems are limited. The aim of this study was to determine the prevalence of IGD (online subtype) in adolescents and to examine the relation between IGD and chronotype and sleep problems.

METHODS: This study was conducted with 660 adolescents. All participants filled out the Socio-demographic Information and Gaming Habits Questionnaire, Internet Gaming Disorder Scale Short Form, Morningness-Eveningness Scale for Children and Children‘s Sleep Habits Questionnaire. The IGD group was formed from the participants who stated that they played online games and scored 36 points or more from the Internet Gaming Disorder Scale Short Form, and the control group was formed from the other participants.

RESULTS: The study conducted with 394 girls (59.7%) and 266 boys (40.3%). The prevalence of IGD was determined as 4.7% (n:31). The mean age of the IGD group was 14.71±2.32 and the mean age of the control group was 14.93±2.09. No statistically significant difference was detected between the groups in terms of age and gender. In terms of socio-demographic data, statistical significance was found only in terms of parent‘s mental illness. The presence of psychiatric disorder in the mother and father was significantly higher in the IGD group than in the control group ($p<0.001$). A relation was found between IGD and sleep problems. It was determined that 90.3% (n:28) of the participants in the IGD group and 73% (n:459) of the participants in the control group had sleep problems (p:0.035). Among the CSHQ subscales, "bedtime resistance", "sleep duration", "parasomnias", "sleep breathing disturbance" and "daytime sleepiness" scores were significantly higher in the IGD group. While being an evening chronotype was significantly higher in the IGD group ($p<0.001$), being an intermediate chronotype was significantly higher in the control group ($p<0.001$).

CONCLUSIONS: Current study determined that being an evening chronotype and having sleep problems were significantly higher in the IGD group than in the control group. In addition, it was shown that there was a positive relation between mental illness in the mother and/or father and IGD. The interventions on adolescents' chronotype and sleep patterns and assessments on parents' mental health may contribute to the IGD treatment process.

Keywords: Addictio,; adolescent, chronotype, game, internet, sleep

[Abstract:0411]

Evaluation of the Relation Between Peripheral Inflammatory Parameters and the Suicide Probability in Adolescents with Suicide Attempts

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BACKGROUND AND AIM: Suicide and suicide attempts remain a serious public health concern. Suicide is the second most common cause of death among 10-24 years old. Suicide attempts are more common than suicide-related deaths. Recent studies have suggested that immune dysregulation of inflammatory and regulatory processes may have a role in suicide attempts. The aim of this study is to compare and evaluate the counts of white blood cells, hemoglobin, hematocrit, platelet, leukocyte, NLR, MLR, PLR, BLR, PDW, RDW and SII, in healthy controls and adolescents who attempted suicide. In addition, the relation between these parameters and the suicide probability and psychiatric disorders was also investigated.

METHODS: This study was conducted with 79 adolescents who were brought to the pediatric emergency department with a suicide attempt and referred to the child psychiatry clinic for consultation, and 32 healthy adolescents in the same age range who did not have any psychiatric disorders and had not attempted suicide. The exclusion criteria for both groups were as follows: obesity, presence of any infection or other signs of diseases at admission, presence of chronic medical diseases, history of trauma, malignancy and surgery. The sociodemographic data form, suicide probability scale (SPS), and Revised Child Anxiety and Depression Scale (RCADS) were filled out by all participants. Hemogram results of patients from whom blood was taken within the first 6 hours after the suicide attempt were recorded. Hemoglobin, hematocrit, White Blood Cell (WBC), neutrophil, lymphocyte, platelet, monocytes, eosinophil, basophil, Red Blood Cell (RBC), Mean Platelet Volume (MPV), Platelet Distribution Width (PDW) were recorded. Neutrophil/Lymphocyte Ratio (NLR), Platelet/Lymphocyte Ratio (PLR), Monocyte/lymphocyte (MLR), Basophil/Lymphocyte Ratio (BLR), Systemic Inflammatory Index (SII=Platelet Count X Neutrophil Count/Lymphocyte Count Ratio) were calculated manually from the hemogram results.

RESULTS: The distribution of the laboratory parameters was evaluated, and lymphocyte, monocytes, platelet, MPV, PDW, RDW-SD, RDW-CV, PLR, MLR, SII values were not different between the groups (P = 0.092; 0.060; 0.159; 0.101; 0.742; 0.857; 0.339; 0.134; 0.077; 0.158, respectively). WBC, neutrophil, basophil, NLR, and BLR were elevated in patients who had attempted suicide than the controls (P = 0.002; 0.001; 0.001; 0.018; 0.001, respectively). RBC, Hemoglobin, hematocrit and eosinophil were decreased in patients who had attempted suicide than the controls (P = 0.000; 0.001; 0.000; 0.022, respectively). All of the subscales scores of SPS and RCADS were significantly higher in the suicide attempt group (p = 0.000 for all values). In addition the total score and subscales of the SPS and RCADS-Child total anxiety, total anxiety and depression subscale scores were negatively correlated with hemoglobin and hematocrit. RBC was negatively correlated with RCADS-Child total anxiety, total anxiety and depression subscale scores, and SPS hopelessness, hostility subscale scores. Monocyte was positively correlated with RCADS-Child total anxiety, total anxiety and depression subscale scores, and SPS negative self-assessment subscale score. WBC was positively correlated with SPS suicidal ideation subscale score.

CONCLUSIONS: Current study suggested that inflammatory factors might have a role in the occurrence of suicide attempts. Further studies are needed to elucidate the mechanisms of immune pathways underlying suicidal behavior.

Keywords: Basophil/lymphocyte ratio, Inflammation, Neutrophil/lymphocyte ratio, Platelet/lymphocyte ratio, Suicide

[Abstract:0417]

Comparison of Attention Deficit Hyperactivity Disorder in Preoperative Psychological Evaluations of Bariatric Surgery

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BACKGROUND AND AIM: The global rise in obesity leads to significant medical and psychological complications, imposing an economic burden on healthcare systems. Recognized as a critical public health issue, obesity is linked to chronic conditions such as hypertension, diabetes, cardiovascular diseases, and cancer in both adults and children. Attention Deficit Hyperactivity Disorder (ADHD), a neurobiological disorder with a 2.5–5% prevalence, often co-occurs with depression, anxiety, and circadian rhythm disorders. Recent studies suggest ADHD may increase obesity risk, with a proposed linear relationship between ADHD severity and obesity. Neglecting psychiatric issues can hinder obesity treatment and bariatric surgery outcomes. Thus, understanding obesity-ADHD interactions and implementing early interventions is vital for individual and public health.

METHODS: A dataset was created by retrospectively examining the psychological evaluations of obese individuals who underwent bariatric surgery. The dataset included sociodemographic information, as well as responses to the Adult Attention Deficit Hyperactivity Disorder (ADHD) Evaluation Scale, Wender Utah ADHD Evaluation Scale, Beck Depression Inventory, Beck Anxiety Inventory, Eating Attitudes Test, and Insomnia Severity Index. Subsequently, based on their responses to these scales, individuals were categorized into two groups: those with ADHD in adulthood and those who were healthy in adulthood. Additionally, according to the developmental course of ADHD, individuals were further divided into four groups: (1) individuals with ADHD in childhood but not in adulthood, (2) individuals without ADHD in both childhood and adulthood, (3) individuals without ADHD in childhood but with ADHD in adulthood, and (4) individuals with ADHD in both childhood and adulthood. The collected data were compared using frequency distributions according to these categorized groups. Scale scores were evaluated using the Mann-Whitney U test and Kruskal-Wallis test.

RESULTS: The dataset comprised a total of 619 individuals, including 163 males (26.3%) and 456 females (73.7%). Based on the Wender Utah Rating Scale (WURS) or the Adult ADHD Self-Report Scale (ASRS), the prevalence of Attention Deficit Hyperactivity Disorder (ADHD) was significantly elevated at 12.6% (N=78) compared to the general population. When stratified by gender, ADHD prevalence was 14.2% (N=64) in females and 8.6% (N=14) in males. Assessment using other scales revealed increased rates of depression at 18.1%, anxiety at 37.3%, and insomnia at 2.7% relative to the general population. Furthermore, among individuals diagnosed with ADHD, the prevalence of depression was 50%, anxiety was 75%, eating disorders were 48%, and insomnia was 4.7%. When categorizing individuals based on the developmental trajectory of ADHD, those who had ADHD in childhood but not in adulthood exhibited depression, anxiety disorder, and Insomnia Severity Index scores comparable to those with chronic ADHD.

CONCLUSIONS: Individuals with obesity exhibit higher rates of ADHD, anxiety, and depression compared to general population. ADHD disrupts psychological development, leading to obesity, anxiety, depression, and insomnia. Even mild ADHD persisting into adulthood is linked to increased insomnia, depression, and anxiety, similarly impairing quality of life as chronic ADHD. These findings emphasize the importance of early ADHD diagnosis and treatment in childhood. A holistic approach addressing ADHD, anxiety, and depression may more effectively combat obesity than obesity-focused treatments alone.

Keywords: Obesity, Bariatric Surgery, Attention Deficit Hyperactivity Disorder (ADHD), Mental Health

Distribution according to ADHD subgroups

		No ADHD, not even childhood	No ADHD, but with childhood ADHD	ADHD but there is no childhood ADHD	Adult ADHD with childhood ADHD
Age		35,324603 ± 10,876402 (N:504)	29,977297 ± 8,746883 (N:37)	36,614872 ±10,433577 (N:39)	32,854359 ±10,639875 (N:39)
Sex	Male	139 %27.6	10 %27.0	6 %15.4	8 %20.5
	Female	365 %72.4	27 %73.0	33 %84.6	31 %79.5
Marital Status	Married	314 %62.3	16 %43.2	24 %61.5	23 %59.0
	Single	150 %29.8	15 %40.5	10 %25.6	14 %35.9
	Other	25 %5.0	4 %10.8	4 %10.3	1 %2.6
Depression	Depressed	60 %11.9	13 %35.1	16 %41.0	23 %59.0
	non-depressed	444 %88.1	24 %64.9	23 %59.0	16 %41.0
Anxiety	Anxious	144 %28.6	28 %75.7	27 %69.2	32 %82.1
	Normal	360 %71.4	9 %24.3	12 %30.8	7 %17.9
Eating Attitudes	Over 30	144 %28.6	19 %51.4	22 %56.4	16 %41.0
	Below 30	360 %71.4	18 %48.6	17 %43.6	23 %59.0

This table presents the distribution of study participants categorized into four ADHD subgroups based on the presence of Attention Deficit Hyperactivity Disorder (ADHD) during childhood and adulthood. The subgroups include: (1) individuals without ADHD in both childhood and adulthood (2) individuals with ADHD in childhood but not in adulthood individuals without ADHD in both childhood and adulthood, (3) individuals without ADHD in childhood but with ADHD in adulthood, and (4) individuals with ADHD in both childhood and adulthood. The distribution is analyzed to understand the prevalence and patterns of ADHD across different developmental stages among obese individuals undergoing bariatric surgery.

Distribution of psychometric scales according to ADHD subgroups

	(1)ndividuals without ADHD in both childhood and adulthood,	(2) individuals with ADHD in childhood but not in adulthood,	(3) individuals without ADHD in childhood but with ADHD in adulthood,	(4) individuals with ADHD in both childhood and adulthood.	
	(N:504)	(N:37)	(N:39)	(N:39)	
İnsomnia Severity Index	5,978327 ±4,056946	7,836533 ±4,699949	6,988432 ±3,717842	8,544516 ±3,334553	0,000082 <0.001**
Beck Anxiety Scale	10,833560 ±8,991596	20,780879 ±9,812214	18,410863 ±9,246764	26,049739 ±12,467136	0,0E0 <0.001**
Beck Depression Scale	8,799094 ±6,710629	15,011633 ±7,657592	15,808040 ±9,173504	20,667790 ±9,750556	0,0E0 <0.001**
Eating Attitudes Test	25,046557 ±14,132804	31,361102 ±12,020550	30,627362 ±10,403861	26,839457 ±9,905783	0,000012 <0.001**

This table presents the distribution of scores on various psychometric scales among obese individuals undergoing bariatric surgery, categorized into ADHD subgroups. The scales include the Adult ADHD Self-Report Scale (ASRS), Wender Utah ADHD Rating Scale (WURS), Beck Depression Inventory, Beck Anxiety Inventory, Eating Attitudes Test, and Insomnia Severity Index. Participants were divided into four subgroups based on the presence of ADHD in childhood and adulthood: (1)ndividuals without ADHD in both childhood and adulthood, (2) individuals with ADHD in childhood but not in adulthood, (3) individuals without ADHD in childhood but with ADHD in adulthood, and (4) individuals with ADHD in both childhood and adulthood. The scores on these scales were compared across the subgroups to evaluate the psychological status of each group. This distribution provides significant insights into the impact of different ADHD trajectories on psychiatric symptoms following bariatric surgery.

AuthorToEditor: 1. Jiang F, Jiang Y, Zhi H, et al. Artificial intelligence in healthcare: past, present and future. Stroke Vasc Neurol. 2017; 2: 230-243. 2. Shatte ABR, Hutchinson DM, Teague SJ. Machine learning in mental health: a scoping review of methods and applications. Psychol Med. 2019; 49: 1426- 1448. 3. Luxton DD. Artificial intelligence in psychological practice: Current and future applications and implications. Professional Psychology: Research and Practice. 2014; 45: 332-339. 4. Dwyer DB, Falkai P, Koutsouleris N (2018) Machine learning approaches for clinical psychology and psychiatry. Annual Review of Clinical Psychology 14: 91-118. 5. Hepdurgun C, 2024 Feb, The Present and Future of Artificial Intelligence Applications in Psychiatry, Noro Psikiyatr Ars 19; 61(1):1–2. doi: 10.29399/npa.28725

[Abstract:0421]

Evaluating the Clinical Utility and Tolerability of Brexpiprazole in Child and Adolescent Psychiatry: A Retrospective Case Series

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BACKGROUND AND AIM: Brexpiprazole is a modulator of serotonin-dopamine activity. It has high binding affinity to 5-HT1A and D2 and D3 receptors where it acts as a partial agonist. Because its dopamine agonism is lower than that of aripiprazole, there is less chance of dopamine-related side effects such as nausea, insomnia, akathisia, and EPS. In adults, it is used in many settings, including schizophrenia, augmentation of depression, treatment of agitation in Alzheimer's dementia, and reduction of anxiety symptoms. In children and adolescents, it is approved only for the treatment of schizophrenia. Given the specific receptor profile of brexipiprazole and its highly reliable side effect profile, we aim to present case studies to support its potential use in child and adolescent mental health and expand its clinical applications.

METHODS: Nine patients who were followed up at Ege University, Department of Child and Adolescent Mental Health and Diseases and who were taking brexipiprazole were included in the study. Written informed consent was obtained from the patients and their parents. The study methodology was retrospective and descriptive. Cases were diagnosed according to DSM-5 and KSADS was used for differential diagnosis. CGAS and CGI data, weight and drug side effect scale data were obtained from their records.

RESULTS: The mean age of the cases was 14.7 years (min:12 and max:17). Two of the cases were male and seven were female. Psychiatric diagnoses: ADHD in 1 case (11.1%), conduct disorder in 1 case (11.1%), ASD in 2 cases (22.2%), OCD in 4 cases (44.4%), anxiety disorder in 4 cases (44.4%), psychotic disorder was present in 2 patients (22.2%), bipolar disorder in 2 patients (22.2%), mood disorder-BTA in 4 patients (44.4%), major depressive disorder in 2 patients (22.2%). The mean dose of brexipiprazole was 1.33 mg/day (min=1, max2). Brexipiprazole was discontinued in 1 case (11.1%) at a dose of 2 mg/day at the end of the first month due to lack of benefit. The drug was not discontinued due to adverse events in any patient. In 1 case (11.1%) a drug-related adverse event was observed, which was weight gain. The mean CGAS of the patients before the start of Brexipiprazole was 34.63±15.79, while the mean CGAS after the addition of the drug was 57.62±21.86, and the difference between them was statistically significant (p=0.02). The mean value of CGI before the start of brexipiprazole was 5.37±1.06, while it was 3.5±1.41 after the addition of the drug and the difference between them was statistically significant (p=0.004).

CONCLUSIONS: Brexipiprazole may provide potential therapeutic benefit in the augmentation treatment of depression, obsessive-compulsive disorder, anxiety disorders and management of stereotypic behaviors associated with autism spectrum disorder in the child and adolescent population. It is considered to offer high tolerability in terms of side effect profile. These properties highlight brexipiprazole as a promising pharmacological agent in the field of child and adolescent psychiatry.

Keywords: Augmentation Therapy, Brexpiprazole, Child and Adolescent Psychiatry

[Abstract:0458]

Reliability and Validity of the Turkish Version of the Infant-Toddler Checklist

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BACKGROUND AND AIM: The Infant-Toddler Checklist (ITC) is a parent-reported scale developed to screen infants‘ social communication, expressive language, and symbolic language skills. It is a reliable tool used in research and clinical settings to assess children with language and communication development difficulties. The scale has been shown to have adequate psychometric properties in various languages. This study aimed to evaluate the psychometric properties, reliability, and validity of the Turkish version of the ITC. The sample group of the cross-sectional study consisted of 350 children aged 8-16 months. Two parent-reported instruments—the Turkish versions of the ITC and the MacArthur-Bates Communicative Development Inventory (MB-CDI) were used to determine the concurrent validity of the subscales of the ITC. Parents completed the ITC and MB-CDI questionnaires face-to-face (n=28) or online (n=322).

METHODS: Internal consistency, construct validity, concurrent validity and test-retest reliability were measured to evaluate psychometric properties.

RESULTS: Turkish version of the ITC showed good psychometric properties and the characteristics of a standardized measurement tool. The Cronbach's alpha coefficient was.917. Pearson correlation coefficients for the test-retest reliability of communication, expressive language, and symbolic component subscale scores were significant ($p < 0.001$).

CONCLUSIONS: Given the absence of early language and social communication assessment tools for infants in our language, the Turkish version of ITC could support professionals in early screening for speech, language, and communication development and disorders in infants.

Keywords: Communication, speech, screen, toddler, validity, reliability

Embryonically Derived Dorsal Dentate Granule Neurons Regulate BDNF Expression, Adult Hippocampal Neurogenesis, and Anxiety-Like Behaviors

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ABSTRACT: The dentate gyrus (DG) regulates hippocampal information flow and plays key roles in processes such as pattern separation, learning, memory, and mood regulation. Dysfunction of DG neurons is implicated in various neurological and psychiatric disorders, including anxiety, but the underlying mechanisms remain unclear. In this study, we identified a subset of embryonically derived dorsal DG (dDG) neurons expressing osteocalcin (Ocn)-Cre. Using chemogenetic tools and Cre-dependent diphtheria toxin AAV (DTA), we found that these neurons exhibited heightened activity in response to an anxiogenic environment. Activation of Ocn-Cre+ dDG neurons alleviated anxiety-like behaviors and promoted neurogenesis, while ablation or chronic inhibition exacerbated anxiety and impaired neurogenesis. These neurons exhibited lower excitability and fewer presynaptic inputs than Ocn-Cre− or adult-born dDG neurons. RNA sequencing and functional studies revealed that brain-derived neurotrophic factor (BDNF) mediates the anxiolytic and neurogenic effects of Ocn-Cre+ dDG neuron activation. Our findings highlight the critical role of these neurons in regulating anxiety and neurogenesis via the BDNF pathway, suggesting that targeting this pathway may offer a promising therapeutic strategy for anxiety disorders.

Investigation of Retinal Layers Thicknesses in Schizophrenia Patients and Comparison with Healthy Siblings and Control Group

Kardelen Akbal Bağcı

Bilkent Şehir Hastanesi Çocuk Psikiyatri Kliniği

BACKGROUND AND OBJECTIVE: Psychotic disorder is characterized by combination of hallucinations, delusions, disorganized speech and behavior and negative symptoms. Despite the pathophysiology of this syndrome isn‘t well understood, it is determined as a brain condition that occurs from the interaction of genetic,

Genetic factors plays a crucial role in the etiology. One of the strongest risk factor of schizophrenia is having a first-degree relative with the disorder. Structural and functional brain abnormalities including grey and white matter volume loss, glial cell dysfunction and impaired connectivity demonstrated at both schizophrenia and unaffected first-degree relatives.

Retina is an extension of the central nervous system (CNS). Both brain and retina develop from the forebrain ectoderm at early stages of neurodevelopment. Retina also contains layers that correspond to the gray and white matter of the brain.

In our study we examined , macular retinal nevre fiber layer (RNFL), ganglion cell layer(GCL) and inner plexiform layer (IPL) thicknesses because brain morphology studies indicated that these are the most relevant layers associated with the brain.

This study aims to compare retinal layer thicknesses of adolescents by using Optical coherence tomography (OCT), between schizophrenia patients, healthy siblings of schizophrenia patients and healthy control groups.

METHODS: The study included 22 schizophrenia, 29 healthy siblings and 31 healthy controls with no family history of any psychotic disorder. Patients and healthy siblings were collected from Ankara City Hospital Child and Adolescent Department .The healthy control group recruited from Ophthalmology Department who applied for routine eye examination, had no history of eye disease other than refractive errors, and had no systemic disease. The sociodemographic data form, Clinical Global Impression (CGI) scale were completed by the same clinicians for all subjects. Kiddie Schedule for Affective Disorders and Schizophrenia (K-SADS) was performed for all participants. **RNFL,** GCL, IPL were automatically measured by using OCT and were compared between the three groups.

RESULTS: The inner süperior and inner inferior subsegments of IPL and inner temporal subsegments of GCL were found thinner at schizophrenia and healthy siblings than healthy controls. No statistically significant difference was found between the RNFL layer thicknesses of the 3 groups.

CONCLUSION: The RNFL contains ganglion cell axons, the GCL contains ganglion cell bodies and the IPL contains ganglion cell dendrites. Acording to Rotterdam study thinning at the RNFL, GCL and IPL is associated with decreased gray and white matter volumes in the brain. Also MRI studies demonstrated reduced grey and white matter volume and impaired connectivity at schizophrenia patients.

We found some of the subsegments of IPL and GCL thinner in schizophrenia and healthy siblings than healthy controls. This might be the result of the neurodegeneration seen at schizophrenia. We also found retinal thinning at healthy siblings. That might be a endophenotype candidate.

Key Words: Schizophrenia, retina, OCT, biomarker, endophenotype

Investigation of the Relationship Between Sleep Disturbances, Chronotype, and Functionality in the Restrictive ADHD Phenotype

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BACKGROUND AND AIM: The DSM-5 proposed the Restrictive ADHD (ADHD-R) phenotype to differentiate cases with high inattention symptoms and low or absent hyperactivity/impulsivity symptoms from Predominantly Inattentive ADHD (ADHD-PI) cases that exhibit 4 or 5 hyperactivity/impulsivity symptoms. Chronotype refers to an individual's preference for morningness or eveningness. ADHD is associated with increased eveningness and sleep disturbances, and studies have linked inattention symptoms to greater eveningness. This study aims to compare chronotypic differences and sleep disturbances between ADHD-R and ADHD-PI groups and examine their impact on functional impairment.

METHODS: This study included 104 children aged 7–12 with no comorbid psychiatric diagnoses (excluding ODD and CD) and no psychotropic medication use in the past three months (34 ADHD-PI, 36 ADHD-R, and 34 typically developing peers). Parents completed the Children's Sleep Habits Questionnaire, Children's Chronotype Questionnaire, Weiss Functional Impairment Rating Scale, and Barkley Child Attention Scale. Participants with an IQ score of 80 or above were included.

RESULTS:Functional impairment was significantly higher in ADHD-PI (67%) and ADHD-R (61%) than in the control group (5.9%, p =.000). Increased eveningness in ADHD-R was associated with academic impairment (p =.021). Both ADHD groups exhibited greater daytime sleepiness than the control group (p =.011). In the ADHD-PI group, individuals with functional impairment had significantly higher scores on sleep duration on free days (p =.019), parasomnia (p =.012), and sleep-disordered breathing (p =.043).However, binomial logistic regression analysis showed that sleep duration on free days (p =.076), parasomnia (p =.153), and sleep-disordered breathing (p =.149) did not predict functional impairment. In the ADHD-R group, individuals with functional impairment had significantly higher total CSHQ scores (p =.004), sleep duration (p =.034), parasomnia scores (p =.015), total inattention scores (p =.015), total oppositional defiant scores (p =.001), and total BCA scores (p =.006).However, binomial logistic regression analysis revealed that total CSHQ scores (p =.142), sleep duration (p =.120), parasomnia scores (p =.218), total inattention scores (p =.854), and total BCA scores (p =.254) did not predict functional impairment.

CONCLUSIONS: This is the first study to assess functional impairment in the ADHD-R phenotype. It examined chronotype and sleep disturbances in ADHD-PI cases with and without hyperactivity symptoms and demonstrated their effects on functionality. In both groups, parasomnia and longer sleep duration were associated with functional impairment. Strengths include a homogeneous patient sample, exclusion of comorbid psychiatric and medical conditions, inclusion of non-medicated participants, and comparison with a control group. The lack of objective sleep measurements is a key limitation. Addressing sleep disturbances is essential for improving the quality of life and daily functioning of children with ADHD. Particularly in ADHD-PI, when pharmacological and non-pharmacological treatments are insufficient, sleep disturbances, parasomnia, and sleep duration should be further evaluated. Interventions aimed at improving sleep hygiene may offer promising benefits for enhancing the overall functionality of children with ADHD.

Keywords: EADHD subtypes, Restrictive ADHD, Sleep disturbances, Functionality, Chronotype

Chronotype Preference and Sleep Disturbances

	ADHD-PI (n=34)	ADHD-R(n=36)	CONTROL(n=34)	P value
Chronotype				0,647
Morning Type	6 (%17,6)	3 (%8,3)	4 (%11,8)	
Intermediate Type	18 (%52,9)	17 (%47,2)	18 (%52,9)	
Evening Type	10 (%29,4)	16 (%44,4)	12 (%35,3)	
Sleep Disturbance				0,080
None	11 (%32,4)	12 (%33,3)	19 (%55,9)	
Present	23 (%67,6)	24 (%66,7)	15 (%44,1)	

There was no significant difference in chronotype preference and the prevalence of sleep disturbances among the groups (p =.647, p =.080).Participants with a total CSHQ score of 41 or above were classified as having sleep disturbances. Sleep disturbances were observed in 67% of the ADHD-PI group, 66% of the ADHD-R group, and 44% of the healthy control group.

Distribution of Functional Impairment (WFIR)) Among Groups

WFIR	ADHD-PI (n=34)	ADHD-R (N=36)	CONTROL (N=34)	Chi-Square	p value
Family Impairment - No	24 (70.6%)	24 (66.7%)	32 (94.1%)	8.565	0,014
Family Impairment - Yes	10 (29.4%)	12 (33.3%)	2 (5.9%)		
School Impairment - No	12 (35.3%)	14 (38.9%)	34 (100%)	37,136	0,000
School Impairment -Yes	22 (64.7%)	22 (61.1%)	0 (0%)		
Life Skills Impairment - No	10 (29.4%)	15 (41.7%)	27 (79.4%)	18,529	0,000
Life Skills Impairment - Yes	24 (70.6%)	21 (58.3%)	7 (20.6%)		
Self-Perception Impairment - No	24 (70.6%)	29 (80.6%)	33 (97.1%)	9,611	0,048
Self-Perception Impairment - Yes	10 (29.4%)	7 (19.4%)	1 (2.9%)		
Social Activities Impairment - No	27 (79.4%)	31 (86.1%)	33 (97.1%)	4,937	0,085
Social Activities Impairment - Yes	7 (20.6%)	5 (13.9%)	1 (2.9%)		
Risky Behaviors Impairment - No	26 (76.5%)	34 (94.4%)	34 (100%)	11,874	0,003
Risky Behaviors Impairment - Yes	8 (23.5%)	2 (5.6%)	0 (0%)		
Total ≥2 Subdomains Impairment - No	11 (32.4%)	14 (38.9%)	32 (94.1%)	31,816	0,000
Total ≥2 Subdomains Impairment - Yes	23 (67.6%)	22 (61.1%)	2 (5.9%)		

FI= Funtional Impairment

Relationship Between Suicide Risk And Uncertainty Intolerance Levels, Emotion Regulation Strategies, Parental Attitudes In Adolescents

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BACKGROUND AND AIM: Suicidal behavior among adolescents is a global public health issue, and its nature is complex. Many significant theories have been proposed to examine the underlying processes of suicidal behavior, but most of these theories are limited as they do not address the difference between suicidal thoughts and suicide attempts. There are many factors that cause individuals to attempt suicide, and high levels of intolerance to uncertainty are thought to be among these factors. Maladaptive emotion regulation strategies have also been associated with suicidal thoughts and attempts in adolescents and have been shown to be predictors of this condition. Additionally, incompetent parental attitudes have been found to be related to suicidal behaviors. This research aims to compare the levels of intolerance to uncertainty, emotion regulation strategies, and parental attitudes between adolescents who have attempted suicide and those who have suicidal thoughts, and to elucidate whether these phenomena have mediating roles in the process of attempting suicide among adolescents who have attempted suicide.

METHODS: The research sample consists of adolescents and their parents who applied to Göztepe Prof. Dr. Süleyman Yalçın City Hospital between October 15, 2023, and March 15, 2024. Data collection tools include a semi-structured diagnostic clinical interview, sociodemographic data form, Suicide Screening Questions scale, Columbia Suicide Severity Rating Scale, Intolerance of Uncertainty Scale 12, Intolerance of Uncertainty Index for Children-A, Emotion Regulation Scale for Adolescents, Parental Attitude Scale. A total of 140 patients aged between 12.33 and 17.91 years (Mean=15.71, SD=1.39) were included in the research. The research sample consists of two groups: 98 individuals who have attempted suicide and 42 individuals who have suicidal thoughts. RESULTS:Our research found a significant relationship between attempting suicide and high scores on the Intolerance of Uncertainty Index for Children-A ($p<.001$), the IU-12 total score ($p=.001$), maladaptive internal ($p<.001$) and external ($p=.002$) emotion regulation strategies scores, and low acceptance/ interest scores in parental attitudes ($p=.044$). When mediation model analyses were separately conducted for these related phenomena in the process of transitioning from suicidal thoughts to suicide attempts, it was found that high levels of intolerance to uncertainty and maladaptive internal emotion regulation strategies had a mediating effect on the transition from suicidal thoughts to suicide attempts.
CONCLUSIONS: In our research, it was found that high levels of intolerance to uncertainty, maladaptive emotion regulation strategies, and parental attitudes, which are phenomena that we think may be effective in the process of adolescents with suicidal ideation attempting suicide, regardless of their diagnoses made with categorical diagnostic systems, are associated with suicide attempts. Thanks to these results obtained from our research, theoretical models were created to predict suicide attempts in high-risk adolescents with suicidal ideation. We believe that re-evaluating and developing these models with new samples in future studies will make significant contributions to the literature on reducing suicide risk among adolescents.

Keywords: Emotion Regulation, Intolerance of Uncertainty, Parental Attitude, Suicide Attempt, Suicidal Thoughts.

The Relationship Between Type D Personality Features And Social Anxiety Among Individuals With Alcohol And Substance Use Didorders

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INTRODUCTION: Type D personality is characterised by the presence of social inhibition (SI) and negative affectivity (NA). Individuals high in SI often experience feelings of discomfort, anxiety, stress, and lack of confidence. In contrast, individuals high in NA tend to experience unpleasant feelings. The aim of the present study was to determine the relationship between type D personality traits and social anxiety in individuals with alcohol and drug use disorders.

METHODS: A cross-sectional was conducted with 140 individuals who were admitted to the Health Sciences University Van Training and Research Hospital at the unit of Alcohol-Drug Addiction Research Treatment and Training Centres (AMATEM) between July and September in 2023. The Type D personality (DS-14) and Liebowitz Social Anxiety Scale (LSAS) were applied to participants. A linear regression model is used to test the predictive effect of D Type Personality on social anxiety.

RESULTS: It was found that there was a positive and significant relationship between social anxiety and social inhibition among the participants. Similarly, a positive and significant relationship was found between social anxiety and NA. The linear regression model revealed that SI was a significant predictor of social anxiety, but NA was not found to be a predictor of this relationship.

CONCLUSIONS: In summary, the relationship between Type D personality traits and social anxiety in individuals with alcohol and substance use disorders is a complex and multifaceted problem influenced by various psychological, emotional, and personal factors.

Keywords: Type D personality, social anxiety, alcohol, substance.

Turkish Version of Moral Injury Event Scale (MIES)

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INTRODUCTION: Events that lead to moral injury (MI) are defined as "performing actions that violate one's moral principles and expectations, failing to prevent those actions, witnessing them, or learning that they have occurred". Repeated exposure to such events can result in moral injury (1). Healthcare professionals frequently face stressful situations that require critical decision-making, and they have been reported to experience moral injury(2). Moral injury can lead to various psychological issues, including depression, anxiety, anger management problems, re-experiencing moral conflicts, self-harming behaviors, suicide attempts, substance abuse, and social problems(3). The aim of this study is to adapt the Moral Injury Events Scale (MIES) into Turkish, to conduct validity and reliability analyses of the Turkish version, and to contribute the scale to the Turkish language.

METHODS: The research sample consisted of 103 healthy volunteer nurses aged between 18- 65 who agreed to participate in the study. Of the participants, 77.7% were female, with a mean age of 27.84 years. The MIES was translated into Turkish by two individuals proficient in mental health terminology in both Turkish and English. The back-translation to English was carried out by an expert in the foreign language. Participants completed the Moral Injury Events Scale, the PTSD Checklist for DSM-5 (PCL-5), the Depression Anxiety Stress Scale Short Form (DASS-21), and the Rosenberg Self-Esteem Scale (RSES). Statistical analyses of the data included descriptive analysis, validity (Pearson correlations), reliability analyses (Cronbach's alpha), confirmatory factor analysis (CFA), and correlation analysis.

RESULTS: In assessing the suitability for analysis, the Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin (KMO) measure yielded significant results (P□.001, Bartlett Chi-square=441.102; KMO=.755). Upon examining the results obtained from the CFA, it was determined that the $\chi 2/df$ ratio, which requires a value below 5, was at an acceptable level ($\chi 2/df=73.24/24=3.05$). The CFA confirmed a three-factor structure with a total of 9 items. In internal consistency analyses, the Cronbach's alpha coefficients were found to be 0.79 for the "perceived transgressions-others" subscale, 0.81 for the "perceived transgressions-self" subscale and 0.87 for ―perceived betrayals" subscale and 0.86 for the overall scale. The item-total correlation analysis for scale reliability indicated that all items showed a positive correlation greater than 0.30.

CONCLUSION: Evaluating moral injury is essential for anticipating possible psychological issues that individuals may develop and for designing suitable interventions.The current empirical study supports that the Turkish version of the MIES is valid and reliable. Results obtained from the CFA confirm a three-factor structure of "transgressions-others", "transgressions-self" and "betrayals," consistent with the original scale (4). The internal consistency analysis showed that the Cronbach's alpha reliability coefficients for both subscales and the total scale score indicate acceptable and reliable internal consistencies(5). The findings validate the usability of the Turkish version of the MIES.

REFERENCES:

1- Litz, B. T., Stein, N., Delaney, E., Lebowitz, L., Nash, W. P., Silva, C., & Maguen, S. (2009). Moral injury and moral repair in war veterans: A preliminary model and intervention strategy. Clinical psychology review, 29(8), 695-706.

2- Ford EW. Stress, Burnout, and Moral Injury. J Healthc Manag. 2019;64(3):125–27.

3- Jinkerson, J. D. (2016). Defining and assessing moral injury: A syndrome perspective. Traumatology, 22(2), 122.

4- Bryan CJ, Bryan AO, Anestis MD, Anestis JC, Green BA, Etienne N, Morrow CE, Ray-Sannerud B. Measuring Moral Injury: Psychometric Properties of the Moral Injury Events Scale in Two Military Samples. Assessment. 2016 Oct;23(5):557-70.

5- Nunnally, J., & Bernstein, I. (1994). Psychometric Theory (3rd ed.). New York: McGraw-Hill.

Therapeutic Potential of Targeting the Nr2e3/Tet2 Pathway for Depression

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ABSTRACT: Recent evidence has shown that DNA methylation and hydroxymethylation play a significant role in the mechanisms of depression. Previous studies have demonstrated that the deficiency of the enzyme Ten-eleven translocation 2 (Tet2), which is involved in DNA hydroxymethylation, can cause depression-like behaviors in mice, highlighting the critical role of Tet2 in depression mechanisms. Following chronic stress in mice, Tet2 expression is significantly increased in the brain, but the transcriptional regulation of Tet2 remains unknown. Using bioinformatic software, potential candidate transcriptional factors for Tet2, including Nr2e3, were identified. Knockdown or overexpression of Nr2e3 in cells was found to significantly decrease or increase Tet2 mRNA and protein expressions. Additionally, Nr2e3 was found to bind to the promoter region of Tet2, increasing Tet2 transcriptional activity. Importantly, knockdown of Nr2e3 in the mouse hippocampus led to depression-like behaviors. Screening for potential treatments revealed that Azacyclonal, a compound known for diminishing hallucinations in psychotic individuals, increased the levels of the Nr2e3/Tet2 pathway and exhibited antidepressant effects in stressed mice. These findings suggest that targeting the Nr2e3/Tet2 pathway could provide a therapeutic strategy for the development of depression treatments.

Key words: Depression; Nr2e3; Tet2; Therapeutic strategy; treatments

Assessing Pain Threshold and Tolerance in Patients Referred to a Psychiatry Clinic: Preliminary Findings from Istanbul Medeniyet University Goztepe Hospital

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BACKGROUND AND AIM:Pain is a common experience among individuals with psychiatric disorders, often intensifying their challenges and negatively affecting overall well-being. Mental disorders such as depression and anxiety have been extensively studied for their impact on pain perception, specifically pain thresholds and tolerance. However, the mechanisms underlying these relationships and their variations across specific psychiatric diagnoses remain poorly understood. Additionally, the association between particular psychiatric disorders and pain perception requires further investigation. This study aims to examine the relationship between pain threshold, pain tolerance, and the presence of major depressive disorder, generalized anxiety disorder, or bipolar disorder in patients referred to a psychiatry clinic.

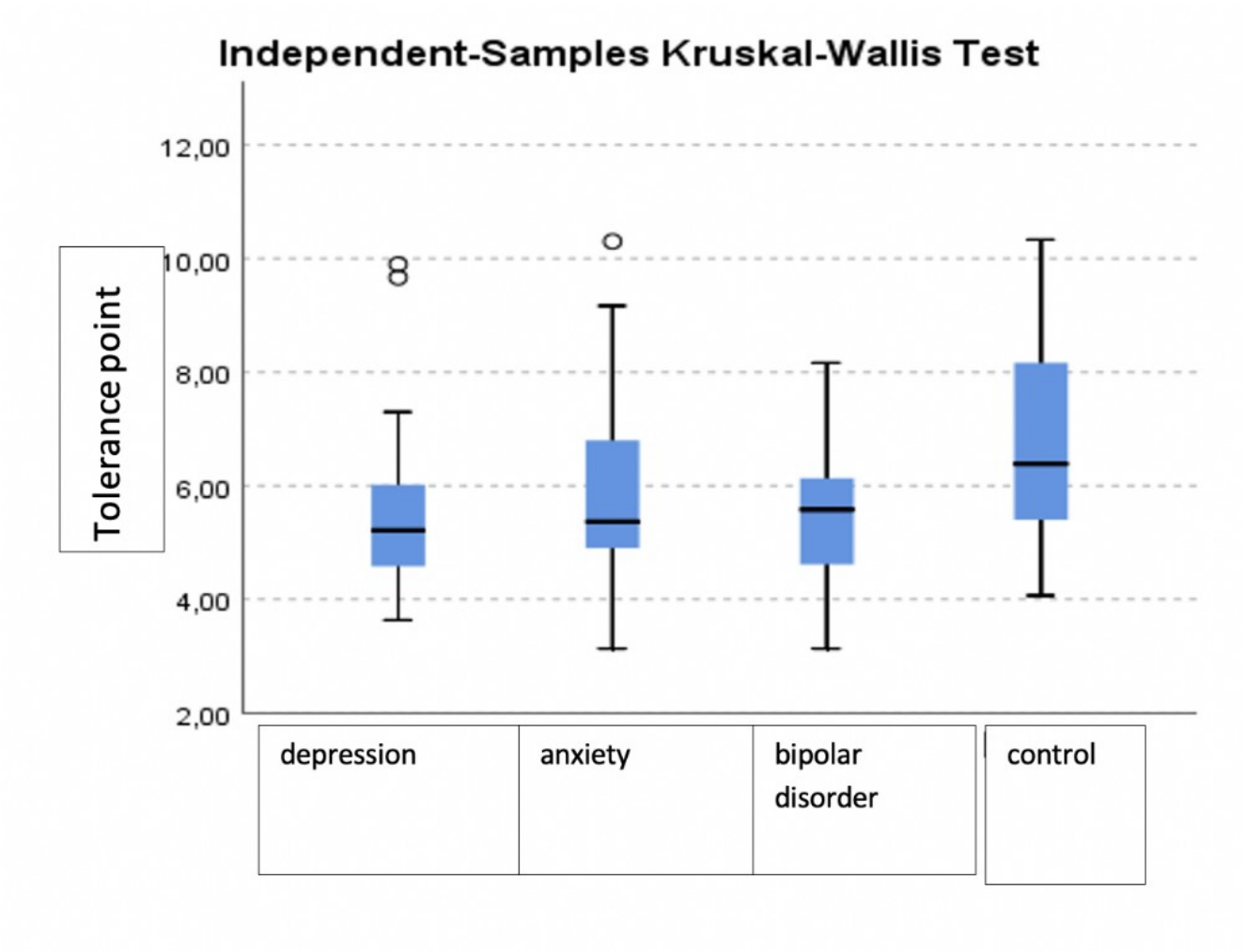
METHODS:This ongoing case-control study has currently enrolled 70 patients diagnosed with major depressive disorder (n=25), generalized anxiety disorder (n=25), or bipolar disorder (n=20), as well as 30 healthy controls. Pain perception was evaluated using a pressure algometer applied to the interosseous membrane of the forearm. Participants reported their pain threshold (the point at which pressure first became painful) and pain tolerance (the point at which pressure became intolerable). Demographic data, including age, gender, and medication use, were collected. Participants aged 18 to 65 years were eligible for inclusion in this study. Individuals with neuropathy or regular NSAID use were excluded.The Kruskal-Wallis H test was used to compare median age and pain values among the depression, anxiety, bipolar, and control groups. Pairwise comparisons were conducted using the results of pairwise comparison analyses within the Kruskal-Wallis H test framework. The chi-square test was employed to compare gender characteristics among the groups. The statistical analyses were performed using IBM SPSS version 26.0 and significance level of $p < 0.05$ was established for all analyses.

RESULTS:The Kruskal-Wallis H test revealed significant differences in median age among the depression, anxiety, bipolar, and control groups ($p < 0.005$). Pairwise comparisons showed that the anxiety group had a significantly higher median age compared to the control group ($p = 0.014$). However, the chi-square test indicated no significant differences in gender distribution across the groups ($p = 0.698$).For pain tolerance, the Kruskal-Wallis H test identified significant differences in median tolerance point values among the groups ($p < 0.005$). Pairwise comparisons revealed that individuals in the depression group had significantly lower median tolerance point values compared to the control group ($p = 0.038$). No significant differences in pain threshold values were found among the groups.Further analysis of descriptive statistics and group comparisons is currently in progress.

CONCLUSIONS:This study offers valuable preliminary insights into the connection between psychiatric disorders and pain perception. Initial results indicate that individuals with psychiatric diagnoses, particularly those with depression, have reduced pain tolerance compared to healthy controls. However, no significant differences in pain threshold were observed. These findings aim to inform the development of more targeted and effective pain management strategies for individuals with psychiatric disorders.

Keywords: Pain threshold, pain tolerance, psychiatric disorders, depression, anxiety, bipolar disorder

Comparison of Pain Tolerance Points Between Psychiatric Diagnoses and Control Group



Association of VKORC1 G-1639A Polymorphism with Neuropsychiatric Diseases: A Preliminary Study

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INTRODUCTION: Vitamin K is in the group of fat-soluble vitamins and was discovered in 1943 by Danish scientist Henrick Dam, who won the Nobel Prize for his studies on this vitamin[1, 2]. It is named 'Vitamin K', taking the first letter of the German word meaning 'Coagulation'. In initial studies, it was determined that it is an essential cofactor for the production of proteins involved in the regulation of blood clotting homeostasis and calcium metabolism in the human body [2]. Today, vitamin K is thought to be associated with osteoporosis, vascular calcification, osteoarthritis, diabetes, glycemic control, cancer and cardiovascular diseases [1-8]. In recent years, it has been observed that it has a role in the Central Nervous System (CNS), and its deficiency may cause the development and/or progression of dementia (Alzheimer type) and cognitive performance disorders[9].

Vitamin K is found in nature as K1 (phylloquinone), K2 (menaquinone) and as a synthetic analogue, K3 (menadione) [1, 10, 11]. The K2 form is produced by some animals, can be found in various fermented foods, and can occur from other forms of vitamin K in humans. The phylloquinone form is designated 'K', while the menaquinone form is designated 'MK-n'. The letter 'n' refers to the number of unsaturated isoprene units in the side chain. The length of the MK-n side chain can extend up to 65 carbons. For this reason, subgroups of the menaquinone form vary from MK-4 to MK-10 [1, 10].

Vitamin K serves as a cofactor in many biochemical pathways. The most important of these are vitamin K-dependent carboxylation reactions [8]. Vitamin K is required for γ-glutamyl carboxylation of all vitamin K-dependent proteins. The enzyme that catalyzes the conversion of glutamic acid (Glu) to γ-carboxyglutamic acid (Gla) is carboxylase, and this reaction facilitates the binding of calcium to vitamin K-dependent proteins. Hydroquinone, the reduced form of vitamin K, is involved in enzymatic carboxylation reactions[8, 10]. The main proteins dependent on vitamin K are hepatic coagulation proteins (Factor II-prothrombin-,VII, IX, is growth arrest specific protein 6 (Gas-6), which is involved in processes such as antiapoptotic, mitogenic and myelination[9, 12, 13].

In order for vitamin K to continue its cofactor function, the quinone form must be reduced to the quinol form. This transformation occurs with the vitamin K epoxide reductase complex subunit 1 enzyme (VKORC1). As a result, the VKORC1 gene plays a key role in maintaining the cofactor function of vitamin K [9].

In recent years, studies showing that vitamin K is involved in sphingolipid metabolism and brain physiology through the vitamin K-dependent Gas-6 protein, which protects nerve cells from β-amyloid (Aβ) or oxidative stress-induced neuronal apoptosis, have gained importance [14]. Sphingolipids have a polar structure and are found in the structure of the CNS cell membrane, and they play a role in neuronal differentiation and proliferation. Low vitamin K intake or low blood concentrations are associated with decreased cognitive performance or Alzheimer's Disease (AD) [9, 15].

Identification of modifiable risk factors and alleviating or eliminating the pathology by taking precautions have become important in the treatment of neuropsychiatric diseases. In our study, we aimed to determine the relationship between the VKORC1 G-1639A polymorphism, which causes a decrease in the biogenesis of vitamin K, which plays an important role as a cofactor, and the sociodemographic and clinical characteristics of patients with Schizophrenia, Bipolar disorder and Alzheimer's type dementia, and to produce information that can be used as a basis for further studies.

METHODS

SUBJECTS: We recruited a total of 200 volunteers with schizoprenia (n = 40), bipolar disorder (n = 40), alzheimer type dementia (n = 40) and without any neuropsychiatric disorder (n = 80) diagnosed at Aydin State Hospital. Each participant signed the informed consent form. The study was approved by Ethics Committee of Aydın Adnan Menderes University Non-Interventional Clinical Research and was carried out in full compliance with the Declaration of Helsinki.

Genomic DNA isolation

DNA isolation was performed from peripheral blood samples taken from volunteers using the HighPure PCR Template Preparation Kit (Roche Diagnostics) commercial kit, following the manufacturer's instructions. The concentration and purity of the isolated DNA samples were determined by measuring their absorbance at 260 and 280 nm wavelengths with the Multiskan SkyHigh Microplate Spectrophotometer (Thermo Scientific) device.

Genotyping of *VKORC1 G-1639A*

Real-time PCR assay for VKORC1 was performed on the Cobas z (Roche) instrument using Light Mix® for the detection of VKORC1 G1639A (TIB MOLBIOL GmbH, Berlin, Germany) according to the manufacturer's protocol. Wild-type VKORC1 G1639 exhibited a melting temperature of 52.6°C in channel 640. VKORC1 1639A allele variant exhibited a melting temperature of 61.3°C in channel 640.

Data Analysis

SPSS version 25.0 was used for data analysis. The Kolmogorov-Smirnov test was performed to determine whether the data followed a normal distribution and to assess whether parametric or non-parametric statistical analysis was required. One-way analysis of variance (ANOVA) was used to evaluate group differences for continuous variables, while the χ^2 test was applied for categorical variables. A p-value of <0.05 was considered statistically significant.

RESULTS: The genotype and haplotype distributions of the VKORC1 G-1639A polymorphism were compared between case and control groups using the χ^2 test. To estimate risk, odds ratios (OR) and 95% confidence intervals (CI) were calculated based on four inheritance models: codominant, dominant, recessive, and overdominant. In the codominant and dominant models, the G/G genotype was used as the reference. For the recessive model, the G/G and G/A genotypes were used as the reference, and for the overdominant model, the G/G and A/A genotypes served as the reference.As evident from both the ratios and statistical analysis, the frequency of the homozygous A allele in patients with schizophrenia is twice as high as in controls. These findings represent preliminary data, and further analysis on Alzheimer's disease and bipolar disorder is currently ongoing.

CONCLUSIONS: Homozygous A allele of the VKORC1 G-1639A polymorphism has been observed at higher frequencies in patients with schizophrenia compared to controls, suggesting a potential genetic link between vitamin K metabolism and psychiatric disorders.

Identifying modifiable risk factors and understanding their contributions to the development of neuropsychiatric conditions is critical for advancing therapeutic strategies. This study aims to investigate the relationship between the VKORC1 G-1639A polymorphism and sociodemographic and clinical characteristics in patients with schizophrenia, bipolar disorder, and Alzheimer's-type dementia. By elucidating these associations, we seek to provide foundational data for future research and potential interventions targeting vitamin K metabolism as a modifiable factor in the treatment of these disorders.

Model	Genotype	Schizophrenia (n=48) n (%)	Control (n=84) n (%)	OR (95% CI) (n=132)	p-value (n=132)
Codominant	G/G	9 (18.8)	22 (26.2)	1.00 (Reference)	0.13
	G/A	23 (47.9)	47 (56)	1.20 (0.48-3.01)	
	A/A	16 (33,3)	15 (17.9)	2.61 (0.91-7.43)	
Dominant	G/G	9 (18.8)	22 (26.2)	1.00 (Reference)	0.33
	G/A - A/A	39 (81.2)	62 (73.8)	1.54 (0.64-3.68)	
Recessive	G/G - G/A	32 (66,7)	69 (82,1)	1.00 (Reference)	**0.046**
	A/A	16 (33,3)	15 (17.9)	2.30 (1.01-5.22)	
Overdominant	G/G - A/A	25 (52.1)	37 (44)	1.00 (Reference)	0.37
	G/A	23 (47.9)	47 (56)	0.72 (0.36-1.48)	

REFERENCES

[1] S.M. Plaza, L. ND, The anticancer effects of vitamin K, Alternative medicine review 8 (2003) 303-318.

[2] G.K. Schwalfenberg, Vitamins K1 and K2: The Emerging Group of Vitamins Required for Human Health, J Nutr Metab 2017 (2017) 6254836.

[3] J. Iwamoto, Vitamin K(2) therapy for postmenopausal osteoporosis, Nutrients 6 (2014) 1971-1980.

[4] A. Siltari, H. Vapaatalo, Vascular calcification, vitamin K and warfarin therapy–possible or plausible connection?, Basic & Clinical Pharmacology & Toxicology 122 (2018) 19-24.

[5] M.K. Shea, S.B. Kritchevsky, F.-C. Hsu, M. Nevitt, S.L. Booth, C.K. Kwoh, T.E. McAlindon, C. Vermeer, N. Drummen, T.B. Harris, The association between vitamin K status and knee osteoarthritis features in older adults: the Health, Aging and Body Composition Study, Osteoarthritis and cartilage 23 (2015) 370-378.

[6] S. Dahlberg, J. Ede, U. Schott, Vitamin K and cancer, Scand J Clin Lab Invest 77 (2017) 555-567.

[7] A.J. van Ballegooijen, J.W. Beulens, The Role of Vitamin K Status in Cardiovascular Health: Evidence from Observational and Clinical Studies, Curr Nutr Rep 6 (2017) 197-205.

[8] G. Suna, A. Ayaz, K vitamininin Kardiyovasküler Sağlık Üzerine Etkisi: Güncel Yaklaşımlar, Beslenme ve Diyet Dergisi 45 (2017) 61-69.

[9] L. Alisi, R. Cao, C. De Angelis, A. Cafolla, F. Caramia, G. Cartocci, A. Librando, M. Fiorelli, The relationships between vitamin K and cognition: a review of current evidence, Frontiers in neurology 10 (2019) 416803.

[10] J. DiNicolantonio, J. Bhutani, J. O'Keefe, The health benefits of vitamin K. Open Heart 2: e000300, 2015.

[11] P. Alam, S.K. Chaturvedi, M.K. Siddiqi, R.K. Rajpoot, M.R. Ajmal, M. Zaman, R.H. Khan, Vitamin k3 inhibits protein aggregation: Implication in the treatment of amyloid diseases, Sci Rep 6 (2016) 26759.

[12] M.S. El Asmar, J.J. Naoum, E.J. Arbid, Vitamin k dependent proteins and the role of vitamin k2 in the modulation of vascular calcification: a review, Oman Med J 29 (2014) 172-177.

[13] M. Shiraki, N. Tsugawa, T. Okano, Recent advances in vitamin K-dependent Gla-containing proteins and vitamin K nutrition, Osteoporosis and Sarcopenia 1 (2015) 22-38.

[14] M. Fenech, Vitamins Associated with Brain Aging, Mild Cognitive Impairment, and Alzheimer Disease: Biomarkers, Epidemiological and Experimental Evidence, Plausible Mechanisms, and Knowledge Gaps, Adv Nutr 8 (2017) 958-970.

[15] N. Presse, B. Shatenstein, M.-J. Kergoat, G. Ferland, Low vitamin K intakes in community-dwelling elders at an early stage of Alzheimer's disease, Journal of the American Dietetic Association 108 (2008) 2095-2099.

The Effect Of Emotion Regulation Difficulties On The Treatmnet Of Internalizing Disorders In Adolescent

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BACKGROUND AND AIM: This study aims to investigate the impact of emotion regulation difficulties on the length of hospital stay and treatment response among adolescents hospitalized with internalizing disorders. Additionally, it explores the relationship between adolescents' own emotion regulation difficulties and those of their parents.

METHODS: The study sample consisted of adolescents diagnosed with internalizing disorders who were hospitalized in the child psychiatry unit between March 20, 2024, and November 15, 2024. Inclusion criteria included meeting the study's participation requirements and obtaining parental consent.The study included 70 adolescents and 70 parents.The data analysis for the study was conducted based on 65 patient-parent diad, as five patients discontinued treatment and were discharged upon refusing further treatment. Treatment response during admission and discharge was evaluated by clinicians using the Clinical Global Impressions (CGU) Scale. Parents completed a Sociodemographic Data Form, the Difficulties in Emotion Regulation Scale-16 (DERS-16) to assess their emotion regulation difficulties, and the Coping with Children's Negative Emotions Scale (CCNES) to evaluate their strategies for managing their child's emotional difficulties. Adolescents completed the Strengths and Difficulties Questionnaire (SDQ) to assess internalizing problems, the Children's Depression Inventory (CDI) to determine the presence and severity of depressive symptoms, the Screen for Child Anxiety Related Disorders (SCARED) to evaluate anxiety symptoms, and the Difficulties in Emotion Regulation Scale (DERS) to assess emotion regulation difficulties. Verbal and written informed consent was obtained from adolescents and their parents after providing detailed information about the study.

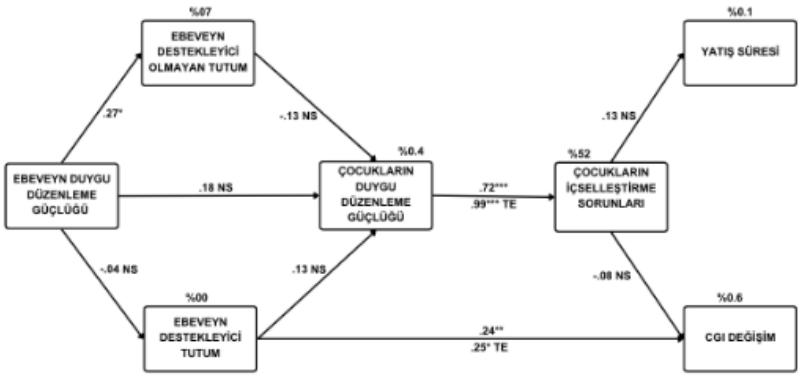
RESULTS: In our study, it was demonstrated that parents' difficulties in emotion regulation increase negative parenting attitudes, while children's difficulties in emotion regulation exacerbate internalizing problems in children. Regarding total effects, the overall impact of parental emotion regulation difficulties on children's internalizing problems was found to be strong and statistically significant. This indicates that parents' emotion regulation difficulties may indirectly influence children's psychosocial outcomes. Additionally, it was shown that children's difficulties in emotion regulation have a statistically significant total effect on treatment outcomes through parents'; supportive attitudes.

CONCLUSIONS: Our study results indicate that parents' difficulties in emotion regulation significantly influence their parenting attitudes. Furthermore, it has been demonstrated in our study that the treatment response of adolescents receiving inpatient care in child and adolescent psychiatry units is affected by various factors, among which positive parenting attitudes play an important role. Based on these findings, it is considered that the active involvement of parents in the treatment process of adolescents receiving inpatient care, as well as the support of positive parenting attitudes during and after the treatment process, could make significant contributions to improving treatment outcomes.

Keywords: Emotion Regulation Difficulties, Parental Emotion Regulation Difficulties, Child Psychiatry, Inpatient Adolescent, Treatment Response

Figure 3. Path Analysis of the Relationship Between Parental Emotional Regulation Difficulties, Supportive Attitudes, and Children's Psychosocial Outcomes by Treatment Status (Second Dataset Consisting of Mothers Only)

Şekil 3. Ebeveynlerin Duygu Düzenleme Güçlüğü, Destekleyici Tutumları ve Çocukların Psikososyal Sonuçları ile Tedavi Durumu Arasındaki Yol Analizi (sadece annelerden oluşan ikinci veri seti)



*p<.05, **p<.01, ***p<.001, χ^2: 16.138; p = .04; CFI = .91; RMSEA = .07.; SRMR = .09; TE: Total etki,NS: not significant

Path Analysis Conducted to Evaluate the Relationship Between Variables

Table 4. Pearson Correlation Coefficients Between Variables in the Study

Tablo 4. Çalışmadaki Değişkenler Arasındaki Pearson Korelasyon Katsayıları

Değişkenler	1	2	3	4	5	6	7	8	9
1.DDGÖ-16	-								
2.Destekleyici olmayan	.34**	-							
3.Destekleyici	-.03	.05	-						
4.DDGÖ	.14	-.06	.00	-					
5.GGA-İnt	.07	-.01	.06	.72***	-				
6.Yatış süresi	-.14	-.08	.04	.06	.13	-			
7. KGİÖ-değişim	-.00	.05	.25*	-.14	-.09	-.27*	-		
8- Depresyon değişim	.06	.05	.18	.18	.23	-.05	41***	-	
9- Anksiyete değişim	-.04	-.11	.23	-.09	-.09	-.11	.36**	.51***	-
Ortalama	12.7	53.5	116	67.9	8.7	30.6	3.2		
SS	12.3	24.4	17.8	33.0	5.1	13.9	1.4		

N=65
*p<.05, **p<.01, ***p<.001
(DDGÖ-16: Duygu Düzenleme Güçlüğü Ölçeği- Kısa Form, DDGÖ: Duygu Düzenleme Güçlüğü Ölçeği, GGA-int: Güçler ve Güçlükler Anketi -içselleştirme alt ölçeği, KGİÖ: Klinik Global İzlenim Ölçeği)

Examination of Correlations Between Variables

PEERS-GY: Adaptation and Effectiveness Study of the Social Skills Training

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Background and Aım: Social difficulties persist into adulthood for individuals with autism spectrum disorder (ASD), often leading to isolation and reduced quality of life. PEERS for Young Adults (PEERS-YA) is a structured, evidence-based social skills training program designed to address these challenges. This study aimed to adapt the PEERS-YA program into Turkish and evaluate its effectiveness and cultural applicability.

Methods: The program was implemented over 16 weeks with a clinical sample of young adults diagnosed with ASD. Participants were randomly assigned to either an intervention group or a control group. Measures administered to young adults included: Beck Depression Inventory (BDI), Social Skills Inventory (SSI), Young Adult Social Skills Knowledge Test (TYASSK), Social Interaction Anxiety Scale (SIAS), Social Phobia Scale (SFO), Quality of Socialization Questionnaire (QSQ), Autism Spectrum Quotient (AQ), and Empathy Quotient (EQ). For social coaches (parents or caregivers), the AQ, Social Responsiveness Scale (SRS), QSQ, and EQ were used. Pre- and post-test scores were compared using paired-samples t-tests and Wilcoxon signed-rank tests.

Results: In the intervention group, significant improvements were observed in social skills knowledge (TYASSK, $p < .001$), empathy (EQ, $p = .002$), autism-related traits (AQ, $p = .027$), and social anxiety symptoms (SFO, $p = .049$). No significant changes were observed in the control group. Among social coaches, significant increases were found in empathy ($p = .005$) and a reduction in perceived autism-related symptoms ($p = .006$), while changes in social responsiveness and socialization quality were not statistically significant.

Conclusıons: Findings suggest that the Turkish adaptation of the PEERS-YA program is both effective and culturally appropriate for improving social skills and emotional understanding in young adults with ASD. Future research should explore the program's long-term outcomes and broader implementation in community settings.

Keywords: Autism Spectrum Disorder (ASD), Social Skills Training, PEERS-YA, Young Adults, Cultural Adaptation, Empathy, Social Anxiety, Intervention Effectiveness, Turkey, Social Competence

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Referance: Laugeson, E. A., Frankel, F., Gantman, A., Dillon, A. R., & Mogil, C. (2012). Evidence-based social skills training for adolescents with autism spectrum disorders: The UCLA PEERS program. Journal of Autism and Developmental Disorders, 42(6), 1025–1036. https://doi.org/10.1007/s10803-011-1339-1

Mandelberg, D. F., Laugeson, E. A., Cunningham, T. D., Ellingsen, R., Bates, S., & Frankel, F. (2014). Long-term treatment effects of PEERS for young adults with ASD. Journal of Autism and Developmental Disorders, 44(3), 532–537. https://doi.org/10.1007/s10803-013-1891-5

White, S. W., Koenig, K., & Scahill, L. (2007). Social skills development in children with autism spectrum disorders: A review of the intervention research. Journal of Autism and Developmental Disorders, 37(10), 1858–1868. https://doi.org/10.1007/s10803-006-0320-x

Kasari, C., Rotheram-Fuller, E., Locke, J., & Gulsrud, A. (2012). Making the connection: Randomized controlled trial of social skills at school for children with autism spectrum disorders. Journal of Child Psychology and Psychiatry, 53(4), 431–439. https://doi.org/10.1111/j.1469-7610.2011.02493.x

Evaluation of NLR (neutrophil/lymphocyte ratio) and PLR (platelet/lymphocyte ratio) as inflammatory markers of drug-naive first episode mania:A retrospective study

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Background and Aım: Bipolar disorder is a chronic, severe and episodic neuropsychiatric disorder that has a prevalence of nearly 1%.[1] There are various theories involved in its etiopathogenesis including infections,[2] genetics,[3], oxidative and psychological stress.(4) However the exact biological mechanism behind the bipolar disorder is still not clear.

It is remarkable that cytokine profiles, immunoglobulins and acute phase reactants as well as various blood parameters such as white blood cell, neutrophil-to-lymphocyte ratio(NLR), platelet-to-lymphocyte ratio(PLR) and platelet count, which are relatively cost effective and could be examined in a short time, are used as markers of inflammation.(5)The aim of the study was to assess and compare the selective inflammatory markers like neutrophils, lymphocytes, platelets NLR, and PLR value among drug naive first episode mania and healthy individuals

Methods: NLR,MPV, PDW, PCT, PLR levels obtained from complete blood count samples collected on the date of admission of 69 patients with -drug naive- first episode mania who received inpatient care unit at Ankara Bilkent City Hospital between May 2019 and October 2024 were compared with age-and gender-matched 71 healthy controls.(Ethics Committee Approval Date: 25.12.2024 Number: TABED 2-24-757)

Results: The mean ages of the participants in the patient and control groups were 30.69±9.50 and 31.67±8.91 years, respectively. Forty-one (59.4%) of the patients and 42 (59.1%) of the control group were male. Neutrophil, platelet, lymphocyte count, NLR, PLR, WBC, PCT values of the patient group were significantly higher than the control group.(p:0.001,p:0.001,p:0.009,p:0.001,p:0.001,p:0,003,p:0.01,respectively) There was no difference between the two groups in terms of Hgb, RBC, HCT, MCV, MCHC, RDW and MPV values.($p>0.05$)

The diagnostic function of NLR and PLR for first episode mania patients was assessed via the Receiver-operating characteristic (ROC) curves. It was revealed that the area under curve (AUC) was,834 [(,759-,909)], $p < 0.001$] for NLR,752 [(,669-,834), $p < 0.001$] for PLR.The optimal cut-off value with sensitivity and specificity for NLR was 2,1497, %73,9, and %89,1%; for PLR was 111,8357, 82,6%, and 65,3%; respectively.

Conclusıons: Based on our findings, the fact that parameters such as WBC, neutrophil, NLR,PLR, which are deemed to be peripheral markers of inflammation in patients with drug naive first episode mania have significantly higher values compared to the healthy control group indicates the role of inflammatory pathways in the pathogenesis of the BB, although we anticipate that it could be used in the early diagnosis and follow-up of the disease. Future research having greater number of participants and prospective design is much needed to validate NLR and PLR as potential biomarkers of bipolar disorder.

Keywords: drug-naive,first episode mania,inflammation,neutrophil/lymphocyte ratio,platelet/lymphocyte ratio

Effect of COVID-19 Pandemic on Clinical Follow-Up in Children and Adolescents with Anxiety Disorders

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Background and Aım: The coronavirus disease 2019 (COVID-19) pandemic is a global outbreak of coronavirus, an infectious disease caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). In addition its physical and social effects, the COVID-19 pandemic has also caused many psychological effects in children and adolescents, one of which is anxiety disorders. It also affected patients previously diagnosed with anxiety disorders. So, this study aimed to investigate the clinical follow-up status and associated factors of children and adolescents who were previously followed-up in the outpatient clinic due to anxiety disorders after the COVID-19 pandemic.

Methods: In the study, data of patients with anxiety disorders were examined retrospectively. Since the first case in our country was seen in March 2020 and the restrictions started after this date, the patients who were regularly followed-up before this period were divided into two groups as patients who came to the outpatient clinic in the first year of the pandemic and patients who did not come. Thus, 75 patients were included in the study. These patients' age at diagnosis, gender, follow-up period, diagnosis, the medical treatments they used at this time, additional treatments, initial severity of the disorder, comorbidity and chronic illnesses were recorded. The study was approved by the Ethics Committee of Erciyes University (2023/734).

Results: The mean age at diagnosis of the patients was 11.24±2.96. A total of 75 patients, 30 (40%) were male and 45 (60%) were female. 42 (56%) of the patients had a follow-up period of more than 3 years. The majority of the patients had generalized anxiety disorder (65.3%), social phobia was the second with 15 (20%) patients. 30 (40%) of the patients were markedly ill. 29 of 75 patients had comorbidities and 12 had at least one chronic illnesses. In total, 24 (32%) of the patients discontinued their outpatient follow-up during the pandemic. No significant differences were found between discontinuation, and gender, diagnosis, initial severity, treatments, follow-up period, comorbidity and chronic illnesses ($p>0.05$). Almost half of the 24 patients who discontinued follow-up in the first year of the pandemic re-admitted to the outpatient clinic in the second year of the pandemic.

Conclusıons: There may be many reasons why patients discontinued follow-up. Fear of COVID-19, being in quarantine, and curfews may have prevented people from attending the outpatient clinic. In addition, it is possible that they continued their treatment without coming to the examination, since the reported drugs could be obtained from the pharmacy during this period. No association was found between loss to follow-up and any clinical factors. The results may change with a larger number of patients. Considering the effects of the pandemic on mental health, it seems that more studies and large-scale investigations are needed in this field.

Keywords: anxiety, COVID-19, children, adolescents, follow-up, discontinuation

Creative Thinking and Brain Regions with rs&dw MRI: Multimodal Connectivity Analysis

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Background and Aım: Creative thinking and reasoning represent some of the highest expressions of human cognitive capacity and rank among the most complex brain functions. Their interactive and dynamic nature holds significant strategic value for maintaining sustainability and improving quality of life. Although extensive research has been conducted in this field, the underlying neural mechanisms remain unclear. To understand these mechanisms better recent advances in neuroimaging have enabled fMRI experiments utilizing "Semantic Distance" and "Analogy-Based Reasoning." Building on these methods, this study investigated the brain as an interconnected network during both analogy-based reasoning tasks and resting-state conditions by incorporating a range of imaging modalities, including task-based fMRI, resting-state fMRI (rs-fMRI), and diffusion-weighted imaging (DW-MRI)

Methods: Thirty participants (aged 20-35, no psychiatric disorders) underwent structural and functional MRI scans at Ege University Hospital's 3T MR Unit, including task-based fMRI, rs-fMRI, and diffusion-weighted imaging (DW-MRI). Preprocessing and analysis were conducted using Freesurfer, CONN toolbox, and FSL-ProbtrackX-Tracula, focusing on global probabilistic tractography and connectivity assessments

Results: The findings of this study reveal significant BOLD activation was observed in cortical regions (e.g., left IPS, ACC-Ventral, and MFG) and subcortical regions (bilateral caudate nuclei). Left IPS and right IFJ exhibited strong functional connectivity during tasks and resting-state conditions. While no significant white matter tract correlations were found, graph theory analysis revealed task-score correlations in specific cortical regions (e.g., medial OFC, ACC-Rostral, amygdala).

Conclusıons: These findings align with previous studies linking cortical regions to creativity and reasoning while providing new insights into the functional connectivity and network dynamics of the regions studied. Future research should explore the detailed network properties of these regions to deepen our understanding of creative cognition.

Keywords: Multimodal, Magnetic Resonance Imaging, Diffusion tensor imaging, Connectivity, Network

Figure1

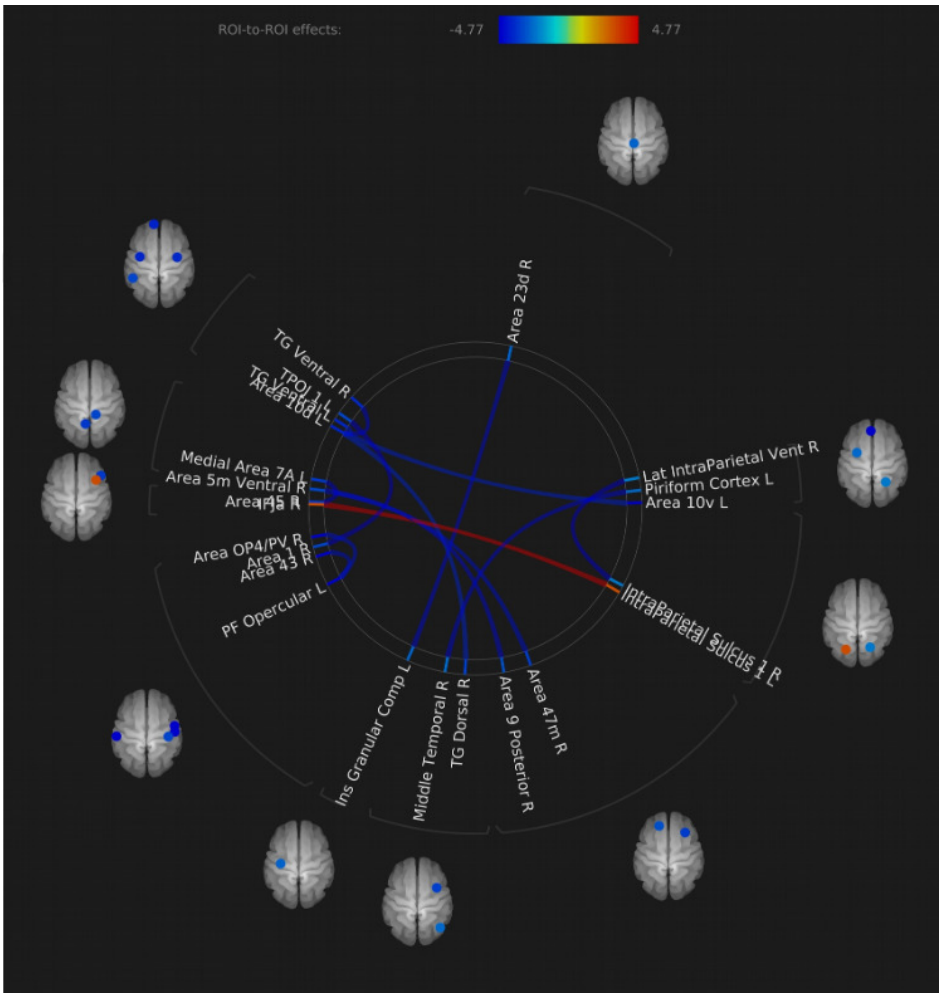
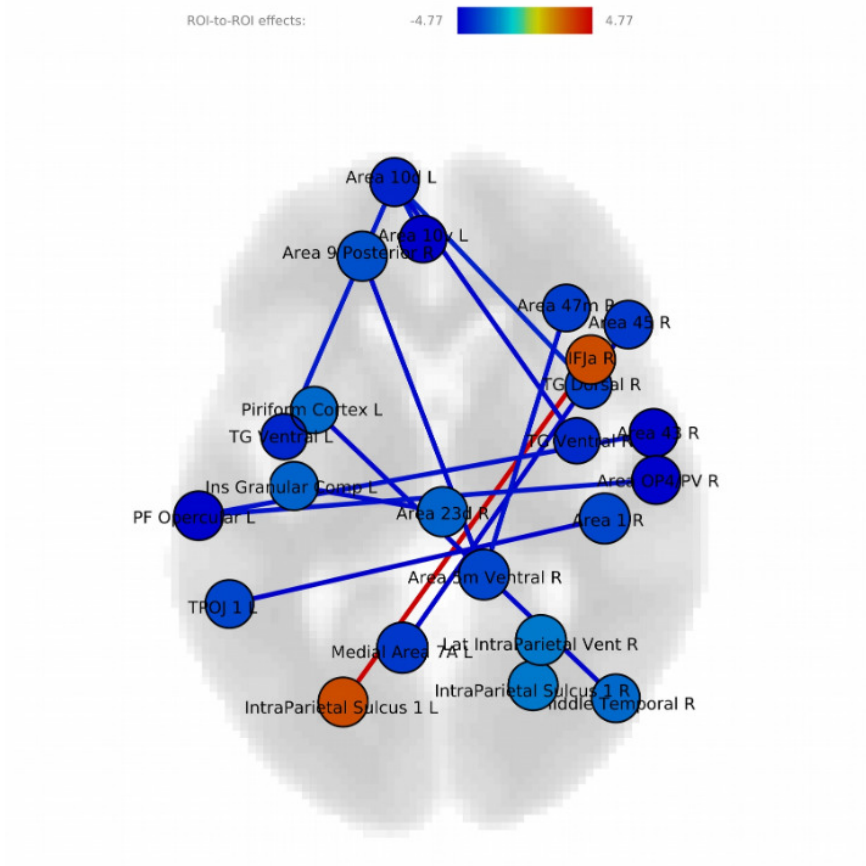


Figure2



Catatonia in Child and Adolescent Psychiatry: A Case Report and Treatment Approach

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Background and Aım: Catatonia, although rare in child and adolescent psychiatric practice, is a serious neuropsychiatric condition characterized by motor, emotional, and neurovegetative dysfunctions. In adolescents, it is often mistaken for conversion disorder or severe depression, leading to delays in the treatment process.

Methods: In this case report, we present the clinical course of a 17-year-old female patient with no prior psychiatric history, either personally or within her family, who was diagnosed with catatonic depression and admitted to the inpatient unit of a university hospital's child and adolescent psychiatry department. Due to medical stabilization challenges, she was also monitored in the intensive care unit.

Results: After a thorough differential diagnosis, despite the administration of benzodiazepines at an effective dose and duration, the patient exhibited only a minimal response. Consequently, 10 sessions of electroconvulsive therapy (ECT) were performed, with consciousness regained after the 7th session. However, due to the patient's lack of interaction with her surroundings, serotonergic augmentation was implemented concurrently with agents such as mirtazapine, escitalopram, and aripiprazole.

Conclusıons: The diagnosis and treatment of pediatric catatonia are crucial for closely monitoring the patient's long-term morbidity and mortality. In particular, the potential medical comorbidities and the risk of a complicated clinical course in pediatric patients necessitate close consultation and collaboration between pediatricians and child and adolescent psychiatry specialists. This highlights the clear necessity of a multidisciplinary approach.

Keywords: Pediatric Catatonia, Benzodiazepine-Resistant Catatonia, Electroconvulsive Therapy (ECT), Consultation Psychiatry, Neuropsychiatric Disorders, Adolescent

“Sociodemographic Characteristics and Diagnostic Profiles of Patients in a Child and Adolescent Psychiatry Inpatient Unit"

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Background and Aım: The inpatient child and adolescent psychiatry unit is a crucial mental health service utilized for psychiatric evaluations, diagnosis, follow-up, treatment, and crisis management when needed. Due to the limited availability of child psychiatry inpatient units in our country, the experiences gained in these units are of great value. This study aims to analyze the sociodemographic characteristics and diagnostic distributions of hospitalized patients in a child-adolescent psychiatry unit, to identify high-risk groups for hospitalization, and to explore the potential for improving pre-admission psychiatric interventions and reducing hospitalization needs.

Methods: The sociodemographic characteristics, diagnostic distributions, and clinician-reported scores on the Clinical Global Impression Scale (CGI-S) and Children’s Global Assessment Scale (CGAS) were retrospectively reviewed for 250 female patients admitted to the inpatient Child and Adolescent Psychiatry Unit at Göztepe Prof. Dr. Süleyman Yalçın City Hospital between February 2022 and October 2023. Data were collected retrospectively from the hospital’s electronic medical records and archived files between October 15, 2023, and December 15, 2023, by the primary and assistant researchers. Psychiatric diagnoses were assessed using the Kiddie-Schedule for Affective Disorders and Schizophrenia-Present and Lifetime Version (K-SADS-PL). Statistical analyses were conducted using IBM SPSS version 25, with a significance level set at $p < 0.05$.

Results: The study included 250 female patients (100%), with a mean age of 15.86±1.33 years. Emergency department referrals accounted for 185 (74.0%) admissions, and the mean hospitalization duration was 12.84 ±9.46 days. Among the patients, 237 (94.8%) had a psychiatric history, 194 (77.6%) had a history of psychotropic medication use, and 57 (22.8%) had prior inpatient admissions. Axis I diagnoses were identified in 212 patients (84.8%), and Axis II personality traits were noted in 131 patients (52.4%). The most common diagnoses were depression (162; 64.8%), attention-deficit/hyperactivity disorder (ADHD) (43; 17.2%), social anxiety disorder (30; 12.0%), and post-traumatic stress disorder (PTSD) (24; 9.6%). Axis II personality traits consistent with Cluster B were observed in 107 patients (42.8%). Mean CGI-S and CGAS scores upon admission were 5 and 51–60, respectively. The most frequently used psychopharmacological agents were atypical antipsychotics (82.0%), selective serotonin reuptake inhibitors (SSRIs) (64.4%), mood stabilizers (10.8%), anti-ADHD medications (6.4%), serotonin-norepinephrine reuptake inhibitors (SNRIs) (6.4%), and typical antipsychotics (5.6%). Psychiatric comorbidity ($p = 0.006$) and Axis II Cluster A personality traits ($p = 0.012$) were significantly associated with longer hospital stays.

Conclusıons: This study provides valuable insights into the sociodemographic characteristics and diagnostic distributions of patients hospitalized in a child and adolescent psychiatry unit, highlighting the profile of high-risk patients requiring hospitalization. The findings reveal that depression is the most common diagnosis, while ADHD and anxiety disorders are also frequently observed. Additionally, significant relationships were identified between psychiatric comorbidities, specific personality traits, and longer hospitalization durations. These results suggest that early diagnosis and appropriate psychiatric interventions could enable more effective management of child and adolescent patients, potentially reducing the need for hospitalization.

Keywords: Pediatric Catatonia, Benzodiazepine-Resistant Catatonia, Electroconvulsive Therapy (ECT), Consultation Psychiatry, Neuropsychiatric Disorders, Adolescent

Poster Research Presentations

[Abstract:0037]

A Case of Double Incontinence Associated with Paliperidone Palmitate Treatment

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INTRODUCTION: Incontinence caused by antipsychotic drugs is a rare side effect. Drug-induced urinary incontinence is more common than cases of fecal incontinence. This side effect is particularly seen with the use of Clozapine and Risperidone, although cases of incontinence have also been reported with antipsychotics such as Olanzapine, Quetiapine and Amisulpride. In this case, urinary and fecal incontinence occurred within a month of starting Paliperidone Palmitate treatment and was thought to be a side effect of the drug.

CASE PRESENTATION: A 62-year-old female patient sought treatment in psychiatry three years ago due to her unusual behaviors, which included selective eating (only consuming yogurt or soda during certain periods), neglecting self-care, hoarding, and being suspicious for approximately 10 years. She was initially prescribed Risperidone 50 mg/2-week depot for a diagnosis of ‗atypical psychosis', and experienced some improvement. When she was admitted to intensive care after a cerebrovascular accident in 2022, her Risperidone treatment was changed to Haloperidol drops. However, the patient did not use this treatment regularly. The patient recovered with mild left-sided hemiparesis and experienced urinary and fecal incontinence for about a year, which eventually resolved on its own. In July 2024, she was admitted to our clinic by court order after refusing the recommended treatment for escalating psychotic symptoms. She was then started on oral Paliperidone treatment. The patient responded well to the treatment and did not experience any extrapyramidal system side effects. It was decided to switch her to depot treatment due to drug incompatibility. The patient received Paliperidone palmitate 150 mg and 100 mg loading treatment before being discharged with partial remission. One month after being discharged, the patient visited the neurology clinic due to urinary and fecal incontinence. The only significant findings were widespread canal stenosis in the cervical MRI and encephalomalacia in the cranial MRI. The patient had been evaluated by internal medicine, gastroenterology, and neurosurgery, with the incontinence believed to be a side effect of antipsychotic treatment. The patient referred to us had their Paliperidone palmitate dose reduced to 75 mg per month. In November 2024, it was discovered that the patient, who was not experiencing any active psychotic symptoms, wished to discontinue treatment due to side effects. It was decided to begin Aripiprazole at 20 mg and slowly increase the dose.

CONCLUSION: Atypical antipsychotics are believed to contribute to the development of urinary and fecal incontinence through various mechanisms, including alpha 1 adrenergic blockade, anticholinergic effects, antiserotonergic effects (5HT 2A and 5HT 3A blockade), interactions with caffeine, and side effects such as sedation and diabetes. It is believed that the sensitivity of neurotransmitter receptors in the sphincters influences the frequency of this side effect. Paliperidone Palmitate is thought to cause incontinence by affecting the internal anal and urethral sphincters through D2, 5HT-2A, α1, and H1 receptors. While there is only one reported case of urinary incontinence linked to Paliperidone Palmitate in the literature, our case represents the first instance of Paliperidone Palmitate-related double incontinence.

Keywords: Antipsychotic Side effects, Paliperidone palmitate, Double incontinence.

[Abstract:0053]

Divergent Psychotropic Treatment Responses in Monozygotic Twins Diagnosed with ADHD: A Case Report

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INTRODUCTION: Attention Deficit Hyperactivity Disorder (ADHD) is a neurodevelopmental condition often requiring psychopharmacological intervention for symptom management. However, treatment responses and side effects can vary significantly among patients. This case highlights a 15-year-old female with mild cognitive developmental delay and her identical twin, focusing on their differing responses to ADHD treatment.

CASE PRESENTATION: A 15-year and 9-month-old girl in the ninth grade has been attending special education for four years due to mild cognitive developmental delay. Her monozygotic twin sibling has scoliosis but no additional comorbidities. Neither sibling had prior psychotropic medication use. On November 12, 2024, both were referred to child and adolescent psychiatry by their teachers for ADHD symptoms. Following evaluation, both were diagnosed with ADHD and prescribed Concerta 18 mg. Three days after starting treatment, the patient developed significant side effects, including depressive mood, irritability (e.g., pushing peers), and obsessive-compulsive behaviors such as excessive handwashing and cleaning personal items with wet wipes. The medication was discontinued by her mother on the 8th day. In the three days following discontinuation, the patient experienced severe anxiety, insomnia, and somatic complaints such as shortness of breath. She also reported hallucinations, including bugs crawling on her and a sense of being watched in the dark. She exhibited separation anxiety, clinging to her mother and expressing fear. To manage these symptoms, Risperdal 0.25 mg was prescribed. Two days later, she developed ocular dystonia and shortness of breath, requiring emergency IV Akineton. Despite discontinuing Risperdal, ocular dystonia recurred the next morning, leading to oral Akineton and Xanax prescriptions. Four hours after taking these medications, her shortness of breath worsened. All medications were stopped, and Aripiprazole 2.5 mg was initiated. However, she developed akathisia two days later, prompting a dosage reduction to 1 mg. By the 5th day, symptoms improved with Aripiprazole 1 mg. In contrast, her twin sibling experienced significant improvement in attention and ADHD symptoms with Concerta, requiring a dose increase to 27 mg without any side effects. 50% improvement in ADHD symptoms in the other twin who was switched to concerta 27 mg

CONCLUSION: This case underscores the variability in psychotropic treatment responses, even among monozygotic twins with similar genetic backgrounds. While one sibling achieved marked improvement with Concerta, the other experienced severe psychiatric and neurological side effects. This highlights the importance of personalized psychopharmacological approaches and close monitoring, especially in patients with neurodevelopmental disorders or mild cognitive impairments.

Keywords: ADHD, Monozygotic Twins, Psychotropic Treatment, Side Effects, Personalized Medicine

[Abstract:0054]

A Case of Foreign Accent Syndrome Responding to Clozapine

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INTRODUCTION: Foreign Accent Syndrome (FAS) is a rare speech disorder characterized by the emergence of an accent that sounds foreign both to the speaker and the listener. One of the striking features of the syndrome is its occurrence in individuals who have never been to the country of the perceived accent‘s origin. Most FAS cases have been associated with damage observed in speech centers and are of neurological origin. However, it has also been identified in psychiatric cases without detectable organic brain damage. This report presents a case of a patient diagnosed with FAS and schizophrenia.

CASE PRESENTATION: A 29-year-old-male patient, native Turkish speaker, was admitted to the psychiatric ward of Ankara Bilkent City Hospital in October, 2024. He presented with complaints of irritability, talking to himself, inappropriate laughter, suspicious attitudes toward his family, and speaking Turkish with an English accent since 2016. The patient‘s initial psychiatric symptoms, which began 13 years ago, included talking to himself. In 2016, he was treated at an external center due to referential delusions and auditory hallucinations. In 2020, he was hospitalized at our clinic with symptoms such as believing he had special powers, describing magical thinking, and expressing the belief that he had leukemia. Although the patient had been treated with olanzapine 20 mg/day and paliperidone-palmitate 150 mg/month, full remission was not achieved. His speech resembled that of someone who had lived abroad for an extended period or had learned Turkish as a second language. However, the patient stated that he had never been abroad and did not speak any foreign languages. Neurological examination and laboratory tests revealed no pathology. EEG findings and brain-MRI were reported as normal. In the psychiatric examination, the patient‘s self-care was markedly poor, eye contact was limited, and speech was monotone, low in volume, and devoid of emotional expression. His speech exhibited significant changes in rhythm and prosody. He used the letter ~~“r~~” less distinctly and replaced the Turkish vowel ~~“ı~~” with ~~“i~~”, pronouncing the word ~~“k~~*adın*” (woman) as ~~“k~~*adin*”. Additionally, he omitted conjugations at the end of sentences, using infinitive forms such as ~~“g~~*elmek*” (to come) and ~~“o~~*lmak*” (to be). The patient‘s thought content included referential-persecutory delusions, as well as auditory-visual hallucinations. He was diagnosed with schizophrenia according to DSM-5criteria, and clozapine treatment was initiated, targeting a dose of 400 mg/day. Following the initiation of clozapine therapy, there was a significant reduction in the patient‘s suspicious attitudes and delusions. His speech fluency and accent improved to a level close to normal and remission was achieved.

CONCLUSION: This case highlights that FAS can accompany severe psychiatric disorders such as schizophrenia and should be considered in the differential diagnosis. The psychogenic etiology of FAS is thought to be related to changes in language processing mechanisms, dissociative processes, or emotional disturbances. In this case, the absence of any pathology in neurological examinations supported the diagnosis of FAS. Changes in prosody, rhythm, and articulation, which are frequently observed in schizophrenia, may predispose individuals to the development of FAS. During treatment, clozapine emerged as an effective option for treatment resistant schizophrenia cases and also offered a viable strategy for managing psychogenic FAS. Further case reports are needed to provide comprehensive insights into the pathophysiology and treatment approaches for psychogenic FAS.

Keywords: Clozapine, Foreign Accent Syndrome, Schizophrenia.

[Abstract:0058]

Olanzapine-Induced Obsessive-Compulsive Disorder in a Patient with Psychotic Disorder

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INTRODUCTION: Atypical antipsychotics (AAPs) can be used as an adjunct treatment in managing resistant obsessive-compulsive disorder (OCD). However, some cases demonstrate that AAP can paradoxically cause emergence or exacerbation of OCD. This study presents the clinical course of a patient diagnosed with psychotic disorder who developed OCD during olanzapine treatment. The primary aim of this report is to evaluate obsessive-compulsive symptoms associated with antipsychotics. This case is shared with informed consent obtained from her parents.

CASE PRESENTATION: 12-year-old girl presented to the outpatient clinic approximately two months prior with complaints of increasing introversion, school refusal, excessive interest in South Korean music. She exhibited grandiose thoughts, such as believing she would become a famous dancer in South Korea, and displayed compulsive behaviors like an inability to take off her hat due to the belief that removing it would prevent her from going to South Korea. Additionally, she experienced irritability, reduced self-care, and auditory hallucinations.

During mental status examination, patient wore a black cap covering her face, avoided eye contact, was noncompliant and exhibited blunt affect. Her thought content included referential and grandiose themes. Psychomotor activity was reduced, with significant impairments in judgment and insight. Negative symptoms were prominent.

The patient was diagnosed with psychotic disorder, and olanzapine treatment was initiated, with the dose gradually titrated to 20 mg/day. Following treatment, positive changes were observed, such as improved self-care, taking off her hat, and wearing colorful clothing. However, no significant improvement occurred in her thought content.

During treatment the patient developed cleaning obsessions, such as feeling restless when not showering, and compulsions, including showering 4-5 times daily. She also exhibited checking behaviors, such as frequently seeking approval from her family for her actions and displaying aggressive behavior when approval was not granted. Notably, patient had no prior history of OCD.

Initially, behavioral interventions were recommended to address these symptoms. However, as compulsive behaviors persisted, fluvoxamine was added at dose of 150 mg/day. Despite this, OCD symptoms and psychotic features continued, leading to a planned switch from olanzapine to risperidone. The risperidone dose was titrated to 4 mg/day, resulting in 70% reduction in OCD symptoms, regression of psychotic symptoms, return to daily themes in her thought content. She resumed school attendance, demonstrated significant functional improvement during outpatient follow-ups.

CONCLUSION:AAPs can be effective in treating resistant OCD. However, there is evidence that AAPs may induced OCD symptoms in patients with psychotic disorders.

In this case, absence of prior OCD symptoms and emergence of these symptoms during olanzapine dose escalation strongly suggest that symptoms were obsessive-compulsive rather than psychotic in nature. Consistent with the literature, AAPs such as clozapine, olanzapine, risperidone have been associated with the de novo onset or exacerbation of OCD in patients with schizophrenia.

When OCD symptoms emerge during treatment, switching to an antipsychotic with lower 5-HT2 binding affinity or augmenting the treatment with an SSRI is recommended. In this case, fluvoxamine was initially added, but as symptoms persisted, transition to risperidone was undertaken. This led to significant improvement in both psychotic and OCD symptoms.

Keywords: Psychotic Disorder, Obsessive-Compulsive Disorder, Olanzapine, Atypical Antipsychotics

xAuthorToEditor: 1.Scheltema Beduin AA, Swets M, Machielsen M, Korver N; Genetic Risk and Outcome of Psychosis Investigators. Obsessive-compulsive symptoms in patients with schizophrenia: a naturalistic cross-sectional study comparing treatment with clozapine, olanzapine, risperidone, and no antipsychotics in 543 patients. J Clin Psychiatry. 2012 Nov;73(11):1395-402. doi: 10.4088/JCP.11m07164. PMID: 23218156. 2.Schirmbeck F, Esslinger C, Rausch F, Englisch S, Meyer-Lindenberg A, Zink M. Antiserotonergic antipsychotics are associated with obsessive-compulsive symptoms in schizophrenia. Psychol Med. 2011 Nov;41(11):2361-73. doi: 10.1017/S0033291711000419. Epub 2011 Apr 5. PMID: 21466748. 3.Lykouras L, Alevizos B, Michalopoulou P, Rabavilas A. Obsessive-compulsive symptoms induced by atypical antipsychotics. A review of the reported cases. Prog Neuropsychopharmacol Biol Psychiatry. 2003 May;27(3):333-46. doi: 10.1016/S0278-5846(03)00039-3. PMID: 12691768.

[Abstract:0060]

Improvement of Stuttering with Methylphenidate Treatment in a 10-Year-Old Boy: A Case Report

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INTRODUCTION: Childhood onset fluency disorder also known as stuttering is a communication problem characterized by the disruption of timing and fluency of speech. The co-occurrence of attention deficit hyperactivity disorder (ADHD) and stuttering is frequently observed, yet there exists a scarcity of empirical evidence regarding the impact of psychostimulant medications, widely used for ADHD treatment, on stuttering symptoms in children with comorbid stuttering. We present a case of ADHD and stuttering comorbidity in which the severity of stuttering improved after methylphenidate treatment.

CASE PRESENTATION: 10 years old boy going with fifth grade on primary school, who was previously diagnosed with stuttering. He applied to our clinic with with complaints of inability to focus, difficulty in sitting in class, getting bored quickly while studying, and losing stuff. Based on a thorough clinical evaluation utilizing the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), in conjunction with an extensive and comprehensive history, a diagnosis of Attention-Deficit/Hyperactivity Disorder (ADHD) was determined for the case who exhibited persistent stuttering. After obtaining informed consent from the family and the patient, intermediate acting methylphenidate 10 mg was started and gradually increased up to 20 mg per day within 8 weeks follow up. The case did not experience any drug-related adverse effects during the follow-up period. Moreover, there was observed improvement in the symptoms of both ADHD, as measured by the Conners Teacher Rating Scale and Conners Parent Rating Scale, and stuttering symptoms, as assessed through the utilization of the Stuttering Severity Instrument-4.

CONCLUSION: Our case points out that it is crucial to emphasize the need for additional research in order to elucidate the role of methylphenidate in the therapeutic management of ADHD and stuttering co-morbidities.

Keywords: Stuttering, ADHD, methylphenidate, comorbidity

[Abstract:0063]

Misophonia Characteristics and Responses to Drug Treatment in Children and Adolescents: A Case Series

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BACKGROUND AND AIM: Misophonia is a recently recognized condition characterized by reactions such as sensitivity, anger or disgust when faced with specific and repetitive auditory stimuli. Misophonia causes loss of function in people's lives.Misophonia is not classified as a clinical disorder and is not included as a diagnostic title in DSM-V or ICD-11. In the literature, there are limited studies on the efficacy of pharmacological treatments for misophonia, especially in children and adolescents. In this presentation; the aim of this study is to examine the characteristics of this disorder and to discuss the treatment process on 10 children/adolescents followed up with the diagnosis of misophonia, which is being observed more and more frequently in child and adolescent psychiatry clinics.

METHODS: Ten cases who were diagnosed with misophonia and received medical treatment in the outpatient clinics of the Department of Child and Adolescent Psychiatry between 2022-2024 were included in the case report. The sociodemographic characteristics of the adolescents, the characteristics of misophonia, and their responses to drug treatments initiated during the treatment process were retrospectively scanned from the files. The sociodemographic characteristics of the adolescents, the characteristics of misophonia disorder, and the responses to the drug treatments started during the treatment process were retrospectively scanned through the files. This study has the approval of the ethics committee of the Kocaeli University Faculty of Medicine, dated 27 March 2023 and numbered 2023/79.

RESULTS: Of the 10 cases whose files were evaluated, 8 were female and 2 were male. The age range was between 8-17 years and the mean age was 13.4. Of the 10 cases, 4 had a family history of misophonia, and 8 had a family history of any psychiatric illness. Six of the cases had an additional psychiatric disease. The most commonly used drugs in the cases were antidepressants. It was observed that the symptoms of 8 patients improved with the use of fluoxetine and sertraline.

CONCLUSIONS: Misophonia is a disorder that can start in childhood and adolescence, and early detection and treatment will be beneficial for the chronicity of the disorder and its prognosis. Further studies on this subject, which has been studied in a limited number of studies, are important. Therefore, in our case report, it is aimed to emphasize misophonia disorder in children and adolescents and to discuss the treatment processes.

Keywords: Misophonia, sertraline, fluoxetine, psychiatric disease.

AuthorToEditor: References: 1. Schroder, A., Vulink, N., & Denys, D. (2013). Misophonia:Diagnostic criteria for a new psychiatric disorder. PLoS One, 8, e54706. http://dx.doi.org/10.1371/journal.pone.0054706.t001. 2. Cavanna AE (2014) What is misophonia and how can we treat it? Expert Rev Neurother, 14:357-359. 3. Hocaoglu C (2018) A little known topic misophonia: two case reports. Dusunen Adam, 31:89.

[Abstract:0064]

The Role of Willingness to Experience Unpleasant Thoughts in Exposure and Response Prevention Therapy for Obsessive-Compulsive Disorder: A Case Report

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INTRODUCTION: The present article will expound on the Exposure and Response Prevention Therapy (ERP) process applied to a patient diagnosed with obsessive-compulsive disorder (OCD), and the effects of the willingness to experience unpleasant thoughts on treatment outcomes will be discussed.

CASE PRESENTATION: ERP under supervision was administered to the patient, a 21-year-old female university student who is presented with mainly contamination obsessions and cleaning compulsions. Her symptoms included excessive hand washing (spending 30 minutes handwashing periods several times a day), taking off and washing her clothes when she returned home immediately without being able to enter the house, and avoiding contact with surfaces such as doorknobs. Throughout the therapy process, it was planned to gradually expose her to anxiety-provoking stimuli, starting with the least anxiety-provoking stimulus. In addition, the level of willingness to experience unpleasant thoughts while administering ERP was assessed during the treatment process.

From the 5th interview onwards, the patient scored out of 100 on the question of 'How willing have you been to face anxiety/worry-provoking stimuli since the last interview?', adapted from ERP Feedback Form (Reid et al. 2010), before each interview. Her level of willingness was also evaluated by her therapist. The therapist and supervisor were blinded to all assessments and the results were known to them only after the termination of the therapy process.

Self-reported willingness scores (Table 1) tended to be higher during the weeks when the patient became more sociable and completed homework tasks such as stopping disinfectant use and washing hands in less than 5 minutes (interviews 9, 10, 13) and when she successfully completed more challenging exposures such as touching the door handle and using the communal toilet (interviews 19, 20 and 21). Conversely, low scores regarding self-reported willingness were observed during weeks when the patient encountered difficulties in interpersonal relationships and did not complete assigned homework successfully (interviews 14, 15, 16, 17, 18).

At the end of the treatment (25 psychotherapy sessions in total), the goals set in the initial interviews with the patient were achieved. These goals included shorter handwashing durations, being able to touch the surfaces like doorknobs freely and better ability to control her anger. The patient was able to use common areas in her house like bathroom and she also had stronger family relationships. Psychometric evaluations conducted before and after treatment revealed a decline in obsessive-compulsive symptoms and general symptom severity (see Table 2 for details). Informed consent was obtained from the patient for this case presentation.

CONCLUSION: A preliminary negative correlation was appeared to be detected between the amount of ERP homework and the assessment of both patient and the therapist‘s levels of willingness (8, 9, 10, 13, 19, 20, 21, 23). This case supports the results that willingness is a marker of exposure therapy success (Reid et al. 2010) and suggests that therapist and patient‘s congruence in assessing the level of willingness might deepen the mechanism of change in ERP therapy.

Keywords: Cognitive–behavioral therapy, exposure and response prevention, obsessive-compulsive disorders

Table 1: Willingness Scores Assessed by Patient and Therapist

Interviews	Patient	Therapist
6	25	50
7	50	60
8	80	60
9	80	50
10	100	80
11	40	75
12	20	60
13	70	80
14	0	50
15	0	50
16	0	10
17	0	20
18	0	30
19	90	80
20	90	50
21	80	50
22	0	60
23	50	60

Table 2: Scores of Self-report Scales Before and After Treatment

	Pre-treatment	Post-treatment
Obsessive-Compulsive Inventory	24	14
Obsessive Beliefs Questionnaire	17	6
SCL-90	2.32	1.88
Beck Depression Inventory	23	13

AuthorToEditor: REFERENCES: Reid, A. M., Garner, L. E., Van Kirk, N., Gironda, C., Krompinger, J. W., Brennan, B. P.,. & Elias, J. A. (2017). How willing are you? Willingness as a predictor of change during treatment of adults with obsessive–compulsive disorder. Depression and anxiety, 34(11), 1057-1064.

[Abstract:0067]

Is Clozapine Effective in Tardive Dyskinesia; A Case Report with Bardet Biedl Syndrome and Intellectual Disability

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INTRODUCTION: Tardive dyskinesia(TD) is a movement disorder characterized by irregular, stereotyped, and choreiform movements, frequently linked to antipsychotic medication. This disorder typically affects the tongue, lips, jaw, face, and peri-orbital areas.[1] The prevalence of tardive dyskinesia is 13% for second-generation antipsychotics, and 32% for first-generation antipsychotics have been reported in published studies. [2]

CASE PRESENTATION: A 15-year-old male patient who has bardet-biedl syndrome and intellectual disability using risperidone due to aggressive behaviors followed-up in our clinic since 2016. While he was using risperidone 4.5 mg, his mother noticed abnormal involuntary movements of the orofacial part of the face, cervical contraction, and tip-toe walking. We noted orofacial stereotypic movements during our examination, as well as cervical dystonia, lip-smacking, tongue protrusion, rolling the tongue, buccolingual motions, yelling with a high pitch voice, involuntary left arm movements, and difficulty walking based on contraction of the lower extremities muscles in January 2024. The abnormal involuntary movements scale (AIMS) yielded a positive result, which supports tardive dyskinesia.

Following the diagnosis of tardive dyskinesia, a transition was made from risperidone to quetiapine, and biperiden was added to the treatment. However, due to the lack of improvement in dyskinetic movements and the persistence of symptoms, clozapine therapy was initiated. After clozapine 25 mg/day treatment, tardive dyskinesia symptoms regressed.

In our final examination, after two months of clozapine 25mg/day usage in August 2024, his orofacial movements, cervical dystonia, and abnormal movements of extremities were discontinued, and he was relieved. AIMS was performed again. We observed the patient unobtrusively at rest, and the score was lower compared to the previous one. According to AIMS criteria the test result of our patient does not meet the criteria of tardive dyskinesia. In January 2025, the patient continues to be followed up in our clinic in terms of long-term treatment results of clozapine.

CONCLUSION: Numerous theories have been put out to explain how the use of antipsychotics causes TD. The idea that prolonged exposure to antipsychotics causes D2 receptor overexpression and dopaminergic receptor hypersensitivity is among the most generally recognized notions. [3] Modifications to the antipsychotic medication regimen, such as dose reduction, discontinuance, and switching from one antipsychotic medication to another, are one method for treating TD. [1] Quetiapine and clozapine seem to be the best options because of their low occupancy and quick dissociation from dopamine D2 receptors. [4] A meta-analysis study that included research on the effectiveness of clozapine in treating antipsychotic-induced tardive dyskinesia found that the medication significantly reduced moderate to severe TD. [5] Multiple pathways of TD formation and clozapine activity may be present, as seen by the varied responses and dosages of clozapine needed by patients with various psychiatric condition. [3]

Keywords: Antipsychotics, clozapine, tardive dyskinesia

AuthorToEditor: 1. Ricciardi, L., et al., Recommandations sur le traitement de la dyskinésie tardive. Canadian Journal of Psychiatry, 2019. 64(6): p. 388-399. 2. D'Abreu, A., U. Akbar, and J.H. Friedman, Tardive dyskinesia: epidemiology. Journal of the neurological sciences, 2018. 389: p. 17-20. 3. Wong, J., et al., A systematic review on the use of clozapine in treatment of tardive dyskinesia and tardive dystonia in patients with psychiatric disorders. Psychopharmacology, 2022. 239(11): p. 3393-3420. 4. Cloud, L.J., D. Zutshi, and S.A. Factor, Tardive dyskinesia: therapeutic options for an increasingly common disorder. Neurotherapeutics, 2014. 11(1): p. 166-176. 5. Mentzel, T.Q., et al., Clozapine monotherapy as a treatment for antipsychotic-induced tardive dyskinesia: a meta-analysis. The Journal of clinical psychiatry, 2018. 79(6): p. 11724.

[Abstract:0074]

Neuroleptic Malignant Syndrome Due to Clozapine Withdrawal in a Patient with Schizophrenia: A Case Report

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INTRODUCTION: Neuroleptic malignant syndrome (NMS) is a rare but potentially fatal complication of antipsychotic therapy. This condition is primarily associated with dopamine receptor blockade or the abrupt discontinuation of dopaminergic agents. While it is more commonly observed with first-generation antipsychotics, atypical antipsychotics such as clozapine can also lead to NMS under specific circumstances. This syndrome is characterized by symptoms such as rigidity, hyperthermia, altered mental status, and autonomic dysregulation. Prompt recognition and intervention are crucial, as the mortality rate can be significant without appropriate treatment. The following case illustrates the development of NMS in a young male patient with schizophrenia after an abrupt reduction in his clozapine dose, emphasizing the critical need for careful management of antipsychotic therapy.

CASE PRESENTATION: A 24-year-old male with a three-year history of schizophrenia presented to the emergency department with complaints of tremors, urinary incontinence, reduced communication, and convulsions. His medical records revealed that he had been on clozapine 400 mg/day for the last eight months due to treatment-resistant schizophrenia. However, his relatives had recently reduced his clozapine dose to 100 mg/day without consulting a physician. On initial examination, his body temperature was slightly elevated, and rigidity was noted. Laboratory tests showed elevated creatine kinase (CK) levels, indicative of muscle damage, and further evaluation confirmed the diagnosis of NMS.

Despite immediate treatment with intramuscular biperiden, the patient‘s condition rapidly deteriorated. His rigidity worsened, and he developed confusion and autonomic instability. Subsequent laboratory evaluations revealed a dramatic increase in CK levels, necessitating intensive care unit admission. Treatment with bromocriptine and intravenous dantrolene, alongside aggressive hydration and cooling measures, resulted in significant clinical improvement. Over the next few days, the patient‘s CK levels returned to near-normal values, and his symptoms resolved completely. He was subsequently transferred back to the psychiatry unit for further stabilization and continuation of his treatment.

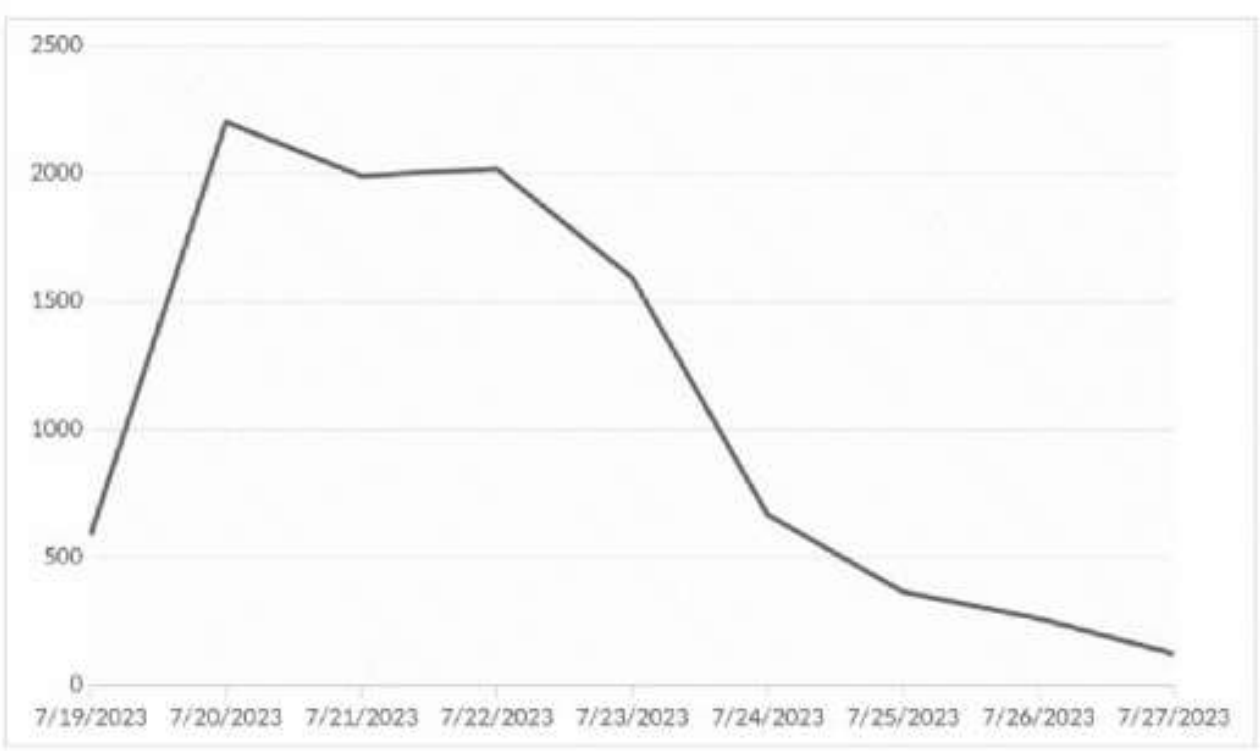
CONCLUSION: This case highlights the potential dangers of abrupt antipsychotic dose reductions, particularly with medications like clozapine. Clozapine‘s unique pharmacological profile may play a role in both the pathophysiology and prevention of NMS. The sudden withdrawal of clozapine can lead to dopaminergic hypersensitivity and cholinergic hyperactivation, contributing to the development of NMS. Given the potential severity of this condition, clinicians should exercise caution when adjusting antipsychotic dosages. Gradual tapering under medical supervision is essential to minimize risks.

Furthermore, this case underscores the importance of educating patients and their caregivers about the proper use of antipsychotic medications. Non-compliance or improper adjustments to prescribed regimens can have serious consequences. By fostering better communication and understanding between healthcare providers, patients, and their families, such complications may be prevented.

In conclusion, NMS remains a life-threatening medical emergency that demands prompt recognition and management. This case serves as a reminder of the critical need for careful monitoring of antipsychotic therapy, particularly in patients at higher risk. The importance of medication adherence and gradual dose adjustments cannot be overstated, as these measures are vital to ensuring patient safety and improving clinical outcomes.

Keywords: Abrupt discontinuation, clozapine, dopamine, neuroleptic malignant syndrome, schizophrenia

CK levels of patient during treatment



CK levels of patient during treatment

[Abstract:0083]

Quetiapine-Induced Retrograde Ejaculation in a Young Male with Bipolar Disorder: A Rare Case and Management Approach

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INTRODUCTION: Atypical antipsychotic (AAP) medications are widely used in the management of schizophrenia, bipolar disorder, and other psychiatric conditions. While effective, AAPs frequently cause adverse side effects such as weight gain, metabolic changes, sedation, and sexual dysfunction. Sexual dysfunction, often underreported, includes difficulties with erection, lubrication, orgasm, arousal, libido, retrograde ejaculation (RE) and overall sexual satisfaction. These side effects may lead to poor medication adherence and negatively impact treatment outcomes. Quetiapine is a dopamine D1/D2, 5-HT2, alpha1-adrenoceptor, and histamine-1 receptor antagonist. Although generally associated with fewer sexual side effects than other antipsychotics, quetiapine has rarely been implicated in RE. RE, characterized by the backward flow of ejaculate into the bladder due to bladder neck contraction failure, is a recognized side effect of medications with alpha1-adrenoceptor antagonism.This report presents a rare case of quetiapine induced RE in a young male with bipolar disorder.

CASE PRESENTATION: Informed consent has been obtained from the patient.A 21-year-old male university student first presented with psychiatric complaints at the age of 20.His initial symptoms included dysphoria, depressed mood, and anergy leading to a diagnosis of a depressive episode treatment with sertraline 50 mg/day. Initially adherent, he became irregular in medication use. Three months later, he presented with elevated energy, excessive spending, pressured speech, heightened sexual desire, and religious preoccupations, persisting for about a month. He was hospitalized and diagnosed with a manic episode of bipolar disorder, treated with quetiapine 800 mg/day and valproate 1000 mg/day, achieving clinical stabilization.During follow-up two months post-discharge, the patient reported reduced ejaculate volume despite normal erectile function. Spermiogram results indicated a lack of sperm in the ejaculation, attributed to quetiapine‘s alpha1-adrenoceptor antagonistic effects. Reducing the quetiapine dose to 300 mg/day and switching to its extended-release (XR) form resolved the issue without recurrence of psychiatric symptoms. He remains stable under regular follow up (Figure 1).

CONCLUSION: Sexual dysfunction is a common side effect of AAPs that can significantly reduce quality of life and negatively impact medication adherence but is often underestimated in clinical practice.RE has been reported to occur with various antipsychotic medications.

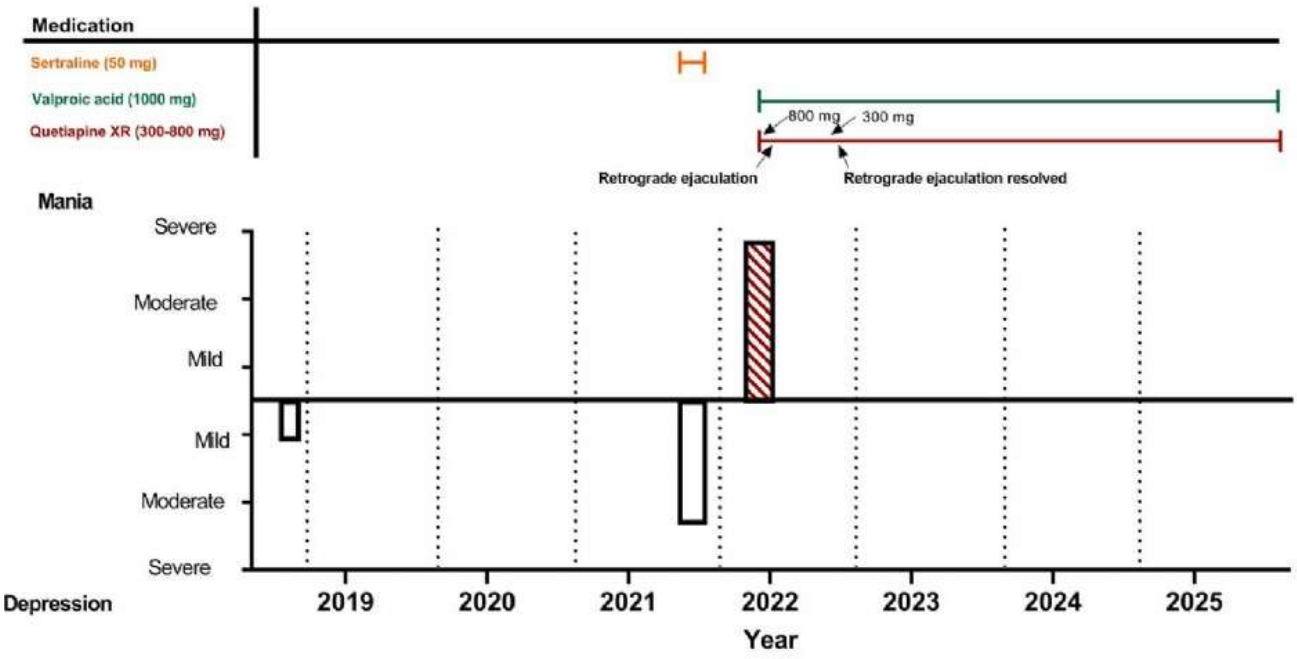
The patient developed RE two months after starting quetiapine, highlighting a delayed onsed compared to the typical timeline of RE, which often emerges within two weeks of treatment initiation. Literature underscores that while quetiapine-induced RE is uncommon, it is dose-dependent and more likely at higher doses. Management strategies for antipsychotic induced RE include dose reduction, drug holidays,adjunctive medications or switching to another antipsychotic.

In this case, a gradual reduction in quetiapine dosage to 300 mg/day along with transitioning to the XR formulation, resolved the RE without compromising psychiatric stability.Our case demonstrates the importance of recognizing and addressing RE, even with medications like quetiapine,which are considered to have a lower risk of sexual side effects. It underscores the need for clinicians to proactively inquire about sexual side effects during follow-up, especially at higher doses of antipsychotics.

This report highlights the dose-dependent nature, delayed onset, and successful management of quetiapine-induced RE, emphasizing careful dose adjustments and formulation changes to mitigate side effects without jeopardizing therapeutic efficacy.

Keywords: Bipolar Disorder, Quetiapine, Retrograde Ejaculation

Figure 1



The life chart of a male patient who developed symptoms of retrograde ejaculation following the initiation of quetiapine shows a relationship between the resolution of retrograde ejaculation and the down-titration of quetiapine. The patterned bar indicates the period during which the patient was hospitalized.

[Abstract:0084]

A Complex Case of Schizophrenia: Reevaluating Strategies for Treatment Resistance

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INTRODUCTION: The management of clozapine-resistant or intolerant patients remains a critical challenge in psychiatry, often requires innovative approaches by clinicians. Augmentation strategies, such as combining treatments with electroconvulsive therapy (ECT), using high-dose or multiple antipsychotic regimens, and employing adjunctive agents like lamotrigine, topiramate, or N-acetylcysteine, are commonly implemented in clinical practice. In this case report, we aim to contribute to the literature with a patient who couldn‘t tolerate clozapine, who achieved partial remission with multiple antipsychotic regimens.

CASE PRESENTATION: A 36-year-old unmarried male with no children, high school graduate, and living with his family, was admitted to the psychiatric ward following an evaluation conducted by medical board. Before the admission,he had no history of psychiatric consultations nor any psychotropic medication use. Over the preceding six months, he exhibited behaviors such as talking to himself, avoiding communication with his family and claiming characters in television series resembled him, that his real family resided in Russia, and he was the Russian Tsar. He had also attempted to leave home to go to the Russian Embassy.

Upon his first psychiatric evaluation, his poor self-care was evident, he was grandiose and disorganized, and his judgment was impaired. His Positive and Negative Syndrome Scale (PANSS) score was recorded as 132.

During hospitalization, his treatment regimen included Haloperidol 20 mg/day, Paliperidone 12 mg/day, ECT augmentation. Due to insufficient therapeutic benefit, his treatment was switched to Olanzapine 20 mg/day, followed by a combination therapy involving Clozapine 600 mg/day, Amisulpride 600 mg/day, and Valproate 1000 mg/day. While partial improvement was observed, clozapine-induced agranulocytosis developed and necessitated discontinuation of his treatment regimen. He was discharged with a plan for long-acting Aripiprazole 400 mg/month during outpatient follow-ups. But his complaints increased and he was hospitalised for a second time.

During the second hospitalization, he received Olanzapine 20 mg/day, Zuclopenthixol depot 200 mg/2 weeks, N-acetylcysteine 1800 mg/day. Unfortunately it has been ineffective. His treatment switched to Ziprasidone 80 mg/day, Zuclopenthixol depot 200 mg/2 weeks, which finally reduced his complaints. His PANSS score regressed to 82. Post-discharge, although the delusional content persisted partially, the patient demonstrated regular adherence to treatment, his behavior towards his delusions decreased.

CONCLUSION: Although clozapine is considered the gold standard and often the final therapeutic option for treatment-resistant schizophrenia, response rates remain low, ranging from 40% to 70%. Factors such as tailoring the treatment protocol to the patients‘ specific clinical symptoms, strong social support and early initiation of treatment positively influence patients‘ outcome. İn this case, despite the failure of most standard treatment protocols documented in the literature, remission was achieved with an unconventional(Ziprasidone and Zuclopenthixol) treatment regimen. This case report highlights an option for clinicians to consider in similar complex cases.

Informed consent was obtained from the patient or the patient‘s legally authorized represantative.

Keywords: Schizophrenia, Augmentation, Clozapine intolerance, Ziprasidone, Zuclopenthixol

[Abstract:0096]

Isodicentric X Chromosome Mutation with a Diagnosis of Trichotillomania

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INTRODUCTION: Trichotillomania (TTM) is a psychiatric disorder characterized by significant hair loss resulting from recurrent hair-pulling behavior.According to the DSM-5(Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition) criteria, TTM is classified as an independent diagnosis under the category of obsessive-compulsive and related disorders (1). The lifetime prevalence rate of TTM ranges from 0.6% to 4%,with the highest incidence observed during childhood (2). The pathogenesis of TTM is thought to involve an interaction of genetic,neurobiological,environmental,and psychological factors (3). The treatment of TTM is managed with a combination of behavioural interventions and psychopharmacological treatment methods (1). Genetic variations associated with TTM include regions such as 5-HT2A, SLC6A4, HOXB8, SLITRK1, DLGAP3, DRD1, and DRD4 (4,5). This case report discusses a case of TTM associated with a rare genetic mutation,aiming to contribute novel findings to the existing literature.

CASE PRESENTATION: The patient was 27 years old,female,single,graduated from secondary school and living in Ankara with her mother and siblings. According to the anamnesis,it was learned that her first mental complaints started at the age of seven,involving pulling her own hair after the death of her father,and imipramine treatment was initiated at an external centre with a diagnosis of TTM and borderline intellectual functioning at that time; she did not use the drug because of the side effect of nausea. At the age of 18,it was learnt that she had been diagnosed with primary ovarian insufficiency, her mental complaints continued during this period,she was followed up with amisulpiride and sertraline treatments, and she partially benefited from the treatment. The patient presented to us in November 2023 with complaints of hair pulling, restlessness, low mood and widespread anxiety which increased after familial stressors.

After physical examination and psychiatric evaluation, borderline intellectual functioning, mixed anxiety, depressive disorder and, TTM were diagnosed. Hamilton Depression scale score was 26 and Hamilton Anxiety scale score was 30. Impulsivity was present in all 3 domains of the Barrat impulsivity scale, and the total scale score was 60. A review of her past medical records revealed a genetic analysis conducted in 2016 at an external center, reported as 46,X,idic(x)(pter->q21::q13->pter)ish. idic(x)(DXYS129++,DXZ1++,pVYS258B-),arr[hg19] Xp22.33p11.21(192689-58081470)x3,Xq11.1q13.1(61931689-67906903)x3,Xq21.1q28(82119115-155208244)x1.

The patient was started on fluoxetine 20mg/day and titrated to 40mg/day during follow-up. Over 50% improvement in anxiety and depressive symptoms was observed. Due to persistent hair-pulling behavior, aripiprazole was added at 2,5mg/day and later increased to 5mg/day. The patient experienced a reduction in hair-pulling behavior. The patient, who was followed up for approximately 5 months,was assessed to be in remission during her final psychiatric evaluation.Written informed consent was obtained from the patient for the case report.

CONCLUSION: Trichotillomania presents various challenges for both patients and clinicians, including comorbid dermatological, endocrinological, nutritional, and psychiatric conditions,as well as delays in seeking medical help due to lack of insight in some patients. An accurate diagnosis of TTM requires a detailed psychiatric anamnesis and a multidisciplinary approach to manage potential comorbidities effectively.

This case underscores the intersection of psychiatry and genetics,highlighting the importance of interdisciplinary collaboration. It also aims to pave the way for further research into the etiological and clinical aspects of TTM and foster the development of individualized treatment approaches. To the best of our knowledge, this is the first reported case of TTM associated with an isodicentric X mutation, emphasizing the need for collaboration across disciplines to advance understanding and treatment strategies.

Keywords: Trichotillomania, isodicentric, x chromosome

AuthorToEditor: 1) Grant, J. E., & Chamberlain, S. R. (2016). Trichotillomania. American Journal of Psychiatry, 173(9), 868-874. 2) King, R. A., Zohar, A. H., Ratzoni, G., Binder, M., Kron, S., Dycian, A., Cohen, D. J., Pauls, D. L., & Apter, A. (1995). An epidemiological study of trichotillomania in Israeli adolescents. Journal of the American Academy of Child and Adolescent Psychiatry, 34(9), 1212–1215. https://doi.org/10.1097/00004583-199509000-00019 3) Bozok, B., Özdemir, Ö., Cicek, A. U., Aksoy, H. U., Ucuz, İ., & Abanoz, E. (2022). Sleep-Isolated Trichotillomania As An Ictal Symptom Of Complex Partial Seizure In A 12-Year-Old Girl: A Case Report. Cumhuriyet Medical Journal, 44(4), 484-488. 4)Chatterjee K. The genetic factors influencing the development of trichotillomania. J Genet 2011; 90:259-262. 5) Akpinaroglu C, Ulucan K. Genetics of trichotillomania. The Journal of Neurobehavioral Sciences 2017; 4(2):90- 93.

[Abstract:0099]

Autistic Features and Epilepsy in a Case with a Heterozygous ZSWIM6 Mutation

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INTRODUCTION: Autism Spectrum Disorder (ASD) is a heterogeneous neurodevelopmental disorder known to result from the interaction of hereditary and environmental factors. More than 800 genes associated with the inheritance of ASD has been identified in the literature. Among these, the ZSWIM6 (Zinc Finger SWIM-type Containing 6) gene encodes a protein highly expressed in the central nervous system, playing a crucial role in neural development, striatal morphology, and motor regulation. Mutations in ZSWIM6 have been associated with severe intellectual disability, schizophrenia and more recently, a neurodevelopmental disorder characterized by movement abnormalities, abnormal gait, and autistic features. These findings highlight the potential role of ZSWIM6 mutations in the pathogenesis of ASD and related conditions.

CASE PRESENTATION: A 5-year-old boy presented to our clinic with complaints of frequent screaming, delayed speech, echolalia, lack of interaction with peers, poor eye contact, compulsive behaviors, insistence on sameness, as well as developmental delays, and atypical interests. It was also observed that he had dysmorphic facial features. Diagnostic evaluations confirmed ASD, and he was referred to the pediatric metabolic diseases, neurology and genetics departments for further investigations. Advanced tests in the genetics department revealed that both the mother and the patient were heterozygous carriers of a ZSWIM6 gene mutation. Other assessments were unremarkable, including metabolic panels, additional genetic testing, electroencephalography (EEG) evaluation, and hearing evaluations. MRI findings indicated bilateral periventricular white matter volume loss and patchy T2-weighted and FLAIR hyperintense lesions suggestive of prematurity-related white matter injury or a neurometabolic disorder mimicking periventricular leukomalacia (PVL). In the Stanford-Binet test, the patient was able to answer questions appropriate for his age group, and his IQ was found to range between 90 and 95. After the ASD diagnosis, the patient was initiated on risperidone 0.5 mg/day for behavioral issues and special education support. Improvements were observed in echolalia, repetitive behaviors, and emotional dysregulation. He also benefited more from special education. However, the patient's food selectivity continued. During follow-up, at the age of 7, the patient experienced a 25-minute seizure following a febrile illness. After further evaluations, the patient was diagnosed with epilepsy and started on levetiracetam 500 mg/day therapy. In his most recent psychiatric examination, he displayed limited eye contact with the interviewer, and repetitive behaviors, such as moving his tongue from side to side, were observed. The patient continues to receive multidisciplinary care for ASD and epilepsy.

CONCLUSION: ZSWIM6 gene mutations are an important genetic factor associated with ASD and other neurodevelopmental disorders. Findings in the literature suggest that early recognition of these mutations can significantly enhance treatment strategies by providing a clearer understanding of the genetic underpinnings of ASD. Notably, the absence of certain features commonly reported in association with ZSWIM6 mutations, such as movement abnormalities and gait disturbances, may be attributable to the heterozygous nature of the mutation in this case. Therefore, the clinical management of individuals with ZSWIM6 mutations should involve a multidisciplinary approach, focusing on genetic testing, early diagnosis, and tailored intervention strategies.

Keywords: ZSWIM6 Mutation, Autism Spectrum Disorder, Genetic, Risperidone

[Abstract:0100]

Neuroleptic Malignant Syndrome in a 14-Year-Old Girl: A Case Report

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INTRODUCTION: Neuroleptic Malignant Syndrome (NMS) is one of the most critical psychiatric emergencies in terms of mortality. It generally develops following the initiation or dose escalation of antipsychotic medications, representing an idiosyncratic reaction to drugs affecting the central dopaminergic system. Although its pathophysiology is not fully elucidated, two main mechanisms have been suggested: central dopaminergic blockade and toxicity in muscle fibers. Epidemiological data vary, but a meta-analysis reported an incidence of approximately 1 case per 1000 patients.

CASE PRESENTATION: A 14-year-old girl presented to the pediatric emergency department with complaints of disorganized speech and behaviours, aggression and hallucinations. These symptoms started about three months earlier and had worsened significantly over the past few days. At initial assessment, a first psychotic episode was suspected. Routine laboratory tests were performed, and the pediatric neurology team deemed no further evaluation necessary. The patient was then admitted to the psychiatry clinic.

Olanzapine 5 mg twice daily was initiated; however, additional injections (two times) were required. On the second day of her hospital stay, she developed sialorrhea, somnolence, dysphagia, incontinence, rigidity, and diaphoresis, along with elevated CK, leukocytosis, thrombocytosis, hypophosphatemia, and hypercalcemia. Suspecting NMS, all antipsychotic medications were discontinued, and she was transferred to the pediatric intensive care unit (PICU).

She remained in the PICU for 10 days. During the first three days, midazolam and supportive treatments were administered. Attempts to discontinue midazolam earlier were unsuccessful due to severe rigidity. From the sixth day onward, bromocriptine 2.5 mg four times daily was started. By the tenth day, PICU care was no longer required, although her psychotic symptoms persisted, necessitating further psychiatric management.

CONCLUSION: Common clinical features of NMS are hyperthermia, muscle rigidity, altered mental status, autonomic dysfunction, elevated CK, leukocytosis, and evidence of rhabdomyolysis. Treatment involves discontinuation of antipsychotic agents, aggressive supportive and fluid therapy, cooling measures for hyperthermia, and administration of dopaminergic agonists (e.g., bromocriptine) and/or dantrolene. One study found that in schizophrenia, NMS typically begins around the 9th hour after treatment initiation, lasts approximately 23 days, and that rigidity appears around the 38th hour. In affective disorders, onset was reported around the 17th hour and lasted approximately 11 days, with rigidity emerging around the 84th hour. Among 20 NMS cases with schizophrenia, four died, whereas no deaths occurred in the affective disorder group. Moreover, 10 cases were successfully re-challenged with neuroleptics after a 12-week interval, and none experienced NMS recurrence during a 6-month follow-up. Another review examined 57 NMS cases in children and adolescents. NMS occurred at an average of 11 days with typical antipsychotics and 13 days with atypicals. The most common clinical signs were muscular rigidity, autonomic instability, and hyperthermia, while elevated CK and leukocytosis were the most frequent laboratory abnormalities. Benzodiazepines were the most commonly used pharmacological treatment.Risk factors include a history of prior NMS, organic brain syndrome, hyperthyroidism, alcoholism, iron deficiency, extreme fatigue, dehydration, and agitation. Additional risk factors related to medication use include high-potency antipsychotics, higher doses, polypharmacy, preexisting severe extrapyramidal side effects. Clozapine considered the safest neuroleptic.

Keywords: Antipsychotic, neuroleptic malignant syndrome, side effect, adolescent

Initial Abnormal Laboratory Findings

WBC (↑)	13.62 x10³/µL
PLT (↑)	421 x10³/µL
CRP (↑)	18 mg/L
Calcium (↑)	11 mg/dL
Phosphorus (↓)	3.8 mg/dL
Uric Acid (↑)	7.9 mg/dL
Direct Bilirubin (↑)	0.22 mg/dL
LDH (↑)	362 U/L
AST (↑)	61 U/L
CK (↑)	3412 U/L
CK - MB (↑)	87 U/L
Total Protein (↑)	85 g/L
Iron (↓)	25 µg/dL

Follow-up Abnormal Laboratory Findings (Day 10)

CK (↑)	209 U/L
LDH (↑)	257 U/L
Lipase (↑)	63.4 U/L
Urea (↓)	15.5 mg/dL

[Abstract:0117]

Depressive Symptoms Preceding MS Attack: A Case Presentation

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BACKGROUND AND AIM: INTRODUCTION: Multiple sclerosis (MS) is a chronic autoimmune disease characterized by inflammation and demyelination in the central nervous system (CNS), resulting in progressive cognitive and physical impairments (1). Pediatric-onset multiple sclerosis (POMS), which occurs before the age of 18, accounts for 3–5% of all MS cases (2). Notably, nearly 50% of pediatric MS patients experience depression, highlighting the significant psychiatric burden associated with the disease (3, 4). There is growing interest in the potential link between depression and MS onset. Some studies suggest that depressive symptoms may not only be a consequence of MS but could also serve as a prelude to its onset or exacerbate disease activity (4). However, this relationship remains insufficiently explored, particularly in pediatric populations. Here, we present a case of a 16-year-old female patient who exhibited depressive symptoms prior to being diagnosed with MS and subsequently experienced an MS attack.

METHODS: Case Presentation

A 16-year-old girl was hospitalized after expressing a suicidal plan. She reported escalating fatigue, hypersomnia, anhedonia, and suicidal ideation over the preceding three weeks. Psychiatric evaluation revealed a markedly depressed mood, preoccupation with health-related concerns, and active suicidal thoughts.

RESULTS: The patient‘s psychiatric symptoms began in 2022, including anhedonia, suicidal ideation, and a prior suicide attempt involving medication. Four months after this suicide attempt, she was diagnosed with MS following the onset of neurological symptoms, including numbness in her left arm and diplopia.

At the time of her current hospitalization, she was on Sertraline 50 mg/day and Risperidone 1 mg/day. Her treatment was adjusted to Sertraline 100 mg/day and Risperidone 1 mg/day. On the third day of hospitalization, she developed sensory loss in her left arm. MRI findings revealed multiple hyperintense lesions on T2-weighted and FLAIR sequences, consistent with MS, in the pericallosal, callosal-septal margin, juxtacortical, and periventricular regions, as well as the infratentorial white matter. The lesions exhibited typical orientations perpendicular to the ventricular wall.

The patient received three days of pulse steroid therapy, which led to a significant improvement in her neurological symptoms. Following stabilization of her depressive symptoms and resolution of suicidal ideation, she was discharged and placed on outpatient follow-up care.

CONCLUSIONS: Discussion

This case highlights the potential interplay between depression and MS, suggesting that depressive symptoms could precede or even contribute to disease exacerbations.

In this case, the patient‘s depressive symptoms and suicidal thoughts intensified prior to her neurological manifestations, raising the question of whether mood disturbances may herald MS attacks. While similar observations have been reported in adult MS populations, there is limited research on this phenomenon in pediatric MS (5). Further investigation is warranted to elucidate the temporal relationship between mood disorders and MS onset or exacerbation and to explore their potential role in disease pathophysiology (4). This case underscores the importance of comprehensive psychiatric evaluation in pediatric MS patients, as timely recognition and management of depressive symptoms may not only improve quality of life but also mitigate potential impacts on disease activity.

Keywords: Depression, Multiple sclerosis, Pediatric

AuthorToEditor: 1. Boesen, M. S., Thygesen, L. C., Uldall, P. V., et al. (2017). Psychiatric morbidity develops after onset of pediatric multiple sclerosis: A Danish nationwide population-based study. Multiple Sclerosis and Related Disorders, 19, 30–34. https://doi.org/10.1016/j.msard.2017.10.018 2. Brola, W., Steinborn, B., Niewada, M., Mazurkiewicz-Bełdzińska, M., Jóźwiak, S., Sobolewski, P., Żak, M., Wilski, M., Bilska, M., Siedlarska, M., et al. (Yıl). Pediatric-onset multiple sclerosis in Poland: A registry-based retrospective cohort study. Multiple Sclerosis and Related Disorders. https://doi.org/10.1016/j.msard.2021.103344 3. Vattakatuchery, J. J., Rickards, H., & Cavanna, A. E. (2011). Pathogenic mechanisms of depression in multiple sclerosis. Journal of Neuropsychiatry and Clinical Neurosciences, 23(3), 261–276. https://doi.org/10.1176/jnp.23.3.jnp26 4. Mamtani, H., Jain, K., Ganjekar, S., Netravathi, M., & Desai, G. (2023). Depression in multiple sclerosis: Clinical case review and grand rounds. Journal of Psychiatry Spectrum, 2(2), 122–126. https://doi.org/10.4103/jopsys.jopsys_23_23 5. Sharma, P., Morrow, S. A., & Owen, R. J. (2015). Episodic mood changes preceding an exacerbation of multiple sclerosis. Primary Care Companion for CNS Disorders, 17(5), 27516. https://doi.org/10.4088/PCC.15br01815

[Abstract:0120]

Diagnosis of Niemann-Pick Type C in a Case of Treatment-Resistant Psychotic Disorder: A Case Report

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INTRODUCTION: Niemann-Pick type C is a lysosomal storage disorder associated with mutations in the NPC1 (95%) and NPC2 genes (1)(3) It is primarily recognized as a neurodegenerative disease characterized by neurological symptoms such as dystonia, ataxia, dysphagia, and oculomotor abnormalities; cognitive symptoms including executive dysfunction, reduced processing speed, and verbal memory impairment; and psychiatric disorders such as depression, bipolar disorder, and psychosis. (2)(3)

CASE PRESENTATION: A patient initially presented 1.5 years ago with symptoms of inappropriate laughing, suspiciousness, aggressive behavior and was hospitalized at an psychiatric inpatient unit with a preliminary diagnosis of psychotic disorder. Treatment included risperidone, which caused dystonia, and was replaced with olanzapine 5 mg/day, zuclopenthixol 200 mg every 21 days, biperiden 3 mg/day, and valproic acid 750 mg/day. Partial improvement was noted, and the patient was discharged. During a year of irregular follow-ups, psychotic symptoms persisted, and medication was adjusted to olanzapine 15 mg/day, valproic acid 1000 mg/day, zuclopenthixol 200 mg IM every 21 days, and biperiden 2 mg/day.

For the past five months, the patient was noncompliant with medication, and psychotic symptoms worsened, presenting with insomnia, self-harm, aggression, disorganized speech. In July 2024, the patient was admitted to the emergency department of our hospital and subsequently hospitalized with a diagnosis of a psychotic episode. Mental state examination at admission revealed poor self-care, blunted affect, reduced speech, and thought flow with pauses and flight of ideas. The patient exhibited persecutory and control delusions. Psychophysiological findings included decreased sleep and increased appetite.

Treatment during hospitalization included valproic acid 1500 mg/day, olanzapine 15 mg/day, and biperiden 1 mg/day. Additionally, zuclopenthixol 200 mg intramuscular injection was reinstated, to be administered every 14 days.

On the 5th day, dysphagia was noted, leading to a gradual increase in biperiden to 4 mg/day, Dysphagia resolved within a week, but disorganized and aggressive behavior increased, prompting the addition of diazepam, an increase in olanzapine to 20 mg/day, and valproic acid to 2000 mg/day.

Following the second dose of zuclopenthixol, dysphagia recurred, necessitating an increase in biperiden to 6 mg/day. Due to worsening agitation and the inability to take oral medications, all oral treatments were discontinued. Diazepam 10 mg/day IM and biperiden 10 mg/day IM were administered. Dysphagia led to aspiration pneumonia.

Initially attributed to antipsychotic side effects, persistent dysphagia, alongside dysarthria, ataxic gait, and vertical supranuclear gaze palsy, prompted further investigation. Genetic testing identified a heterozygous mutation in the NPC1 gene, confirming a diagnosis of Niemann-Pick type C.

With ongoing psychiatric symptoms, treatment was switched to IM paliperidone, leading to improvement in dysphagia. After a 50-day hospitalization, the patient was discharged with biperiden 6 mg/day, diazepam 15 mg/day, and paliperidone 75 mg IM monthly.

CONCLUSION: Organic or secondary psychosis can occur in various conditions, including metabolic disorders, neurodegenerative diseases, and stroke (5). Atypical features such as psychomotor delay, autistic symptoms observed prior to the onset of psychosis, complex delusions, isolated visual hallucinations, treatment resistance, and accompanying neurological symptoms may indicate the need for Niemann-Pick type C screening. Early screening is essential for timely diagnosis and initiating etiology-targeted treatment (4)

Keywords: Niemann-Pick Type C, Organic Psychosis, Psychosis,Treatment Resistance

[Abstract:0124]

Non-Convulsive Status Epilepticus After First Electroconvulsive Therapy Session: A Case Report

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INTRODUCTION: Electroconvulsive therapy (ECT) is a treatment method that creates controlled seizures in the brain using electric current. Since the 1940s, it has been widely used in mood disorders, both manic and depressive episodes, especially in patients who are resistant to pharmacotherapy. While motor seizure activity usually lasts between 30-60 seconds after ECT administration, EEG seizure activity lasts less than 90 seconds. Rarely, when intrinsic seizure termination mechanisms fail, seizure activity prolongs, and seizures lasting more than 5 minutes are considered status epilepticus1. The state in which seizure activity is observed on the EEG although there is no obvious motor activity is called non-convulsive status epilepticus (NCSE). Although observing a motor seizure for 5 minutes is sufficient to diagnose status epilepticus, at least 10 minutes of EEG seizure activity is required to diagnose NCSE 2,3.

CASE PRESENTATION: A 21-year-old female patient presented to our psychiatric emergency unit with rapid and pressured speech, grandiose delusions, affective lability, decreased sleep, and increased psychomotor activity that started 3 days ago. Her last hospitalization was 3 years ago with a manic episode, and she had not been taking her medications for the past 3 months. The patient was admitted to the psychiatric ward with a diagnosis of mania with psychotic features. Her treatment was adjusted to lithium 1200 mg/day, risperidone 8 mg/day. Nine days after admission, ECT was decided for the patient whose clinical findings showed no improvement with the current treatment.

The patient was taken to the ECT room with continuous monitoring and EEG observation, 60 mg propofol and 40 mg succinylcholine were injected by the anesthesia team, and the first session of ECT was applied at 10% energy level with Thymatron® System IV. The motor seizure of the patient who started having a generalized tonic-clonic seizure after stimulation ended in 64 seconds. As the seizure activity continued in the EEG, 7 mg Midazolam and 160 mg Propofol were administered over three minutes. The patient who showed no motor phenomena but continued to have seizure activity on the EEG and did not regain consciousness was considered to have NCSE and was intubated. Propofol infusion of 100 mg/day was started and Levetiracetam 1500 mg was injected intravenously. The patient's seizure ended after a total of 20 minutes and her vitals remained stable during and after the seizure. She was transferred to the intensive care unit by the anesthesia team intubated and under propofol infusion. The patient whose hemodynamics were stable after 24 hours of follow-up was admitted to the psychiatric ward.

CONCLUSION: NCSE is a rare but potentially life-threatening complication of ECT that, if left untreated, can result in serious neurological sequelae. Possible risk factors include discontinuation or reduction of doses of benzodiazepines and anticonvulsants, concurrent use of lithium, antipsychotics or antidepressants, history of seizure in the past or family history.4. Evaluating patients for risk factors before initiating ECT treatment is crucial for preventing NCSE. Moreover, multi-lead EEG monitoring during the procedure is essential for the early detection of NCSE and the timely implementation of appropriate interventions.

Keywords: Electroconvulsive Therapy, Status Epilepticus, Lithium

AuthorToEditor: Referances 1-Grogan R, Wagner DR, Sullivan T, Labar D. Generalized nonconvulsive status epilepticus after electroconvulsive therapy. Convuls Ther. 1995 Mar;11(1):51-6. PMID: 7796069. 2- Aftab A, VanDercar A, Alkhachroum A, LaGrotta C, Gao K. Nonconvulsive Status Epilepticus After Electroconvulsive Therapy: A Review of Literature. Psychosomatics. 2018 Jan-Feb; 59(1): 36-46. doi: 10.1016/j.psym.2017.07.005. Epub 2017 Jul 15. PMID: 28802513. 3-Beleza, Pedro MD*; Rocha, João MD†; Pinho, João MD†. Diagnosis, Etiology, and Treatment of Nonconvulsive Status Epilepticus, a Semiological Oriented Review. The Neurologist 19(6):p 160-167, June 2015. | DOI: 10.1097/NRL.0000000000000031 4- Cristancho MA, Alici Y, Augoustides JG, O'Reardon JP: Uncommon butseriouscomplicationsassociatedwith electroconvulsive therapy:recognitionandmanagement for theclinician.CurrPsychiatryRep2008;10(6): 474–480

[Abstract:0129]

Factors Associated with the Development of Side Effects in Methylphenidate Treatment

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BACKGROUND AND AIM: In our study, we aim to explore the relationship between the development of side effects and the factors of sleep and exercise in the use of methylphenidate, the most widely used, effective, and first-line treatment for ADHD.

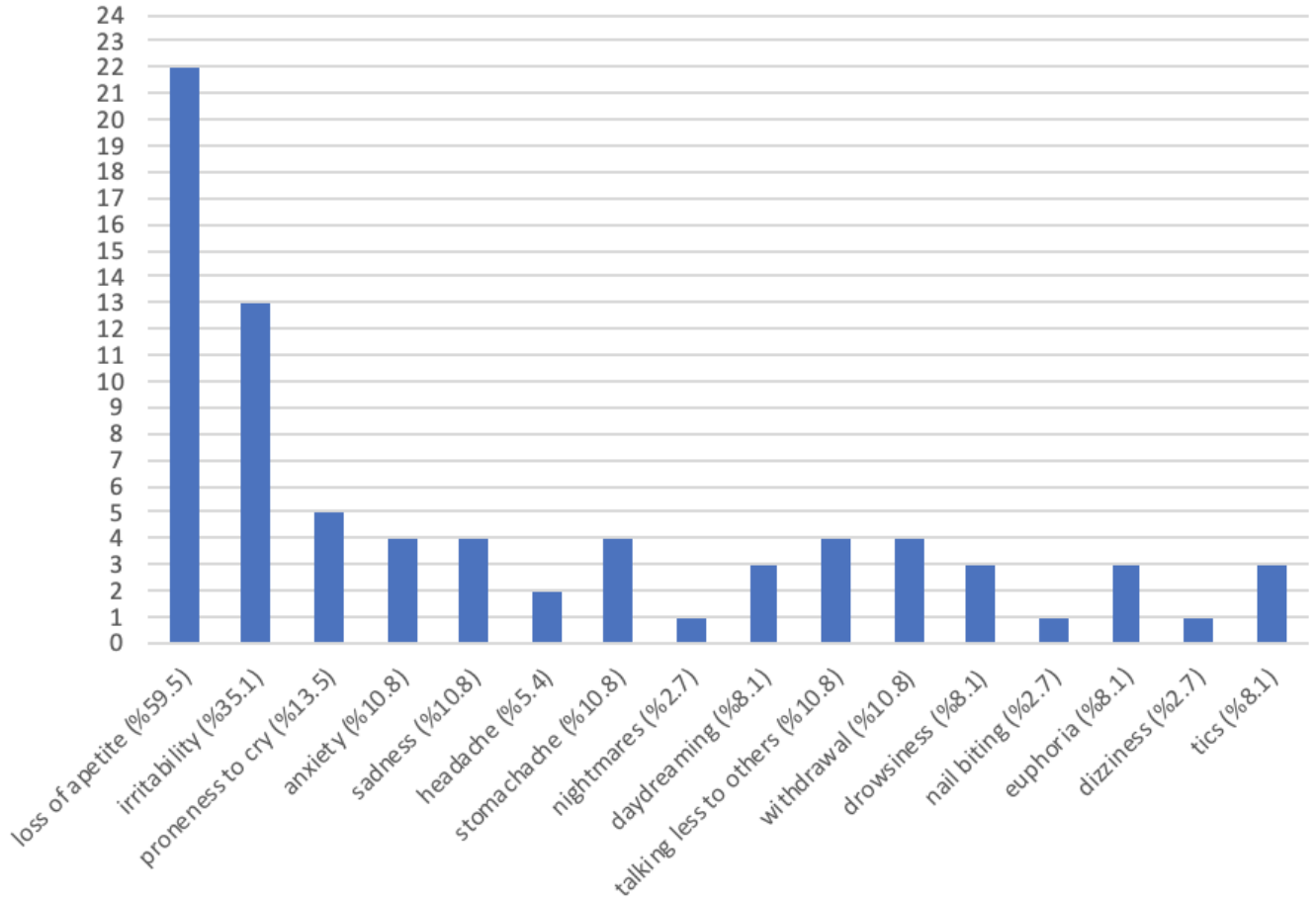
METHODS: Our study included 49 children aged 6 to 12 years, newly diagnosed with ADHD and initiated on methylphenidate treatment at doses ranging from 0.5 mg/kg to 1 mg/kg for one month at the Child Psychiatry Clinic of Zonguldak Bülent Ecevit University Faculty of Medicine. Ethical approval was obtained from the Ethics Committee of the same university, under decision number 2024/17. Five patients, who exhibited sleep-related side effects as assessed by Barkley's Side-Effect Rating Scale (SERS) and showed significant score differences on The Children's Sleep Habits Questionnaire (CSHQ) before and after treatment, were excluded from the study. Additionally, seven patients were excluded due to missing data. Statistical analysis was performed with the remaining 37 patients. The children were assessed prior to the initiation of treatment and at the 1-month follow-up using the Turgay DSM-IV-Based Screening Scale for Disruptive Behavior Disorders, the Clinical Global Impressions Scale (CGI), SERS, and CSHQ. Exercise-related data were collected using a sociodemographic data form prepared by the researchers.

RESULTS: A total of 67.6% of the patients (n = 25) reported at least one side effect on the SERS scale. The most frequently observed side effects, in order of prevalence, were loss of appetite (59.5%, n = 22), irritability (35.1%, n = 13), and proneness to cry (13.5%, n = 5) (Table 1). The Spearman correlation between sleep quality scores and the number of side effects was found to be statistically significant ($r = .655$, $p < 0.05$). A statistically significant difference in CSHQ scores was observed between patients with and without irritability as a side effect ($p < 0.01$). A statistically significant relationship was observed between the number of exercise days per week and CSHQ scores ($p < 0.05$). No significant relationship was found between the number of side effects and physical exercise.

CONCLUSIONS: Methylphenidate-based medications exert their effects via the dopamine and norepinephrine neurotransmitters. It is well-established that insufficient sleep disrupts the levels of dopamine and norepinephrine in the brain. In addition to its known benefits, regular and high-quality sleep may reduce the number of side effects and the risk of irritability as a side effect in children with ADHD receiving methylphenidate treatment. Although our study found no direct effect of exercise on the number of side effects, its positive impact on sleep could indirectly mitigate the risk of side effects.

Keywords: ADHD, exercise, methylphenidate, side effects, sleep

Table 1



Side effects observed with methylphenidate treatment based on their frequency and number of occurrences, excluding sleep-related side effects.

[Abstract:0132]

A Rare Presentation of PANS: Sudden-Onset Hoarding Behavior and Neuropsychiatric Symptoms in a Child

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INTRODUCTION: Pediatric Acute-Onset Neuropsychiatric Syndrome (PANS) is a clinical condition characterized by the sudden onset of obsessive-compulsive disorder (OCD) or severe food restriction, accompanied by at least two additional neuropsychiatric symptoms. These may include anxiety, emotional lability, depression, irritability, aggression, developmental regression, sensory or motor abnormalities, or somatic symptoms such as sleep disturbances and enuresis. PANS is often linked to post-infectious autoimmune responses and neuroinflammatory mechanisms, and its diagnosis requires the exclusion of other medical conditions. This report describes a 5-year-old child diagnosed with PANS, emphasizing clinical presentation, differential diagnosis and management.

CASE PRESENTATION: A 5-year-old child was referred to our outpatient clinic with complaints of irritability,aggressive behavior,developmental regression,separation anxiety,olfactory sensitivity and hoarding.These symptoms had an abrupt onset 1.5 months before admission,following an upper respiratory tract infection two months prior.The child had no prior history of behavioral or emotional problems,as reported by her family and teachers.The child was born of a non-consanguineous marriage after an uncomplicated full-term pregnancy and delivery.Developmental milestones were achieved within normal limits,and there was no family history of psychiatric disorders.On physical examination,the child appeared well-oriented with intact higher mental functions but demonstrated marked separation anxiety, crying frequently and refusing to leave her mother. Vital signs were normal. Laboratory investigations, including a complete blood count, throat and nasal swab cultures, erythrocyte sedimentation rate, revealed no abnormalities. Anti-streptolysin O (ASO) titers were also within normal limits. A general pediatrics consultation ruled out secondary causes, including infectious conditions, that could explain the clinical presentation. Following the diagnosis of PANS, risperidone 0.25 mg was initiated during the second visit to address aggressive behaviors. By the third visit, significant improvement in symptoms was observed. However, the patient‘s family did not return for further follow-up,which limited the assessment of long-term outcomes. Written informed consent was obtained from the patient‘s parents.

CONCLUSION: PANS is a complex condition requiring a high index of suspicion, as its diagnosis depends on excluding other medical conditions with similar symptoms. This case highlights the importance of considering autoimmune, infectious, metabolic, and psychiatric conditions in the diagnostic process. Conditions such as Sydenham chorea, often associated with rheumatic fever, can mimic PANS due to overlapping features like emotional lability and OCD-like behaviors, though it typically includes choreiform movements. Autoimmune encephalitis, particularly anti-NMDA (N-methyl-D-aspartate) receptor encephalitis, and metabolic disorders such as Wilson disease were also excluded based on clinical and laboratory findings. While this patient‘s ASO titers were normal, raising doubts about Pediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcal Infections (PANDAS), false-negative results in serological testing are well-documented. This highlights the diagnostic challenges in distinguishing PANS from PANDAS, emphasizing the role of clinical judgment when laboratory results are inconclusive. Management of PANS requires a multidisciplinary approach,including pediatrics, neurology, and psychiatry. In this case,risperidone effectively addressed aggressive behaviors, demonstrating the value of early symptomatic treatment. However, the absence of follow-up limited further evaluation of long-term treatment outcomes. This underscores the need for continuous monitoring to assess treatment efficacy and potential relapses. In conclusion, this case illustrates the diagnostic complexity of PANS and the importance of comprehensive evaluation in children presenting with sudden-onset neuropsychiatric symptoms. Despite normal ASO titers, the temporal link to an infection supports the possibility of PANDAS, highlighting the need for future research to develop reliable biomarkers and standardized protocols. Early intervention led to significant improvement, but ongoing monitoring is essential to improve long-term outcomes.

Keywords: Aggression, Hoarding, Neuropsychiatric Symptoms, OCD, PANS, PANDAS

[Abstract:0135]

The Long-Term Psychiatric Consequences of Traumatic Brain Injury: A Case of Schizophrenia and Dementia

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INTRODUCTION: In the DSM-5, traumatic brain injury (TBI) is defined as brain trauma causing loss of consciousness, amnesia, disorientation, or neurological signs [1]. TBI can lead to severe psychiatric and neurological disorders, which may cause disability or death [2]. TBI also increases both schizophrenia and dementia risk [3,4]. Greater injury severity and older age at injury elevate psychiatric risk,with a stronger effect observed in women. [4] This case report examines the diagnostic and follow-up challenges in a patient with schizophrenia post-TBI. Informed consent was obtained from the patient.

CASE PRESENTATION: A 49-year-old, single, unemployed male high school graduate, has two kids,living with his parents, resented in 2021 with a judicial request in accordance with Articles 405-432 of the Turkish Civil Code. His family had reported complaints of auditory hallucinations and delusions of persecution.

The patient had a history of mental health issues dating back to 1998, following a severe traffic accident requiring intensive care and splenectomy. Post-accident, he experienced significant functional decline, including job loss, social withdrawal, anxiety, and persistent hallucinations. Despite multiple psychiatric consultations and treatments—such as fluoxetine, sulpiride, citalopram, risperidone, olanzapine, mirtazapine, and duloxetine—clinical improvement was minimal due to low adherence. By 2015, he had divorced due to jealousy-related conflicts and subsequently moved in with his parents.

In 2021 his neurological evaluation at Psychiatry clinic revealed anteflexion posture, bradykinesia, bradymimia, tremors, and rigidity on the right side. Motor and cerebellar function tests were within normal limits. Mini-Mental State Examination (MMSE) score was 27/30. No drug use or side effects that could explain the extrapyramidal system (EPS) findings were detected. Cranial imaging was requested and it was reported as "Evaluation in terms of corticobasal degeneration is recommended" and neurological consultation was requested. Neurological evaluation was not compatible with corticobasal degeneration due to the absence of cortical degeneration findings such as apraxia, agraphesthesia and loss of cognitive function, but follow-up was recommended due to EPS findings.

During hospitalisation, olanzapine was started and titrated to 20 mg/day. Haloperidol (5 mg/day, increased to 10 mg/day) was added when visual and auditory hallucinations persisted. Biperiden (2 mg/day, increased to 4mg/day) was started for rigidity and cogwheel phenomenon, while propranolol treatment was continued for intentional tremors. After 1 month of hospitalisation, the patient achieved clinical remission and was discharged with a diagnosis of schizophrenia and treatment with olanzapine (20 mg/day), haloperidol (10 mg/day), biperiden (4 mg/day) and propranolol (40 mg/day).

During follow-up, the patient developed symptoms including difficulty using public transportation,heart palpitations, hand tremors, and excessive sweating. Paroxetine (20mg/day, increased to 40mg/day) was initiated for an anxiety disorder diagnosis. Suspected drug-induced parkinsonism led to the gradual discontinuation of haloperidol and biperiden, resulting in partial EPS regression. Over three years of follow-up, the MMSE score declined from 24 to 18, prompting a multidisciplinary evaluation involving neurology specialists. Cranial imaging revealed significant asymmetric medial temporal atrophy on the left side, along with age-inappropriate atrophy in the temporoparietal region. Neuropsychiatric testing indicated impairment in three core cognitive domains—attention, memory, and language—suggestive of Alzheimer-type dementia. Donepezil (5mg/day, titrated to 10 mg/day) was initiated. Positron Emission Tomography (PET) was performed for differential diagnosis but was interpreted as nonspecific heterogeneous findings. Cerebrospinal fluid (CSF) analysis is currently planned as part of the ongoing diagnostic process. The patient‘s follow-up is ongoing.

CONCLUSION: The association between schizophrenia, dementia, and TBI is uncommon and necessitates an interdisciplinary approach. In such cases, it is important to consider both psychiatric and other neuropsychiatric symptoms that may occur after TBI. Further research and interdisciplinary collaboration are required to improve diagnostic accuracy and optimize treatment strategies for individuals affected by TBI-related psychiatric and neurological disorders.

Keywords: Schizophrenia, Traumatic Brain Injury, Dementia

AuthorToEditor: 1-)Diagnostic and Statistical Manual of Mental Disorders. (2025). Presented at the 2013/05/22. https://doi.org/10.1176/appi.books.9780890425596 2-)Maas, A. I. R., Menon, D. K., Manley, G. T., Abrams, M., Åkerlund, C., Andelic, N., Aries, M., Bashford, T., Bell, M. J., Bodien, Y. G., Brett, B. L., Büki, A., Chesnut, R. M., Citerio, G., Clark, D., Clasby, B., Cooper, D. J., Czeiter, E., Czosnyka, M., Dams-O'Connor, K., … InTBIR Participants and Investigators (2022). Traumatic brain injury: progress and challenges in prevention, clinical care, and research. The Lancet. Neurology, 21(11), 1004–1060. https://doi.org/10.1016/S1474-4422(22)00309-X 3-)Livingston, G., Huntley, J., Sommerlad, A., Ames, D., Ballard, C., Banerjee, S.,. & Mukadam, N. (2020). Dementia prevention, intervention, and care: 2020 report of the Lancet Commission. The lancet, 396(10248), 413-446. https://doi.org/10.1016/S0140-6736(20)30367-6 4-)Cheng, K. Y., Robinson, N., Ploner, A., Kuja-Halkola, R., Molero, Y., Lichtenstein, P., & Bergen, S. E. (2024). Impact of traumatic brain injury on risk for schizophrenia and bipolar disorder. Psychiatry research, 339, 115990. https://doi.org/10.1016/j.psychres.2024.115990

[Abstract:0137]

A Case of Late-Onset Oculogyric Crisis in an Adolescent Patient with Autism Spectrum Disorder

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INTRODUCTION: Oculogyric crisis (OGC) is a rare type of dystonia characterized by spasmodic upward eye deviation lasting from a few minutes to a few hours. It is usually seen with the use of first-generation antipsychotics and has been rarely reported in patients receiving second-generation antipsychotics (1). Aripiprazole, a second-generation antipsychotic, is known for its low potential for extrapyramidal side effects (EPS). This drug, which is frequently used in children and adolescents, is rarely presented in the literature with a rare dystonia type called OGC. In this study, late-onset OGC symptoms and treatment process are shared in an adolescent patient with autism who has been receiving aripiprazole treatment for 7 years.

CASE PRESENTATION: Written consent was obtained from the patient's family for the presentation. A 13-year-3-month-old male patient, who was followed up with atypical autism diagnosis, was referred to us because of the recurring upward eye fixation behavior for the last 1.5 months, and no pathology was detected in the examination, MRI, and EEG tests performed by the pediatric neurology. In the past treatment history; Due to behavioral problems and repetitive behaviors, 9 years ago risperidone was started. After 2 years of using risperidone, the targeted benefit was not achieved, so the antipsychotic was changed 7 years ago. Aripiprazole treatment was started in the process and gradually increased to 15 mg/day within 2 years. In the psychiatric examination, he appeared restless. He was conscious but cooperation was limited. Eye contact and affect were limited, mood was dysphoric. In the EPS examination, no EPS findings were detected other than the upward deviation of the eyes stated in his examination. Body weight was 60 kg. Considering the OGC side effect due to the antipsychotic, the dose was gradually reduced and the aripiprazole dose was continued at 10 mg/day. EPS symptoms were observed to regress during the follow-up within 2 weeks. The patient's restless appearance and behaviors decreased and his cooperation increased.

CONCLUSION: Although aripiprazole is safer than other antipsychotics in terms of extrapyramidal side effects, this case highlights a rare dystonic side effect known as OGC that can occur with antipsychotic use. The majority of cases of OGC-related disorders have been reported to be drug-related; neuroleptics, antiemetics or other dopamine antagonists (2). Antipsychotic drug use is currently the most common cause of OGC (3). A meta-analysis revealed a significant increase in EPS compared to placebo in children and adolescents treated with atypical antipsychotics, aripiprazole was considered to be a low risk compared to other antipsychotics (4). Although the onset of OGC symptoms is not fatal, it can reduce patient compliance and cause significant psychological and physical effects on patients (5). Due to its self-limited nature, recognition and correct diagnosis of OGC is often difficult, and attacks are rarely seen by the physician. The onset of these symptoms in the late period, when the treatment is relatively stable, may increase the risk of being overlooked in the clinic. Therefore, when initiating aripiprazole care should be taken in terms of acute and tardive dystonic reactions during follow-up.

Keywords: Aripiprazole, Atypical antipsychotic, Autism Spectrum Disorder, Extrapyramidal side effects, Oculogyric crisis

AuthorToEditor: References 1. Bafarat, A., Alaseeri, B., Labban, S. A., & Morya, R. E. (2023). Oculogyric Crisis Due to Aripiprazole Ingestion as a Suicide Attempt: A Case Report. Cureus, 15(11), e48267. https://doi.org/10.7759/cureus.48267 2. Barow, E., Schneider, S. A., Bhatia, K. P., & Ganos, C. (2017). Oculogyric crises: Etiology, pathophysiology and therapeutic approaches. Parkinsonism & related disorders, 36, 3–9. https://doi.org/10.1016/j.parkreldis.2016.11.012 3. Mahal, P., Suthar, N., & Nebhinani, N. (2021). Spotlight on Oculogyric Crisis: A Review. Indian journal of psychological medicine, 43(1), 5–9. https://doi.org/10.1177/0253717620942096 4. Cohen, D., Bonnot, O., Bodeau, N., Consoli, A., & Laurent, C. (2012). Adverse effects of second-generation antipsychotics in children and adolescents: a Bayesian meta-analysis. Journal of clinical psychopharmacology, 32(3), 309–316. https://doi.org/10.1097/JCP.0b013e3182549259 5. Das, S., & Agrawal, A. (2017). Lurasidone-induced Oculogyric Crisis. Indian journal of psychological medicine, 39(5), 719–720. https://doi.org/10.4103/IJPSYM.IJPSYM_266_17

[Abstract:0138]

Serotonin Syndrome Associated with Polypharmacy: A Case Report

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INTRODUCTION: Serotonin Syndrome (SS) is a potentially life-threatening condition that occurs due to excessive serotonin accumulation in the central and peripheral nervous systems (1). SS usually develops as a result of the combined use of more than one serotonergic agent or an overdose of these agents. Selective serotonin reuptake inhibitors (SSRIs), tricyclic antidepressants (TCAs), monoamine oxidase inhibitors (MAOIs), and central nervous system stimulants are the drug groups most commonly associated with SS (2). In this article, the SS diagnosis of a patient with polypharmacy is presented.

CASE PRESENTATION: A 17-year-old, 11-month-old male patient, for whom written consent was obtained from the patient's family for the presentation, applied to us with complaints of restlessness, irritability, increased sweating, nausea, vomiting, severe diarrhea, and tremors that started 2 days ago. The patient, who was followed up with the diagnoses of attention deficit and hyperactivity disorder, obsessive-compulsive disorder, and social phobia, was using methylphenidate (30 mg/day), tricyclic antidepressant (clomipramine, 75 mg/day) and a MAOI (moclobemide, 150 mg/day), haloperidol 5 mg/g. The family reported that the patient had used an overdose of medication (methylphenidate 150 mg, clomipramine 225 mg, moclobemide 600 mg) for self-medication 2 days ago. The patient was restless and agitated during the examination. Tachycardia (110/min), hypertension (145/95 mmHg), and hyperthermia (38.8°C) were detected in his vital signs. Physical examination revealed generalized sweating, tremor, and myoclonus. According to clinical findings, drug history, and Hunter Serotonin Toxicity Criteria, SS was suspected in the patient. The patient was first referred to the general emergency department for symptomatic treatment and follow-up, and the serotonergic drugs he was using were discontinued. Intravenous fluid support, cooling protocol, benzodiazepine sedation, and symptomatic treatment were applied in the general emergency department setting. In addition, cyproheptadine treatment was started. Clinical symptoms significantly regressed within 24 hours after the serotonergic agents were discontinued. The patient and the patient's relatives were informed about the risks of serotonergic drug combinations to avoid similar interactions in the future.

CONCLUSION: This case emphasizes the importance of multiple drug use in the development of serotonin syndrome. Methylphenidate is a stimulant that can increase serotonin levels and its dopaminergic effects (3). TCAs and MAOIs also increase the risk of toxicity due to their effects on serotonin metabolism. MAOIs are known to be much higher risk factors for serotonin toxicity. The lack of a laboratory test to confirm the diagnosis of SS has led us to base the diagnosis more on clinical findings. Hunter's Criteria helped confirm the diagnosis in this case. Consultation with a clinical pharmacologist or toxicologist is important in clarifying treatment decisions in such cases. In the treatment approach, stopping exposure to the toxic agent and supportive treatment are the most important steps (4). This case shows that although serotonin syndrome is usually a self-limiting condition, life-threatening complications can occur if appropriate treatment is not given. Therefore, careful planning of pharmacological treatment, careful monitoring of overlapping mechanisms, especially in patients using multiple drugs, clinical awareness, and early intervention play a critical role in protecting the patient from life-threatening complications.

Keywords: Antidepressant, Polypharmacy, Psychostimulant, Serotonin syndrome

AuthorToEditor: References 1. Khetarpal, S. K., Rengasamy, M., Adebiyi, O., Hsiung, K., Wong, S., Shulman, J., & Pizon, A. (2023). Risk Factors and Clinical Correlates of Pediatric Serotonin Syndrome in Hospitalized Suicide Attempters. The journal of pediatrics: X, 9, 100086. https://doi.org/10.1016/j.ympdx.2023.100086 2. Naguy, A., Singh, A., AlDarweesh, F. Q. M., & Alamiri, B. (2022). Possible Toxic Serotonin Syndrome in an Adolescent With Obsessive-Compulsive Disorder Precipitated by Esomeprazole. The primary care companion for CNS disorders, 24(4), 21cr03096. https://doi.org/10.4088/PCC.21cr03096 3. Davis, Chemar R. BS; Hernandez, Michael MD; Stock, Saundra MD. Adolescent Polypharmacy and Serotonin Syndrome. Clinical Neuropharmacology 43(1):p 28-30, 1/2 2020. | DOI: 10.1097/WNF.0000000000000375 4. Boyer, E. W., & Shannon, M. (2005). The serotonin syndrome. New England Journal of Medicine, 352(11), 1112-1120. https://doi.org/10.1056/NEJMra041867

[Abstract:0143]

Cognitive Disengagement Syndrome in The Differential Diagnosis: A Case Report

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INTRODUCTION: Neurodevelopmental disorders are a cluster of disorders that are common in childhood and show widespread comorbidity. Since their symptoms and course can often be similar, their differential diagnosis can be difficult. Cognitive disengagement syndrome (CDS), previously referred to as sluggish cognitive tempo, is a cluster of behaviors that include daydreaming, blank staring or avoidance, mental confusion, lethargy and slowed behavior or thinking. This diversity in the symptom cluster makes differential diagnosis difficult.

CASE PRESENTATION: In the anamnesis of a 8 years old male patient who was referred to our outpatient clinic because of difficulty in learning to read and write and adaptation problems in the classroom; he learned to read and write, but he read significantly slower, had difficulty in writing, could not complete his dictation studies, wrote some letters backwards, had difficulty in completing his homework, had difficulty managing his time, was often late for activities, had difficulty adapting to the rhythm in group activities, showed ineptitude in motor movements and was exposed to peer bullying due to this situation, was absent-minded in class and this situation caused stigmatization by his teachers, and didn‘t want to go to school. The family stated that he was slower and more disorganized than his siblings, and that he made efforts in school but couldn‘t make progress. In the child psychiatry outpatient clinic of an external center where he presented with similar complaints, Attention-deficit hyperactivity disorder (ADHD) and Specific learning disorder (SLD) diagnoses were considered and methylphenidate treatment (1 mg/kg/day dose) was started. Although he used the treatment regularly six months, his teachers and his family reported that his complaints didn‘t improve and his absent-mindedness in class increased. Psychiatric examination in our clinic revealed marked slowness in movements and processing time. As a result of the teacher and parent forms for ADHD, Barkley CDS scale, Wechsler intelligence scale for children-Revised and psychiatric examination, the patient was evaluated as CDS, and Atomoxetine treatment was started; the family was informed about effective support methods with psychoeducation and behavioral suggestions. In the evaluations and tests performed in outpatient follow-ups, it was observed that the patient benefited significantly from the treatment, reached the class level academically, his achievement improved, his peer relations were better, he was not exposed to bullying, his motivation towards school increased, and his SLD symptoms regressed. CONCLUSION:Studies show that ADHD symptoms are different and separate symptoms from CDS. Studies suggest that treatment responses to atomoxetine in CDS may be more favorable than methylphenidate. Looking at the responses to atomoxetine treatment in groups with or without SLD accompanying ADHD and CDS symptoms, it was found that the best responses were found in those with CDS symptoms. ADHD, CDS and SLD are conditions that frequently cause outpatient clinic visits at school age and negatively affect school adaptation. Accurate early recognition, identification of differential diagnoses and comorbidities, and effective treatment in the early period are very important for both the academic and social life of the child.

Keywords: Cognitive disengagement syndrome, Atomoxetine, Specific learning disorder

[Abstract:0145]

Catatonia Associated with Tuberculous Meningitis: A Case Report

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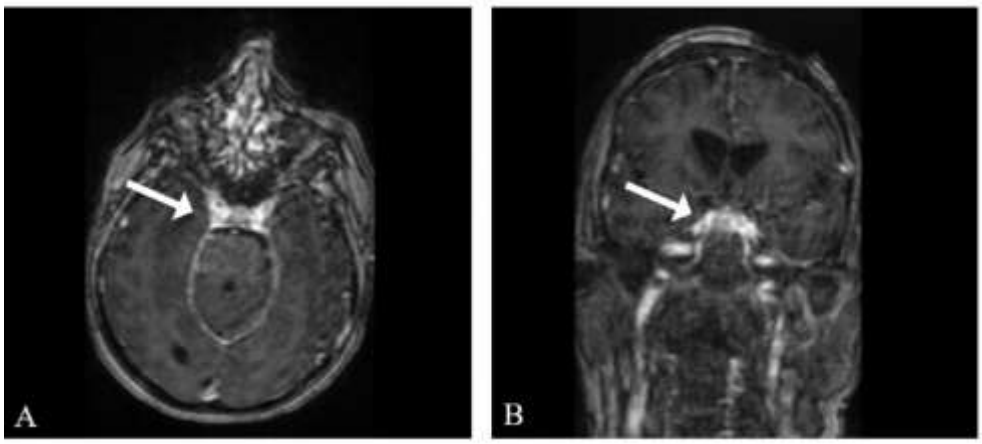
INTRODUCTION: Catatonia is a syndrome characterized by disturbances in motor, psychiatric and autonomic functions, which can lead to rapid clinical deterioration and even death, although it is treatable when diagnosed in time. Catatonia can develop due to both psychiatric and medical conditions. When it occurs in the context of medical illnesses, it is often overlooked or misdiagnosed. This case report describes a patient who developed catatonia following the rare condition of tuberculous meningitis.

CASE PRESENTATION: A 54-year-old woman, who was being followed up by the rheumatology department for vasculitis, was referred to our department due to the sudden onset and progressively increasing difficulty with cooperation, refusal to eat, and non-compliance with medication. She had no history of active psychiatric complaints or psychiatric medication use up to three days prior. During the examination, a strong desire to remain in bed and repeated single-word utterances were observed. The "psychological pillow sign," which is a form of neck posturing, was negative. She scored 27 points on the Bush-Francis Catatonia Rating Scale. Catatonia was suspected based on the clinical evaluation and the lorazepam challenge test. Since lorazepam was unavailable, alprazolam 1 mg/day was started. The patient showed a complete response to the treatment on the second day. Contrast-enhanced cranial magnetic resonance imaging (MRI) was performed to identify any underlying organic etiology. The MRI showed leptomeningeal thickening and contrast enhancement in the brainstem and the walls of the third ventricle, consistent with meningitis. Cerebrospinal fluid (CSF) analysis confirmed the presence of Mycobacterium tuberculosis, leading to a diagnosis of tuberculous meningitis. The catatonia was considered to be related to the meningitis.

CONCLUSION: Catatonia, which was historically entirely associated with psychiatric causes, is now known to arise from over a hundred general medical conditions, including meningitis. However, catatonia continues to be an under-recognized condition. A thorough history and physical examination that includes the evaluation of potential organic, psychiatric, and substance/drug-related etiologies, along with complementary tests, is essential in all cases of catatonia. In addition, regardless of the underlying cause, treatments such as benzodiazepines and electroconvulsive therapy (ECT) are effective in catatonia patients. Careful attention to the clinical features of catatonia, investigation of its underlying medical causes, and appropriate treatment are crucial to reducing morbidity and mortality in these patients.

Keywords: Catatonia, organic, tuberculous meningitis

Figure 1



T1 C+ MRI axial (A) and coronal (B) planes show leptomeningeal thickening and contrast enhancement around the brainstem and in the basal cisterns (white arrow)

[Abstract:0155]

Clinical Course and Phenotypic Variability of Autism in Twins with Similar Genetic and Environmental Influences: A Case Report

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INTRODUCTION: Autism spectrum disorder (ASD) is a serious neurodevelopmental disorder characterized by difficulties in social interaction and communication accompanied by repetitive behaviors and restricted interests (1). Although ASD is a neurodevelopmental disorder with high heritability, the complexity of the underlying genetic basis remains in the literature (2). In autism and twin studies, genetic transmission has been reported to be 80%, and this rate has been observed as 70% in monozygotic twins and 3% in dizygotic twins. However, environmental contributions to ASD are largely unknown (3). This case study is important in understanding how similarities and differences between dizygotic twin siblings diagnosed with autism spectrum disorder are shaped by genetic and environmental factors.

CASE PRESENTATION: The case involves dizygotic twin siblings, both aged 3 years and 7 months, who were referred for simultaneous psychiatric evaluation. Concerns were first raised when Sibling A did not respond to his name by 24 months, while Sibling B exhibited restricted play patterns and mouthing behaviors.

The siblings were born by cesarean section at 37 weeks. Sibling A's birth weight was 2400 grams, and Sibling B's was 2300 grams. It was learned that the pregnancy process was carried out through in vitro fertilization and there were no complications during pregnancy or after birth. Both siblings started walking at 15 months. It was learned that Sibling A's meaningful words were at 12 months; Sibling B's at 18 months.There is no history of any disease in the family. The mother is 31 years old and the father is 36 years old.

Sibling A was diagnosed with ASD at 26 months due to limited eye contact, interest in rotating objects, sensory sensitivity and resistance to change. Sibling B was also diagnosed with ASD at the same age due to lack of verbal and nonverbal communication and avoidance of peer interaction, including his twin brother.

The Autism Rating Scale in Children was applied to the siblings; Sibling A scored 38.5, Sibling B scored 46 and both children were diagnosed with severe autism.

With individualized special education treatment, Sibling A showed an increase in eye contact and joint attention, a decrease in sensitivity to loud sounds, and Sibling B showed a significant improvement in language skills after 18 months.

CONCLUSION: This case report demonstrates how the clinical picture can differ under the influence of environmental factors, even in twins with genetically similar backgrounds, and supports the importance of early diagnosis and individualized intervention approaches. Despite their genetic similarity, the twins displayed distinct clinical features, likely influenced by environmental factors. This case underscores the interplay between genetic inheritance and shared environmental influences in predisposing individuals to ASD. (4). Long-term follow-up studies and more comprehensive genetic-environmental analyses are needed to understand the effects of environmental factors in more detail. Thus, more effective and targeted strategies can be developed in the management of autism.

Keywords: Autism, spectrum, disorder, Twins

AuthorToEditor: References 1.) Schendel, D. E., Grønborg, T. K., & Parner, E. T. (2014). The genetic and environmental contributions to autism: looking beyond twins. JAMA, 311(17), 1738–1739. https://doi.org/10.1001/jama.2014.3554Thapar, A., & Rutter, M. (2021). Genetic Advances in Autism. Journalof autism and developmental disorders, 51(12), 4321–4332. https://doi.org/10.1007/s10803-020-04685-z 2.) Gómez-Vallejo, S., Leoni, M., Ronald, A., Colvert, E., Happé, F., & Bolton, P. (2021). Autism spectrum disorderand obstetric optimality: a twin study and meta-analysisof sibling studies. Journal of child psychology andpsychiatry, and allied disciplines, 62(11), 1353–1362. https://doi.org/10.1111/jcpp.13526 3.) Willfors, C., Carlsson, T., Anderlid, B. M., Nordgren, A., Kostrzewa, E., Berggren, S., Ronald, A., Kuja-Halkola, R., Tammimies, K., & Bölte, S. (2017). Medicalhistory of discordant twins and environmental etiologiesof 4.) Hallmayer, J., Cleveland, S., Torres, A., Phillips, J., Cohen, B., Torigoe, T., Miller, J., Fedele, A., Collins, J., Smith, K., Lotspeich, L., Croen, L. A., Ozonoff, S., Lajonchere, C., Grether, J. K., & Risch, N. (2011). Genetic heritability and shared environmental factorsamong twin pairs with autism. Archives of general psychiatry, 68(11), 1095–1102. https://doi.org/10.1001/archgenpsychiatry.2011.76autism. Translational psychiatry, 7(1), e1014. https://doi.org/10.1038/tp.2016.269

[Abstract:0156]

Accompanying Catatonia in an Adolescent Girl with Lyme Antibody Positivity: A Case Report

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INTRODUCTION: Catatonia is a neuropsychiatric syndrome characterized by motor, mental, affective, and autonomic symptoms. The prevalence of catatonia among cases presenting to child and adolescent psychiatry outpatient clinics has been reported as 5.5%, while it is 17.8% among cases with catatonia-related disorders (such as psychosis, autism, etc.). Catatonia can be observed in psychiatric disorders such as schizophrenia, mood disorders, and autism spectrum disorder, as well as in internal and neurological diseases like metabolic disorders, endocrine diseases, viral infections, immune system diseases, encephalitis, parkinsonism, neurosyphilis, and epilepsy. Research on the role of inflammation and initiating pathogens in psychiatric disorders has increased in recent years. This case presentation discusses the relationship between Borrelia burgdorferi infection and catatonic symptoms in an adolescent who presented to the child psychiatry clinic with symptoms of catatonia, such as immobility, mutism, and refusal to eat, and who was followed up in the child neurology department, the laboratory tests showing positive result for Borrelia burgdorferi IgM in serum.

CASE PRESENTATION: A 14-year-old female patient presented to the Child and Adolescent Psychiatry Clinic at Izmir City Hospital with her parents four months ago. She had been experiencing a decrease in speech, slowed movements, frequent staring, and refusal to eat for the past 10 days.Her developmental history was normal and she had no previous psychiatric admissions. Due to the sudden onset of her symptoms, she was referred to the pediatric neurology department for further investigation of an organic etiology and was admitted to the pediatric neurology service with a preliminary diagnosis of autoimmune encephalitis. Blood tests, cranial MRI, and EEG results were normal. The patient was started on steroid and intravenous immunoglobulin treatment. The patient‘s response to therapy was minimal. In further examinations, Borrelia burgdorferi IgM test sent from serum by ELISA (Enzyme-Linked ImmunoSorbent Assay) method was positive. Borrelia DNA Polymerase Chain Reaction (PCR) test sent from cerebrospinal fluid(CSF) of our patient was negative.The antibiotic therapy was completed in 28 days, her symptoms did not improve, a catatonia evaluation was performed.The Bush-Francis Catatonia Rating Scale score was assessed as 18Diazepam 5 mg/day was initiated for the suspected catatonia. A few hours after the first dose of diazepam, the patient spontaneously engaged in a 30-minute conversation with her father and the on-call nurse and the dose of diazepam was gradually increased to 7.5 mg/day. A week later, during a follow-up outpatient visit, no catatonic symptoms were observed.

CONCLUSION: There is increasing awareness of the importance of the immune system and inflammation in both the development and persistence of infectious diseases and mental disorders.As clinicians, it is important to identify infectious agents and associated inflammatory and immunological factors in treatment-resistant psychiatric disorders, and further research, particularly in children and adolescents, is needed in this area. Although rare, we believe that due to the high likelihood of psychiatric disorders accompanying Borrelia infection in children and adolescents, it is crucial to refer these patients to a child and adolescent psychiatrist for psychiatric evaluation and to implement early treatment interventions for the benefit of the patients.

Keywords: Adolecent, borreliaburgdorferi, catatonia, encephalitis, lymedisease

AuthorToEditor: 1.Tandon, Rajiv, et al. Catatonia in DSM-5. Schizophrenia research, 2013, 150.1: 26-30. 2.Lee JW. Neuroleptic-induced catatonia: clinical presentation, response to benzodiazepines, and relationship to neuroleptic malignant syndrome. J Clin Psychopharmacol. 2010 Feb; 30(1):3-10. 3.Walther S, Strik W. Catatonia. CNS Spectr. 2016 Aug; 21(4): 341-8. doi: 10.1017/S1092852916000274. Epub 2016 Jun 3. PMID: 27255726. 4. Greenberg R. Infections and childhood psychiatric disorders: Tick-borne illness and bipolar disorder in youth. Bipolar Disord 2017; 3:113 5.Daniels J. Catatonia: clinical aspects and neurobiological correlates. J Neuropsychiatry Clin Neurosci 2009; 21:371-380.

[Abstract:0163]

Venous Thromboembolism Developing Due to Antipsychotic Drug Use in Adolescents: A Case Report

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INTRODUCTION: Deep vein thrombosis (DVT) is a condition characterized by the formation of a thrombus in the deep veins of the body, most commonly in the legs, and may present with pain, swelling, redness, or increased warmth in the affected extremity. It can potentially lead to fatal complications, such as pulmonary embolism. [1] It is known that antipsychotic drugs, especially atypical antipsychotics like clozapine, risperidone, and olanzapine, increase the risk of DVT. [2] In this case, we will discuss the diagnosis of acute DVT in an adolescent patient with prolonged grief disorder and suicidal thoughts who was followed up in an inpatient setting with antipsychotic medication, along with the management and follow-up process. Written informed consent was obtained from the patient and her guardians for the publication of this case.

CASE PRESENTATION: A 16-year-old male patient with obesity presented to our clinic with complaints of anhedonia, anergy, depressed mood, insomnia, and multiple suicide attempts following the sudden death of his mother due to myocardial infarction 4 years ago. He was diagnosed with prolonged grief disorder and was admitted to the inpatient child and adolescent psychiatry unit. Treatment with Sertraline 100 mg/day and Risperidone 1 mg/day was initiated. On the seventh day of Risperidone treatment, the patient developed complaints of increased warmth, swelling, and pain in his left leg. The patient was evaluated in consultation with the pediatric pulmonology, pediatric cardiology, pediatric hematology, and pediatric genetics departments. Coagulation parameters, genetic tests, bilateral lower limb Doppler ultrasound, posteroanterior chest X-ray, and echocardiography were ordered. The chest X-ray and echocardiogram were normal, but Doppler ultrasound of the left leg revealed findings consistent with a thrombus in the deep crural vein. The patient was diagnosed with acute DVT, and further investigation revealed a homozygous mutation in MTHFR and a heterozygous mutation in Factor XIII. Enoxaparin 6000 IU/day was started, and within 3 days, the patient's symptoms improved. Follow-up Doppler ultrasound performed a week later showed reperfusion of the thrombotic veins. Given that the patient had no prior history of thromboembolism, the development of acute DVT during Risperidone treatment led us to consider that antipsychotic medications may contribute to the development of DVT in this case.

CONCLUSION: The incidence of DVT increases significantly with age, particularly affecting individuals over 40. However, two peak periods for DVT incidence have been identified in children: early childhood and adolescence. [3] In patients receiving antipsychotic medication, particularly those with metabolic syndrome and/or a family history of thromboembolism, or those who experience physical immobility during hospitalization, the risk of deep vein thrombosis should be carefully considered. In such cases, effective prophylaxis and regular screening should be conducted when necessary to reduce the risk of DVT.

Keywords: Adolescents, Antipsychotic drugs, Deep vein thrombosis

[Abstract:0176]

Buerger's Disease and Psychosis: A Case Report on Their Co-occurrence

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INTRODUCTION: Psychosis secondary to organic etiology can be seen in various conditions such as neurodegenerative diseases, toxic, endocrine and metabolic disorders, autoimmune diseases, infections, head traumas, central nervous system vasculitis and stroke. [1]

Thromboangiitis Obliterans (TAO) is a non-atherosclerotic, inflammatory and vasculopathic disease. This disease, which usually affects medium and small-sized arteries, develops due to smoking and is commonly characterised by vascular occlusion in the extremities. [2]

The effect of TAO on the central nervous system (CNS) is rarely observed. CNS involvement progresses with neurological symptoms such as convulsions, transient ischaemic attacks and ischaemic stroke.

The development of psychotic disorders in association with TAO is quite rare, and this condition has been documented in a very limited number of cases in the literatüre.[3] In this case presentation, prepared with written consent from the patient, the diagnostic process, clinical findings, and treatment response of a patient diagnosed with TAO who presented with paranoid delusions will be discussed.

CASE PRESENTATION: A 58-year-old male patient, who has no prior psychiatric history, has been followed for 15 years with a diagnosis of TAO. Over the past month, he has begun to believe that "he is being monitored through the internet" and "the cars passing in front of his house are following him."

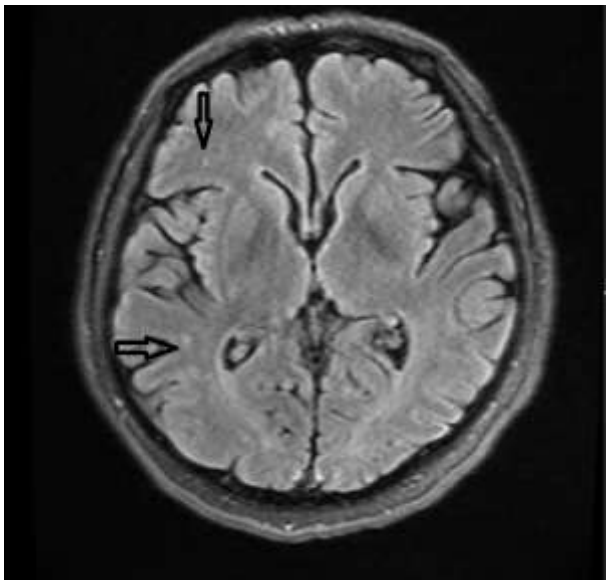
Due to these delusions, he changed the locks on his door, turned off his satellite and Wi-Fi devices. The patient, who presented to the emergency department with these complaints, was admitted to the psychiatry department with a preliminary diagnosis of a psychotic episode. His physical examination revealed amputation of three fingers on the left lower extremity, and discoloration was observed in the left foot due to TAO. In order to evaluate the organic etiology that could be causing the psychotic episode, Magnetic Resonance Imaging(MRI), Positron Emission Tomography (PET), Electroencephalogram (EEG), and vasculitis panel tests were performed.

The MRI examination revealed several millimetric, non-specific T2 FLAIR hyperintense lesions in both centrum semiovale and the right frontal white matter. (Figure-1) MRI angiography revealed irregularities and stenosis in the intracranial distal branches. (Figure-2) This finding was considered as a potential indication of CNS involvement related to TAO. There was no pathology found in the results of autoimmune and vasculitis panel, PET and EEG imagings.
Antipsychotic treatment with a dose of 2 mg/day of risperidone was initiated and gradually increased to 4 mg/day. The patient‘s symptoms significantly improved, by the end of the second week, the delusions had regressed. PANSS scores recorded on the day of admission and in the following weeks were 134, 119, 102, and 96, respectively. The CGI-S scores were 5, 4, 3, and 2.

CONCLUSION: This case presentation shows that TAO can have effects not only on the peripheral system but also on the central nervous system, potentially leading to secondary psychotic conditions. Further exploration of the coexistence of TAO and psychosis through advanced imaging techniques and autoimmune investigations could provide important insights into the pathophysiology of the disease. In patients diagnosed with TAO, it is crucial to consider psychiatric symptoms related to CNS involvement and evaluate them with a multidisciplinary approach.

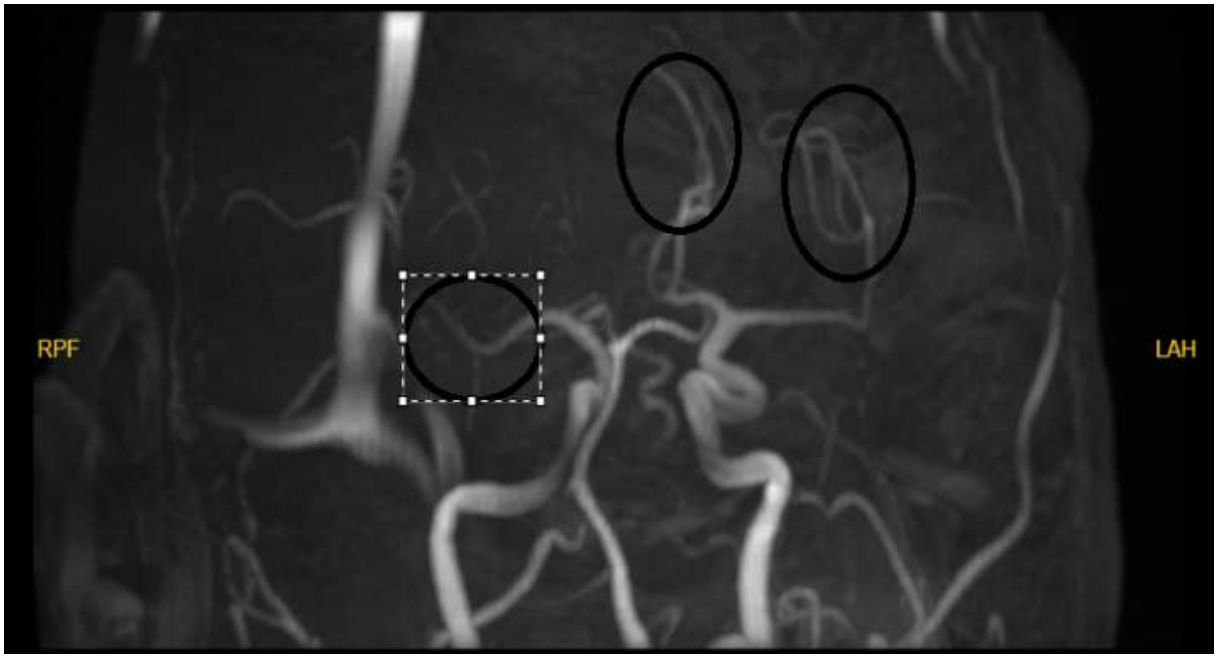
Keywords: Organic etiology, psychotic episode, thromobanjitis obliterans

Figure 1



Several millimetric, non-specific T2 FLAIR hyperintense lesions in both centrum semiovale and the right frontal white matter.

Figure 2



Irregularities and stenosis in the intracranial distal branches

AuthorToEditor: Sources: 1. Kiraz, S., & Kiraz, M. (2020). Mitochondrial Membrane Protein-Associated Neurodegeneration as The Cause of Psychosis. Psychiatry and Clinical Psychopharmacology, 30(3), 327–331. doi:10.5455/PCP.20200219100855. 2. Kaiser, D., et al. (2021). Pearls & Oy-sters: Primary Cerebral Buerger Disease: A Rare Differential Diagnosis of Stroke in Young Adults. Neurology, 97(11), 551–554. doi:10.1212/WNL.0000000000012140. 3. Rivera-Chavarría, I. J., & Brenes-Gutiérrez, J. D. (2016). Thromboangiitis obliterans (Buerger‘s disease). Annals of Medicine and Surgery, 7, 79–82. doi:10.1016/J.AMSU.2016.03.028

[Abstract:0178]

Apremilast-Induced Psychotic Episode in Psoriasis

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INTRODUCTION: Apremilast is an orally administered small-molecule drug that selectively targets phosphodiesterase 4 (PDE4) to suppress the inflammatory cascade. PDE4 is an intracellular enzyme that regulates the expression of proinflammatory and anti-inflammatory mediators through the degradation of cyclic adenosine monophosphate (cAMP). In vitro studies have demonstrated that inhibition of PDE4 by apremilast suppresses the production of Th1, Th2, and Th17 cytokines. [1,2]

cAMP plays a critical role not only in immune cells but also in neural processes, including neurotransmitter release, synaptic plasticity, and intracellular signaling. By increasing cAMP levels, apremilast may alter neurotransmitter balance in the central nervous system, potentially contributing to psychiatric symptoms in susceptible individuals.[3]

This case report aims to present an acute psychotic episode observed in a patient following the initiation of apremilast for psoriasis treatment and the subsequent management of the condition with antipsychotic therapy. Signed consent has been obtained from the patient.

CASE PRESENTATION: 44-year-old woman presented with internal restlessness, mistrust of those around her, jealousy, misperceptions of events and insomnia which began shortly after starting Apremilast therapy. The patient was diagnosed with short psychotic disorder due to Apremilast and initiated on risperidone 1 mg/day. Dermatology records indicated temporary discontinuation of Apremilast. The patient had used risperidone for a month, with complete resolution of psychiatric symptoms, including mistrust and insomnia. However, she expressed dissatisfaction with worsening skin lesions because of discontinuation of apremilast.Dermatology consultation recommended resuming Apremilast. The patient and her family were informed of potential psychiatric symptoms, and close psychiatric follow-up was recommended.

CONCLUSION: The relationship between dopamine and cAMP offers a possible explanation for this case. Dopamine receptors, classified as D1-like (including D1 and D5) and D2-like (including D2, D3, and D4), regulate intracellular cAMP levels via G-protein-mediated mechanisms. Activation of D1-like receptors increases cAMP levels, enhancing protein kinase A (PKA) activity, which influences neurotransmitter release and intracellular signaling. This pathway could link the psychotic symptoms observed in this patient to apremilast.

Conversely, D2-like receptor activation inhibits adenylate cyclase activity, decreasing cAMP levels and mitigating excessive dopaminergic activity. Imbalances in these pathways may underlie the psychiatric effects observed with apremilast use [3]. While the exact biological mechanism linking apremilast to psychosis remains unclear, theoretical mechanisms suggest the drug's potential impact on the brain and neurological functions. To our knowledge, no prior case reports have documented acute psychosis following apremilast initiation. This report aims to raise awareness among mental health and other healthcare professionals regarding the possibility of apremilast-induced psychiatric complications, including psychotic episodes.

Keywords: Apremilast, Psoriasis, Psychotic Episode

AuthorToEditor: sources: 1- Cutolo M, Myerson GE, Fleischmann RM, et al. A Phase III, Randomized, Controlled Trial of Apremilast in Patients with Psoriatic Arthritis: Results of the PALACE 2 Trial. J Rheumatol. 2016;43:1724-34 2- Ekici M.,BILGEN APRAS S., Psychiatric risk profile of apremilast, J Turk Soc Rheumatol 2024;16(2):87-89, DOI:10.4274/raed.galenos.2024.02411,https://raeddergisi.org/articles/psychiatric-riskprofile-of-apremilast/doi/raed.galenos.2024.02411 3- Sayin A.,Dopamine Receptors and Signaling Properties, Turkish J Clin Psy. 2008; 11(3): 125-134,https://klinikpsikiyatri.org/tr/jvi.aspx?pdir=kpd&plng=tur&un=KP D-40695&look4=

[Abstract:0180]

Glioblastoma Multiforme in a Patient with Depression: Multidisciplinary Management of a Case

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INTRODUCTION: Depression is a chronic and recurring mental illness in which the individual feels unhappy and unmotivated, accompanied by sleep-appetite disorders, social isolation and physiological / cognitive retardation.

Glioblastoma Multiforme (GM) is the most common and most difficult to treat central nervous system malignancy, mostly in men between the ages of 40-60. While it can present mostly with headache, cognitive disorders and seizures, the most common psychiatric symptoms are depression, personality-behavior changes and anxiety. The treatment process requires a multidisciplinary approach with patients who also have co-occurring mental illnesses.

In this case report, we aimed to share the management of the treatment process after the diagnosis of GM of a 58-year-old male patient who was followed up in our hospital with the diagnosis of Depression. Consent was obtained from the patient's guardian for the case report.

CASE PRESENTATION: A 58-year-old male patient was admitted to our clinic in 08/2023 for differential diagnosis and treatment after being brought to the emergency room by his relatives due to complaints of unhappiness, irritability, restlessness that continued despite using recommended medications and a suicidal attempt.

According to the thorough assessment conducted during his hospital stay, the patient's initial psychiatric complaints began with depressive symptoms that were generally well-progressing and responsive to treatment between 2012 and 2023. His resistant symptoms, which included "unhappiness, hopelessness, distress, irritability and restlessness" began about 3 to 4 months prior to his hospitalization and continued to worsen; even after taking various prescribed medications.

High-grade Glioblastoma Multiforme in the left deep temporal region was diagnosed after the neuroimaging performed during the patient's hospitalization. The patient was transferred to the Neurosurgery department. The operation carried out without complications, RT and adjuvant CT were administered.

Due to resisting depressive symptoms, the patient was hospitalized 2 more times following the procedure. The patient's depressive symptoms decreased after receiving treatment with Venlafaxine, Mirtazapine, Olanzapine, and Diazepame; he is currently being followed regularly in our hospital.

CONCLUSION: In previous case repots, it has been reported that symptoms such as depression are frequently seen especially in GM cases with frontal and temporal lobe involvement. It was also reported that psychiatric symptoms could be the first symptoms of CNS malignancy, and that depressive symptoms may continue even after the treatment of the malignancy.

In this case we believe that GM was the cause of the patient's treatment-resistant depressive symptoms for the last 4 months. This theory is supported by the fact that prior CNS imaging showed no discernible pathology, the patient was diagnosed with GM during the hospitalization and that the tumor was located in a region that is known to likely cause mood changes.

Diseases that affects the CNS can cause psychiatric symptoms. The case can be more complicated in people with a history of a psychiatric disease. In patients whose symptoms increase in severity despite appropriate treatment, it is important to perform neuroimaging in order not to miss an underlying CNS pathology. In addition, a multidisciplinary approach is important in the treatment of both the malignancy and the psychiatric symptoms.

Keywords: Depression, Glioblastoma, Multidiciplinary, Resistant

AuthorToEditor: 1 - Ünal B, Ergör G. Türkiye Kronik Hastalıklar ve Risk Faktörleri Sıklığı Çalışması. Ankara, Sağlık Bakanlığı, 2013. 2 - Leo RJ, Frodey JN, Ruggieri ML. Subtle neuropsychiatric symptoms of glioblastoma multiforme misdiagnosed as depression. BMJ Case Rep. 2020 Mar 17; 13(3): e233208. doi: 10.1136/bcr-2019-233208. PMID: 32188609; PMCID: PMC7078688. 3- Cheema FA, Badr A, Iqbal J. Glioblastoma multiforme presenting as treatment-resistant depression. J Neuropsychiatry Clin Neurosci. 2010 Winter; 22(1):123.E26. doi: 10.1176/jnp.2010.22.1.123.e26. PMID: 20160235. 4- Liliana P. Ferreira, Carolina F. Pinheiro, Nuno A. Fernandes, Carla N. Ferreira. When Depression Hides a Brain Tumor. Primary Care Companion for CNS Disorders. 2019. VL-21. doi: 10.4088/PCC.19l02455 5- Sahil Munjal, Silky Pahlajani, Ami Baxi, Stephen Ferrando. Delayed Diagnosis of Glioblastoma Multiforme Presenting With Atypical Psychiatric Symptoms. Primary Care Companion for CNS Disorders. 2016. 18(6). doi:10.4088/PCC.16l01972

[Abstract:0184]

Manic Episode Induced by Escitalopram Treatment: A Case Report

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INTRODUCTION: The most well-known and commonly prescribed drugs for the treatment of depression are selective serotonin reuptake inhibitors, encompassing fluvoxamine, fluoxetine, sertraline, paroxetine, citalopram, and escitalopram. Escitalopram is an antidepressive substance of the SSRI class and it is approved for the treatment of major depressive disorder and anxiety disorders. Escitalopram is the pure S-enantiomer of the previously marketed citalopram with mixed stereoisomer R and S. Although the underlying mechanism remains unclear, it is known that all antidepressants can potentially cause manic episodes. A case of mania that developed in a short period of time with a low dose change during escitalopram treatment is reported in this article. The patient's psychiatric history and clinical course indicated that the mania is probably related to the use of escitalopram.

CASE PRESENTATION: The patient is a 68-year-old male who is married and self-employed. He has been under medical supervision for a period of 10 years, during which time a diagnosis of depression is made. In accordance with the doctor's recommendation, the patient takes 5mg/day of escitalopram to prevent depression. However, the patient has recently been experiencing symptoms such as anhedonia, sadness, sleep disturbances and psychomotor retardation. A mental status examination revealed that the patient was conscious, oriented, and cooperative, with reduced self-care. Symptoms include psychomotor retardation, depressed mood and affect, thought content inadequacy and pessimism, slow thought process, decreased spontaneity in speech, anhedonia, insomnia, no suicidal thoughts, and presence of judgment and insight are evident. To mitigate the patient's symptoms, the doctor increases the dose of escitalopram to 10 mg/day. After three weeks of monitoring the patient, manic symptoms exhibited increased speech, elevated self-confidence, psychomotor agitation, and risky behaviors such as careless driving. The use of escitalopram is stopped due to manic symptoms by the doctor. Ten days later, a partial remission of the patient's symptoms is observed. The case suggests that escitalopram-induced mania/hypomania is likely a dose-dependent phenomenon. Indeed, mood changes emerged shortly after the dose escalation in the patient. Furthermore, the manic episodes decreased as the escitalopram dose was reduced.

CONCLUSION: Recent studies highlight the diagnostic significance of mania/hypomania symptoms induced by antidepressant use in patients with major depressive episodes. According to the Meta-Analysis of New Generation Antidepressants (MANGA) Working Group, escitalopram demonstrates a better efficacy-acceptability ratio compared to citalopram and/or other antidepressants in patients with unipolar major depression. Although considered to have fewer side effects than other SSRIs, several case reports and clinical studies have documented escitalopram-induced mania/hypomania. Historically, the incidence of mania with SSRI treatment is estimated to be 3–6% in bipolar depression and less than 3% in major depressive disorder. The case demonstrates that escitalopram can trigger mania/hypomania in a dose-dependent manner. Although escitalopram is regarded as safer and more tolerable than other SSRIs, starting treatment at lower doses with cautious upward titration may help minimize the risk of mood changes in some patients with bipolar depression or major depressive disorder. However, further research is required in the future to validate and confirm the accuracy of this hypothesis.

Keywords: Depression, escitalopram, manic episode

[Abstract:0185]

A Treatment-Resistant Case of Fregoli with Methamphetamine Psychosis

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INTRODUCTION: Fregoli syndrome is a rare delusional misidentification syndrome which is a delusional belief that one or more familiar persons, generally persecutors following the patient, repeatedly change their appearance at different times.Here we present a case of a male patient with fregoli syndrome.

CASE PRESENTATION: M.B. 44 years old male patient was divorced 14 years ago then he was married with someone else. He was admitted to our psychiatry clinic with a delusion that his ex wife was following him in disguise. He was thinking that her daughter was actually his ex-wife; he was planning to marry with her again. He had multiple substance use for 15 years recently mainly methamphetamine use. On psychiatric examination, the patient had flat affect, disorganized associations, paranoid and mystical delusions and auditory hallucinations. Complete blood count, routine biochemistry test results were within normal ranges. Urine toxicology analysis was positive for metabolite of methamphetamine. Cranial MRI and EEG showed no abnormalities. Treatment was started as oral olanzapine 10 mg/day, paliperidone 6 mg/day with the diagnosis of psychotic disorder due to psychoactive substance use. Since no side effect was observed with oral paliperidone treatment and due to patient may has compliance problem, paliperidone palmitate long acting agent was administered intramuscular. By the end of two weeks of treatment patient‘s delusions have not regressed, he was thinking his ex-wife was continuing to following him in clinic. Electroconvulsive therapy was planned. Consent from family members was taken.

Total 7 sessions of ECT were administered on an alternate day basis. Significant improvement was observed with resolution of delusions and auditory hallucinations. He was discharged from hospital at 40 th day of treatment. He was clinically stable with oral olanzapine 20 mg/day and intramuscular paliperidone palmitate 100 mg/month.

CONCLUSION: Misidentification syndromes are known to be related to dissociation and identification processes and most commonly seen in paranoid type schizophrenia, affective disorders and organic brain disorders. Its prevalence is 1.3-4%. Fregoli syndrome was first reported in 1927 by Courban and Fail. Since between 25 and 40 percent of misidentification syndrome cases are associated with organic brain disorders such as dementia,head trauma, cerebrovascular disease and epilepsy; clinicians should exclude first organic psychopathology in patients with misidentification syndrome. Working memory dysfunction affecting prefrontal and parietal brain regions is considered to main mechanism of the disease. Fregoli patients have deterioration of normal face processing system; hyperactivity of temporo-limbic connections between facial recognition system and the amygdala that can be the reason of producing excessive inappropriate arousal to seeing unfamiliar faces. Most of the cases are very refractory to various anti psychotic treatments. In our case we have aimed rapid and significant reduction of psychotic symptoms and we have prefered early augmentation with ECT and high dose anti psychotic treatment. After ECT our patient‘s delusions and hallucinations were resolved and he had tolerated well high dose antipsychotic medication. Since ECT and antipsychotic medication were started synchronical; it is diffucult to deterninate which treatment was more efficient in our patient.

Keywords: Amphetamine, electroconvulsive therapy, fregoli, misidentification, substance use

[Abstract:0197]

"A Diagnosis Overlooked in Patients Presenting with Psychotic Symptoms: Frontotemporal Dementia – A Case Report"

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INTRODUCTION: Frontotemporal dementia (FTD) is a neurodegenerative brain disease characterized by atrophy of the frontal and temporal lobes associated with personality, behaviors, memory, and language. It is one of the common causes of early-onset dementia.

The diagnosis of FTD is often delayed by 5–6 years due to limitations in neuroimaging techniques during the early stages, the absence of molecular biomarkers, and its common symptoms with non-neurodegenerative primary psychiatric disorders. This case report discusses a similar scenario involving a patient who received a probable FTD diagnosis six years after symptom onset. The aim is to explore how FTD overlaps with primary psychiatric disorders and to discuss focal points for differential diagnosis in light of the literature.

CASE PRESENTATION: This is a case report of a 62-year-old woman who has a family history of schizophrenia. For the past six years, she experienced symptoms such as headaches, progressive suspiciousness, thoughts of being harmed, and delusions about her neighbor, causing her body pain and rheumatic disease, as well as breaking into her home to steal her belongings. She carried her jewelry constantly and believed that even passing by this neighbor's house exacerbated her pain. Additionally, she experienced significant somatic complaints, visiting various doctors at least 10 times a month. Her first neurology consultation was in 2022, after a syncope episode. EEG and MRI ordered in November 2022, showed no abnormalities. During this time, she frequently overthought daily events, repeated questions often and had anxiety. In 2023, she presented to psychiatry with insomnia, social withdrawal, restlessness, and anhedonia. She was prescribed fluoxetine 20 mg/day, mirtazapine 15 mg/day, and quetiapine 50 mg/day, but she took only mirtazapine 15 mg during periods of insomnia.

In June 2024, due to an increase in repeated questioning and difficulties in tasks like driving or withdrawing money from an ATM she presented again to the neurology clinic. The patient insisted she only had headaches. A Montreal Cognitive Assessment was administered, yielding a total score of 10/30. In July 2024 MRI reported:

—Brainstem and cerebellum atrophy are observed, with more prominent atrophy in supratentorial regions, the EEG showed focal epileptiform abnormalities originating from the left temporal region, and in October 2024, a brain PET scan revealed hypometabolism especially in the left hemisphere. During the mental status examination, the patient appeared well-groomed and cooperative, with normal psychomotor activity. She reported feeling happy. Her speech was excessively detailed with occasional word-finding difficulties. Tangential thought processes, delusions of being harmed, and denial of memory issues were noted, despite evident short-term memory deficits. Orientation was intact, but recent memory, abstract thinking, insight, and judgment were impaired.

CONCLUSION: Diagnosis of bvFTD is difficult because diagnosis is largely based on clinical assessment. The coexistence of symptoms that are similar to those found in primary psychiatric conditions and approximately half of the bvFTD patients are given a prior psychiatric diagnosis. In conclusion, a key point is that the early and shared features of bvFTD with psychiatric diseases must be acknowledged. Increased awareness, cooperation between disciplines, and integration of genetic and imaging technologies will enable the achievement of timely and accurate diagnoses.

Keywords: Frontotemporal dementia, neuropsychiatric symptoms, psychiatric misdiagnosis

AuthorToEditor: Ducharme, S. et al. (2020). ‗Recommendations to distinguish behavioral variant frontotemporal dementia from psychiatric disorders', Brain, 143(6), pp. 1632–1650. doi:10.1093/brain/awaa018. Urban-Kowalczyk, M. et al. (2022) ‗Major depression and onset of frontotemporal dementia', Neuropsychiatric Disease and Treatment, Volume 18, pp. 2807–2812. doi:10.2147/ndt.s390385. Scarioni, M. et al. (2020). ‗Frontotemporal dementia: Correlations between psychiatric symptoms and pathology,' Annals of Neurology, 87(6), pp. 950–961. doi:10.1002/ana.25739. Mitsuyama, Y., & Inoue, T. (2009). Clinical entity of frontotemporal dementia with motor neuron disease. Neuropathology. https://doi.org/10.1111/j.1440-1789.2009.01059.x Gossink, F.T. et al. (2017). ‗Psychosis in behavioral variant frontotemporal dementia,' Neuropsychiatric Disease and Treatment, Volume 13, pp. 1099–1106. doi:10.2147/ndt.s127863.

[Abstract:0199]

Beyond Depression: A Case of Progressive Non-Fluent Aphasia in Psychiatric Practice

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INTRODUCTION: Frontotemporal dementia (FTD) is the second most common type of primary degenerative dementia after Alzheimer's disease in middle age. It typically begins between the ages of 45 and 65. FTD is often confused with Alzheimer's disease and psychiatric disorders. The average life expectancy is 6-8 years after the onset of symptoms. FTD commonly presents with a gradual change in behavior, personality, and/or language ability. Three types of clinical FTD syndromes have been defined: behavioral variant, primary non-progressive aphasia, and semantic type. Symptoms may include progressive behavioral changes, executive function impairments, language problems, restlessness, loss of inhibition, apathy, and social withdrawal.

This case highlights the importance of a detailed history, physical and neurological examination, and brain imaging in psychiatric patients.

CASE PRESENTATION: A 52-year-old female patient with a known diagnosis of epilepsy, presented to our clinic with complaints of forgetfulness, increased sleep, difficulty forming sentences, reduced speech, difficulty finding words, irritability, skin picking, sudden falls while walking, decreased self-care, and apathy. It was learned that the patient's complaints began approximately 9 months prior with forgetfulness. She had reported forgetting certain words, frequently using the word "thing" in conversation, and sleeping excessively, which prompted her to visit a neurology clinic. Initial evaluations, including EEG, brain MRI, NPT, and CSF sampling, were conducted, but no neurological cause for her symptoms was identified. The patient was then referred to the psychiatry clinic.

During follow-ups in the psychiatry clinic, she was treated with escitalopram (20 mg/day), venlafaxine (50 mg/day), and modafinil (100 mg/day), with no significant improvement. The patient was admitted to the psychiatry ward for differential diagnosis of dementia and major depressive disorder. During hospitalization, venlafaxine was increased to 225 mg/day. Her brain MRI imaging and neuropsychological testing were repeated and evaluated her existing symptoms. During her hospitalization, the patient's apathy decreased, and self-care improved, but other symptoms persisted. Based on her clinical presentation and test results, progressive non-fluent aphasia was considered the leading diagnosis. The patient was discharged and referred to the dementia clinic.

CONCLUSION: Progressive non-fluent aphasia, a subtype of FTD, is primarily a language-related disorder characterized by significant problems in word retrieval within the context of an intact vocabulary, associated with asymmetric atrophy in the left hemisphere. The clinical presentation is dominated by language impairment, with speech characterized by anomia, agrammatism, and at least one of apraxia or paraphasias.

In this case, the difficulties with word retrieval were predictive for the investigation of neurological diseases. The lack of response to medications for apathy and depressive symptoms, commonly seen in psychiatric and neurological disorders, also guided the differential diagnosis. Imaging findings during the psychiatry ward stay, 9 months after the patient's first admission to the neurology clinic, revealed clearer evidence for disease.

Our case demonstrates the need to consider FTD in patients presenting to psychiatric clinics with language problems, apathy, and disorganized behavior. Even if the patient has been referred from neurology, repeating imaging and consulting neurology in the later stages of the disease is crucial for diagnosis and management in cases unresponsive to treatment.

Keywords: Frontotemporal Dementia(FTD), Progressive non-fluent aphasia (PNFA), Anomia

[Abstract:0204]

Lycanthropy Induced by Iatrogenic Effects: A Case Report of Dissociation

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BACKGROUND AND AIM: Lycanthropy is a rare psychiatric phenomenon characterized by the delusional belief or perception of transforming into an animal, most commonly a wolf. This condition can emerge from a complex interaction of cultural influences, elevated suggestibility, and exposure to specific media content. The present case report aims to illustrate how a television episode depicting lycanthropic themes may have contributed to the onset of clinical lycanthropy in a patient displaying marked dissociative symptoms.

METHODS: A 34-year-old female dentist was evaluated after a three-month history of episodic dissociative fugues, memory lapses, and intermittent wolf-like behaviors. Neurological assessment, EEG, MRI, lumbar puncture, and routine laboratory tests showed no abnormalities. Psychiatric evaluation included the Dissociation Questionnaire (DIS-Q) and the Taştan Hypnotic Suggestibility Scale. Written informed consent was obtained from the patient in accordance with ethical standards prior to all diagnostic and therapeutic interventions. The treatment plan consisted of aripiprazole (5 mg/day), vortioxetine (20 mg/day), and a structured hypnotherapy protocol.

RESULTS: Initial assessments indicated a DIS-Q score of 3.1 (signifying notable dissociation) and a Taştan Hypnotic Suggestibility Scale score of 6 (reflecting high suggestibility). The patient‘s transient ―werewolf” behaviors appeared soon after viewing a television episode centered on lycanthropy. She was diagnosed with dissociative amnesia with fugue. Pharmacotherapy with aripiprazole and vortioxetine led to partial remission of dissociative symptoms and disorganized behavior; however, medication discontinuation resulted in relapse. Upon readmission, a structured hypnotherapy protocol was reintroduced alongside the original pharmacotherapy, yielding marked clinical improvement. Over one year of follow-up, her dissociation scores decreased to 1.5, and no further dissociative fugues or wolf-like behaviors were documented.

CONCLUSIONS: This case underscores the potential for cultural content, media influence, and individual hypnotic susceptibility to precipitate rare psychiatric syndromes, including clinical lycanthropy. Timely recognition and management, comprising both psychopharmacological treatment and targeted psychotherapeutic interventions (such as structured hypnotherapy), can foster substantial symptomatic relief. Enhanced clinical vigilance toward the interplay of cultural, iatrogenic, and dissociative factors is essential in achieving accurate diagnosis and optimal treatment outcomes. Further interdisciplinary research is warranted to elucidate the mechanisms underlying culture-bound dissociative presentations and to refine therapeutic strategies accordingly.

Keywords: Hypnotherapy, Lycanthropy, Suggestibility

[Abstract:0205]

Assessing the Efficacy of Guanfacine in Treating Tourette Syndrome: A Promising New Option in Turkey

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INTRODUCTION: Tourette Syndrome (TS) is a neurodevelopmental disorder that can severely impair academic and social functionings. Although antipsychotics are considered to be the most effective pharmacologic treatment for tics, there are several off-label drugs among the additional pharmacotherapy options recommended. Among these, alpha-2 agonists are frequently used as first-line pharmacologic treatment for tics due to their better safety profile. More than half of children with TS also have Attention deficit hyperactivity disorder (ADHD), making it essential to address both conditions during treatment. As an alpha-2 agonist, guanfacine has been used in our country since 2023, demonstrating significant clinical benefits. This case report highlights a significant response to guanfacine treatment in a patient with comorbid TS and ADHD who was unresponsive to antipsychotic therapy, underscoring the potential role of guanfacine as an alternative treatment option for TS. Consent was obtained from the patient and his parent for this case report.

CASE PRESENTATION: A 9-year-old male patient presented to our clinic three years ago with a two-year history of vocal and motor tics. The patient‘s history revealed that he had first been admitted to our clinic at the age of 3.5 due to language developmental delay. Following psychiatric and psychometric evaluations, he was diagnosed with borderline intellectual functioning and articulation disorder. Additionally, he had been monitored for epilepsy but had no active seizures at the time of his recent admission.. After the comprehensive evaluation, the patient was diagnosed with TS and ADHD. Aripiprazole 3 mg/day was started for the tics with the approval of pediatric neurology and the dose was increased up to 8 mg/day and atomoxetine 36 mg/g was started gradually. Extended release methylphenidate 10 mg/day was added to the treatment for ADHD symptoms, but methylphenidate treatment was discontinued due to an increase in the severity of tics. Since the severity of both vocal and motor tics increased, aripiprazole was gradually discontinued and risperidone was started at a dose of 0.5 mg/day and gradually increased to 2.5 mg/day. As there were no improvements in functionality, the risperidone dose was reduced, and guanfacine 1 mg/day was added to the treatment. Within one week, a significant reduction in the severity of the patient's tics was observed. By the end of one week, the patient no longer exhibited vocal tics. The only side effect observed with guanfacine was sedation, which resolved quickly. In the follow-up, guanfacine dose was increased up to 3 mg/day and atomoxetine was discontinued, and no increase in ADHD symptoms was noted. The patient is still being followed up in our clinic, exhibiting moderate to high functionality.

CONCLUSION: In the treatment of TS, guanfacine is an effective treatment option for tics, especially in children with ADHD. This positions guanfacine as a promising monotherapy for this patient population. Although guanfacine has been available in Turkey since 2023, further clinical reports are necessary to establish its broader applicability and efficacy.

Keywords: Attention deficit hyperactivity disorder, Tourette syndrome, Guanfacine, Children

[Abstract:0210]

Erythematous Reaction-Induced by Fluoxetine: A Case Report

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INTRODUCTION: Fluoxetine, a commonly used selective serotonin reuptake inhibitor (SSRI), has proven efficacy in treating a range of psychiatric conditions, including major depressive disorder, obsessive-compulsive disorder (OCD), and generalized anxiety disorder. It works by increasing serotonin levels in the brain through reuptake inhibition, which promotes mood stabilization and anxiety reduction. The drug‘s long half-life not only facilitates sustained therapeutic effects but also minimizes the risk of withdrawal symptoms during dose adjustments, making it particularly suitable for long-term use. Although fluoxetine is generally safe and well-tolerated, potential side effects include nausea, headaches, and, in rare cases, dermatologic reactions. Dermatologic adverse effects, observed in 2–4% of patients on antidepressants, may present as erythematous reactions. This case report examines the clinical course and management of a rare adverse erythematous reaction, which is associated with fluoxetine use in the treatment of OCD.

CASE PRESENTATION: A 23-year-old male with a three-year history of OCD presented with exacerbation of symptoms precipitated by acute stress related to his graduation project. His OCD, characterized by persistent intrusive thoughts and compulsive checking behaviors, met the diagnostic criteria outlined in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). He was initially prescribed fluoxetine, an SSRI, but developed a severe allergic reaction, presenting as generalized pruritus and erythematous reaction, within four days of initiation. Comprehensive evaluations in the emergency department excluded alternative etiologies, and the reaction resolved following discontinuation of fluoxetine and administration of antihistamines. A dermatological consultation corroborated the diagnosis of a drug-induced erythematous rash. Psychiatric management was subsequently transitioned to sertraline, titrated to a dose of 100 mg/day. Six months later, a significant familial stressor resulted in a recurrence of OCD symptoms, necessitating an adjustment of his regimen to sertraline 150 mg/day and the addition of aripiprazole 1 mg/day. This therapeutic modification yielded marked clinical improvement, and the patient‘s symptoms have remained well-managed on this treatment plan. Written informed consents were obtained from the patient.

CONCLUSION: The occurrence of urticaria during fluoxetine treatment was assessed using the Naranjo Adverse Drug Reaction Probability Scale (NADRPS), with a score of 6, categorizing it as a probable adverse drug reaction. Fluoxetine, for instance, has been reported to influence keratinocyte function and inflammatory responses, potentially triggering allergic manifestations. Furthermore, fluoxetine's modulation of serotonin levels might contribute to pruritus and other cutaneous symptoms, as serotonin is known to regulate skin physiology. However, it remains unclear whether the adverse reaction was caused by the active ingredient of the medication or its non-therapeutic components.

The findings of this report contribute to the broader understanding of fluoxetine-associated dermatologic reactions and underscore the critical role of individualized care in psychiatric practice. Clinicians should remain vigilant for potential skin reactions, particularly in patients with a history of drug allergies. Being aware of possible adverse effects of medications and implementing personalized interventions are important to improve patients' therapeutic experience and overall quality of life.

Keywords: Fluoxetine, Side Effect, Erythematous Reaction

Figure 1



Figure 1: Is presented with the written consent of the patient

AuthorToEditor: This case focuses on a fluoxetine-associated erythematous skin reaction. Being aware of possible adverse effects of medications and implementing personalized interventions are important to improve patients' therapeutic experience and overall quality of life.

[Abstract:0212]

From Scabies to Psychosis: A Diagnostic Journey in Delusional Parasitosis

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INTRODUCTION: Delusional parasitosis is a rare psychiatric disorder in which an individual has a false and unchangeable belief that their body has been invaded by parasites or small living organisms. While this condition is often seen individually, it can sometimes occur jointly among several people (e.g., folie à deux, folie à trois) or among all family members (folie à famille). It is critical to exclude actual parasitic infestations in the differential diagnosis. This case highlights the importance of proper direction in dermatology and the coexistence of delusional parasitosis with possible shared psychosis.

CASE PRESENTATION: A 79-year-old female patient, making her first psychiatric visit, was consulted by dermatology due to complaints of the belief that "bugs are under her skin," accompanied by itching and psychological distress persisting for 4 months. Despite previously seeking help from family medicine and dermatology outpatient clinics and undergoing treatment for scabies, there was no improvement in her symptoms. Numerous skin lesions were found due to her behavior of pricking her skin with a needle to remove the bugs.

It was learned that her son, with whom she lived, also had similar complaints; however, no organic cause was found. The patient was asked to collect bugs under the "matchbox sign" during the dermatology examination and was referred to the psychiatry clinic. She had no insight into her condition. Even after a two-week separation from her son, who was considered the primary case, no improvement in her complaints was observed. She was discharged after refusing inpatient treatment. One week after discharge, as there was no improvement in the patient's symptoms, commenced outpatient monitoring with olanzapine 5 mg/day. By the end of the fourth week, her symptoms had completely resolved, and at the fifth-month follow-up, it was found that she had not taken medication for two months and had no active complaints.

CONCLUSION: Delusional parasitosis is a psychiatric disorder often detected in patients presenting to dermatology and family medicine clinics. Most patients reject psychiatric evaluation, which complicates the diagnosis and treatment process. As seen in our case, early recognition of the diagnosis in dermatology clinics and proper referral is crucial.

Management of delusional parasitosis, which can occur alongside shared psychosis (folie à deux), requires a multidisciplinary approach. Further studies on this condition and informing other medical disciplines will contribute to increasing rates of diagnosis and treatment.

Keywords: Delusional parasitosis, Shared psychosis, Folie à deux, Matchbox sign

[Abstract:0217]

Acute Pancreatitis Possibly Associated with Paroxetine: A Case Report

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INTRODUCTION: Paroxetine is a selective serotonin reuptake inhibitor (SSRI) commonly used in the treatment of psychiatric disorders such as depression, anxiety disorders, and obsessive-compulsive disorder. While SSRIs are generally well-tolerated, they can rarely cause serious side effects, one of which is pancreatitis. Although pancreatitis due to paroxetine is rare, it is important for healthcare professionals treating psychiatric conditions to be aware of this uncommon side effect. This case report discusses the development of acute pancreatitis in a 21-year-old university student following paroxetine treatment and its impact on the treatment process.

CASE PRESENTATION: The patient is a 21-year-old female university student who lives alone and works at a café. She presented to the emergency department with complaints of nausea, vomiting, severe epigastric pain, and left upper quadrant pain. Laboratory tests revealed elevated levels of amylase (367 U/L) and lipase (1187 U/L), which were consistent with acute pancreatitis. The patient had been using 20 mg paroxetine for the past month. In 2020-2021, due to increasing anxiety and depressive symptoms, 50 mg sertraline was prescribed, but she discontinued the medication after some time. Paroxetine 20 mg was started a month ago, and one week later, she developed symptoms of acute pancreatitis. After evaluation by the internal medicine department, it was suspected that paroxetine was responsible for the development of acute pancreatitis, and the medication was discontinued. The patient had no history of alcohol or substance abuse. Her mood was described as "slightly anxious," and she exhibited a mildly depressive affect.

After discontinuing paroxetine, the patient reported significant improvement in her symptoms, and laboratory values returned to normal. Her symptoms continued to decrease during follow-up visits. After discharge from the internal medicine department, the patient was advised to avoid using paroxetine and was referred to the psychiatry outpatient clinic for regular follow-up.

CONCLUSION: This case highlights the rare but serious side effect of acute pancreatitis associated with paroxetine therapy. The criteria for diagnosing drug-induced pancreatitis include: 1) the development of pancreatitis during drug therapy, 2) the absence of other possible causes of pancreatitis, 3) improvement of pancreatitis symptoms after discontinuation of the drug, and 4) recurrence of pancreatitis upon re-initiation of the drug. Based on these criteria, the relationship between paroxetine and pancreatitis can be evaluated.

Although the relationship between paroxetine and pancreatitis does not show a direct pharmacological link, several potential mechanisms have been proposed, including direct toxic effects of the drug on the pancreas, drug-drug interactions, drug-induced spasm of the sphincter of Oddi, and idiosyncratic reactions. These adverse drug reactions are classified as Type B, which, though rare, tend to be severe. After discontinuing paroxetine, the patient's condition improved significantly, and laboratory values returned to normal.

This case emphasizes the importance of monitoring the gastrointestinal system in patients undergoing antidepressant therapy and raises awareness about the potential for serious side effects, such as pancreatitis, with drugs like paroxetine.

Keywords: Acute necrotizing, Paroxetine, pancreatitis

[Abstract:0218]

Persistent Sneezing Case: Clinical Presentation, Differential Diagnosis, and Treatment Recommendations in a Patient Presenting to a Child and Adolescent Psychiatry Outpatient Clinic

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INTRODUCTION: Sneezing is a physiological defense mechanism triggered by nasal mucosa irritation due to allergies, infections, or local pathology. However, sneezing can also be a manifestation of psychiatric disorders. Here, we report a case of persistent paroxysmal sneezing in an 11-year-old girl that improved with risperidone treatment. The differential diagnoses included tic disorder and psychogenic sneezing.

CASE PRESENTATION: An 11-year-old girl presented to the Child and Adolescent Psychiatry Outpatient Clinic at Ankara Bilkent City Hospital with a one-year history of persistent sneezing with fluctuating severity. Extensive evaluations in neurology, allergy, and otolaryngology departments at another center had yielded no significant findings.

The sneezing episodes began in January 2024, coinciding with the patient's transition to a new school. On her first day, she experienced a sneezing episode described as a "sneezing crisis," which persisted daily except during sleep. The sneezing occasionally subsided at home for up to three hours and could be voluntarily suppressed, albeit followed by more intense episodes. Triggers included dusty environments and spicy foods, with sneezing occurring more than three times per minute at its peak. No accompanying symptoms were reported, such as nasal discharge, sore throat, or cough. The sneezing significantly disrupted her school attendance, sometimes leading to emergency room visits. Her sneezing episodes were relatively reduced during the summer months, particularly while swimming.

Initial treatments, including antibiotics, montelukast, cetirizine and intranasal steroids provided minimal relief. Allergy testing and cranial MRI results were normal. During psychiatric evaluation, the sneezing episodes were observed to interrupt her speech. The mental status examination revealed an anxious affect, with thought content reflecting concerns about school adaptation difficulties related to sneezing episodes.

The differential diagnosis included tic disorder and psychogenic sneezing. The fluctuating course of sneezing, absence during sleep, and suppressibility supported the tic disorder hypothesis. Evaluations also indicated a psychogenic aspect to her sneezing, linked to peer bullying and the stress of transitioning to a new school.

Detailed discussions with the patient and her family revealed a critical insight: Among the medications previously used, metoclopramide had been the most effective in alleviating her sneezing. This effect was hypothesized to be related to the dopamine antagonism mechanism of the drug. Considering the overlapping features between her symptoms and tic disorders, risperidone was initiated at a dosage of 0.25–0.5 mg/day. After two weeks, the sneezing significantly decreased, occurring only sporadically at school. The patient resumed regular school attendance, participated in exams, and showed improved concentration.

CONCLUSION: The management and follow-up of persistent chronic sneezing cases require a multidisciplinary approach, particularly involving child psychiatrists. In the literature, most sneezing cases have been reported as psychogenic (2). In our case, while psychogenic stressors significantly contributed to the onset of sneeze episodes, certain pathophysiological and clinical features matched with those observed in tic disorders. This observation aligns with literature reporting psychogenic sneezing cases responsive to dopamine antagonists such as haloperidol (3). Therefore, persistent sneezing may represent an alternative manifestation of tic disorder, highlighting the importance of a tailored and holistic diagnostic approach.

Keywords: Persistent sneezing, psychogenic, tic disorder.

[Abstract:0222]

Pediatric Catatonia: A Case Series

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INTRODUCTION: Catatonia is a severe neuropsychiatric disorder affecting movement, speech and complex behaviour, often involving autonomic and affective disturbances.

Pediatric catatonia is a rare condition, mostly considered as a schizophrenia subtype, but can occur in a range of psychiatric, neurological and general medical conditions. Early identification and effective treatment of pediatric catatonia is critical given the significant morbidity and mortality associated with the condition. However, recognition of catatonia is often poor and knowledge about the condition and its management is frequently limited among clinicians.

Here we want to review the presentation, evaluation, and management of our catatonia cases. For this purpose, all cases diagnosed with catatonia between the dates 01.01.2019 – 31.12.2024 were scanned. A total of 12 cases were identified.

CASE PRESENTATION: The mean age of the cases was determined to be 15.58 (min 14, max 17). While the diagnosis of 4 patients was schizophrenia, 6 patients were being followed with the diagnosis of acute psychotic attack, 1 substance-induced psychosis, and 1 eating disorder and depression. While no triggering factor for catatonia could be determined in 2 of the cases, drug refusal/withdrawal was reported in 8 patients. The remaining 2 patients had newly diagnosed psychosis, and catatonic symptoms had quickly added to psychotic symptoms before diagnosis and treatment were initiated. When their medical history was examined, only 1 patient had a diagnosis of Down syndrome. The others did not describe any comorbid diseases/disorders before. Limbic encephalitis was initially considered in the differential diagnosis of 2 patients, but was later excluded. The most common findings were negativism, mutism, posturing, catalepsy, waxy flexibility and food refusal. When we look at the outcome, 6 patients refused treatment or were referred to another center for inpatient treatment. We were able to access outcome information of the remaining 6 patients (4 girls, 2 boys). While 5 of these patients were followed up in the adult psychiatry inpatient service, 1 patient with severe food refusal and dehydration required hospitalization in the pediatric gastroenterology department. While 2 of them improved with lorazepam treatment, 3 patients remained unresponsive to lorazepam and improved with ECT. In one case, partial recovery was achieved with ECT. The average number of sessions in patients who received ECT was 8.

CONCLUSION: Catatonia observed during childhood may be rare, but can lead to life-threatening situations. Early recognition and initiation of treatment may prevent worsening of the prognosis and facilitate recovery. The literature has limited data regarding the diagnosis and treatment algorithm for pediatric catatonia, and we aimed to contribute to the literature on the recognition, development, and management of catatonia cases seen in childhood with this case series.

Keywords: Pediatric catatonia, lorazepam, ECT

[Abstract:0226]

Autoimmune Encephalitis or Postpartum Psychosis? A Diagnostic Challenge in a Postpartum Case

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INTRODUCTION: The postpartum period poses a significant risk for the onset or recurrence of psychiatric illnesses, including mood, anxiety, and psychotic disorders. (1) Autoimmune encephalitis is a rare, recently described group of diseases associated with specific circulating autoantibodies targeting neuronal proteins. (2) Psychiatric symptoms, often predominant in these cases, may include anxiety, delusions, agitation, irritability, hallucinations, psychomotor excitement, confusion, catatonic features, depression, and insomnia. (3) This case highlights the overlap between psychiatric manifestations in autoimmune encephalitis and postpartum psychosis, emphasizing the need for a multidisciplinary approach in diagnosis and management. (4)

CASE PRESENTATION: A 29-year-old woman (Mrs. K) with epilepsy treated with levetiracetam (1000 mg/day) and no prior psychiatric history presented with postpartum onset of severe psychiatric and neurological symptoms. While hospitalized in the obstetrics and gynecology department, she exhibited shouting, crying, irritability, insomnia, inability to fulfill self-care, whole-body convulsions, and jaw locking. Progressive confusion, dysarthria, urinary incontinence, and further convulsions prompted neurology evaluation.

Initial diffusion brain MRI excluded acute central pathologies. Despite normal findings from neurological and infectious disease evaluations, her symptoms persisted, necessitating transfer to psychiatry for further investigation. Comprehensive diagnostic workup included:

Contrast-enhanced brain MRI, MR venography, and MR angiography

Electroencephalogram

Pituitary hormone panel

Coagulation and rheumatological parameters

Lumbar puncture (cerebrospinal fluid analysis for autoimmune encephalitis)

No significant findings were detected initially. However, the patient exhibited catatonic symptoms (mutism, negativism, stereotypic movements) and impaired self-care. High-dose diazepam was initiated, later replaced with lorazepam. She underwent seven sessions of electroconvulsive therapy (ECT) over ten days, resulting in motor function improvement but no significant cognitive recovery. Subsequent lumbar puncture revealed elevated IgG (6.4 g/L) and IgG index (4.5). Considering verbal impairment, retrograde amnesia, apraxia, and autonomic instability, autoimmune encephalitis became the leading diagnosis, prompting transfer to neurology. Informed consent was obtained from the patient and her relatives for this case report.

CONCLUSION: The overlapping symptoms of neurological and psychiatric disorders can complicate diagnosis and treatment. Clinicians should consider underlying neurological conditions, such as autoimmune encephalitis, when psychiatric symptoms are accompanied by verbal impairment, memory loss, apraxia, or autonomic instability. A multidisciplinary approach and comprehensive differential diagnosis are crucial for accurate management. (4)

Keywords: Autoimmune encephalitis, postpartum, psychosis

AuthorToEditor: Sources 1- payne, jennifer. (2024). Postpartum psychosis: Epidemiology, clinical features, and diagnosis. UpToDate. https://www.uptodate.com/contents/postpartum-psychosis-epidemiology-clinical-features-and-diagnosis 2- Honnorat, J., & Plazat, L. O. (2018). Autoimmune encephalitis and psychiatric disorders - sciencedirect. ScienceDirect. https://www.sciencedirect.com/science/article/abs/pii/S0035378717307440 3- Reddy, M. S. S., Thippeswamy, H., Ganjekar, S., Nagappa, M., Mahadevan, A., Arvinda, H. R., Chandra, P. S., & Taly, A. B. (2018, February 7). Anti-NMDA receptor encephalitis presenting as postpartum psychosis-a clinical description and Review - Archives of Women's Mental Health. SpringerLink. https://link.springer.com/article/10.1007/s00737-018-0816-3#citeas 4- Granerod, J., Titulaer, M. J., Dalmau, J., Al-Diwani, A., Kuppuswamy, P. S., Shi, Y. C., Schimmel, M., Li, W., Jang, Y., Szots, M., Lancaster, E., Lin, J., Kim, T. J., Warren, N., Rogers, J. P., Wesselingh, R., Jackson, A., Abboud, H., Huppatz, C., … Wang, D. (2022, July 15). Psychiatric manifestations of autoimmune encephalitis. Autoimmunity Reviews. https://www.sciencedirect.com/science/article/abs/pii/S156899722200115X

[Abstract:0228]

Dose-Dependent Spontaneous Ejaculation with Duloxetine – A Case Report:

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INTRODUCTION: Duloxetine is a serotonin-norepinephrine reuptake inhibitor (SNRI) used primarily in the treatment of major depressive disorder and generalized anxiety disorder, as well as diabetic peripheral neuropathic pain, fibromyalgia, osteoarthritis, and chronic low back pain. Common side effects of duloxetine include nausea, dry mouth, trouble sleeping, fatigue, constipation and dizziness. Although studies have shown that duloxetine causes significantly less sexual dysfunction than selective serotonin reuptake inhibitors (SSRIs), another commonly used antidepressant group, these side effects can also be seen under duloxetine use. Spontaneous ejaculation is a rare side effect among sexual dysfunctions. In this case, we present a case of dose-dependent spontaneous ejaculation developing under duloxetine treatment.

CASE PRESENTATION: A 47-year-old male patient was admitted to the outpatient clinic with depressive symptoms and somatic complaints. The patient was started on duloxetine 30 mg/day as initial treatment. It was observed that the patient partially benefited from the treatment and the dose was increased to 60 mg/day. During follow-up, the patient complained of post-defecation semen discharge under duloxetine 60 mg/day treatment. It was learned from the patient that his current complaint had developed several times under duloxetine 30 mg/day treatment. Possible organic pathologies in the patient were excluded. The patient's current condition was evaluated as dose-dependent spontaneous ejaculation due to duloxetine under 60 mg/day. The patient's dose-dependent spontaneous ejaculation picture developed with duloxetine was evaluated as 8 points (POSSIBLE side effect) with the Naranjo Adverse Drug Reaction Probability Scale (NADRPS). Duloxetine was first reduced to 30 mg/day, and the patient's complaints regressed, but since the side effects did not disappear, the patient's duloxetine treatment was discontinued and the treatment was updated to sertraline 100 mg/day. For the purpose of the case report, verbal and written consent was obtained from the patient.

CONCLUSION: Duloxetine commonly causes side effects such as nausea, dry mouth, constipation, sleep disturbances, fatigue, and dizziness, with rare effects like spontaneous ejaculation. Ejaculation, a complex process involving neural, endocrine, and muscular coordination, comprises emission and expulsion phases regulated by a spinal ejaculation generator that integrates sympathetic, parasympathetic, and somatic motor outputs while interacting with supraspinal regions. Despite advances in understanding, many aspects of ejaculation, including facilitation and inhibition, remain unclear. Psychiatric disorders and psychotropics, including duloxetine, can influence ejaculatory function. Defecation, another complex process, requires synchronized movements of the ileo-colo-recto-anal pathway initiated by sacral reflexes and controlled by cortical input. Rare cases of spontaneous ejaculation during defecation have been linked to duloxetine and other psychotropics like milnacipran and reboxetine. In one instance, switching from duloxetine to sertraline resolved the adverse effect. Further research into rare side effects like spontaneous ejaculation is essential for a comprehensive understanding of duloxetine‘s profile and effective management. Dose-dependent spontaneous ejaculation is a rare but documented adverse effect of duloxetine. Although similar events have been associated with other psychotropics, they are typically unrelated to defecation. Only one additional case of defecation-related spontaneous ejaculation with duloxetine has been reported, highlighting the need for clinician awareness and alternative treatment options.

Keywords: Duloxetine, side effect, spontaneous ejaculation

[Abstract:0229]

Restless Legs Syndrome Induced by Aripiprazole Discontinuation in a Patient with Generalized Anxiety Disorder: A Case Report

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INTRODUCTION: Restless legs syndrome (RLS) is characterized by an uncomfortable urge to move the legs during rest, relief upon movement or walking, and worsening of symptoms at night. RLS may be primary or secondary to conditions such as pregnancy, iron deficiency, or chronic renal insufficiency. The pathogenesis of RLS is not fully understood but likely involves central nervous system dopaminergic dysfunction and other undefined mechanisms.

Generalized anxiety disorder (GAD) is characterized by excessive worry or anxiety accompanied by physical and psychological symptoms and is among the most prevalent psychiatric disorders. We present a case of RLS emerging after the discontinuation of aripiprazole, which had been used as augmentation therapy in a patient with GAD.

CASE PRESENTATION: A 40-year-old male patient had been receiving psychiatric treatment for four years due to symptoms of tendency to crying, generalized anxiety, irritability, and insomnia. He was diagnosed with GAD and initially treated with duloxetine and venlafaxine. However, sexual dysfunction emerged during treatment, and his regimen was adjusted to aripiprazole 5 mg/day, vortioxetine 20 mg/day, and quetiapine extended-release 100 mg/day.

Since the sexual dysfunction persisted, aripiprazole was tapered and discontinued, and bupropion 150 mg/day was introduced. Shortly after discontinuing aripiprazole, the patient reported difficulty sleeping due to unpleasant sensations in his legs during the night. Upon restarting aripiprazole, his symptoms regressed.

After six months, the patient again discontinued aripiprazole, leading to a recurrence of symptoms, including uncomfortable sensations in his legs, an urge to move his legs, and worsening symptoms at rest, particularly at night. Routine blood tests showed normal kidney function and ferritin levels within the standard range.

The patient was diagnosed with RLS related to aripiprazole withdrawal. Treatment with pramipexole 0.25 mg/day was initiated and titrated to 0.75 mg/day. His symptoms resolved completely following pramipexole therapy.

CONCLUSION: The mechanism underlying antipsychotic-induced RLS involves dopaminergic dysfunction as well as alterations in serotonin and norepinephrine activity. Aripiprazole differs from other antipsychotics as it acts as a partial agonist at D2 and 5-HT1A receptors and an antagonist at 5-HT2A receptors, functioning as a "dopamine stabilizer" by modulating dopaminergic activity across various brain regions.

To date, the literature includes three cases in which aripiprazole improved RLS symptoms, one case in which RLS was induced by aripiprazole initiation, and one case in which it was induced by discontinuation. In our case, the recurrence of RLS symptoms following aripiprazole discontinuation suggests a potential link. The cessation of aripiprazole's dopaminergic stabilizing effects may have uncovered the patient‘s vulnerability to dopaminergic dysfunction, resulting in RLS symptoms.

Although direct evidence remains limited, clinicians should consider the possibility of RLS when discontinuing aripiprazole treatment.

This case highlights the potential association between aripiprazole discontinuation and the emergence of RLS symptoms. Increased awareness of this phenomenon may aid clinicians in identifying and managing similar cases. Further research is warranted to elucidate the role of aripiprazole in RLS.

Keywords: Aripiprazole, anxiety disorder, discontinuation, movement disorders

[Abstract:0231]

Importance of Differential Diagnosis in a Case of Autism Spectrum Disorder with Intense Behavioral Issues

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INTRODUCTION: Autism spectrum disorder (ASD) is a neurodevelopmental condition characterized by persistent challenges in social communication and interaction alongside restricted and repetitive patterns of behavior and interests (1). Beyond its core features, a significant proportion of individuals with ASD present with comorbid neuropsychiatric symptoms. Among these, behavioral disturbances are frequently observed and represent a common clinical challenge. This case report describes a 13-year-old boy with ASD, referred to our clinic for specialized evaluation due to treatment-resistant and prolonged behavioral challenges.

CASE PRESENTATION: A 13-year-old boy with ASD presented with eight months of severe behavioral issues, including school irritability, peer conflicts, aggression, property damage, nocturnal shouting, and reduced sleep duration. His episodes of anger occurred frequently throughout the day. During this period, the patient underwent multiple hospital visits, during which various medications, including first- and second-generation antipsychotics, methylphenidate derivatives, and mood stabilizers, were trialed. However, these interventions yielded no significant improvement, and the patient experienced substantial weight gain (approximately 40 kg). Due to treatment resistance and concerns regarding further weight gain, his family discontinued all medications one month prior to presentation.

In detailed discussions with the family, it was revealed that the patient‘s irritability had markedly increased over the past eight months, with no prior history of significant behavioral issues or need for pharmacological intervention. Further investigation uncovered a notable loss of interest in activities once enjoyed, frequent tearfulness, heightened repetitive behaviors, diminished communication with family members, and a decline in self-care. Evaluations at external centers had excluded organic pathologies. Based on clinical findings, the patient was provisionally diagnosed with major depressive disorder and was prescribed sertraline (25–50 mg/day) and risperidone (0.5 mg/day).

Two weeks into treatment, the patient showed significant improvement, with a marked reduction in irritability. At the one-month follow-up, he experienced complete resolution of school-related stress and peer conflicts, enhanced communication with family, and a substantial decrease in irritability (occurring once a week). Aggression and self-injury ceased, and he demonstrated the ability to self-regulate during anger episodes. Sleep duration normalized, and nocturnal shouting was no longer present. During his most recent psychiatric evaluation, the patient maintained eye contact, exhibited no signs of agitation, and his mother reported an 80% improvement in symptoms. The patient continues to attend regular follow-up visits at our clinic.

CONCLUSION: Individuals with ASD often exhibit "atypical" features that may not be captured by conventional diagnostic tools, making the identification of mood disorders in this population particularly challenging. Further research is essential to clarify how depression manifests in individuals with ASD, accounting for variables such as age, gender, and cognitive abilities. Comorbid major depressive disorder significantly affects the quality of life and overall outcomes for individuals with ASD, leading to diminished well-being throughout developmental stages (2) and increased mortality from suicide, particularly in those without intellectual disabilities (3). Clinicians working with individuals with ASD should prioritize careful differential diagnosis before initiating treatment, paying particular attention to mood disorders to ensure accurate diagnosis and optimal management.

Keywords: Autism Spectrum Disorder, Comorbidity, Major Depression Disorder

[Abstract:0237]

A Case Report of Wernicke-Korsakoff Syndrome: Rarely Co-occurring Clinical Findings and MRI Features in a Patient with Chronic Alcohol Use

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INTRODUCTION: Wernicke encephalopathy (WE) is a serious neuropsychiatric disorder caused by thiamine (vitamin B1) deficiency, most commonly associated with chronic alcohol use. The classic diagnostic triad includes ophthalmoplegia, ataxia, and confusion. While these symptoms are key to diagnosis, they may not always appear together, making early recognition challenging. If untreated, WE can progress to Korsakoff syndrome, a condition characterized by irreversible memory loss and cognitive dysfunction, and may lead to death.

Korsakoff syndrome is considered a late-stage complication of WE and is characterized by anterograde and retrograde amnesia, confabulation, and severe memory impairments. The prognosis for patients with Korsakoff syndrome is poor if not treated, as cognitive deficits may be permanent. However, if identified early, Wernicke encephalopathy can be reversed with appropriate thiamine replacement, preventing progression to Korsakoff syndrome and reducing the risk of mortality.

In this case, we present a 47-year-old woman who exhibited the classic triad of WE and had MRI findings characteristic of the disorder. We emphasize the importance of timely diagnosis and thiamine treatment to prevent long-term neurological damage and potential death.

CASE PRESENTATION: A 47-year-old woman with a history of chronic alcohol use was admitted with complaints of confusion, disorganized behavior, and nonsensical speech. Her relatives reported that she had been exhibiting strange behaviors for the past week, including saying, ―They will burn me," self-talking, refusing to eat, and experiencing reduced sleep. She had a 30-year history of alcohol use, consuming 28 cc of beer daily, and had poor nutritional habits.

On examination, the patient appeared cachectic, with fluctuating consciousness and disorientation. Neurological findings included horizontal nystagmus, dysmetria, dysdiadochokinesia, and ataxia, consistent with the classic triad of Wernicke encephalopathy.

Brain MRI showed hyperintense lesions in the bilateral putamen, periaqueductal area, pontine tegmentum, and caudate nuclei on FLAIR imaging, supporting the diagnosis of Wernicke encephalopathy.

The patient was started on intravenous thiamine replacement at a dose of 600 mg/day for the first 5 days, followed by 200 mg/day intravenously until the 10th day. Subsequently, oral thiamine was initiated at a dose of 500 mg/day. At discharge, the patient was prescribed oral thiamine 500 mg/day for maintenance.

Although her orientation and confabulation improved, her ataxia did not regress, and she continued to experience significant short-term memory deficits and confabulation. Despite the persistence of these symptoms, the patient survived and was discharged with ongoing thiamine supplementation and scheduled follow-up.

CONCLUSION: This case highlights the importance of early diagnosis and treatment of Wernicke encephalopathy, especially in patients with chronic alcohol use and nutritional deficiencies. The classic triad of ophthalmoplegia, ataxia, and confusion, along with characteristic MRI findings, should raise suspicion for WE. Early intervention with thiamine therapy is crucial in reversing acute symptoms and preventing progression to Korsakoff syndrome, which can lead to irreversible cognitive deficits and death.

Keywords: Chronic alcohol use, Korsakoff syndrome, Wernicke encephalopathy

[Abstract:0238]

Possible Psychosis Developed Following Intraarticular Steroid Injection: A Case Report

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INTRODUCTION: Steroids, particularly corticosteroids, are widely used in the treatment of inflammatory diseases. However, these medications also have psychiatric side effects. Psychiatric symptoms typically emerge after the initiation of treatment and are often dose-dependent. High-dose steroid therapy, in particular, can lead to psychiatric side effects such as psychosis, manic episodes, depression, and anxiety. Steroid-induced psychosis, which occurs during steroid therapy, can often be reversed with early intervention. However, careful monitoring and assessment are essential throughout the treatment process. In our case, psychosis developed as a rare side effect following an intraarticular injection, which is less commonly associated with psychiatric symptoms. Additionally, the psychosis emerged at a lower dose and after a longer duration than those reported in the literature, which is why we considered it a potential etiological factor.

CASE PRESENTATION: A 52-year-old female patient, married with two children, with a primary school education, lives in a family apartment with her husband and one son. The patient had no previous psychiatric history or complaints. Three weeks prior to her clinic visit, she received an intraarticular injection of 20 mg/ml triamcinolone hexacetonide for osteoarthritis. Four days before her visit to our hospital‘s clinic, the patient developed sudden-onset symptoms, including restlessness, inability to stay still, nonsensical speech, and reduced sleep duration. She was brought to the hospital by her son and was admitted for evaluation.

The patient had a history of Hashimoto thyroiditis. However, during her hospitalization, thyroid function tests were within normal limits, and other organic causes, such as infections, metabolic disturbances, and neurological conditions, were ruled out through laboratory tests and imaging studies. Upon admission, the patient‘s PANSS score was 122. She was started on olanzapine 5 mg/day, which was gradually increased. During her follow-up, depressive symptoms also emerged, and venlafaxine treatment was initiated. The patient‘s symptoms improved significantly, and her PANSS score decreased to 38 at the time of discharge. At discharge, the patient had returned to her premorbid state.

CONCLUSION: Intraarticular steroid injections, although less commonly associated with psychiatric symptoms, can rarely lead to psychosis, especially after lower doses and longer durations than those typically reported in the literature. In this case, psychosis developed after an intraarticular injection of triamcinolone hexacetonide, supporting the potential etiological role of corticosteroids in the development of psychiatric symptoms. Early recognition and appropriate treatment can lead to significant improvement and return to premorbid functioning.

Keywords: Intraarticular steroid injections, Steroid-Induced Psychosis, triamcinolone hexacetonide

[Abstract:0240]

Treatment of Depression Associated with Mitochondrial Cytopathy with Sertraline: An Adolescent Case Report

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INTRODUCTION: Mitochondrial cytopathy is a rare group of disorders caused by mutations in mitochondrial or nuclear DNA, leading to deficits in energy production. These disorders primarily affect high-energy-demand organs, including the central nervous system, skeletal muscles, and the heart. Psychiatric conditions, such as major depression, bipolar disorder, schizophrenia, and anxiety disorders, are frequently reported in patients with mitochondrial cytopathy. Among these, depression is particularly common, likely due to mechanisms involving neuroinflammation, oxidative stress, and neurotransmitter imbalances.

Managing depression in mitochondrial cytopathy poses significant challenges. Altered cellular metabolism complicates the selection of appropriate medications, dosage adjustments, and predicting treatment responses. While selective serotonin reuptake inhibitors (SSRIs) are commonly used for depression, their efficacy and safety in mitochondrial disorders are not well-documented. To date, only one case report has described the use of escitalopram in children with mitochondrial disorders, and there are no published reports on the use of sertraline in this context.

This case report aims to address this gap by evaluating the efficacy and safety of sertraline in managing depression associated with mitochondrial cytopathy, with a focus on the importance of tailored treatment strategies for such complex cases.

CASE PRESENTATION: A 16-year-old male diagnosed with mitochondrial cytopathy and moderate intellectual disability presented with a one-year history of depressive symptoms, including social withdrawal, reluctance to leave home, and anhedonia. Following a thorough clinical evaluation, a diagnosis of depression was confirmed. Given his cognitive limitations, potential side effects, and symptom severity, sertraline was initiated at a low dose of 12.5 mg/day. After two weeks, the dose was titrated to 25 mg/day based on parental feedback and clinical assessment.

Over the first six weeks, the patient demonstrated significant symptom improvement. However, a partial relapse occurred after five months, prompting an increase in the sertraline dose to 50 mg/day, which was well-tolerated. Sustained remission was achieved over nine months of follow-up, as evidenced by reductions in Child Anxiety and Depression Scale–Parent Form (CADS-P) scores and notable improvements in quality of life.

CONCLUSION: Sertraline was selected in this case for its favorable pharmacological properties, including potent serotonergic effects, dopamine reuptake inhibition, low sedative potential, minimal pharmacokinetic interaction risk, and antioxidant properties. These features make it particularly suitable for addressing depressive symptoms and energy deficits in mitochondrial disorders.

This report demonstrates the effectiveness and safety of sertraline in treating depression associated with mitochondrial cytopathy. It highlights the complexities of managing psychiatric symptoms in mitochondrial disorders due to altered cellular metabolism and underscores the necessity of individualized treatment planning and careful dose titration. Given the limited existing literature, further studies are essential to refine therapeutic approaches for this unique patient population.

Keywords: Depression, Mitochondrial Cytopathy, Sertraline

[Abstract:0241]

Munchausen Syndrome Mimicking Autism Spectrum Disorder: A Case Report

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INTRODUCTION: Munchausen Syndrome is characterized by intentionally producing symptoms without any clear external motivation or gain. This differs from malingering, where symptoms are produced to gain secondary benefits, such as medication, shelter, or financial compensation. Munchausen Syndrome poses significant challenges for healthcare professionals regarding accurate diagnosis, understanding, and management. In this case report, we will discuss a 15-year-old patient diagnosed with Munchausen Syndrome, who mimicked Autism Spectrum Disorder (ASD) symptoms while rejecting diagnoses of social anxiety and depressive disorder. Written informed consent was obtained from the patient and her parents for the publication of this case.

CASE PRESENTATION: The patient, living in a different city, had been followed for high-function ASD and depressive disorder. Due to suicidal ideation, homicidal thoughts toward peers who had bullied her, and non-compliance with medications, she was admitted to the Child Psychiatry Department of Ankara Bilkent City Hospital for homicidal thoughts. Upon admission, the patient was on alprazolam 0.5 mg/day, lithium 900 mg/day, and olanzapine 5 mg/day. Interviews with the patient's mother revealed that her developmental milestones were on time, and there were no ASD symptoms during her childhood. The patient had been bullied since middle school and refrained from going outside during recess. Despite attempts by her peers to engage her in conversation, she had not communicated with anyone. During interviews, the patient appeared in masculine clothing with short hair, avoided eye contact, and showed signs of simple motor tics, such as tilting her head and stereotypical spinning movements. The patient expressed concerns about having ASD, believing that her symptoms could not be explained by social anxiety or depression. She mentioned reading the DSM-5 ASD diagnostic criteria and thought she was a high-functioning individual with ASD. However, it was noted that the patient did not display these stereotypic movements or tics during her hospital stay. Further investigation of her medical history revealed multiple visits to various healthcare facilities, which raised suspicion of Munchausen Syndrome. Neuropsychological testing was conducted, and during this process, her alprazolam was discontinued, and venlafaxine was started at 37.5 mg/day, gradually increasing to 150 mg/day for internalizing symptoms. By the end of treatment, the patient no longer had homicidal or suicidal ideation and was discharged with a diagnosis of Munchausen Syndrome. The family was given psychoeducation about ASD and the child's Munchausen Syndrome process.

CONCLUSION: The primary challenge in diagnosing Munchausen Syndrome lies in the intentional fabrication or mimicry of symptoms. This can be misleading during clinical evaluation and complicate the diagnosis. In cases where patients mimic symptoms, it is essential to differentiate between various psychiatric disorders, such as in this case, where ASD symptoms were confused with social anxiety and depressive disorders. A thorough clinical assessment, inpatient service observation, and psychological tests are critical. Understanding the underlying psychological factors in Munchausen Syndrome can help improve the treatment process, which should involve a multidisciplinary approach. Coordination between healthcare institutions is also crucial for effective treatment, as patients may seek care from multiple providers.

Keywords: Adolescent, Autism Spectrum Disorder, Munchausen Syndrome

[Abstract:0242]

Treatment of Catatonia in a Patient with Autism Spectrum Disorder: A Case Report

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INTRODUCTION: The DSM-5 allows catatonia to be coded as associated with various mental disorders. It defines catatonia as the presence of at least three of the following symptoms: catalepsy, waxy flexibility, stupor, mutism, negativism, agitation, posturing, stereotypies, mannerisms, grimacing, echolalia, and echopraxia. Despite this clear diagnostic framework, catatonia remains underrecognized by clinicians. Increasing attention has been directed toward the overlap between catatonia and Autism Spectrum Disorder (ASD), as features such as social withdrawal, mannerisms, and echolalia are common to both conditions. Diagnosing catatonia in individuals with ASD can be particularly challenging due to symptom overlap. Here, we present the case of a 17-year-old male with a diagnosis of ASD since age three, who developed catatonic symptoms over the past eight months.Written informed consents were obtained from the patient or patient's legally authorized representative.

CASE PRESENTATION: The patient, diagnosed with ASD at the age of three, was admitted to the Child Psychiatry Unit at Ankara Bilkent City Hospital for the management of persistent catatonia symptoms despite prior treatment with benzodiazepines. Upon admission, the patient was receiving clonazepam 4 mg daily. Interviews with the patient‘s mother revealed that catatonic symptoms had gradually emerged over eight months. Symptoms included progressive social withdrawal, decreased movement and speech, reduced appetite, and diminished water intake.

Clinical evaluations identified catalepsy, stupor, mutism, negativism, posturing, stereotypies, mannerisms, and grimacing. The Bush-Francis Catatonia Rating Scale (BFCRS) score was 26 at baseline. Neurology, metabolic, and genetic consultations ruled out underlying organic pathologies. Clonazepam was titrated to 7 mg/day without notable improvement in catatonia symptoms. Consequently, with informed consent from the family, electroconvulsive therapy (ECT) was initiated.

Prior to ECT, clonazepam was discontinued, which did not result in a significant worsening of symptoms. ECT sessions were administered, and a gradual reduction in catatonia symptoms was observed. After four ECT sessions, the BFCRS score improved to 8. A total of 7–10 ECT sessions were planned, and the patient‘s treatment is ongoing.

CONCLUSION: The overlap between ASD and catatonia poses significant diagnostic challenges due to shared symptoms. Benzodiazepines, often effective in treating catatonia, may not yield the desired outcomes in cases of ASD with comorbid catatonia. This case highlights the efficacy of ECT in resolving catatonia symptoms in the context of ASD, even when benzodiazepines prove ineffective. Further research is warranted to better understand the mechanisms underlying this overlap and to optimize treatment strategies for affected individuals.

Keywords: Autism Spectrum Disorder, Catatonia, Electroconvulsive Therapy (ECT)

[Abstract:0243]

A Case of Manic Episode Induced After “Subconciousness Cleaning” with Hypnosis

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INTRODUCTION: Bipolar disorder is characterized by mood episodes of mania, hypomania, and major depression. Manic episodes can be induced by factors such as substance use, antidepressant drug use, and stressful life events. [1,2,3]

Hypnosis is a psychological technique in which the participant receives suggestions from a therapist and responds with imagined experiences.[4] Hypnosis can induce changes in consciousness and cognition through hypnotic suggestion. [5,6]

In this article, we would like to present a case of manic episode induced after "subconscious cleaning" using the hypnosis for depressive complaints and relation problems. Written consent was obtained from the patient for the presentation of the case.

CASE PRESENTATION: A 32-year-old male patient, who had complaints of excessive spending, irritability, insomnia, and increased speech that started approximately two months ago, was brought to the emergency service by his wife and police teams due to his aggressive attitudes.

According to anamnesis; he started treatment for major depression following the birth of his baby in 2022, hospitalised for 45 days into psychiatry clinic due to the resistant depression. He was discharged with quetiapine, lithium, and venlafaxine treatments, symptoms partially benefited from the treatment, One year later, approximately 2-3 months before his emergency service admission, he started receiving hypnotherapy sessions for —subconscious cleaning.” After the hypnotherapy sessions, he felt freer, he wasn‘t longer afraid of anyone, he could say everything that came to his mind, he didn‘t want to see anyone in his house except his wife and child. When he did not get what he wanted, he got very angry and gave aggressive reactions. He he shopped excessively by borrowing, he had only been sleeping for 1-2 hours at night for the last week. And his wife had to leave home.

In the mental status examination, elevated mood, irritablity, grandiose thoughts, intense anger themes towards his wifeand wife's family, increased psychomotor activity, and decreased sleep and appetite were detected. In blood, MRI and EEG examinations no problems were detected except B12 deficiency.

Venlafaxine and lithium were discontinued, quetiapine dose was increased to 800 mg/day, valproic acid and paliperidone palmitate injection therapy was added to his treatment due to the increased speech, irritability and continuing aggression. After 38 days of hospitalization, he was discharged with diagnosis of Bipolar Disorder. His follow-up continues with this treatment amd remission.

CONCLUSION: In this case, there had been no previous manic episode, he had been using treatments including antidepressants for more than a year, there was no known psychiatric disorder diagnosis in his family. In addition, the fact that manic symptoms emerged following "subconscious cleansing" suggests that the hypnotic technique used here contributed to the triggering of the manic episode. Although there are discussions in the literature that psychotic attacks can be triggered by hypnotherapy, concrete scientific evidence to support this relationship has not yet been shown. In conclusion, although there is no scientific evidence that bipolar disorder can trigger a manic episode, our case is the first reported case on this subject.

Keywords: Bipolar Disorder, Mania, Hypnosis

AuthorToEditor: 1.Kim BH, Kim SH, Han C, Jeong HG, Lee MS, Kim J. Antidepressant-induced mania in panic disorder: a single-case study of clinical and functional connectivity characteristics. Front Psychiatry. 2023 May 25;14:1205126. 2. Gijsman HJ, Geddes JR, Rendell JM, Nolen WA, Goodwin GM. Antidepressants for bipolar depression: a systematic review of randomized, controlled trials. Am J Psychiatry. 2004 Sep; 161(9): 1537-47. 3.Üstündağ, MF, Özhan İbis, E., Yücel, A. ve Özcan, H. (2015). Sentetik Esrarın Yol Açtığı Mani. Psikiyatride olgu sunumları, 2015 (1), 310930. 4. Elkins, G. (2022). Evidence-Based Practice and Clinical Hypnosis. International Journal of Clinical and Experimental Hypnosis, 70(2), 101–103. 5.Yapko, M. (Ed.). (2006). Hypnosis and treating depression: Applications in clinical practice. Routledge. 6. Yapko, M. (2010). Hypnosis in the treatment of depression: An overdue approach for encouraging skillful mood management. International Journal of Clinical and Experimental Hypnosis, 58(2), 137–146.

[Abstract:0245]

Psychotic Relapse and Self-Destructive Behavior Following Clozapine Dose Reduction in a Schizophrenia Patient with Long-Term Remission: A Case Report

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INTRODUCTION: Schizophrenia is a chronic psychiatric disorder marked by psychotic episodes that impair daily functioning. Antipsychotic medications are crucial for managing acute symptoms and preventing relapse, though their side effects often lead to dose adjustments or discontinuation.

This case report describes a patient in remission for five years who relapsed with severe self-destructive behavior after a sudden reduction in clozapine dosage. This report aims to explore the implications of dose reduction in antipsychotic treatment, particularly in patients with a history of psychosis, and discusses the potential risks and outcomes in light of current literature. Informed consent was obtained from both the patient and their legal guardian for this case presentation.

CASE PRESENTATION: A 35-year-old patient with no family history of psychiatric disorders presented to our emergency department following a two-month history of anhedonia, persecutory ideation, and self-harming behavior (inserting their left hand into a machine).

The initial symptoms were approximately 10 years ago, following workplace stressors, and included anxiety, paranoid ideation, insomnia, and increased psychomotor activity. The patient was hospitalized at an external facility, where they were diagnosed with "Bipolar Disorder" and subsequently discharged. From 2013 to 2016, non-compliance led to four hospitalizations. After non-compliance, the patient had auditory hallucinations and persecutory delusions in 2017, which led to hospitalization. The patient was diagnosed with "Schizophrenia" and treated with 20 mg of haloperidol and 100 mg of clozapine daily. During subsequent follow-up, the treatment regimen was adjusted to 300 mg/day clozapine and 600 mg/day quetiapine, and the patient was followed for nearly five years in remission. After a period of stability, the patient‘s clozapine dose was reduced to 200 mg/day in September 2022. This led to symptoms of fear of being alone, paranoia, and increased religious preoccupations, resulting in hospitalization. The treatment was adjusted to clozapine 300 mg/day, quetiapine 100 mg/day, and aripiprazole 30 mg/day. Upon discharge, the patient presented to the emergency department with self-harm behaviors, fear of leaving home, and concerns about harm. After left-hand amputation surgery, the patient was admitted to the psychiatric unit, where irritability and persecutory delusions were noted. The regimen was modified to clozapine 200 mg/day and amisulpride 400 mg/day. After 51 days, the patient's BPRS score improved from 21 to 9, and they were discharged in near-full recovery. The clozapine dose was later increased to 300 mg/day, with continued functional improvement and regular follow-up.

CONCLUSION: Chronic use of antipsychotic medications is thought to increase the sensitivity of dopamine receptors. Abrupt discontinuation, as opposed to a gradual tapering approach, may precipitate rebound psychosis. Clinicians must carefully evaluate several significant risk factors for psychotic relapse when considering dose reduction in schizophrenia patients. While dose reduction may be considered in the context of long-term remission, it is essential to implement a gradual tapering of the dose and to closely monitor patients for the emergence of symptoms throughout this process.

Keywords: Antipsychotic, clozapine, psychotic relapse, schizophrenia

[Abstract:0246]

Clinical Improvement in an 11-Year-Old Girl with ADHD Following Diagnosis and Treatment of Graves' Disease: A Case Report

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INTRODUCTION: Attention Deficit Hyperactivity Disorder (ADHD) is a neurodevelopmental disorder affecting approximately 7.2% of children and adolescents worldwide. ADHD symptoms often include academic underachievement, social adaptation problems, hyperactivity, difficulty sustaining attention, and impulsivity. Additionally, a substantial proportion of children with ADHD (approximately 24–50%) exhibit irritability, emotional lability, and anger outbursts, reflecting emotional dysregulation. Hyperthyroidism, commonly caused by Graves‘ disease in children and adolescents, involves the excessive production and secretion of thyroid hormones. Typical symptoms of hyperthyroidism include irritability, easy provocation of anger, attention difficulties, weight loss, palpitations, tremor, sleep disturbances, and heat intolerance. Because these symptoms can overlap with ADHD, hyperthyroidism is an important differential diagnosis. Children in institutional care (e.g., foster care or residential facilities) may be exposed to diverse biological and psychosocial risk factors, leading to a higher prevalence of psychiatric disorders. Rates of psychotropic medication use in these settings are notably higher than in the general pediatric population.

CASE PRESENTATION: An 11-year-old girl under residential care was referred to a child and adolescent psychiatry clinic due to academic difficulties, excessive activity, impulsivity, and inattention. Cognitive assessments and clinical observations indicated borderline intellectual functioning and Specific Learning Disorder (SLD); she was subsequently enrolled in specialized educational support. Despite improvements in academic functioning following special education, the patient continued to exhibit incomplete task execution, emotional lability, hyperactivity, and impulsive behaviors. Considering a possible comorbidity of ADHD, methylphenidate treatment was initiated. Although there was partial improvement in her academic performance with the stimulant therapy and special education, prominent behavioral issues (e.g., explosive anger, conflicts with peers) persisted. Consequently, the dose of methylphenidate was increased and an atypical antipsychotic (risperidone) was added. Around the sixth month of psychopharmacological treatment, routine lab tests revealed an abnormality in thyroid function. Further evaluation led to a diagnosis of Graves‘ disease. After starting antithyroid therapy (thiamazole) prescribed by the endocrinology department, the patient‘s behavioral and emotional symptoms improved rapidly as her thyroid hormone levels normalized. Subsequently, both the stimulant and the antipsychotic were tapered off. In follow-up visits, no additional psychiatric treatment was deemed necessary aside from ongoing support for SLD.

CONCLUSION: This case highlights the importance of carefully investigating organic causes—such as hyperthyroidism—in children diagnosed with ADHD, particularly when their symptoms are resistant to standard treatments. In institutionalized patients, diagnostic challenges are often compounded by inadequate or incomplete developmental histories. In our patient, persistent behavioral and mood-related symptoms were ultimately attributed to delayed recognition of hyperthyroidism. The rapid attenuation of ADHD-like symptoms following hyperthyroidism treatment strongly suggests that thyroid dysfunction played a significant role in her clinical presentation. This underscores the need to consider an endocrine evaluation in children displaying ADHD symptoms who do not respond satisfactorily to standard pharmacological interventions. Previous research also notes that methylphenidate can influence the hypothalamic-pituitary-thyroid axis, or conversely, that excess thyroid hormone might exacerbate attention and behavioral problems. In conclusion, close medical follow-up and regular laboratory monitoring are crucial for children with neurodevelopmental diagnoses, especially those in institutional care.

Keywords: Adhd, hyperactivity, graves, thyroid

[Abstract:0254]

A Neglected Diagnosis *Misophonia*:A Case Report

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BACKGROUND AND AIM: Misophonia is defined as "hatred of sound." It is characterized by intense emotional reactions (such as anger, anxiety, disgust) and avoidance behavior toward specific sounds, particularly those related to other people's mouth sounds (eating noises, gum chewing), nasal sounds (breathing, sniffing, blowing), or finger-related sounds (playing with a pen, writing, tapping on a table).1 Misophonia is not yet included in psychiatric diagnostic classification systems. However, interest in the subject has been growing in recent years.2 Studies on the topic suggest that misophonia should be recognized as a psychiatric disorder and that it has been overlooked. Therefore, there is a need for studies examining the causes, risk factors, relationships with other mental disorders, and treatment approaches of misophonia. In this study, a case presenting with acute stress disorder and depressive symptoms, who was found to have misophonia during the interview, is presented along with the literature findings.

METHODS: CASE

A 41-year-old housewife and mother of one child presented to our psychiatry clinic three weeks ago, following a family dispute, with symptoms including frequent waking during the night due to nightmares, persistent thoughts that both she and her husband would be killed, lack of motivation, a general sense of sadness and apathy, and inability to perform daily tasks. During the interview with her and her husband, as well as the psychiatric examination, it was noted that the patient had been affected by certain sounds, such as chewing gum and mouth smacking, since childhood. She was expelled from school after using violence against a classmate because of this sensitivity to sounds. Furthermore, due to her discomfort with noises, she reported wearing headphones particularly in public transportation and crowded environments. It was learned that during the patient‘s first marriage, which lasted one year, she was affected by the sounds made by her ex-husband, which led to frequent arguments and eventually their divorce. The patient, who remarried three years ago, reported being disturbed by the sounds made by her spouse‘s relatives living on the upper floor, which was also the source of family conflicts. The Hamilton Depression Rating Scale score was 28 that scale as severe depression and after a mental status examination, the patient was diagnosed with acute stress disorder, major depressive disorder, and nisophonia, a condition not yet classified in diagnostic systems. The patient was started on sertraline 50mg/day. The dosage of the medication was gradually increased, and informed consent was obtained from the patient before starting treatment. Written informed consent was obtained from the patient before the study.

RESULTS: Misophonia, which is not yet included in the DSM-5, is a condition with an unclear mechanism and treatment. Studies on comorbid conditions in these patients may offer some insights that could guide the understanding of the nature of the disorder.

CONCLUSIONS: Misophonia, which can begin at an early age and significantly impact the quality of life of patients, still has many unresolved aspects and awaits further research. Therefore, we believe that our study will contribute to future research in this field.

Keywords: Diagnosis, misophonia, treatment

[Abstract:0256]

Adverse Cutaneous Drug Reaction Due To Possible Lorazepam In a 12-Year-Old Patient With Hunter Syndrome

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INTRODUCTION: Benzodiazepines cause adverse cutaneous reactions in about 0.3% of patients, with lorazepam associated with hypersensitivity and exanthematous eruptions in adults. Lorazepam, an intermediate-acting benzodiazepine, is commonly prescribed for anxiety and status epilepticus, and its pharmacological effects are mediated by gamma-aminobutyric acid (GABA). This report presents a lorazepam-induced skin reaction in a 12-year-old male patient with Hunter syndrome, which improved after discontinuation of lorazepam therapy.

CASE PRESENTATION: A 12-year-old boy with Hunter syndrome, intellectual disability, epilepsy, and hearing loss presented with increased aggression, restlessness, and disturbed sleep for the past two weeks. He was on long-term treatment with risperidone, levetiracetam, and quetiapine. In the mental status examination, psychomotor agitation due to acute psychotic or mood episodes was considered. He was started on lorazepam medication (2 mg/day). Approximately 8-10 hours after the first dose of lorazepam, erythematous, slightly papular macules appeared on both legs. No lesions were found on the skin, mucous membranes, or conjunctiva. Complete blood count, biochemistry, thyroid and liver function tests, and vitamin B12 level tests were normal. Cranial computed tomography showed no new findings compared to previous examinations. Although the dermatology department recommended patch testing, it could not be performed due to the patient's failure to adhere to the testing procedure. Due to the temporal relationship between lorazepam and the rash, lorazepam was discontinued. After discontinuation of lorazepam, the rash began to resolve within 24 hours without any intervention. The rash completely resolved within 10 days. At the 1-month follow-up, the patient had residual hyperpigmented lesions at the rash sites. No skin reactions were noted with other medications.

CONCLUSION: It should be kept in mind that drug-induced skin reactions may occur during lorazepam treatment, especially in pediatric patients with underlying metabolic disorders. Early detection of cutaneous reactions and the timely cessation of the offending drug are critical to prevent serious adverse effects.

Keywords: Drug Eruption, Drug Rash, Hunter Syndrome, Lorazepam

[Abstract:0258]

Cetirizine-Induced Tics Disorder: A Case Report

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INTRODUCTION: Cetirizine is a derivative of piperazine. It acts as a highly selective antagonist of the histamine H1 receptor and is classified as a second generation, non-sedative antihistamine. Second-generation antihistamines are characterized by their lack of access to the central nervous system and the absence of central side effects. On the other hand, some studies have shown that cetirizine also exerts histamine receptor blocking activity in the central nervous system.Tics are characterized by sudden, rapid, recurrent, nonrhythmic movement or vocalization, and are the most common movement disorders in children. To the best of our knowledge, there are no reported cases of tics due to cetirizine in the literatüre. Herein, we present a 5-years-old patient who developed the drug induced tic after the first dose of cetirizine. Written informed consents were obtained from the patient or patients legally authorized representative.

CASE PRESENTATION: Cetirizine was started due to a recent upper respiratory tract infection in 5 years-old male patient. Patient had head shaking, mouth opening, throat clearing, eye blinking, tic and dystonia-like movements were observed for one hours after the administration of 5 ml oral cetirizine. Mouth opening and head shaking improved with biperiden but throat clearing, eye blinking is not improved. When the throat cleaning and eye blinking continued for a month, they applied to the child psychiatry clinic.

CONCLUSION: Cetirizine-induced dystonia has been reported in a pediatric patient before, but tic disorder has not been reported. Our patient‘s symptoms started within one hours. The time interval between drug intake and onset of symptoms is in fact consistent with the maximum reported plasma concentration (T max) as reported 0.5 hours for oral cetirizine (6). In our opinion, due to the similar structure of cetirizine to anticholinergics, it may have disturbed the balance between cholinergic and dopaminergic activity. In addition, taking twice the recommended dose may have caused the emergence of central nervous system side effects. As a result, cetirizine is widely used in pediatric patients considering that it is safe. However, it should be kept in mind that it may cause drug-induced tics and dystonia.

Keywords: Cetirizine, dystonia, histamine, tics

AuthorToEditor: Brito AF, Moreira LKS, Menegatti R, Costa EA. Piperazine derivatives with central pharmacological activity used as therapeutic tools. Fundam Clin Pharmacol 2019; 33(1): 13-24. doi: 10.1111/fcp.12408. Epub 2018 Sep 17. Yanai K., Yoshikawa T., Yanai A., Nakamura T., Iida T., Leurs R., Tashiro M. The clinical pharmacology of non-sedating antihistamines. Pharmacol. Ther. 2017;178:148–156. doi:10.1016/j.pharmthera.2017.04.004. Singer H., Mink J., Gilbert D., Jankovic J. Movement Disorders in Childhood. 2nd ed. Elsevier; London, UK: 2016. pp. 40–55. Zesiewicz TA, Sullivan KL. Drug-induced hyperkinetic movement disorders by nonneuroleptic agents. Handb Clin Neurol. 2011;100:347-363. doi:10.1016/B978-0-444-52014-2.00027-6. Anderson, K. E., & Weiner, W. J. (2005). Drug-induced tics. Kurlan R. Handbook of Tourette‘s syndrome and related tic and behavioral disorders. 2nd ed. New York: Marcel Dekker, 195-213.

[Abstract:0259]

Bupropion Associated Tic Disorder: A Case Report

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INTRODUCTION: Depression is a common mental illness in the general population. Bupropion is an antidepressant used in the treatment of Major Depressive Disorder (MDD) by inhibiting dopamine and norepinephrine reuptake. Bupropion is frequently preferred in the treatment of MDD due to its fewer GIS (gastrointestinal system) side effects, minimal effect on sexual function, low sedative effect and minimal effect on appetite compared to SSRI (Selective Serotonin Reuptake Inhibitors) drugs. In the literature, bupropion use has been associated with various tic disorders, but the reported cases are generally of exacerbation of existing tic disorders under bupropion use. Our case report is about a case of tic disorder thought to be related to bupropion use.

CASE PRESENTATION: A 45-year-old female patient was admitted to the psychiatry outpatient clinic with symptoms of severe depressive disorder. Bupropion 150 mg / day was recommended as initial treatment for the patient, and the patient's treatment was updated to 300 mg / day as she partially benefited from the treatment. Under bupropion 300 mg/day treatment, involuntary repetitive tongue thrusting and rubbing movements against teeth were detected in the patient's mouth area. The involuntary tongue movements of the patient, who had no history of antipsychotic use and no history of additional medication other than bupropion, were evaluated in terms of tic disorder. The patient was referred to plastic and reconstructive surgery and ear, nose and throat consultations regarding the hyperemic area on the tongue, and the lesion was evaluated in favor of in situ carcinoma. The patient's bupropion treatment was simultaneously tapered off and citalopram treatment was started. After dose reduction, it was observed that the patient's current complaint decreased. The mentioned side effect did not recur under citalopram treatment. Clinicians should be aware of the potential for bupropion to cause tic disorders and be able to develop alternative treatment approaches if necessary. Verbal and written consent was obtained from the patient.

CONCLUSION: Bupropion, a norepinephrine-dopamine reuptake inhibitor (NDRI), is commonly used for Major Depressive Disorder (MDD) due to its low side effect profile. This case report evaluates a dose-dependent tic disorder associated with bupropion use. The patient presented with involuntary repetitive tongue movements, scoring 8 points (POSSIBLE side effect) on the NADRPS scale. After dose reduction, symptoms improved, and treatment was adjusted to citalopram 10 mg/day, later increased to 20 mg/day, with no recurrence of side effects. Bupropion enhances dopaminergic activity, a factor implicated in tic disorders. Similar to other dopaminergic agents like methylphenidate, it can exacerbate tics. While most reports document worsening of pre-existing tics, one case describes adult-onset motor and vocal tics linked to bupropion. Neurological symptoms such as tremors and dystonia have been associated with bupropion, typically resolving after dose reduction or discontinuation. Despite its efficacy in MDD and smoking cessation, bupropion‘s potential for tic-related side effects underscores the importance of patient selection and monitoring. Further research is needed to fully understand its side effect profile and optimize its use in diverse populations.

Keywords: Bupropion, tic disorder, side effect

[Abstract:0260]

Sulpiride-Induced Urinary Retention: A Case Report

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INTRODUCTION: Sulpiride is an antipsychotic that blocks dopamine D2 receptors in the brain and has low anticholinergic and antihistaminic activity. It is commonly used to treat anxiety and depression by regulating dopamine levels, improving mood and behavior. Although effective, it can cause side effects such as drowsiness and stomach issues. Rarely, bladder-related problems like urinary retention or difficulty emptying the bladder may occur, significantly impacting patients' quality of life if untreated. This report highlights a case of urinary issues linked to sulpiride use in anxiety treatment, underscoring the need for careful monitoring and prompt management of rare side effects.

CASE PRESENTATION: A 60-year-old married woman with two children, a high school graduate, came to a psychiatry clinic. She reported severe anxiety, restlessness, fear of darkness, hot flashes, obsessive thoughts, and a constant feeling that something bad would happen. These symptoms disrupted her daily life and emotional well-being. The patient was first prescribed escitalopram 10 mg/day, a commonly used antidepressant. After one month, the dose was increased to 20 mg/day because her symptoms only partially improved. Although there was some relief, her anxiety remained significant. At a follow-up visit, sulpiride 50 mg/day was added to her treatment to better control her symptoms. This adjustment provided mild relief, and her anxiety and physical symptoms improved slightly. Later, the sulpiride dose was increased to 100 mg/day to enhance the effect further. While the higher dose of sulpiride improved her anxiety and reduced her hot flashes, she began experiencing new urinary symptoms. These included urinary retention, frequent urination, and a sensation of incomplete emptying of the bladder. These problems worsened as the sulpiride dose increased. The patient was evaluated by urology and gynecology specialists, but no underlying pathology was identified. Following these evaluations, she was referred back to psychiatry for a reassessment and adjustment of her treatment regimen. Written informed consents were obtained from the patient.

CONCLUSION: Although rare, sulpiride-induced urinary dysfunction should be considered as a potential side effect. This case highlights the importance of early recognition and management of such issues. Dopamine plays a critical role in bladder control via the pontine micturition center, where D1 receptors inhibit and D2 receptors facilitate the micturition reflex. Research by Mitra et al. demonstrates that dopamine depletion, as seen in the 6-OHDA Parkinson‘s model, increases spontaneous bladder activity and voiding frequency. Additionally, central dopamine depletion alters bladder innervation and smooth muscle contractility, enhancing purinergic receptor responsiveness after muscarinic receptor blockade. These disruptions to central and peripheral pathways may cause symptoms such as frequent urination or difficulty emptying the bladder. This case highlights the importance of monitoring for rare side effects like urinary problems when using sulpiride treatment. Identifying these issues early and adjusting treatment can help ensure better outcomes for patients, both in terms of mental health and overall well-being.

Keywords: Sulpiride, Side Effect, Urinary Retention

AuthorToEditor: This case highlights the importance of monitoring for rare side effects like urinary problems when using sulpiride treatment.

[Abstract:0264]

Treatment Approach and Guanfacine Use in Tourette Syndrome and ADHD Comorbidity

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INTRODUCTION: Tourette Syndrome (TS) is a childhood-onset neuropsychiatric disorder involving multiple motor and vocal tics.[1] Tics may present as sudden-onset, rapid, stereotyped, purposeless movements or sounds and are often associated with attention deficit hyperactivity disorder (ADHD). [2]

CASE PRESENTATION: A 15-year-old male patient applied to us with complaints of peer bullying at school for 4 months due to attention problems and vocal tics that he had been experiencing since he was 8 years old.

The patient's complaints started at the age of 4 with blinking, moving his fingers, jumping and shaking his head. It was evaluated as a tic disorder at an external center and risperidone treatment was started, but due to lack of benefit and weight gain, aripiprazole treatment was started and the patient benefited from this treatment. At the age of 8, vocal tics such as hiccuping, sniffling and screaming started and since the aripiprazole dose was not increased, haloperidol treatment was started. Coprolaline was added at the age of 11.

The patient first applied to us at the age of 13 due to attention problems that he had been experiencing since the age of 8. The patient's family stated that they did not apply because they were afraid that ADHD treatment would increase the severity of tics. The patient, who was using haloperidol 5mg/day at the time of application, was started on atomoxetine for ADHD, and despite using it at an effective dose for 5 months, since it was not beneficial and there was an increase in tics, methylphenidate 18mg/day treatment was started. Because the severity of the tics increased with methylphenidate treatment, the patient could not use the medication and stopped follow-up.

The patient applied to us again in January 2023, when he was 15 years old, due to peer bullying and attention problems due to vocal tics. The patient was started on 1mg/day Guanfacine treatment and increased to 4mg/day with vital signs and side effect monitoring. After using guanfacine treatment at this dose for 3 days, the treatment was continued at 3mg/day due to dizziness, blurred vision, peripheral cyanosis and measured arterial blood pressure of 90/60 mmHg.

In the controls, the patient's motor and vocal tic severity decreased and he described the benefits in terms of attention problems, so guanfacine treatment was continued at 3mg/day. There was no increase in his complaints during the process.

CONCLUSION:The patient should be informed in detail about the side effects that may occur during the increase in the guanfacine dose, and emergency situations should be explained. [3]

In patients with tic disorders, the assumption that tics will definitely increase with ADHD treatment as a result of inadequate psychoeducation causes families to avoid treatment, ADHD may remain untreated and may present with increased symptom severity in the future.

In our case with Tourette syndrome and ADHD comorbidity, guanfacine was effective in reducing the symptom severity of both disorders. Guanfacine may be a treatment alternative in reducing tic severity in TS cases that cannot be effectively treated with antipsychotics or cannot be tolerated. [4][5]

Keywords: ADHD, Adolescent, Guanfacine, Hypotension, Tic, Tourette

AuthorToEditor: 1.Recent progress on Tourette syndrome. Ueda K, Black KJ. Fac Rev. 2021;10:70. doi: 10.12703/r/10-70. 2.Tourette syndrome in a longitudinal perspective. Clinical course of tics and comorbidities, coexisting psychopathologies, phenotypes and predictors. Groth C. Dan Med J. 2018;65 3. Hirota T, Schwartz S, Correll CU. Alpha-2 agonists for attention-deficit/hyperactivity disorder in youth: a systematic review and meta-analysis of monotherapy and add-on trials to stimulant therapy. J Am Acad Child Adolesc Psychiatry. 2014;53:153–173. doi: 10.1016/j.jaac.2013.11.009. 4. Bloch MH, Panza KE, Landeros-Weisenberger A, Leckman JF. Meta-analysis: treatment of attention-deficit/hyperactivity disorder in children with comorbid tic disorders. J Am Acad Child Adolesc Psychiatry. 2009;48(9):884–893. doi: 10.1097/CHI.0b013e3181b26e9f. 5. Scahill L, Chappell PB, Kim YS, Schultz RT, Katsovich L, Shepherd E, et al. A placebo-controlled study of guanfacine in the treatment of children with tic disorders and attention deficit hyperactivity disorder. Am J Psychiatry. 2001;158(7):1067–1074. doi: 10.1176/appi.ajp.158.7.1067.

[Abstract:0267]

Acute Catatonia in Female Adolescent Successfully Treated with Lorazepam: A Case Report

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INTRODUCTION: Catatonia is a multifaceted neuropsychiatric syndrome characterized by body movement, emotional and behavioral symptoms. It may present as a primary psychiatric disorder or may be associated with underlying medical, neurological, endocrine, metabolic, and infectious conditions. The exact cause is not yet known. Catatonia is usually a medical emergency; rapid diagnosis and intervention are crucial for prognosis. The most commonly used and effective methods in the treatment of catatonia are benzodiazepines and ECT.

CASE PRESENTATION: The patient is a 17-year-old girl with no previous documented psychiatric history. She presented to the pediatric emergency department with complaints of not speaking, refusing to eat, and not following the commands. She was consulted at our clinic. In the mental status examination, the symptoms of her catatonic episode were mutism, immobility, fixed gaze, catalepsy, mannerism, and negativism. Physical examination revealed mild rigidity in the upper extremities. Complete blood count, biochemistry, thyroid and liver function tests, and vitamin B12 level tests were normal. In pediatric neurology follow-up, neurological examination and brain imaging including CT scan, magnetic resonance imaging (MRI), and electroencephalogram (EEG) tests were all normal. According to DSM-5 criteria, catatonia of the retarded type was diagnosed, with a score of 21 points on the Bush-Francis Catatonia Rating Scale (BFCR-S). Lorazepam 3 mg/day was initiated. Within one hour after lorazepam 1mg, her flexed posture improved significantly and she became more verbally and interactive. The patient completely recovered from catatonia in two days, with a score of 4 points on the BFCR-S. Aripiprazole 15 mg and valproic acid 1000 mg treatment was initiated for manic symptoms with psychotic features that emerged after the resolution of catatonia symptoms (increased gradually). No recurrence of catatonia and manic symptoms was observed at the 2-month follow-up. Our patient experienced a first episode of catatonia and manic episode. Lorazepam medication resulted in a rapid resolution of the patient's catatonic symptoms.

CONCLUSION: This case report highlights the importance of early diagnosis and comprehensive evaluation for catatonia, as well as the critical role of lorazepam in its management.

Keywords: Adolescent, catatonia, mutism, lorazepam

[Abstract:0269]

Turkish Validity and Reliability of Prodromal Questionnaire-Brief Version (PQ-B) Among Adolescent Clinical Population

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BACKGROUND AND AIM: The detection and intervention of individuals at high risk for psychosis have become crucial, and self-report scales aimed at this objective have gained significance. One of the most commonly used self-report scales to identify high-risk individuals is the "Prodromal Questionnaire-Brief Version (PQ-B)." However, there is no Turkish adaptation of any scale related to the prodromal process, including PQ-B. This study aims to demonstrate the validity and reliability of the Turkish version of the PQ-B scale in the Turkish language and among the adolescent population.

METHODS: The study included 88 participants in the clinical high-risk group for psychosis and 85 adolescent participants in the control group (without psychotic or prodromal syndrome). After the participants completed the "Prodromal Questionnaire-Brief Version (PQ-B)" scale, the results obtained by applying the SIPS interview (Structured interview of Psychosis Risk Syndromes) were compared. In addition, Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version (KID-SADS) interview, Positive and Negative Symptom Scale (PANSS), and sociodemographic form were administered by the interviewer. Scale data and demographic data and measurement tools were compared in terms of case and control groups. Psychometric evaluations were made, Cronbach's alpha value was calculated and ROC analysis was applied.

RESULTS: Prodromal Questionnaire-Brief Version (PQ-B)" was found to have construct validity, concurrent validity, discriminant validity, convergent validity, internal consistency analysis and reliability. The Cronbach's alpha value was found to be 0.90, and the area under the curve (AUC) was 0.989 with the Receiver Operation Caracteristic (ROC) analysis at an excellent level; ($p<0.001$, Limitmin = 0.970, Limitmax= 1.00) cut-off score obtained to determine the patient group was found to be 5.50

CONCLUSIONS: The Prodromal Questionnaire-Brief Version (PQ-B) scale is a valid, reliable and applicable interview in the Turkish child and adolescent population. It is a self-report scale that can be used before semi-structured interviews. It is the first self-report study with validity and reliability analyzes for prodromal symptoms in the Turkish adolescent population.

Keywords: Validity, Reliability, Turkish

AuthorToEditor: 1-Loewy, R. L., Pearson, R., Vinogradov, S., Bearden, C. E., & Cannon, T. D. (2011). Psychosis risk screening with the Prodromal Questionnaire--brief version (PQ-B). Schizophrenia research, 129(1), 42–46. https://doi.org/10.1016/j.schres.2011.03.029 2-Tonyali, A., Karaçetin, G., Kanik, A., Ertaş, E., Karabağ, U., Umut, Ö., Çiray, O., Özkan, B., & Ermiş, Ç. (2022). Turkish Version of Structured Interview of Psychosis-Risk Syndromes (SIPS) and Proposal of a Brief Version of SIPS as a Pretest Risk Enrichment. Noro psikiyatri arsivi, 59(2), 139–146. https://doi.org/10.29399/npa.27793 3-McGlashan, T., Walsh, B., & Woods, S. (2010). The psychosis-risk syndrome: handbook for diagnosis and follow-up. Oxford University Press.

[Abstract:0272]

The Impact of Untreated Selective Mutism and Obsessive Compulsive Disorder on the Life of a 14 Year-Old Girl

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INTRODUCTION: Selective mutism (SM) can be defined as not speaking in normal and social settings but speaking in settings where there are close relationships, such as with parents and siblings (1). The average age of onset for SM ranges between 2.7 to 4.1 years (2). SM has a higher prevalence in young children and decreases in adolescence and adulthood. The prevalence is approximately 1 in 140 below 8 years and approximately 1 in 550 in population samples up to 15 years (3). In this case report, a 14 year-old girl who doesn't talk to anyone except her family and has extreme fear of contamination was presented.

CASE PRESENTATION: This case was referred to our outpatient clinic from the pediatric neurology outpatient clinic where she was being followed for epilepsy which was diagnosed one year ago. Since the patient didn‘t speak during the examination, anamnesis was taken from her mother. According to history, it was noticed at the age of four years that she didn't speak to strangers. Due to Developmental Dysplasia of Hip, she couldn‘t go out because she had undergone continuous surgery until the age of six and spent the postoperative period in a cast. Her mother mentioned that she tends to be shy in social situations. She didn't speak to anyone except her family, even contact with relatives was limited, and avoided talking on the phone in crowded places. She wouldn‘t raise her finger in class unless the teacher asked a question and hadn‘t friends and didn't want to go to school because of this situation. In the later period she didn‘t go to classes, she only took exams. She still didn't talk to strangers and hadn‘t friends. She also had an extreme fear of contamination for a year. She refused to let anyone touch her bed, washed her hands with bleach and bathed frequently. She lost five kilograms in the last year due to loss of appetite. During the clinical examination she didn‘t speak, she expressed herself with body language in control. Screen for Child Anxiety Related Disorders score which was not consistent with the patient‘s clinical presentation was 8, Children‘s Depression Inventory score was 19 and Maudsley Obsessive Compulsive Inventory score was 15. According to DSM-5 criteria she was diagnosed with SM and obsessive-compulsive disorder. Sertraline treatment was started at 25 mg/day and after two weeks, the dose was increased to 50 mg/day. Five weeks after the initiation of treatment, an increase in the patient's speech attempts and a decrease in obsessive-compulsive behaviors were observed and Sertraline was increased to 75 mg/day. Cognitive Behavioral Therapy was planned after response to medical treatment.

CONCLUSION: The shyness and low speech in girls can be perceived as normal in some cultures, making it difficult to recognize the disorder, as was the case with this patient. Delay in initiating treatment hinders the development of social skills and negatively affects educational performance. Early diagnosis and treatment are necessary to prevent the persistence of symptoms and the development of other psychiatric disorders.

Keywords: Adolescent, selective mutism, treatment

AuthorToEditor: 1. American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 5th ed. American Psychiatric Publishing; 2013. 2. Viana, A. G., Beidel, D. C., & Rabian, B. (2009). Selective mutism: A review and integration of the last 15 years. Clinical Psychology Review, 29(1), 57-67. 3. Sharkey, L., & McNicholas, F. (2012). Selective mutism: A prevalence study of primary school children in the Republic of Ireland. Irish Journal of Psychological Medicine, 29(1), 36-40.

[Abstract:0303]

Bipolar Disorder in a Patient with Cerebral Palsy and Intellectual Disability

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INTRODUCTION: Cerebral palsy (CP) and intellectual disability (ID) increase the risk of mood disorders but complicate diagnosis and treatment. This case highlights a 16-year-old female patient presenting with bipolar disorder(BP) comorbid with CP and ID, emphasizing diagnostic and therapeutic challenges. This case is shared with informed consent obtained from her parents.

CASE PRESENTATION: In April 2023, a 16-year-old female patient presented with irritability, excessive talking, disorganized speech, insomnia, loss of appetite, delusions involving television characters, and self-talk in our clinic. Family members also reported behavioral changes, including talking with imaginary characters over the past 10 days. The family reported that before these symptoms, the patient had a calm temperament, no behavioral problems.The patient was born at 31 weeks and diagnosed with CP during infancy. She demonstrated delayed motor and cognitive milestones. She uses a wheelchair. The patient also has a history of epilepsy, managed effectively with no seizures in the past seven years, and she has been on carbamazepine treatment. Due to psychotic symptoms, risperidone treatment was initiated and titrated to a dose of 2 mg/day. The patient was followed up in coordination with the neurology department throughout the process. Following 8 months without symptoms, in December 2023, similar complaints recurred, with additional statements involving increased talk focused on marriage and the opposite sex. The risperidone dosage was increased to 3 mg/day. Risperidone treatment initially alleviated some symptoms but caused significant side effects, including rigidity, hyperprolactinemia, orobuccal movements, and hypersalivation. A switch to aripiprazole 10 mg/g successfully treated the symptoms but caused severe enuresis. During the planning for a potential change in antipsychotic treatment, the family discontinued the treatment. One month later, in May 2024, the patient began experiencing symptoms including discussions about marriage, irritability, and insomnia. The family sought care from another physician. The patient was started on sertraline 25 mg/day; however, the medication worsened her symptoms and was subsequently discontinued. Agitation worsened, leading to three consecutive emergency room visits and haloperidol and biperiden IM injections. The patient was later re-evaluated and resumed care under our team. During these follow-ups, a diagnosis of Bipolar I Disorder was confirmed. Olanzapine 5 mg/day was initiated, which resulted in significant clinical improvement. The patient has been monitored for seven months with sustained well-being. Due to the sedation side effects of olanzapine, a mood stabilizer (Valproic Acid 750 mg/day) was added to her treatment, and the olanzapine dose was reduced to 2.5 mg/day.

CONCLUSION: This case highlights the importance of individualized, multidisciplinary care in managing BP with comorbid CP and ID. The characteristic symptoms of BP, including irritability, reduced need for sleep, distractibility, excessive talkativeness, and impaired judgment, can often be mistaken for those of comorbid conditions like ID and the behavioral issues commonly associated with CP. Additionally, patients with CP and ID are more sensitive to antipsychotic effects, like in this case, making it crucial to initiate treatment at low doses. This case report contributes to the limited literature by presenting the diagnosis and treatment processes of a patient diagnosed with BP, comorbid CP, and ID.

Keywords: Bipolar disorder, cerebral palsy, intellectual disability

[Abstract:0304]

Obsessive-Compulsive Disorder Following Montelukast Use: A Case 1

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INTRODUCTION: Montelukast is a leukotriene receptor antagonist widely used for prophylactic and chronic asthma management and treating allergic rhinitis symptoms. During montelukast therapy, various psychiatric side effects, such as depression, anxiety, sleep disturbances, irritability, anger, and obsessive-compulsive disorder (OCD), may occur in some individuals. This case report presents an 8-year-old patient who developed symptoms of OCD following montelukast use.

CASE PRESENTATION: An 8-year-old male patient was started on montelukast 5 mg/day two months ago for allergic rhinitis. The patient had no history of psychiatric disorders. However, approximately 45 days ago, the patient began experiencing obsessions related to contamination and compulsions of hand washing. Mental status examination revealed that the symptoms gradually worsened and started affecting his daily functioning. The patient was assessed using the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS), and the score was found to be 23.

Montelukast therapy was discontinued after consultation with the relevant specialty, and the patient was closely monitored. Psychoeducation was provided to the family regarding the diagnosis, treatment, and follow-up process. Cognitive-behavioral therapy (CBT) was chosen as the treatment method for the patient's OCD symptoms. Four weeks after the discontinuation of montelukast, a reduction in OCD symptoms was noted, and by the eighth week, the Y-BOCS score had decreased to 16.

CONCLUSION: Neuropsychiatric symptoms have been observed in one-quarter of patients treated with montelukast, with the majority (75%) occurring within the first two weeks of treatment. It has been demonstrated that these side effects are generally mild to very mild, and discontinuation of the drug is usually sufficient, with rapid improvement shortly after cessation. While montelukast use is associated with various neuropsychiatric side effects, its relationship with OCD remains inadequately understood. Our case suggests that montelukast use may contribute to the development of OCD. Therefore, patients prescribed montelukast should be closely monitored for the potential onset of obsessive-compulsive disorder.

Keywords: Montelukast, obsessive-compulsive disorder, side effect, case report.

[Abstract:0309]

The Fear Of Inabılıty To Fıll The Voıd, The Comorbidity of Depressive Symptoms and Hoarding Disorder: A Case Report

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INTRODUCTION: Hoarding disorder (HD) is characterized by a persistent difficulty discarding items, the desire to save items to avoid negative feelings associated with discarding them, significant accumulation of possessions that clutter active living areas and significant distress or impairment in areas of functioning. We present a case of a 58-year-old unmarried woman who was referred to the psychiatry department for collecting various objects that were deposited unorganized in the patient‘s house.

CASE PRESENTATION: A 58-year-old female patient presented to our general psychiatry outpatient clinic in July 2023 with the main complaint of difficulty discarding various objects, including clothes, makeup items, shoes, bags, carpets, even exterior pieces from buildings, along with a fear of not being able to fill the void left by discarding these items. The patient had a history of being hospitalized in 2020 for a diagnosis of unipolar depression and hoarding disorder. Upon further assessment, it was revealed that the patient began hoarding in elementary school by collecting stamps, with the aspiration of becoming a collector at that time. After losing her father in her first year of university and her mother in her third year, her hoarding behavior significantly worsened. In the past 15 years, after losing several loved ones, the behavior progressively intensified.

Based on this history, it was concluded that the patient‘s hoarding behavior was triggered by depressive mood episodes. During these periods, purchasing clothes provided her with temporary emotional relief. Her house had become so cluttered that she had not invited anyone over for years and expressed feelings of shame about the state of her home. Treatment with fluoxetine 40 mg/day and mirtazapine 15 mg/day (for her insomnia) was initiated, and the patient was referred to the obsessive-compulsive disorder (OCD) outpatient clinic for follow-up.

During follow-up, depressive symptoms, including feelings of unwillingness, loss of pleasure, inadequacy, and worthlessness, were noted. As a result, aripiprazole 2.5 mg/day was added to the treatment regimen, and the dose was gradually increased to 10 mg/day. The patient reported positive feedback, stating that aripiprazole had improved her depressive symptoms. Despite pharmacotherapy and psychotherapeutic interventions, the hoarding behavior persisted without significant reduction. Therefore, a switch from fluoxetine to duloxetine was made, with the final treatment regimen being duloxetine 60 mg/day, aripiprazole 10 mg/day, and mirtazapine 7.5 mg/day.

The patient is currently under follow-up at the OCD outpatient clinic, and the treatment process continues. Informed consent for case presentation has been obtained from the patient.

CONCLUSION: This case highlights the comorbidity of depressive symptoms and hoarding disorder, illustrating how depressive episodes can worsen hoarding behaviors. The early onset of hoarding in childhood underscores its potential for long-term, destructive consequences, making early detection crucial. While cognitive-behavioral therapy (CBT) is key in treating hoarding disorder, addressing co-occurring depression with pharmacotherapy is equally important. Future research should explore interventions targeting the link between HD and depression while emphasizing the importance of early diagnosis to improve outcomes.

Keywords: Cognitive-behavioral therapy, depression, early diagnosis, pharmacotherapy, hoarding disorder

Photograph 1



Current state of the patient's home environment

Photograph 2



Current state of the patient's home environment

[Abstract:0310]

Risperidone Induced Tardive Dyskinesia in an Adolescent with Intellectual Disability

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INTRODUCTION: Risperidone is an effective antipsychotic which commonly used for behavioral problems in children with intellectual disability. There are several studies that confirm the effectiveness of risperidone up to one year for behavioral problems but risperidon is often used longer than one year and seriously associated with adverse effects such as dyskinesia, akathisia and parkinsonism. Furthermore risperidone can cause tardive dyskinesia in certain patients especially children with intellectual disability who are more likely to experience side effects of antipsychotics.

CASE PRESENTATION: A 15-year-old male patient who has Bardet Biedl Syndrome (BBS) applied to our clinic accompanied by his parents due to aggressive behaviors and unstoppable cries. Aripiprazole was prescribed intended for these symptoms. After one month of usage, it was thought that there was no benefit, and the treatment was changed to risperidone. Risperidone dose gradually increased up to 4.5 mg/day in 9 months. In June of 2024, he applied to our clinic with cervical dystonia and tiptoeing as a contraction of lower extremity muscles. In our examination, we observed orofacial stereotypic movements, making smacking sounds, tongue protrusion, rolling the tongue, buccolingual movements, involuntary movements of left arm, and walking difficulties. Additionally, he was screaming with a high-pitched voice.

CONCLUSION: In conclusion, tardive dyskinesia is an iatrogenic movement disorder that assosiated with antipsychotic medication. The longer the treatment the higher the risk. This risk increases even more in the children with a neurodevelopmental disorder such as in our patient with intellectual disability. We need to be more careful while prescribing antipsychotics and while using these medications we should beware about the side effects and monitor these symptoms in every visit.

Keywords: Intellectual Disability, Tardive Dyskinesia, Risperidone

AuthorToEditor: 1. Ji NY, Findling RL. Pharmacotherapy for mental health problems in people with intellectual disability. Vol. 29, Current Opinion in Psychiatry. Lippincott Williams and Wilkins; 2016. p. 103–25. 2. Ramerman L, de Kuijper G, Scheers T, Vink M, Vrijmoeth P, Hoekstra PJ. Is risperidone effective in reducing challenging behaviours in individuals with intellectual disabilities after 1 year or longer use? A placebo-controlled, randomised, double-blind discontinuation study. Journal of Intellectual Disability Research. 2019 May 1;63(5):418–28. 3. Frei K. Tardive dyskinesia: Who gets it and why. Parkinsonism Relat Disord. 2019 Feb 1;59:151–4. 4. Takeuchi H, Mori Y, Tsutsumi Y. Pathophysiology, prognosis and treatment of tardive dyskinesia. Vol. 12, Therapeutic Advances in Psychopharmacology. SAGE Publications Ltd; 2022. 5. D'Abreu A, Akbar U, Friedman JH. Tardive dyskinesia: Epidemiology. Vol. 389, Journal of the Neurological Sciences. Elsevier B.V.; 2018. p. 17–20.

[Abstract:0316]

A Case Series on Guanfacine Use for ADHD Treatment in Zonguldak: Clinical Outcomes and Insights

Hakan Kayış

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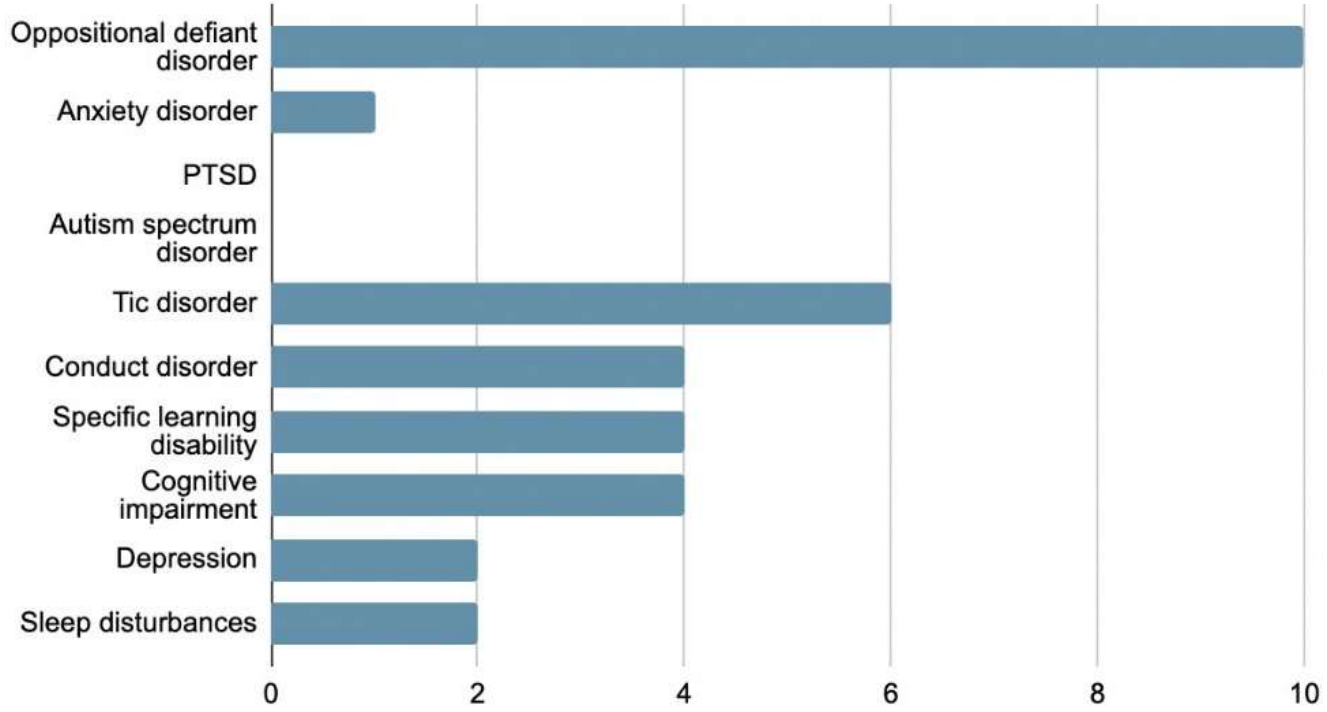
INTRODUCTION: Guanfacine, an α2A-adrenergic receptor agonist, has gained recognition as an effective treatment for Attention-Deficit/Hyperactivity Disorder (ADHD) in children and adolescents. Research indicates that guanfacine enhances activation in the dorsolateral prefrontal cortex (DLPFC), an area associated with cognitive control, thereby improving emotional regulation and reducing the influence of emotional cues on cognitive tasks in individuals with ADHD. It is particularly advantageous for patients who may not tolerate stimulant medications due to side effects or contraindications. It has been noted that guanfacine can be used effectively in patients with comorbid conditions, such as tic disorders, where stimulants might exacerbate symptoms. This case series aims to assess the efficacy and side effects of guanfacine, which has not so long ago been introduced to the Turkish pharmaceutical market as an alternative treatment for ADHD, and to share our clinical experiences.

CASE PRESENTATION: The study included 16 patients aged 7 to 18, all diagnosed with ADHD, who had been receiving guanfacine treatment for at least one month for any reason. Patients were assessed using a sociodemographic data form, which also gathered information on comorbidities and concomitant medications, the TURGAY DSM-IV-based Conduct Disorder Symptom Screening Scale, the Clinical Global Impression Scale, and a scale to evaluate guanfacine-related side effects. Data were analyzed using SPSS software. Among the patients included in our study, 87.5% (n=12) were male and 12.5% (n=2) were female, with a mean age of 11.12 years. Comorbidities were present in 81.3% (n=13) of the patients. The most frequently observed comorbid diagnoses, listed in descending order of prevalence, were oppositional defiant disorder (62.5%, n=10), tic disorder (37.5%, n=6), conduct disorder, cognitive impairment, and specific learning disability (25%, n=4), followed by depression and sleep disturbances (12.5%, n=2) and anxiety disorder (6.3%, n=1). Side effects were reported in 50% (n=8) of the patients. The most commonly reported side effects, in order of frequency, were drowsiness and fatigue (37.5%, n=6), dry mouth (25%, n=4), and nightmares (6.3%, n=1). When evaluating the improvement in patients' CGI scores, it was observed that 12.5% (n=2) showed significant improvement, 50% (n=8) showed slight improvement, and 37.5% (n=6) showed no improvement. Guanfacine treatment was discontinued in the 37.5% (n=6) of patients who showed no improvement. In all cases where treatment was discontinued, the reason was the lack of therapeutic efficacy.

CONCLUSION: The predominance of male patients in our study may be due to the fact that guanfacine is more commonly prescribed for children with higher levels of hyperactivity and behavioral issues. The low treatment efficacy can be explained by the inclusion of patients resistant to first- and second-line ADHD medications, meaning they were pharmacologically refractory or 'difficult' cases. Additionally, the high prevalence of comorbidities may suggest that guanfacine was added to the treatment regimen for patients with comorbid conditions who did not respond to previous treatments, in an attempt to improve therapeutic outcomes. To better evaluate the efficacy and side effects of guanfacine, larger-scale studies should be conducted that exclude patients who did not respond to first- and second-line treatments for ADHD.

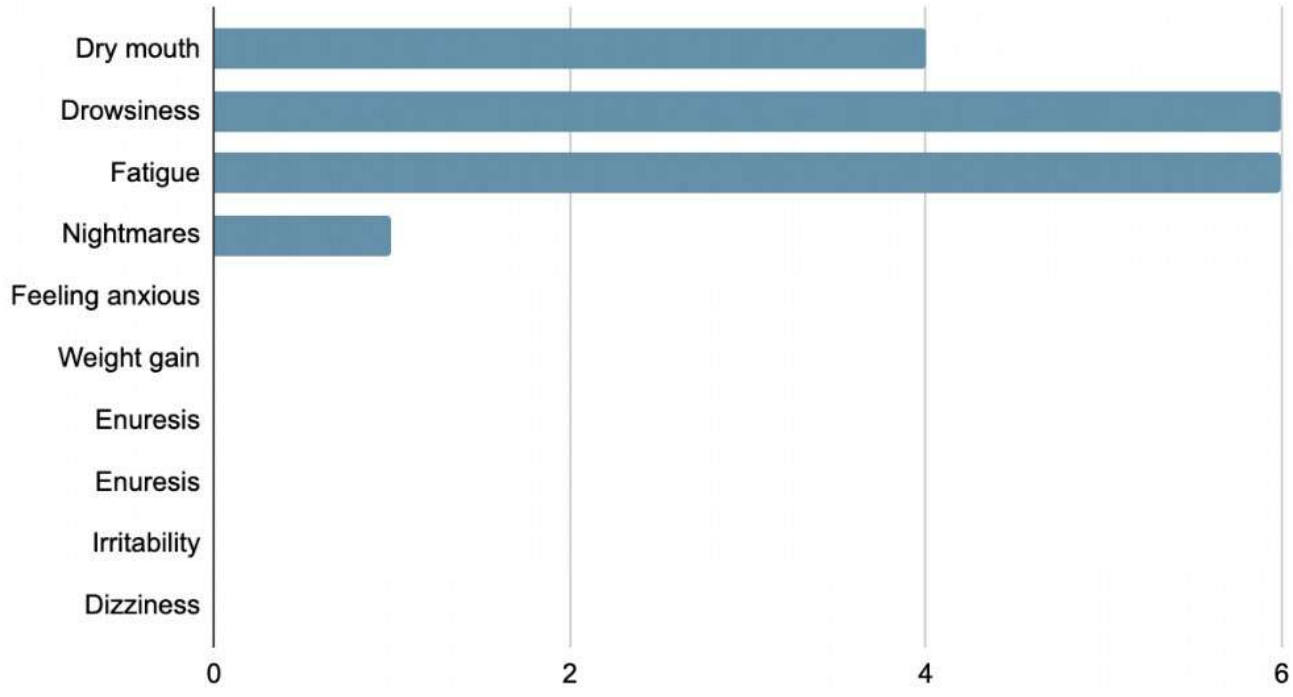
Keywords: Adhd, guanfacine, side effects

Comorbidities



Frequency of comorbid conditions

Side effects



Most frequently reported side effects during guanfacine treatment

[Abstract:0319]

A Case Report: Resolution of Parasomnia with Sertraline Treatment in a Patient with Obsessive-Compulsive Disorder

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INTRODUCTION: Obsessive-Compulsive Disorder (OCD) is characterized by recurrent obsessive thoughts, images, or urges that cause anxiety, along with compulsive behaviors or mental acts aimed at reducing distress. Studies have shown some evidence that total sleep duration and sleep efficiency are reduced in individuals with OCD. Parasomnias are sleep disorders defined by various motor activities occurring during sleep. They can be specific to either NREM or REM sleep or may occur in both sleep stages. In our case, we present a patient diagnosed with OCD who experienced parasomnia, which improved with Sertraline treatment.

CASE PRESENTATION: An 11-year-old, 10-month-old girl was brought to the clinic because of compulsive symptoms. She washed her hands and feet frequently, changed clothes excessively and washed clean clothes again. At night she would wake up thinking her clothes were dirty and change them 2-3 times. Her family noted that there was no actual dirt, but she still felt unclean and did not remember these episodes in the morning. The increase in obsessive symptoms coincided with more frequent episodes of sleepwalking over the previous four months.

A psychiatric assessment revealed that she was conscious, fully oriented, anxious and dysphoric, with intact reality testing. According to DSM-5, she was diagnosed with obsessive-compulsive disorder (OCD) and parasomnias (sleepwalking type). Treatment was started with sertraline 25 mg/day. After two weeks, the nocturnal clothing changes stopped, but the obsessive-compulsive symptoms worsened. The dose of sertraline was increased to 100 mg/day, with improvement in symptoms.

CONCLUSION: Patients with obsessive-compulsive disorder often experience reduced sleep duration and efficiency. Sleepwalking, which occurs during NREM sleep, involves aimless movements and amnesia. Emotional stress, light and sound are thought to trigger sleepwalking episodes.

Serotonergic drugs such as paroxetine and lithium have been reported to cause sleepwalking (1, 2, 3). Some cases have been treated with serotonergic agents (4). However, not all patients respond in the same way.

Studies show that sertraline increases delta-wave sleep and prolongs REM latency (5). In this case, sertraline improved sleep quality and eliminated nocturnal behaviour, highlighting the importance of identifying triggers and pharmacological treatment in cases of sleepwalking.

Keywords: Obsessive Compulsive Disorder, Parasomnia, Sertraline

AuthorToEditor: 1. Juszczak GR, Swiergiel AH. Serotonergic hypothesis of sleepwalking. Med Hypotheses 2005;64:28-32. 2. Kawashima T, Yamada S. Paroxetine-induced somnambulism. J Clin Psychiatry 2003;64:483. 3. Landry P, Warnes H, Nielsen T, Montplaisir J. Somnambulisticlike behaviour in patients attending a lithium clinic. Int Clin Psychopharmacol 1999;14:173–5. 4. Gau SF, Soong WT. Psychiatric comorbidity of adolescents with sleep terrors or sleepwalking: A case-control study. Aust N Z J Psychiatry 1999;33:734-9. 5. Jindal RD, Friedman ES, Berman SR, Fasiczka AL, Howland RH, Thase ME. Effects of sertraline on sleep architecture in patients with depression. J Clin Psychopharmacol. 2003 Dec;23(6):540-8. doi: 10.1097/01.jcp.0000095345.32154.9a. PMID: 14624183.

[Abstract:0327]

Synkinesis in A Case of Intellectual Disability

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INTRODUCTION: Synkinesis is defined as the involuntary contraction of one or more muscle groups simultaneously with the voluntary contraction of a muscle group. The incidence of synkinesis is not yet clearly known. In the literature, synkinesis and mirror movements accompanying stroke, Parkinson's disease, Creutzfeldt-Jakob disease, cerebral palsy, Huntington's disease, syringomyelia, and parietal tumors have been reported. In this case study, synkinesis observed in a patient with intellectual disability will be described due to its rarity.

CASE PRESENTATION: A 6-year-old male patient was brought to our clinic with complaints of delayed learning compared to his peers, clumsiness, and difficulty in self-care. In the history taken, it was learned that he did not go to school, did not receive preschool education, spoke late, could not perform self-care independently, and had poor peer adjustment. It was also stated that he had difficulty putting on clothes, using a fork/spoon, performing movements requiring coordination, and needed help with these tasks. In the psychiatric evaluation, it was observed that the number of words was below the expected developmental level, there was a speech delay, he could not count in succession, his academic and conceptual knowledge was behind that of his peers, and motor movements requested with one extremity were also performed with the opposite extremity. In the ADSI test conducted, the overall developmental level was found to be consistent with that of a 2-year and 9-month-old. It has been determined that the development of fine motor skills is significantly delayed, and compared to the development of gross motor skills, it is approximately 2 years behind. In the evaluation of the patient exhibiting mirror movements, it was found that there was intellectual disability, and the delay in motor skills was not solely due to cognitive development. It was observed that the clinical features of the patient diagnosed with synkinesis affected motor skills. In the cranial MRI performed, microcephaly and variant changes in the corpus callosum were detected.

CONCLUSION: Synkinesis is a rare involuntary movement disorder seen in childhood. Usually, a similar movement to that performed in the distal upper extremities is observed on the opposite side. It is most commonly reported in the eye area and facial muscles after damage to the facial nerve and brachial plexus. The coexistence with many developmental defects or diseases has been reported. The source of mirror movements is not definitively known. Mirror movements are considered to trigger the ipsilateral corticospinal tract. Normally, corpus callosum inhibits this activation. In the case presented, it is thought that synkinesis and mirror movements occurred due to the lack of necessary inhibition caused by variant changes in the corpus callosum. There is no clear evidence in the literature regarding the treatment of synkinesis. As a condition that complicates social adaptation and disrupts the patient's functionality, it is particularly important to recognize it during early childhood. In this case, the detection of synkinesis, observed alongside intellectual disability and microcephaly, emphasizes the importance of evaluating motor movements in psychiatric assessments.

Keywords: Synkinesis, intellectual disability, mirror movements, motor disorders

[Abstract:0332]

Recognizing Serotonin Syndrome: A Case Report

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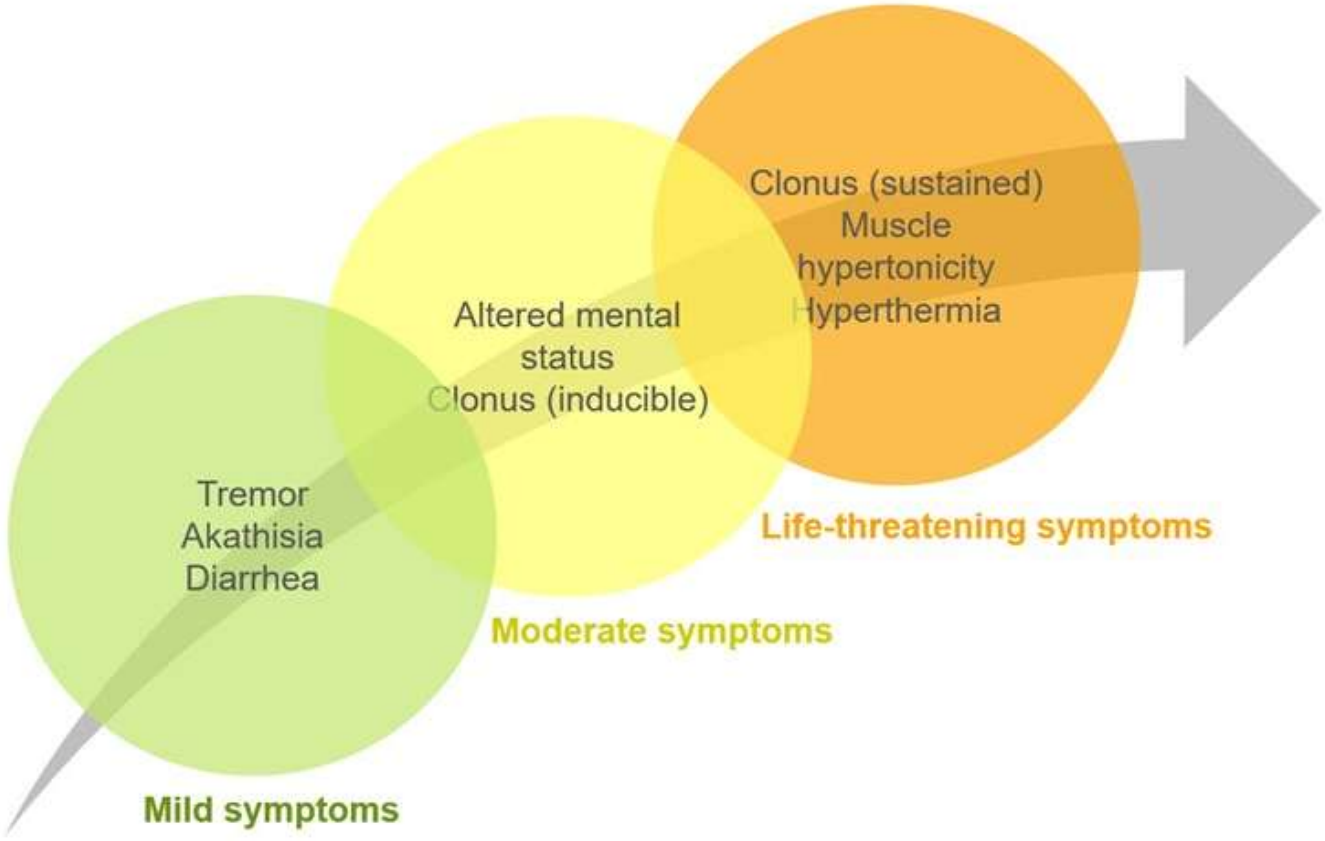
INTRODUCTION: Serotonin syndrome is a potentially life-threatening drug reaction caused by excessive serotonergic activity in the central nervous system and peripheral receptors. It may arise from therapeutic drug use, overdose or unintended drug interactions. Clinically, it is characterized by altered consciousness and behavior, autonomic dysfunction, and neuromuscular abnormalities. Manifestations vary from mild symptoms to severe, life-threatening outcomes. This case emphasizes the importance of early recognition and management of serotonin syndrome.

CASE PRESENTATION: A 71-year-old male presented with fever, chills, sweating, palpitations, hot flashes, and facial flushing for two days. He also had increased forgetfulness, restlessness, sleep disturbances for four days. His medical history included dementia, treated with donepezil 5 mg and memantine 10 mg, and Parkinson‘s disease, for which rasagiline 1 mg was prescribed a month ago. He was also on duloxetine 40 mg for urinary incontinence, prescribed by the urology department. Psychiatric treatment included venlafaxine 75 mg and risperidone 1 mg, it was learned that risperidone 1 mg was replaced with aripiprazole 2.5 mg four days before the hospital admission and aripiprazole was discontinued two days prior. On mental status examination, he was conscious but showed limited cooperation, disorientation to time and place, and impaired attention and recall. His speech was reduced, with decreased sleep and appetite. Neurological findings included bilateral bradykinesia, rigidity, tremors, hyperreflexia, and clonus in the lower extremities. Routine laboratory tests and non-contrast brain computed tomography ruled out metabolic or intracranial causes. Based on the Hunter criteria, serotonin syndrome was diagnosed, with fever (>38ºC), tremor, hyperreflexia, clonus, and hypertonia. Serotonergic medications (venlafaxine, duloxetine, and rasagiline) were discontinued, and alprazolam 0.5 mg/day was started to manage neuromuscular symptoms and restlessness.

CONCLUSION: The incidence of serotonin syndrome is rising due to polypharmacy and increased recognition of subclinical cases. The diversity of medical conditions in the differential diagnosis and the heterogeneity of clinical symptoms complicate diagnosis. Hunter criteria are preferred for their high sensitivity and specificity in diagnosing serotonin syndrome. Treatment involves discontinuation of serotonergic drugs and supportive care. Benzodiazepines can help control autonomic and neuromuscular symptoms. In this case, the sudden onset of symptoms after starting aripiprazole suggests a possible role in triggering serotonin syndrome, despite its low serotonergic activity. Case reports suggest that aripiprazole‘s partial serotonergic agonist effect could contribute to serotonin syndrome when combined with other serotonergic drugs like monoamin oksidase inhibitors or selective serotoninre-uptake inhibitors. This case underscores the importance of careful medication review and interdisciplinary collaboration, as serotonergic drugs are often prescribed by multiple specialties. Polypharmacy without effective communication increases the risk of adverse drug interactions. Early recognition and intervention are critical for reducing morbidity and mortality associated with serotonin syndrome.

Keywords: Aripiprazole, drug interaction, hunter criteria, serotonin syndrome

Figure 1



The spectrum of clinical findings in serotonin syndrome

[Abstract:0333]

Acute Psychosis in an Adolescent Diagnosed with Multiple Sclerosis: A Case Report

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INTRODUCTION: Multiple sclerosis (MS) is a chronic neuroinflammatory disease impairing functionality and quality of life. Psychiatric symptoms are prevalent and often complicate disease progression while reducing life quality. Cognitive changes are common, affecting processing speed, attention, learning, memory, visuospatial abilities, and language. Although cognitive impairment correlates weakly with disease duration or physical disability, its severity is linked to neuronal tissue damage in specific brain regions. Emotional and psychological disturbances in MS pose diagnostic and therapeutic challenges due to overlapping symptoms with the disease's neurological manifestations. Common psychiatric conditions include bipolar disorder, anxiety disorders, apathy, and pseudobulbar affect. We present the diagnostic and therapeutic journey of a 17-year-old female MS patient with acute psychotic symptoms. Written informed consent was obtained from her and her guardians for publication of this case.

CASE PRESENTATION: A 17-year-old with MS presented to the emergency department with sudden social withdrawal, visual hallucinations, and bizarre behaviours, raising concerns of an MS exacerbation by her family. A psychiatric consultation revealed persecutory delusions and visual hallucinations. The initial differential included acute psychotic disorder and manic episode. For further evaluation and management, she was admitted to our inpatient child psychiatry unit. Her developmental history was unremarkable. Diagnosed with MS in March 2023 after presenting with refractory headaches. She experienced recurrent relapses and began Ocrelizumab in May 2024 on a six-month dosing schedule. No further relapses have occurred since. Initial psychiatric evaluation showed guarded, defensive behaviour, piercing eye contact, and difficulty providing goal-directed responses. Thought processes were disorganized, with flight of ideas, derailment, and thought blocking. Delusions of reference, persecution, paranoia, and thought broadcasting were present, alongside visual and auditory hallucinations. She demonstrated impaired judgement, compromised reality testing, and reduced psychomotor activity.

Olanzapine was started at admission and titrated to 20 mg/day. Neurological evaluations, including contrast-enhanced MRI, found no acute plaques but showed involvement of the left limbic system, particularly the parahippocampal region. Although her initial complaints subsided, emotional lability and disorganized thought processes persisted, prompting a provisional mood disorder diagnosis. Lithium was added and increased to 1200 mg/day, leading to remission of delusions, hallucinations, and thought disorganization, and a return to euthymia. She was discharged on olanzapine 20 mg/day and lithium 1200 mg/day, with continued improvement noted during follow-up visits.

CONCLUSION: The etiology of neuropsychiatric disturbances in MS remains poorly understood, likely involving a complex interplay of biological, disease-related, behavioural, and psychosocial factors. Although treatment of neuropsychiatric symptoms can be effective, current evidence is primarily derived from case reports and uncontrolled studies. A comprehensive biopsychosocial approach is essential for the optimal management of MS patients. Early recognition and treatment of co-occurring psychiatric conditions can mitigate morbidity and mortality, enhancing overall outcomes.

Keywords: Multiple Sclerosis, Acute Psychosis, Mood Disorders

[Abstract:0334]

Stuttering and ADHD Treated With Atomoxetine

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INTRODUCTION: Stuttering is a communication disorder that disrupts the rhythm, continuity and fluency of an individual's speech by frequent repetitions or prolongations of sounds without any problems in sound or phonology. Stuttering typically begins in early childhood and is estimated to impact 5% of individuals overall. Stuttering is more common in boys. Stuttering in children usually resolves with therapy or spontaneously. It remains permanent in approximately 20% to 30% of cases. The primary treatment for stuttering is behavioral therapy, particularly speech therapy, while pharmacological treatment is rarely used. Here, a case will be described in which both attention deficit and hyperactivity disorder(ADHD) and stuttering were treated with atomoxetine.

CASE PRESENTATION: A 12-year-old boy was brought to our outpatient clinic by his parents 4 years ago with a complaint of stuttering while speaking. According to the anamnesis, stuttering started at the age of 3 and had reached a level that would impair his functionality at the age of 8. The patient received adequate speech therapy at the age of 8, but his stuttering did not improve. The patient was diagnosed with ADHD during follow-up and was started on long-acting methylphenidate(MPH) treatment. Although the patient's ADHD symptoms decreased after using long-acting MPH treatment for 3 years, his stuttering symptoms continued. In the patient with combined type ADHD and stuttering, the long-acting MPH dose was increased from 36 mg/d to 54 mg/d due to weight gain but the side effects of loss of appetite, headache and tachycardia developed. The long-acting MPH dose used by the patient was reduced from 54 mg/d to 36 mg/d, and a decrease in side effects was observed. However, the patient developed attention problems, hyperactivity and clumsiness. Therefore, long-acting MPH treatment was discontinued and 25 mg/d atomoxetine was started and the dose was gradually increased to 60 mg/d. The patient, who had no change in the severity of stuttering during the period when he used long-acting MPH, had partial remission in stuttering after 1 month and complete remission after 3 months when his treatment was changed to atomoxetine. The patient's ADHD symptoms also decreased after the atomoxetine was increased to an effective dose.

CONCLUSION: A study found that using the stimulant medication amphetamine instead of atomoxetine increased the rates of stuttering, tics, and social anxiety, despite the fact that atomoxetine has never been used to treat stuttering. According to earlier reports, ADHD has been associated to a small percentage of stuttering occurrences, particularly in severe cases. When the literature is examined, it was seen that in children aged 4-12 years who stuttered, the group that received atomoxetine in addition to speech therapy for 3 months showed a greater improvement in stuttering severity compared to the group that received speech therapy alone. Studies have also shown that 26% of children who stutter had ADHD. This case suggests that atomoxetine may be a treatment option for children with comorbid ADHD and stuttering. Additional studies are needed to observe the place of atomoxetine in the treatment of stuttering.

Keywords: ADHD, Stuttering, Atomoxetine, Child psychiatry

[Abstract:0335]

Manic Symptoms in the Follow-up of an Inpatient with an Acute Psychotic Episode: A Male Adolescent Case Report

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INTRODUCTION: Psychotic mania is a form of bipolar disorder characterized by increased self-worth, delusions, and hallucinations. Differentiating between psychosis and mania is critical for proper treatment but can be challenging due to overlapping symptoms. The lack of biomarkers complicates distinguishing between conditions like schizophrenia and psychotic mania, requiring careful diagnostic evaluation. Schizoaffective disorder, a complex condition featuring both mood and psychotic symptoms, necessitates distinct treatment and follow-up approaches. Besides clinical interviews, observation plays a key role in evaluating psychotic patients, as some symptoms may only be identified through in vivo assessments. This case report aims to explore the clinical features of psychotic mania, refine diagnostic strategies, and discuss appropriate treatment options. Written consent for publication was obtained from the patient and their family.

CASE PRESENTATION: A 17-year-old male with a psychiatric history of somatic delusions, including a belief that his brain was shrinking, was diagnosed with an ―Acute Psychotic Episode" two years ago at a different psychiatric clinic. He was later diagnosed with ―Depressive Disorder" and ―Social Anxiety Disorder" a year ago due to social anxiety and difficulty communicating. The patient had previously been inconsistent with his prescribed medications, discontinuing Olanzapine (2.5 mg/day) and Fluoxetine (20 mg/day) one month before admission. The patient was admitted to the Child Psychiatry Department at Ankara Bilkent City Hospital with a preliminary diagnosis of ―Acute Psychosis," marked by high anxiety, irritability, agitation, and delusions of reference and persecution. He had been experiencing these delusions, along with visual and auditory hallucinations, for a month. His delusions included beliefs of special knowledge, being followed, and being in danger, often leading to distrust in others. On admission, there was a marked increase in speech and psychomotor activity. The patient also experienced reduced sleep duration but felt no need for rest due to his delusions. His thought associations included a flight of ideas, and he had planned activities that could lead to harmful outcomes, consistent with his delusions. These symptoms led to the consideration of ―Psychotic-Featured Mania." The patient was treated with a combination of Lithium 1200 mg/day, Olanzapine 30 mg/day, Chlorpromazine 150 mg/day, Diazepam 15 mg/day, and Biperiden 2 mg/day. His manic symptoms improved, and delusions and hallucinations resolved, allowing him to be discharged with the diagnosis of ―Psychotic-Featured Mania." During a six-month follow-up, the patient did not report any delusions or hallucinations, and his manic symptoms had subsided. His treatment regimen was gradually tapered, and both Chlorpromazine and Diazepam were discontinued.

CONCLUSION: Psychotic symptoms are commonly associated with disorders such as schizophrenia, but they can also be part of mood disorders like bipolar disorder and psychotic mania. Therefore, patients presenting with psychotic symptoms should undergo a thorough evaluation to differentiate between these conditions. This case underscores the importance of distinguishing complex disorders like schizoaffective disorder. It highlights the need for long-term monitoring of patients with psychotic symptoms to ensure appropriate treatment and management.

Keywords: Psychosis, psychotic mania, schizoaffective disorder

[Abstract:0343]

Managing Zar Syndrome in a Cross-Cultural Context: A Case Report

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INTRODUCTION: Culturally bound syndromes like Zar, are predominantly observed in East African and Middle Eastern populations, cause significant challenges in psychiatric diagnosis and treatment. Zar is characterized by beliefs of spirit possession, altered behaviors such as withdrawal, agitation, and ritualistic actions to expel spirits, and somatic symptoms interpreted as signs of possession. These symptoms are often understood within cultural or religious frameworks. Migration and acculturation stress can intensify these symptoms, further complicate clinical presentation and management in cross-cultural contexts.

CASE PRESENTATION: A 23-year-old Ethiopian male, single, second-year medical student in Turkiye, stays in dormitory. He was admitted to emergency department with agitation, incoherent speech, disorganized behaviors. When his medical history was detailed, it was learned that 2 months ago he started to feel chest pain, palpitations, and shortness of breath. With these sypmtoms he consulted to a cardiologist and after examination, no cardiac disease was diagnosed. But his complaints continued, he started to get anxious and talked with his religious teacher from Ethiopia. His teacher made the patient believe he was under a spiritual attack by an envious friend. After that he started to get more anxious and feel as a spirit entered to his body from his feet. In the following period, he started to spend less time with his friends, he started to feel bad, his concentration got worsen and his success at school decreased. On the first day of his admission, the patient appeared anxious and exhibited a defensive attitude toward the interviewer. He was afraid of being alone, concerned about potential harm. He had persistent belief about being under the influence of a spell. During psychiatry ward follow-ups, neurological evaluations, including MRI and EEG were performed, his blood tests were checked. There was no patholgical result. Diagnostic interviews were conducted. His treatment gradually arranged as olanzapine 20 mg/day, citalopram 20 mg/day, and diazepam 5 mg/day which resulted in significant improvement. His anxiety and thoughts that he would get harmed regressed. He was discharged with ―Zar syndrome" diagnosis. At discharge, although he still explained his situation with cultural elements, his adherence to treatment was good and he attended his follow-up visits regularly.

CONCLUSION: This case report highlights the importance of assessing each patient in the context of his/her cultural background and formulating a treatment plan tailored to each patient. Managing such cases requires a multidisciplinary approach that integrates evidence-based interventions with an understanding of the patient's cultural and sociocultural context. This case demonstrates the critical role of cultural sensitivity in psychiatric care, showing that a comprehensive understanding of cultural factors can significantly improve diagnostic accuracy and treatment efficacy in complex clinical presentations.

Keywords: Cross-cultural psychiatry, Culturally bound syndrome, Zar syndrome.

[Abstract:0344]

Sertraline Induced Remission of Gardner-Diamond Syndrome in an Adolescent Girl: A Case Report

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INTRODUCTION: Gardner-Diamond Syndrome (GDS), also known as psychogenic purpura or autoerythrocyte sensitization syndrome, is a rare condition characterized by the repeated appearance of painful bruises (ecchymotic lesions) that typically develop without any obvious cause or injury (1,2). Individuals with GDS often present with painful bruising (ecchymoses), swelling and non-specific symptoms such as fatigue, headache and/or gastrointestinal symptoms. Additionally, bleeding from various areas such as the nose, ears, eyes, and digestive system may accompany alongside skin lesions. It is frequently seen in young women; however, it has also been reported in male and adolescents (3).

CASE PRESENTATION: A 16-year 9-month-old girl were referred to child and adolescent psychiatry department by the dermatology polyclinic with the suspicion of GDS with no prior history of psychiatric referral. She had been experiencing bruising on various areas of her body, mainly her arms and legs, without any history of physical injury for two years (Figure 1). These bruises usually faded within two weeks but then reappeared in different locations. She reported no additional symptoms, such as pain, burning, tenderness in the bruised areas, or general symptoms like fever, fatigue, muscle aches, or sore throat.

The patient underwent a dermatological examination, and her coagulation tests were within normal limits. Her hemogram and biochemical test results showed no abnormalities, and rheumatological markers as well as serological tests were all negative. Consequently, she was referred to the psychiatry department with a possible diagnosis of GDS.

In her mental status examination, her mood appeared mildly depressed, and her affect was consistent with her mood, showing mild anxiety. She reported experiencing anhedonia, low energy, irritability, and generalized anxiety. Additionally, she had difficulty in falling asleep and woke up during the night, preoccupied with persistent thoughts.

When asked to rate the intensity of her anxiety on a scale of 1 to 10, she rated it as a 9. The Screen for Child Anxiety Related Disorders (SCARED) was administered, yielding a score of 39 points, while the Children's Depression Inventory (CDI) resulted in a score of 22 points. She is diagnosed as having ‗Generalized Anxiety Disorder' (GAD) and Sertraline 50 mg was gradually introduced.

At her follow-ups in every mounth during nine mounths she described improvement in the frequency and coloration of her ecchymoses.

At her nine-month follow-up, the patient reported that she had not experienced any bruising since the last appointment. She noted a 100 percent improvement in terms of bruising.

Written and informed consent was obtained from the parent and the patient regarding the presentation of the case.

CONCLUSION: Consequently, GDS is an often unrecognized, making it crucial to consider during the evaluation of patients with recurrent ecchymoses. Early diagnosis of this disorder can not only reduce the costs associated with medical evaluations but also provide significant benefits to the patient (3). Enhancing the recognition of underlying psychiatric comorbidities may lead to a better prognosis (4). Therefore, for individuals with GDS, a multidisciplinary approach that includes pediatricians, dermatologists, and child and adolescent psychiatrists is vital for effective disease management.

Keywords: Anxiety disorder, Autoerythrocyte Sensitivity Syndrome, Gardner-Diamond Syndrome, psychogenic purpura.

Figure 1



AuthorToEditor: 1. Gardner FH, Diamond LK. Autoerythrocyte Sensitization A Form of Purpura Producing Painful Bruising Following Autosensitization to Red Blood Cells in Certain Women. Blood [Internet]. 1955 Jul 1 [cited 2024 Nov 12];10(7):675–90. Available from: https://ashpublications.org/blood/article/10/7/675/7375/ Autoerythrocyte-Sensitization-A-Form-of-Purpura 2. Mary K Dick. jcad_12_12_44. 3. Ivanov O, Lvov A, Michenko A, Künzel J, Mayser P, Gieler U. Autoerythrocyte sensitization syndrome (Gardner-Diamond syndrome): review of the literature**. Journal of the European Academy of Dermatology and Venereology [Internet]. 2009 May [cited 2024 Nov 12]; 23(5): 499–504. Available from: https://onlinelibrary.wiley.com/ doi/10.1111/j.1468-3083.2009.03096.x 4. Zagami M, Klepper E, Wienecke E, Andrzejewski M, Sikder A, Ahmed A, et al. A review of psychocutaneous disorders from a psychotherapeutic perspective—Toolkit for the dermatologist. Skin Health and Disease [Internet]. 2023 Aug [cited 2024 Nov 12]; 3(4): e211. Available from: https://onlinelibrary.wiley.com/doi/10.1002/ski2.211

[Abstract:0345]

Aripiprazole-Induced Persistent Hiccups: A Case Report on Uncommon Adverse Effects

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INTRODUCTION: Hiccups result from involuntary contractions of the diaphragm and respiratory muscles, followed by glottic closure, producing the characteristic "hiccup" sound. Persistent hiccups last longer than 48 hours, while intractable hiccups continue for over a month. These prolonged episodes can lead to complications such as weight loss, fatigue, and psychological distress. The causes of hiccups include gastrointestinal disturbances, central nervous system pathologies, medication effects, and irritation of the vagus or phrenic nerve. Although antipsychotics have been used to treat hiccups, they have rarely been implicated in causing them. This report presents a case where aripiprazole induced persistent hiccups in a patient with atypical psychosis and obsessive-compulsive disorder (OCD), which resolved without any changes in treatment or dosage reduction.

CASE PRESENTATION: An 18-year-old male, experiencing religious obsessions, compulsive counting, self-harming auditory hallucinations, and selective mutism towards his mother, sought psychiatric care. His symptoms began in middle school, and by 2020, he started using alcohol and engaging in self-harm to manage distress. In 2022, after a hospitalization due to excessive alcohol consumption, he sought psychiatric help and was diagnosed with OCD with prepsychotic features. Treatment was initiated with sertraline (100 mg/day) and risperidone (3 mg/day), but his symptoms, including social withdrawal and referential delusions, worsened.

In 2023, he developed risperidone-induced tremors, leading to a switch to aripiprazole (5 mg/day) and fluoxetine (40 mg/day). Shortly after starting aripiprazole, he developed restlessness and persistent hiccups. Switching to olanzapine (10 mg/day) with fluoxetine (40 mg/day) resolved the hiccups, but the patient discontinued olanzapine due to side effects.

After three months without treatment, he was hospitalized for self-harm. He was restarted on aripiprazole (10 mg/day) and sertraline (200 mg/day). Approximately 72 hours later, he developed persistent hiccups unresponsive to conventional measures. Laboratory and imaging studies revealed no abnormalities. At 75 hours, an intramuscular dose of chlorpromazine (25 mg) was administered, but it was ineffective. Given his positive response to aripiprazole for psychotic and OCD symptoms, the medication was continued. The hiccups resolved spontaneously within days, with no recurrence over a two-week follow-up.Written consent was obtained from concerned patient of the case report.

CONCLUSION: While antipsychotics are sometimes used to treat hiccups, aripiprazole-induced hiccups are rare. Aripiprazole functions as a partial D2 receptor agonist and 5-HT2A receptor antagonist. It is hypothesized that its partial agonism at D2 receptors may overstimulate the diaphragm, triggering hiccups, while 5-HT2A receptor antagonism may further contribute to this effect. This case was classified as a ‗probable' drug reaction, with a Naranjo Adverse Drug Reaction Probability Scale score of 6. Previous cases have shown hiccup resolution upon switching medications; however, in this patient, aripiprazole was continued due to its efficacy and better tolerability, with hiccups resolving spontaneously. This case highlights that if aripiprazole is clinically beneficial, a wait-and-observe approach may be reasonable before considering discontinuation or dose reduction.

Keywords: Antipsychotic, Aripiprazole, Persistent Hiccups

[Abstract:0348]

Seizure After Ect: Differential Diagnosis Discussion Through A Case Peport

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INTRODUCTION: Electroconvulsive therapy (ECT) is an effective treatment for psychiatric disorders such as depression, schizophrenia, and mania, particularly in cases that treatment-resistant. While ECT induces short-term controlled seizures, long-term seizures or the development of epilepsy after ECT is rare. This case report discusses the differential diagnosis of a patient who exhibited disorganized behavior during ECT, revealing seizure activity on the EEG, while referencing the relevant literature.

CASE PRESENTATION: A 62-year-old female was admitted in September 2024 with paranoia, believing she was being tracked, along with refusal to eat, decreased self-care and social withdrawal.

Her symptoms began 4 years ago, leading to two previous hospitalizations and a diagnosis of nonorganic psychotic disorder. Initially treated with Olanzapine at 10 mg/day and Zuclopenthixol 200 mg/2 weeks, she remained in remission while adhering to her treatment plan. However, after discontinuing her medication for the past 3 months, her psychotic symptoms worsened.

Upon hospitalization, the patient exhibited a defensive attitude, displayed persecutory delusions, and refused to eat hospital food. Treatment commenced with Zuclopenthixol at 200mg/2 weeks and Olanzapine, which was gradually increased to 20 mg/day. After one month, due to a lack of symptom improvement, Olanzapine was discontinued and replaced with Paliperidone depot. Elevated prolactin levels necessitated the addition of Aripiprazole, which was subsequently increased to 20 mg/day. The patient was deemed treatment-resistant, leading to the initiation of ECT.

ECT treatment commenced at 25% energy in the first session, increasing to 85% by the 5th session. Seizure durations varied from 8to16 seconds,with inadequate seizure activity noted initially;however,symptom regression started from the third session.

One hour before the sixth session, 50 mg of Chlorpromazine was administered orally to lower the seizure threshold, which resulted in 9 seconds of seizure activity at 100% energy.

One hour before the seventh and eighth sessions, an additional 100 mg of chlorpromazine was given, leading to 32 seconds of seizure activity at 100% energy.

Two days after the eighth session,the patient exhibited disorganized behavior and orientation disturbances, raising suspicions of delirium. ECT has been stopped. Haloperidol was initiated at 3x1mg/day, with blood tests revealing no abnormalities. A neurology consultation was sought, resulting in an EEG that indicated sharp slow-wave paroxysms in both hemispheres, signifying epileptic activity. Therefore, nonconvulsive status epilepticus was not considered. The patient was started on Levetiracetam at 2x250 mg, with plans to gradually increase the dosage to 2x500 mg and use it prophylactically for two years.

During follow-up visits, the patient‘s orientation improved, allowing for her discharge with diagnoses of Schizophrenia and Epilepsy, and a treatment regimen of Paliperidone at 100 mg/month, Aripiprazole at 20 mg/day, and Levetiracetam at 2x500 mg.

CONCLUSION: This case aims to contribute to the literature concerning potential instances of epilepsy triggered by ECT. Tardive seizure and epilepsy were considered in the differential diagnosis. Research on ECT-induced seizures is limited. A 2022 review on delayed seizures following ECT underscored that such occurrences are uncommon and typically involve identifiable risk factors. In this case, Chlorpromazine, administered prior to ECT to lower the seizure threshold, is suspected to have facilitated seizure activity. However, due to the limited existing studies on this topic, further research is warranted to clarify this possible association.

Keywords: ECT, Nonconvulsive Status Epilepticus, Epilepsy, Tardive Seizure, Psychosis

Ekt seanslarına ait nöbet süreleri

Tarih	Seans	Uygulama	Enerji	Nöbet Süresi EEG	Komplikasyon
18.10.24	1	2	%25, %30	16, 18	gelişmedi
21.10.24	2	1	%40	9	gelişmedi
24.10.24	3	2	%50, %55	15, 24	gelişmedi
28.10.24	4	3	%60, %65, %70	-,-, 24	gelişmedi
31.10.24	5	2	%80, %85	8, 11	gelişmedi
4.11.24	6	2	%90,%100	9, 9	gelişmedi
7.11.24	7	1	%100	32	gelişmedi
11.11.24	8	1	%100	32	gelişti?

Hastanın 8 ekt seansında uygulanan enerjiler ve geçirilen nöbet süreleri

AuthorToEditor: Warren, Nicola MBBS, PhD∗,†; Eyre-Watt, Brenton MD∗,†; Pearson, Ella BBiomedSc‡; O'Gorman, Cullen PhD†,§,‖; Watson, Emily BMBS§; Lie, David MBBS∗,†; Siskind, Dan PhD∗,†. Tardive Seizures After Electroconvulsive Therapy. The Journal of ECT 38(2):p 95-102, June 2022. | DOI: 10.1097/YCT.0000000000000821 Keith G. Rasmussen, Mary E. Lunde, Patients who develop epilepsy during extended treatment with electroconvulsive therapy, Seizure,Volume 16, Issue 3,2007,Pages 266-270,ISSN 1059-1311,https://doi.org/10.1016/j.seizure.2006.12.002. Shin HR, Kim M, Park KI. Electroconvulsive therapy and seizure: a double-edged sword? Encephalitis. 2023 Oct;3(4):103-108. doi: 10.47936/encephalitis.2023.00059. Epub 2023 Jul 13. PMID: 37621189; PMCID: PMC10598284.

[Abstract:0351]

Usher Syndrome Type 3 in a Patient with Treatment-Resistant Psychosis: A Case Report

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INTRODUCTION: Usher syndrome type 3A is a rare autosomal recessive disorder characterized by progressive postlingual hearing loss, late-onset retinitis pigmentosa, and variable vestibular dysfunction. Unlike types 1 and 2, type 3A typically presents with normal hearing at birth, with symptoms like hearing loss emerging in childhood and vision loss developing in young adulthood or middle age. Psychiatric symptoms, including psychosis, have been reported but are often overlooked, especially when sensory impairments are subtle or underdeveloped. This case describes the diagnostic challenges of Usher syndrome type 3A in a patient initially misdiagnosed with schizophrenia due to prominent psychotic symptoms.

CASE PRESENTATION: A 29-year-old woman had an 11-year history of persistent psychotic symptoms, including auditory and visual hallucinations, persecutory delusions, and aggression. Her symptoms began at age 19 with social withdrawal, nihilistic delusions, and talking to herself. She was diagnosed with schizophrenia and treated with antipsychotics, including risperidone, quetiapine, and clozapine, as well as six sessions of electroconvulsive therapy (ECT). Despite adherence to treatment, her symptoms showed minimal improvement, and she required multiple hospitalizations.

The patient‘s non-psychiatric history included childhood strabismus and progressive hearing loss starting at age 10, which were not thoroughly investigated during her initial evaluations. By 2022, she had a confirmed 32% hearing impairment. Ophthalmological assessments raised suspicion of retinitis pigmentosa, although definitive retinal findings were absent at that time.

Genetic testing was conducted due to the combination of psychosis and sensory deficits, revealing a pathogenic mutation in the CLRN1 gene, confirming Usher syndrome type 3A. Sensory deprivation from hearing loss likely contributed to her social withdrawal and psychosis. Despite adjustments to her medication regimen, including addressing elevated prolactin levels caused by antipsychotics, her psychotic symptoms remained treatment-resistant, underscoring the complexity of her case.

CONCLUSION: This case illustrates the critical link between Usher syndrome type 3A and psychiatric symptoms such as psychosis. Sensory deficits, including hearing and potential vision impairments, can exacerbate vulnerability to psychiatric disorders by increasing isolation. The patient‘s psychosis was misdiagnosed as schizophrenia due to the delayed recognition of her sensory impairments and underlying genetic condition.

Early genetic testing and a multidisciplinary approach, including genetic counseling, psychiatric care, and sensory rehabilitation, are essential for accurate diagnosis and effective treatment. Clinicians should consider syndromic causes in cases of treatment-resistant psychosis with sensory deficits. Timely intervention can significantly improve outcomes and quality of life for patients with Usher syndrome type 3A.

Keywords: Usher syndrome type 3A, psychosis, schizophrenia, CLRN1 mutation, sensorineural hearing loss, retinitis pigmentosa

AuthorToEditor: Wafa T, et al. (2021). A Comprehensive Overview of Usher Syndrome and Its Genetic Basis. Journal of Genetic Counseling, 30(2), 244–258. Millán JM, et al. (2011). An Update on the Genetics of Usher Syndrome. Journal of Ophthalmology, 2011, Article ID 417217. Bhat M, et al. (2024). The Role of Sensory Deprivation in Psychiatric Disorders Associated with Usher Syndrome. Journal of Psychiatric Research, 156, 67–74. Fuster-García E, et al. (2021). Usher Syndrome: Genetic Characteristics and Associated Clinical Features. Journal of Clinical Medicine, 10(12), 2572. Toms M, et al. (2020). Clinical Management of Usher Syndrome: Current Perspectives. Clinical Ophthalmology, 14, 1895–1904.

[Abstract:0355]

Co-diagnosis of Prader-Willi Syndrome and Bipolar Affective Disorder

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INTRODUCTION: Prader-Willi syndrome (PWS) is a multisystem disorder characterized by severe hypotonia with poor suck and feeding difficulties in early infancy, followed in early childhood by excessive eating and gradual development of morbid obesity. A characteristic behavior profile with temper tantrums, stubbornness, controlling and manipulative behavior, compulsivity, and difficulty with change in routine becomes evident. In addition to behavioral disorders, mood disorders, psychosis, bipolar disorder, anxiety and depression have been reported in PWS patients (Cassıdy vd., January 2012).

We aimed to present the clinical findings and treatment process of a patient with a known diagnosis of PWS and presented to the emergency department with increased energy, increased amount of speech and increased self-confidence. Informed consent was signed by the patient and their relatives.

CASE PRESENTATION: Mr. Ş, 25-year-old male, It was learned that the first psychiatric complaints of the patient with a diagnosis of PWS started 3 years ago during his hospitalization in the endocrine service due to increased weight gain, and that the patient, who had anger control problems, impulsive behaviors, crying spells in premorbidity, complained of an impulsive increase in eating frequency as well as irritability, increased speech rate and amount at that time. Aripiprazole 10 mg/day treatment was started for his complaints. He used the treatment irregularly for 2 years. During this period, gait disturbance and dysarthric speech were observed, which were considered as drug side effects and aripiprazole treatment was discontinued at the end of the 2nd year. Afterwards, the patient's complaints in walking and speech regressed. There was no psychotropic drug use or psychiatric admission for about 1 year until the current period. According to his father's statement, the patient, whose psychiatric complaints stated in the premorbid period continued, had increased energy for about 1 month and increased amount and speed of speech for the last 20 days. Crying spells and irritability increased. In the last week, his sexual desire and appetite increased, the amount of sleep decreased, he had meaningless conversations, disorganized behaviors, and he stated that he received orders on religious issues. With these complaints, he was admitted to our psychiatry clinic for diagnosis and treatment. Olanzapine 5 mg/g treatment was started for agitation. Aripiprazole treatment was avoided because of a history of side effects. Necessary imaging and blood tests were performed. Related branches were consulted. No additional pathology was found. Although it was known that he had premorbid psychiatric complaints due to the diagnosis of Prader willi syndrome, his complaints at the time of presentation were evaluated as manic episodes. Valproic acid was added to the treatment and gradually increased to 750 mg/g. The patient whose complaints improved was discharged with a diagnosis of bipolar affective disorder, valproate 750 mg/g and olanzapine 5 mg/g.

CONCLUSION: PWS is a multisystemic and neurodevelopmental syndrome often accompanied by psychiatric symptoms. This case report with co-diagnosis of PWS and bipolar affective disorder shows that the predisposition of patients with this syndrome to psychiatric disorders should be considered by the clinician.

Keywords: Bipolar Affective Disorder, Olanzapine, Prader-Willi Syndrome, Valproate

AuthorToEditor: Cassıdy, S. B., Schwartz, S., Mıller, J. L. ve Drıscoll, D. J. (January 2012). Prader-willi syndrome. Genetıcs in Medıcıne, 14(1), 10-26. https://doi.org/10.1038/gim.0b013e31822bead0

[Abstract:0358]

Autism Spectrum Disorder in Noonan Syndrome

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INTRODUCTION: Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterized by impairments in social communication and interaction, along with restricted and repetitive behaviors, with symptoms ranging from mild to severe.Noonan syndrome (NS) is a disorder characterized by skeletal anomalies such as short stature, webbed neck, clinodactyly, pectus excavatum, and/or pectus carinatum, as well as craniofacial anomalies including hypertelorism, ptosis, epicanthus, downward-slanting palpebral fissures, low-set and posteriorly rotated ears, triangular face, small maxilla, micrognathia, high-arched palate, and dental malocclusion. This syndrome may also present with congenital cardiac anomalies, renal malformations, lymphatic system pathologies, delayed puberty, hearing loss, bleeding diathesis, and mild to moderate intellectual disability. Additionally, the fact that some children with Noonan syndrome are diagnosed with Autism Spectrum Disorder suggests that these two disorders can co-occur. In this case, we will discuss a patient who has been diagnosed with both Noonan Syndrome and Autism Spectrum Disorder.

CASE PRESENTATION: The patient was diagnosed with autism in 2021 March and was referred to special education. Due to facial dysmorphism, the patient was referred to the departments of genetics and metabolism. Based on the genetic test results, chromosome analysis of peripheral leukocytes with High Resolution Binding showed normal 46, XY male karyotype. Additionally, the Rasopathy panel revealed a c.236A>G variant in exon 3 of the PTPN11 gene, which was detected in a heterozygous state. In 2022 June, the patient was genetically diagnosed with Noonan syndrome.His last examination was in 2025 January; during the psychiatric examination, no meaningful words were heard, and he produced meaningless sounds. He did not establish eye contact, his response to his name was inconsistent, and joint attention was absent. He did not share his interest, was in his own world, and when excited, he spun around himself several times. He attempted to smell and put objects around him into his mouth. He did not play with toys appropriately (he would throw them or try to put them in his mouth). He did not react when his mother left the room. The patient continues special education and attends regular follow-ups at the child psychiatry outpatient clinic.

CONCLUSION: The reason for publishing this case is the recent reporting of the association between Noonan syndrome and Autism Spectrum Disorder, and the necessity of screening patients diagnosed with Noonan Syndrome for Autism Spectrum Disorder. This is because early diagnosis and treatment of Autism Spectrum Disorder are crucial for the prognosis of Autism Spectrum Disorder.

Keywords: Autism Spectrum Disorder, Noonan Syndrome, Neurodevelopmental Disorder

Noonan Syndrome Front Profile Fig. 1



Figure 1: Facial features in Noonan Syndrome.
He has epichantus, hypertelorism and downward-slanting palpebral fissures (Permission granted)

Noonan Syndrome Side Profile Fig. 2



Figure 2: Facial features in Noonan Syndrome.
He has micrognathia and high arched palate,
low posterior hairlines and low-set rotataed ears (Permission granted)

[Abstract:0366]

Understanding Spesific Phobias: A Case Study on Ombrophobia

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INTRODUCTION: According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), a specific phobia is classified as an anxiety disorder and involves significant fear about a specific object or situation that does not pose a threat.[1] National Institute of Mental Health (NIMH) stated that an estimated 19.3% of adolecents has a spesific phobia.2 Previous studies have reported the average age of onset as 7 years old for spesific phobias but also stated that it can be seen at any stage of life.3

Specific phobias are classified into five subtypes: animal type, natural environment type, blood-injection-injury type, situational type and other type. Natural environment phobias include weather-related conditions such as fear of clouds (nephophobia), hurricanes (lilapsophobia), snow (chionophobia), cold (cryophobia), wind (ancraophobia), fear of fog (Homichlophobia), fear of flooding (Antlophobia), fear of drowning (Aquaphobia) and rain (ombrophobia).

Surveys such as conducted by Coleman (2014) showed that natural environment phobias have the second highest prevalence rate (between approximately 9% and 12%) among phobia subtypes.4 Ombrophobia also known as pluviophobia means fear of weather related to rain, including storms, wind, thunder and lightning.

CASE PRESENTATION: A 12-year-old female patient presented to the child and adolescent psychiatry clinic with a 5 year history of fear of rainy weather and consequences of rain or storms such as her house or school getting damaged. She has a history of crying, trembling, palpitation, feeling anxious, difficulty concentrating on cloudy days and diagnosis of rain phobia was made. On detailed assessment it was revealed that such fears in the past arose after experiencing an earthquake at school in September 2019. She also had natural gas exposure at her grandmother‘s home when she was 3 years old. Last year she witnessed a landslide while going on a road trip with her family and her symptoms worsened after this event. She is heavily irritated on cloudy days so during the daytime she continually observes the changes in the weather especially when she is at school. When it‘s rainy she constantly thinks about the rain turning into something severe such as a storm or a flood, so she has a strong desire to warn her family just in case something bad happens. She refuses to go to school on rainy days, out of fear of being in danger in school and not being able to reach out to her family. She was diagnosed as a case of ombrophobia and started on fluoxetine 20 mg to reduce anxiety symptoms. She received psychoeducation to understand the nature of phobias and develop self-help skills. Additionally, she underwent cognitive-behavioral therapy (CBT) and learned relaxation techniques. She responded well to therapy.

CONCLUSION: Ombrophobia can be caused by negative experiences, learned behavior and genetics. Untreated ombrophobia can impair daily functioning, cause social isolation, and increase anxiety over time. Therefore, treatment options should be evaluated as soon as ombrophobia is diagnosed.

Treatment options for ombrophobia include cognitive-behavioral therapy (CBT), exposure therapy, and relaxation techniques. Additionally, medications may be prescribed to alleviate anxiety and its associated physical symptoms.

Keywords: Anxiety disoerders, spesific phobias, natural environment phobias, ombrophobia

AuthorToEditor: 1. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, 5th ed. Washington, DC; 2013 2. National Institute of Mental Health. Specific phobia. 3. Eaton WW, Bienvenu OJ, Miloyan B. Specific phobias. Lancet Psychiatry. 2018;5(8):678-686. doi:10.1016/S2215-0366(18)30169-X 4. Coleman JS, Newby KD, Multon KD, Taylor CL. Weathering the storm: revisiting severe-weather phobia Bulletin of the American Meteorological Society. 2014;95(8):1179–83

[Abstract:0372]

Use of Guanfacine in a Case with Autism Spectrum Disorder and Comorbid Attention Deficit Hyperactivity Disorder

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INTRODUCTION: Autism is a heterogeneous neurodevelopmental disorder characterized by early onset difficulties in social communication and unusually limited interests and repetitive behaviors. Communication difficulties due to ASD make it di Attention Deficit and Hyperactivity Disorder (ADHD) is the most common neurodevelopmental disorder with a prevalance of 7% in children and adolescents. Considering the overall research conducted to date, it is seen that 28-83% of individuals with autism spectrum disorder have comorbid ADHD. Accompaniment of ADHD increases behavioral problems and disrupts learning and social adaptation. The most commonly used drugs in the treatment of ADHD are psychostimulants. Atomoxetine, guanfacine, clonidine are preferred when there is insufficient response to psychostimulants or when stimulants can not be tolerated. We aimed the use of guanfacine in a case with ASD and comorbid ADHD. Written and verbal consent was obtained from the case and his family.

CASE PRESENTATION: A sixteen-old male patient applied to our hospital outpatient clinic with his parents because with complaints of anger, hyperactivity, disobedience to rules, getting bored quickly, problems in friendship, talking too much, physical contact with friends. The patient is diagnosed with ASD and ADHD. The patient was using Methylphenidate OROS 18 mg/day and risperidon 1 mg/day. In process, Methylphenidate OROS was increased to gradually 54 mg/day and risperidone to 2 mg/day. When the case‘s complaints continued with Methylphenidate OROS and risperidone combination treatment, 1 mg/day guanfacine was added and increased to 2 mg/day one week later. After one month we increased 3 mg/day. We did not observe any side effects. A significant regression was observed in the symptoms of the case.

CONCLUSION: Guanfacine, an alpha 2 agonist, was approved by the FDA in 2009 for the treatment of ADHD and in 2011 it was approved by the FDA for use with stimulants. The initial dose recommended by the FDA is 1 mg/day, with weekly increments of 1 mg/day to a maximum of 7 mg/day. Studies have shown that guanfacine can be considered as a first-line treatment in the presence of oppositional behaviors or repetitive behaviors, as well as hyperactivity, in children diagnosed with ASD and ADHD. However, it was found that there was no significant improvement in anxiety and sleep complaints in cases diagnosed with AS. In our case, guanfacine was used at a dose of 3 mg/day because of adequate response in combination treatment. However, guanfacine can be used in combination treatments up to 4 mg/day.The most common side effects of guanfacine are drowsiness, fatigue, upper abdominal pain and sedation. We did not observe any side effects. Considering the low side effect profile of guanfacine, it can be safely preferred in the presence of ASD and ADHD.

Keywords: ASD, ADHD, guanfacine

[Abstract:0373]

The Use of Lurasidone Treatment in Adolescents with Bipolar Disorder Depressive Episode Diagnosis Followed in Inpatient Care Unit

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INTRODUCTION: Lurasidone has evolved into an intriguing treatment for bipolar depression in children and adolescents in recent years. The efficacy and safety have been evaluated in a variety of studies. A randomized controlled trial demonstrated that lurasidone monotherapy was an efficacious treatment for depressive symptoms with bipolar I depression exhibiting favorable tolerability and minimal effects on weight and metabolic parameters (DelBello et al., 2017).

The sample for this series was obtained from patients admitted to our inpatient unit in 2024. The study included patients, who were diagnosed with bipolar depression and were initiated on lurasidone due to depressive symptoms. The severity of patients‘ depressive symptoms is determined by the Hamilton Depression Rating Scale (HDRS), the Beck Depression Inventory (BDI) and the Clinical Global Impression - Severity (CGI-S) score. The patients' changes in weight during hospitalization were tracked. Written consent was obtained from the families.

CASE PRESENTATION: Case 1: A 16-year-old female who was hospitalized with bipolar depression. She presented with a history of non-suicidal self-injury and suicidal attempts. The patient's father had bipolar and substance use disorder.

Despite a one-year treatment with sertraline, the patient continued to experience anhedonia, non-suicidal self-injury, suicidal ideation and homicidal thoughts. At the time of admission, the patient's regimen encompassed lithium 900 mg/day, lamotrigine 150 mg/day, olanzapine 10 mg/day, alprazolam 1 mg/day.

Upon admission, lurasidone 20 mg was initiated and increased to 40 mg within the first week. Lithium was increased to 1,200 mg/day, and Lamotrigine increased to 200 mg/day. The alprazolam was discontinued, and olanzapine was reduced to 2.5 mg/day.

Over the course of 22-day admission, there was a notable reduction in self-harming behaviors and suicidal ideation within the seven-day period. Clinical assessments and mentioned scales demonstrated a consistent improvement. No adverse effects were observed.

Case-2: A 15-year-old female was admitted to our service for suicidal ideation and depressive symptoms with a diagnosis of bipolar depression. She had been under the care due to attention deficit hyperactivity disorder (ADHD). The patient's mother had bipolar disorder and she had completed suiside.

Upon admission, the patient's regimen included methylphenidate-ER 36 mg/day, paliperidone 6 mg/day, escitalopram 20 mg/day, aripiprazole 20 mg/day.During the hospitalization, lurasidone was initiated 20 mg/day and increased to 40 mg/day during the first week.Lamotrigine was titrated to 50 mg/day. Methylphenidate, escitalopram and aripiprazole were discontinued. Paliperidone was decreased to 3 mg/day.

By the fifth day of hospitalization, there was a notable improvement in depressive symptoms and suicidal thoughts, The clinical assessment yielded results that were consistent with those observed on the mentioned scales. No adverse effects were observed.

CONCLUSION: Lurasidone represents a notable advancement in the treatment of bipolar depression.The efficacy, safety, and favourable metabolic profile of lurasidone make it a compelling choice for clinicians. As further data emerge from ongoing studies and clinical experiences, lurasidone's role in the management of bipolar disorder in adolescents is likely to become more clearly defined, potentially leading to the development of more targeted and efficacious treatment strategies for this population.

Keywords: Lurasidone, bipolar depression, adolescent, antipsychotic

AuthorToEditor: 1.DelBello, M., Tocco, M., Pikalov, A., Deng, L., & Goldman, R. (2021). Tolerability, safety, and effectiveness of two years of treatment with lurasidone in children and adolescents with bipolar depression. Journal of Child and Adolescent Psychopharmacology, 31(7), 494-503. https://doi.org/10.1089/cap.2021.0040 2.Findling, R., Goldman, R., Chiu, Y., Silva, R., Jin, F., Pikalov, A., … & Loebel, A. (2015). Pharmacokinetics and tolerability of lurasidone in children and adolescents with psychiatric disorders. Clinical Therapeutics, 37(12), 2788-2797. https://doi.org/10.1016/j.clinthera.2015.11.001 3.Channing, Jonathan, Mary Mitchell, and Samuele Cortese. "Lurasidone in children and adolescents: systematic review and case report." Journal of child and adolescent psychopharmacology 28.7 (2018): 428-436. 4.Mahesh, M., et al. "Clinical Efficacy and Safety Profile of Lurasidone Comparing with Risperidone: Randomized, Open Label, Clinical Study." Journal of Pharmaceutical Research International 33.4 (2021): 20-27.

[Abstract:0374]

Visual Hallucination Associated with Sertraline: a Case Report

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INTRODUCTION: Sertraline is an antidepressant drug that selectively and strongly inhibits serotonin reuptake. It is widely preferred in children and adolescents due to its good tolerance and weak drug interactions. Although the most common side effects are related to the gastrointestinal system, oral dryness, insomnia, tremor, fatigue, agitation and somnolence are also frequently observed. It has been shown through case reports in the literature that it can also cause psychotic side effects. Written and verbal consent was obtained from the case and his family.

CASE PRESENTATION: A twelve-year-old male patient applied to our hospital outpatient clinic with his parents because he had fears that were not appropriate for his development, such as darkness, earthquakes, elevators, and loud noises. In the clinical evaluation, there is no psychiatric history in the family history and background. The patient was diagnosed with anxiety disorder and treatment with sertraline 25mg/day was started. Approximately 2 weeks later, the family applied to our outpatient clinic due to new complaints. During the interview, the patient described visual hallucinations, often during the day, in the form of darkness and insects moving on the wall. Sertraline treatment was discontinued due to developing hallucinations. Psychotic symptoms of the patient regression was observed.

CONCLUSION: Hallucination cases related to sertraline have been previously reported in the literature. In these cases psychotic symptoms begin between 3 days and 7 weeks after drug use, and the symptoms disappear in a short time when the drug is discontinued. Although the neurobiological basis of this condition is not fully known, sertraline is not only serotonergic but also ıt may also have an effect on dopaminergic reuptake thus, people with certain sensitivities may cause psychotic symptoms.

Keywords: Adverse effects, sertraline, hallucination

[Abstract:0376]

Lurasidone Use for Bipolar Depression in Adolescent Patients: 2 Case Reports

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INTRODUCTION: Merve Ölüç merve.oluc97@gmail.com 29 Oca 2025 23:18 (17 saat önce)

Alıcı: ben Lurasidone, an atypical antipsychotic, has gained attention as a treatment option for paediatric bipolar depression in children and adolescents aged 10-17 years. Trials have demonstrated its efficacy and safety both as monotherapy and as an adjunct to other therapies. Randomised controlled trials have shown that lurasidone monotherapy is effective in reducing depressive symptoms and showing good tolerability and minimal effects on metabolic parameters (1). These findings address the significant concern of metabolic side effects with many atypical antipsychotics and position lurasidone as a promising choice for long-term treatment (2).

Clinical guidelines have endorsed lurasidone as a first-line treatment for bipolar depression(3). In addition, studies highlight lurasidone's low risk of manic episodes, good tolerability and minimal metabolic effects making it particularly suitable for paediatric populations. To contribute to this growing evidence base, we report the results of two patients with bipolar depression who were treated with lurasidone in our clinic, using tools such as the Hamilton Depression Rating Scale (HDRS), Beck Depression Inventory (BDI) and the UKU Side Effect Scale for comprehensive assessment. Informed consent was obtained from the families.

CASE PRESENTATION: Case 1: A 16-year-old female was hospitalised for self-harm, suicidal ideation and multiple suicide attempts. She was diagnosed with rapid cycling bipolar disorder and had previously been treated with aripiprazole and sertraline without improvement. During hospitalisation, lurasidone was started at 20 mg Daily and increased to 40 mg daily. Other medications included lamotrigine (titrated to 100 mg) and olanzapine (5 mg) which was later discontinued. During the 22-day hospitalisation, the patient showed a marked reduction in self-harming behaviours and suicidal ideation. Her HDRS score decreased from 38 on admission to 25 on discharge, the BDI score from 20 to 6, and the CGI-S score from 5 to 2. A weight gain of 2.8 kg was observed, but no adverse effects were reported.

Case 2: A 16-year-old female presented with depressive symptoms, including social withdrawal, psychomotor retardation and anhedonia, which severely impaired her daily functioning. These symptoms developed seven months after the suicide of her father. During her 22-day hospitalisation, lurasidone 20 mg daily was started and increased to 40 mg, along with lamotrigine (titrated to 75 mg) and diazepam (5 mg). Olanzapine (5 mg) was used briefly but discontinued before discharge. Remarkable improvements were observed by day 10, including reduced psychomotor retardation, improved social interaction and communication. Her HDRS score decreased from 25 to 20, the BDI score from 8 to 4 and the CGI-S score from 4 to 1. A minimal weight gain of 0.3 kg was observed and no adverse effects were reported.

CONCLUSION: These cases highlight the potential of lurasidone to effectively treat depressive symptoms in paediatric bipolar disorder, even in rapid cycling, with notable improvements observed in clinical scales and caregiver-reported outcomes. The treatment was well tolerated with minimal adverse effects, supporting its safety and efficacy in this population. Further research is warranted to extend these findings and establish its role in long-term management.

Keywords: Atypical antipsychotic, bipolar depression, lurasidone

AuthorToEditor: 1- DelBello, M., Tocco, M., Pikalov, A., Deng, L., & Goldman, R. (2021). Tolerability, safety, and effectiveness of two years of treatment with lurasidone in children and adolescents with bipolar depression. Journal of Child and Adolescent Psychopharmacology, 31(7), 494-503. https://doi.org/10.1089/cap.2021.0040 2- Loebel, A., Cucchiaro, J., Silva, R., Kröger, H., Hsu, J., Sarma, K., … & Sachs, G. (2014). Lurasidone monotherapy in the treatment of bipolar i depression: a randomized, double-blind, placebo-controlled study. American Journal of Psychiatry, 171(2), 160-168. https://doi.org/10.1176/appi.ajp.2013.13070984 3- Takaesu, Y., Takeshima, M., & Watanabe, K. (2022). Effectiveness and tolerability of lurasidone for bipolar types i and ii and other specified bipolar depression. Journal of Clinical Psychopharmacology, 42(5), 485-488. https://doi.org/10.1097/jcp.0000000000001590

[Abstract:0378]

A Case of Stuttering Due to Methylphenidate Treatment

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INTRODUCTION: Stuttering is a disorder in the fluency and timing patterns of speech that is inappropriate for a person‘s age and language abilities. It involves frequent repetition of sounds or syllables, pauses within words, vocal or silent blocks, and repetition of single-syllable words. The prevalence in the general population is reported to be 1%, while it ranges from 8-11% in children, with a lifetime prevalence of approximately 8%. Stuttering is twice as common in males compared to females. The dopamine hypothesis has been proposed to explain the etiology of stuttering. According to this model, stuttering is thought to be associated with an abnormal increase in cerebral dopaminergic activity. Studies showing that agents such as levodopa, which increase dopaminergic activity, exacerbate stuttering symptoms, support the dopamine hypothesis. Furthermore, clinical studies have shown that dopamine antagonists are effective in the treatment of stuttering. Haloperidol, risperidone, and olanzapine have been shown to be superior to placebo in improving stuttering symptoms. This article will discuss the exacerbation of developmental stuttering in a case where methylphenidate treatment was initiated for ADHD.

CASE PRESENTATION: A 10-year-old male patient, a 4th-grade student, presented to our outpatient clinic with complaints of frequent hesitation and repetition of syllables during speech, accompanied by his mother. His symptoms began a few days after the initiation of methylphenidate 10 mg/day for ADHD three weeks ago, and he returned to our clinic due to the persistence of his complaints. No stressors were identified prior to the onset of symptoms. The history obtained was consistent with stuttering. It was noted that the patient had sought treatment for stuttering at the age of 5-6 years at an external facility, with symptoms resolving spontaneously, and he had not received speech therapy. Mental status examination revealed no psychopathology other than stuttering. Physical examination was unremarkable. The patient‘s medical history was negative for any known illnesses. Family history revealed that the patient‘s father had also experienced stuttering in childhood, which resolved spontaneously. Methylphenidate therapy was discontinued, and atomoxetine 25 mg/day was initiated for ADHD. On follow-up after one month, no language or speech disorders were detected.

CONCLUSION: Stuttering is defined under the main heading of Neurodevelopmental Disorders in the DSM-5 as Childhood-Onset Fluency Disorder. Stuttering can be classified into two types: developmental and acquired. Developmental stuttering is a disorder that begins in childhood, with symptoms continuing into adolescence in only a small percentage of cases. Acquired stuttering, on the other hand, can develop secondarily due to neurogenic, psychogenic, or pharmacological causes. Numerous studies have been conducted on sensory, motor, genetic, and cognitive factors contributing to the pathophysiology of stuttering; however, no definitive mechanism has been identified. It has been noted that stuttering can manifest as a side effect of certain medications, including clozapine, olanzapine, methylphenidate, pregabalin, valproate, topiramate, and lamotrigine. The dopamine hypothesis is one of the most extensively studied aspects of stuttering pathophysiology, and medications that increase dopamine, such as psychostimulants, have been shown to exacerbate stuttering symptoms. One study observed that presynaptic dopamine levels in individuals who stutter were 50-200% higher compared to controls. This article discusses the exacerbation of stuttering in a patient with a history of developmental stuttering after the initiation of methylphenidate treatment.

Keywords: Stuttering, Methylphenidate, ADHD

[Abstract:0381]

Self-Injurious Behaviors and Severe Intellectual Disability in a Patient with Osteoporosis-Pseudoglioma Syndrome: Clinical Challenges and Pharmacological Approach

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INTRODUCTION: Osteoporosis Pseudoglioma (OPPG) Syndrome is a rare autosomal recessive disorder marked by intellectual disability (ID), osteoporosis, and ocular manifestations. It is caused by a mutation in the low-density lipoprotein receptor-related protein 5 (LRP5) gene on chromosome 11q13.4 (1). The LRP5 protein is crucial for the WNT-β-catenin signaling pathway, which regulates biological processes such as cell differentiation, embryonic development, and tissue repair (2). This pathway is also essential for bone remodeling and neural function (3). Dysregulation has been linked to neurodevelopmental disorders like autism and ID (3). We present a case of a patient with OPPG syndrome and severe ID who exhibited self-injurious behaviors (SIB), including biting his extremities, highlighting the challenges in diagnosis and treatment.

CASE PRESENTATION: The patient is an 11-year-4-month-old boy diagnosed with OPPG syndrome. His medical history reveals multiple fractures following the onset of walking. He was referred to a genetics clinic after developing bilateral vision loss and an atrial septal defect. The patient presented to our clinic in both June 2022 and June 2023 due to self-injurious behaviors (SIB), including self-hitting and self-biting, as well as environmentally destructive behaviors and sleep disturbances. The patient's mother reported that he had been taking risperidone 1 mg for approximately one year, and that the symptoms worsened during the summer months. During consultations, we collaborated with specialists from other medical disciplines to investigate the presence of any additional pathology that could be contributing to the patient's symptoms. Following comprehensive examinations, no new pathology (such as a recent fracture, hearing loss, or infection) was identified that could explain the clinical presentation.The patient's medical treatment was initially started with risperidone 2 mg/day and diazepam 2.5 mg/day. After a year, the patient, who had not adhered to regular follow-up appointments, returned to our clinic in June due to an exacerbation of his symptoms. His treatment regimen was then adjusted to include haloperidol 1.2 mg/day, diazepam 2.5 mg/day, risperidone 1.5 mg/day, melatonin 3 mg/day, and olanzapine 2.5 mg/day. During close follow-up, his symptoms gradually improved, followed by a decrease in sleep disturbances and the absence of agitation and screaming during the day. Consequently, the doses of risperidone and diazepam were gradually tapered. In light of the observed benefits, the patient remains on a treatment regimen of haloperidol 1.2 mg/day and melatonin 3 mg/day.

CONCLUSION: Limited information is available in the literature regarding the management of intellectual disability (ID) and self-injurious behavior (SIB) in OPPG syndrome. The seasonal fluctuation of symptoms in our patient, with worsening during the summer months, suggests a possible comorbid mood disorder. However, the patient's severe ID, inability to communicate, challenges in gathering information from the family, and lack of regular follow-up complicate our diagnostic and treatment approaches. Additionally, Wnt signaling dysfunction may contribute to the limited efficacy of pharmacological treatments in this patient population. Further research is warranted to elucidate the clinical presentation of OPPG syndrome and to explore targeted pharmacological interventions addressing the Wnt signaling pathway.

Keywords: Intellectual Disability (ID), LRP5 Gene Mutation, Osteoporosis Pseudoglioma Syndrome (OPPG), Self-Injurious Behavior (SIB), WNT-β-catenin Signaling Pathway

Scars resulting from self-injurious behavior



AuthorToEditor: REFERENCES 1- Gowda, V. K., Vegda, H., Shivappa, S. K., & Benakappa, N. (2020). Osteoporosis Pseudoglioma Syndrome. Journal of Pediatric Neurosciences, 15(3), 334–335. 2- Littman, J., Yang, W., Olansen, J., Phornphutkul, C., & Aaron, R. K. (2023). LRP5, Bone Mass Polymorphisms and Skeletal Disorders. Genes, 14(10), 1846. 3- Kwan, P. P. Y., Doble, B., Bush, R. A., & Lu, Q. (2016). Wnt signaling networks in autism spectrum disorder and intellectual disability. Journal of Neurodevelopmental Disorders, 8, 45

[Abstract:0383]

Acute Dystonia Associated with Fluoxetine in an 11-year-old Male Patient

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INTRODUCTION: Dystonia is a movement disorder characterized by continuous or intermittent muscle contractions, leading to abnormal postures and movements (1). The onset is often sudden and painful. Patients may exhibit neck retraction (opisthotonus) or lateral contractions (torticollis). Ocular involvement may manifest as upward and lateral eye movements due to eye muscle contractions (oculogyric crisis). Additional symptoms may include enlargement and protrusion of the tongue, laryngospasm, and jaw contractions (2). Many drugs cause excessive dopamine blockade in the basal ganglia, leading to extrapyramidal symptoms, particularly with antipsychotic drugs, often occurring early phases of the treatment (3). Drug-induced dystonia is primarily linked to dopamine receptor antagonism, although rare associations have been noted with calcium channel blockers and selective serotonin reuptake inhibitors (SSRIs) (1). Risk factors for acute drug-induced dystonia include young age, male gender, cocaine use, and a previous history of acute dystonia (4). Fluoxetine, a commonly prescribed SSRI,is frequently used to treat anxiety disorders, obsessive-compulsive disorder, and depression in children and adolescents (5). In this report we present an 11-year-old male patient who developed dystonia while using Fluoxetine.

CASE PRESENTATION: Written and verbal consent is obtained from the patient and his family prior to preparing this case report. The patient, typically development an 11-year-old male, was under treatment for Attention Deficit Hyperactivity Disorder and Oppositional Defiant Disorder. Since 2022, he had been prescribed Methylphenidate and Risperidone in varying doses due to hyperactivity and behavioral challenges. However, due to the development of enuresis associated with Risperidone (0.5 mg/d), the treatment was switched to Aripiprazole. The current treatment included Methylphenidate (54 mg/d) and Aripiprazole (10 mg/d) without notable side effects. Additionally, he had anxiety symptoms including nocturnal fears, reluctance to attend school that has a substantial impact on his functionality. Fluoxetine (20 mg/d) was gradually added to manage anxiety symptoms. At the 8th day of his treatment, the patient presented to the Psychiatry Emergency Department with acute spasms localized to the neck and mouth. Upon admission, the patient exhibited anxiety but was conscious, oriented, and cooperative. Initial vital signs revealed hypotension (90/40 mmHg), normothermia (36.5°C), a pulse of 95/min, and oxygen saturation of 98%. Suspected to be experiencing an acute dystonic reaction, the patient was treated with a 2.5 mg intramuscular injection of Biperiden and intravenous fluid support. Vital signs improved to normal; however, neck dystonia persisted for an hour. A second dose of Biperiden (2.5 mg IM) was administered, resulting in remission of the symptoms. Given the adverse reaction, Fluoxetine was discontinued, and the patient was discharged with recommendations for follow-up. After 7 days,Sertraline(25 mg/d) was started in addition to the treatment mentioned above and increased to 50 mg/d to treat anxiety. Throughout follow-up appointments, no pathological findings were noted in the patient's Extrapyramidal Signs (EPS) assessment.

CONCLUSION: SSRIs have been increasingly used in the treatment of children and adolescents (6). While Fluoxetine is generally well tolerated in children and adolescents, this case highlights the importance of careful monitoring, especially for younger patients or those with additional risk factors. Clinicians should be aware of the SSRIs as a potential causative factor for EPS, particularly during the early stages of treatment or when increasing the dose. In conclusion,acute dystonic reaction should be considered in the differential diagnosis of every patient with involuntary movements in the neck.

Keywords: Fluoxetine, acute dystonic reaction, children

AuthorToEditor: 1.Rajan S, Kaas B, Moukheiber E. Movement disorders emergencies. Semin Neurol 2019;39(1):125-36. doi: 10.1055/s-0038-1677050. Epub 2019 Feb 11 2.Taylor, D.M., ve ark., The Maudsley Prescribing Guidelines in Psychiatry, 14.ed. 2021, Hoboken: John Wiley&Sons. 3. Kayaalp SO: Nöroleptik İlaçlar. In Tıbbi Farmakoloji ed. Kayaalp SO. Feryal matbaası, Ankara, 1862-1874, 1995 4.Van Harten, P. N, et al. ―Fortnightly Review: Acute Dystonia Induced by Drug Treatment.” BMJ, vol. 319, no. 7210, 4 Sept. 1999, pp. 623–626, https://doi.org/10.1136/bmj.319.7210.623. Accessed 10 Feb. 2020. 5. Wilens TE, et al. Fluoxetine pharmacokinetics in pediatric patients. J Clin Psychopharmacol 2002; 22:568-575. 6.Rushton JL, Whitmire JT. Pediatric stimulant and selective serotonin reuptake inhibitor prescription trends: 1992 to 1998. Arch Pediatrics Adolesc Med 2001;155:560–5.

[Abstract:0386]

Cefuroxime Induced Isolated Visual Hallucinations In An Elderly Patient: A Case Report

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INTRODUCTION: Elderly patients, in particular, have been reported to develop psychiatric side effects from antibiotics. Clarithromycin, quinolones, sulfamethoxazole-trimethoprim, isoniazid, penicillin, and cephalosporins have been reported to cause psychosis (1).

In this case, isolated visual hallucinations developed after cefuroxime injection and symptoms improved following the discontinuation of the antibiotic treatment. Based on this, we aimed to emphasize the importance of identifying the etiology before the diagnosis in cases with short-term psychotic symptoms.

CASE PRESENTATION: Mrs. A., 63-year-old female patient, was consulted to our department after reporting visual hallucinations. The patient, with a history of epilepsy, diabetes mellitus, and hypertension, is also monocularly blind. After the psychiatric evaluation, it was discovered that cefuroxime injection was administered for a urinary tract infection three days before the onset of the visual hallucinations. She started experiencing violent visual hallucinations, including visions of blood flowing from the walls, dirt on the ground, trees in the rooms, fabric patterns on the walls, and tiles lifting with water puddles on the floor. During this period, the patient remained conscious, did not experience any disorientation. She did not report any delusions or mood disorder.

The patient consulted her neurologist, who had been following her for epilepsy, and after physical examination and imaging studies, no abnormalities were detected. The visual hallucinations were not found to be related to epileptic seizures, and she was referred to us for psychiatric evaluation. During the mental status examination conducted in our outpatient clinic, it was observed that her visual hallucinations had gradually decreased after discontinuation of the antibiotic treatment, and at the time of the examination, she was only perceiving patterns on the walls. The patient was alert, oriented, cooperative, with an euthymic mood, and no psychotic symptoms other than visual hallucinations were noted.After discontinuation of the antibiotic treatment, no antipsychotic treatment initiated, the patient's hallucinations diminished. On a follow-up visit 15 days later, the patient showed no signs of hallucinations.

The patient also reported that her mother had experienced opioid-related visual hallucinations in the past.

CONCLUSION: Risk factors associated with development of cephalosporin-associated neurotoxicity include underlying renal insufficiency, pre-existing neurologic disease, and advanced age. (2) Many cephalosporins have a high degree of CSF penetration. The elevated serum concentrations and good CSF penetration increase the likelihood for adverse neurologic effects. In addition, several laboratory investigations with rats reported increased incidence of seizures, even with lower serum concentrations of cephalosporin. (3) A family history of hallucinations induced by medications may point to an underlying genetic susceptibility or the impact of environmental factors.

This case highlights the importance of conducting a detailed anamnesis in elderly patients presenting to the psychiatry outpatient clinic with newly onset, short-term psychotic symptoms to identify the underlying etiology and protect the patient from unnecessary antipsychotic treatment. It also underscores the significance of interdisciplinary collaboration between specialties.

Keywords: Cefuroxime, halusination, visual, antibiotic

AuthorToEditor: 1. Ninan J, George GM. Imipenem-cilastatin-induced psychosis: A case report. Journal of Medical Case Reports 2016; 10(107): 07-112. 2. Mattappalil A, Mergenhagen KA. Neurotoxicity with antimicrobials in the elderly: A review. Clinical Therapeutics 2014; 36(11): 1489-1511.

[Abstract:0390]

A Case of Asperger's Syndrome with Emotional Dysregulation and Binge Eating

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INTRODUCTION: Autism spectrum disorder (ASD) is associated with impairments in executive functions (EF), which include inhibitory control, cognitive flexibility, and emotional regulation, are crucial for goal-directed behavior. These EF deficits can lead to difficulties in impulse control and contribute to the development of eating disorders (EDs), such as binge eating disorder. In ASD, deficits in these cognitive processes can result in maladaptive eating behaviors. For example, individuals with ASD may engage in rigid eating routines, become fixated on certain foods, or display a lack of flexibility in their eating patterns, which can lead to binge eating episodes.

Binge eating behaviors in ASD may also be influenced by sensory sensitivities. Autistic individuals who seek specific textures or tastes in food may overeat those particular foods, resulting in bingeing. Additionally, cognitive rigidity, a common feature of ASD, can lead to the development of strict internalized rules about eating, which may increase the likelihood of disordered eating.

Furthermore, social communication difficulties, another hallmark of ASD, may hinder access to protective factors like social support or group activities, which could otherwise mitigate the risk of EDs.

Research shows that individuals with ASD, along with those with ADHD, are at increased risk for developing eating disorders, with higher severity of ED symptoms and poorer treatment outcomes. Impairments in executive functions, such as poor impulse control and difficulties in emotional regulation, may be central to this increased risk. The dual-pathway model of self-regulation, which emphasizes the role of both regulatory and reactive processes, helps to explain how these cognitive challenges contribute to binge eating behaviors in individuals with ASD. Understanding the interplay between executive dysfunction and eating disorders is crucial for developing effective interventions that address both neurocognitive and behavioral aspects of these conditions.

CASE PRESENTATION: An 18-year-old female patient diagnosed with Asperger's syndrome (WAIS; verbal IQ: 113, performance IQ: 109, total IQ: 112 and Autism Spectrum Quotient: 37/50) is being followed up. The patient shows emotional dysregulation, impulsivity and social inappropriateness. Despite 12 years of special education, social skills training and behavioural therapy, there has been no regression of symptoms. The patient had sensory sensitivities in childhood, and one year ago she developed binge eating and pathological shopping behaviour. There is no history of mood episodes. There is no family history of similar features. The patient is currently taking fluoxetine 20 mg/day and aripiprazole 2.5 mg/day, with partial remission observed.

CONCLUSION: In autism spectrum disorders, the frequency of binge eating disorder is higher due to emotional dysregulation and executive function impairments. The comorbidity of these conditions leads to a worse prognosis and reduced treatment response. Combining psychopharmacological interventions with psychotherapeutic treatments may enhance treatment response.

Keywords: Autism spectrum disorder, binge eating, executive functions, emotional dysregulation

[Abstract:0396]

Treatment Approach in A Child with Growth Hormone Deficiency and Attention Deficit Hyperactivity Disorder; A Case Report

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INTRODUCTION: Attention Deficit Hyperactivity Disorder (ADHD) is the most frequent neurodevelopment problem characterized by constant inattention, hyperactivity and impulsiveness pattern which affects the academic and social improvement of children (1). When untreated, ADHD may cause long term morbidity and decreased quality of life in adulthood (2). In Turkey, the preferred pharmacological treatment options are stimulants and atomoxetine in the non-stimulants group.

Atomoxetine is a selective norepinephrine reuptake inhibitor which is used in ADHD treatment (3). However, the stimulants increase the noradrenaline and dopamine levels in the synaptic space. It is known that growth hormone problems may develop by noradrenalin and dopamine in children. Increases in dopamine and noradrenaline levels may negatively affect the release of the hormones that enable growing such as the growth hormone, prolactin, thyroid hormones, sex hormones, and insulin. Noradrenaline and dopamine may disrupt the homeostasis of both the growth hormone and the other hormones related to growing and this may have negative effects on growth and development (4). In this study, we presented the treatment of a child with growth hormone deficiency and ADHD.

CASE PRESENTATION: A 12-year-old boy with growth hormone deficiency was referred to our outpatient clinic due to attention deficit at home and school. He was 38 kilograms and 141 meters tall. He was under somatotropin treatment for four years. Regarding the DSM-V, he was diagnosed with predominantly inattentive subtype of ADHD in our clinic. A dose of 18 mg/day atomoxetine was started and titrated up to 36 mg/day in two weeks. Two months later, positive feedback was received in terms of attention in the school and academic success. No weight loss and loss of appetite was observed in this two-month period.

CONCLUSION: In this report, we presented a child with growth hormone deficiency and comorbid ADHD had a regression in his symptoms within a month with atomoxetine treatment without negative effects on development.

It is known that the serum levels of the growth hormones such as IGF-1 and IGF-3 are normal in children with new-diagnosed ADHD (3). In a retrospective study, long term usage of atomoxetine may be related with decreased height gain in young, but this relation is minimal and prone to decline in the first year (3). In a recent study, it was shown that atomoxetine has not a significant effect on the growth parameters such as height, BMI, IGF-1, IGF-3 and thyroid functions (3). However, atomoxetine may cause loss of appetite therefore weight loss in children may be observed. Further studies are required regarding the long-term effects of atomoxetine on children with growth hormone deficiency.

Keywords: Atomoxetine, attention deficit and hyperactivity, growth hormone deficiency

[Abstract:0401]

The Dopaminergic Gamble: Pramipexole-Associated Pathological Gambling in a Patient with Restless Legs Syndrome

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INTRODUCTION: Dopaminergic drugs used mainly in neurological conditions, namely pramipexole, ropinirole, and the antipsychotic aripiprazole, have been implicated in pathological gambling. People with Parkinson's disease (PD), restless legs syndrome (RLS), and those treated for psychotic disorders are groups at risk of pathological gambling.
CASE PRESENTATION: A 35-year-old female patient was diagnosed with Restless Leg Syndrome after applying to the neurology clinic in 2016 with complaints of burning, itching, stinging sensations in the legs, the need to move, and restlessness, and her treatment was arranged as pramipexole 1mg/day and mirtazapine 15mg/day. The patient‘s first admission to the psychiatry clinic was with complaints of leg restlessness and depressive symptoms due to marital problems in June 2017. She was prescribed with pramipexole 0,25 mg and mirtazapine 15mg.

On 16.11.18 she consulted a neurologist which increased pramipexole dosage to 1 mg. Patient stated that she started betting online to pay off her debts. This increase in medication dosage can be associated with the start of gambling behavior.

The patient attempted suicide by taking medication 2 times, in 2021 and January 2024, due to increasing amounts of her debts and feelings of shame due to her debts. She did not seek medical attention. She was admitted to a psychiatry outpatient clinic complaining of ongoing depressive symptoms, inner restlessness, and gambling desire. She was prescribed buspirone and sertraline which did not relieve her symptoms. The patient presented to our clinic on 23.10.24 due to the persistence of the same complaints and was hospitalized on the same date.

Screening tools like the Gambling Risk Assessment Scale (scored 19), South Oaks Gambling Screen (scored 17), and Online Gambling Disorder Scale (scored 86) showed signs of severe pathological gambling. These results were explained by pramipexole's dopaminergic effects.

The patient was prescribed gabapentin (200 mg/day), iron supplementation, and diazepam (5 mg/day) upon admission after consulting with the neurology department. By November 6, 2024, gabapentin dosage was raised to 400 mg daily. Additionally, Sertraline (50 mg) was reintroduced to help manage her depression symptoms. Throughout her hospital stay, the patient's gambling behavior significantly improved, as seen by a decline in her scores on all rating scales. His score on the South Oaks Gambling Screen (score of 9) and the Online Gambling Disorder Scale (score of 21) showed notable declines by November 14, 2024, and her Gambling Risk Assessment Scale score had fallen to 0. Following discharge, a polysomnography (PSG) on December 23, 2024, further validated the diagnosis of Restless Legs Syndrome (RLS) and confirmed REM sleep-related obstructive sleep apnea (OSAS), highlighting the necessity of continued neurological and psychiatric care.

CONCLUSION: The aim of this case report is to review the epidemiologic, clinical and neurobiologic evidence of the relationship between dopaminergic drugs and pathological gambling and to identify risk groups and treatment options. In this patient, who scored 9 on the Naranjo criteria, the drug-induced adverse reaction was considered definite. The patient‘s case highlights the importance of closely monitoring dopaminergic medications, especially in patients with a predisposition to psychiatric disorders.

Keywords: Dopaminergic drugs, pathological gambling, pramipexole, restless legs syndrome

[Abstract:0402]

AI-Powered Sexual Therapy: A New Frontier in Couples' Emotional and Intimate Well-Being

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INTRODUCTION: Sexual activity is not merely a biological function for species survival but also a vital means of emotional communication and pleasure (Rosen RC, 2000). In recent years, artificial intelligence (AI) is revolutionizing numerous fields, including therapy. Tools like DeepSeek are proving valuable in assisting therapists and clients by generating ideas, enhancing creativity, and supporting therapeutic processes. This case report explores the potential of AI in sexual therapy, focusing on a couple experiencing emotional and sexual challenges.

CASE PRESENTATION: This report highlights the role of AI in enhancing therapeutic outcomes. The case involves a couple seeking sexual therapy due to depressive symptoms, guilt, and sexual dysfunction. Mrs. S was diagnosed with vaginismus, while her partner, Mr. D, struggled with emotional regulation and limited sexual experience. Despite his supportive nature, their relationship faced significant strain. The therapy incorporated AI tools like DeepSeek to facilitate sexual therapy, sensate focus exercises, creative writing, and structured homeplay activities.

The therapy centered on sexual therapy principles, emphasizing relationship support and reconnection with meaningful experiences. The couple, initially isolated and hesitant to communicate, engaged in writing letters and poems to express their emotions. This process helped them integrate their experiences into a coherent narrative, reducing negative emotions and fostering resolution. DeepSeek was utilized to generate homeplay exercises, set solution-focused goals, and create daily plans. The therapy also included developing a healthy sexual routine and revisiting joyful memories. Effectiveness was measured using standardized tools: Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Female Sexual Function Index (FSFI), Golombok-Rust Inventory of Sexual Satisfaction (GRISS), and Satisfaction with Life Scale (SWLS). Ethical guidelines from the APA were followed to ensure professional standards.

CONCLUSION: The therapy yielded significant improvements in the couple‘s mood, relationship quality, and creativity. They reported feeling happier and more connected. AI-assisted therapy fostered emotional closeness, enhanced mental agility, and encouraged creative problem-solving. The playful and structured use of AI allowed the couple to thrive even during challenging times, strengthening their bond and improving their overall well-being.

AI has the potential to transform therapy by automating tasks, reducing cognitive biases, and unlocking creativity. It envisions a future where therapists and clients collaborate with AI to accelerate learning, practice generative thinking, and foster personal growth. By integrating AI into therapeutic processes, clients can reinvent themselves, overcome challenges, and achieve meaningful recovery. The case demonstrates that AI is not just a tool but a partner in the journey toward emotional and relational healing.

Keywords: Artificial Intelligence (AI), Sexual Therapy, Couple Therapy, Vaginismus, Sensate Focus Exercises, AI-Assisted Therapy

AuthorToEditor: 1. Rosen, R. C. (2000). Sexual dysfunction as a risk factor for depressive disorders: Results from the Global Study of Sexual Attitudes and Behaviors (GSSAB). Journal of Affective Disorders, 59(2), 123-132. 2. American Psychological Association (APA). (2017). Ethical Principles of Psychologists and Code of Conduct. 3. Kaplan, H. S. (1974). The New Sex Therapy: Active Treatment of Sexual Dysfunctions. Brunner/Mazel. 4. Luxton, D. D. (Ed.). (2020). Artificial Intelligence in Behavioral and Mental Health Care. Academic Press.

[Abstract:0403]

Choreiform Clues: Unmasking Huntington's Disease in a Patient with Treatment-Resistant Schizophrenia

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INTRODUCTION: Huntington's disease (HD) is an autosomal dominant genetic disorder caused by 36 or more CAG repeats in the Huntingtin gene located on the short arm of chromosome 4 (4p16.3). Psychiatric symptoms, often preceding motor manifestations, are among the earliest signs of HD, which may delay diagnosis. These symptoms can include major depression, anxiety, irritability, apathy, obsessive-compulsive behaviors, and psychosis. Psychiatric disorders are highly prevalent in HD, with rates estimated between 33% and 76%, reflecting significant variability across studies. This report describes a 50-year-old male patient with treatment-resistant schizophrenia and obsessive-compulsive disorder (OCD), whose diagnosis of HD was made following the development of accompanying neurological symptoms.

CASE PRESENTATION: A 50-year-old male presented with a five-month history of avoiding opening windows due to fear of falling ill from wind and rain and performing ablutions with soil due to contamination fears. Additionally, he exhibited behaviors such as holding his breath, covering his mouth, and taking deep breaths while outside due to fear of airborne germ exposure.Clinical examination revealed motor abnormalities, including eye-blinking tics, choreiform movements, small-stepped gait, balance difficulties, and slowed movements that impaired daily activities such as dressing. His mental state examination showed loosened associations, reduced emotional engagement, blunted affect.

At presentation, the patient had been on ziprasidone 80 mg/day and paroxetine 40 mg/day for five months without improvement. Based on DSM-5 criteria, schizophrenia with somatic delusions and OCD with poor insight was diagnosed. Ziprasidone was discontinued, and aripiprazole 5 mg/day was initiated, titrated to 30 mg/day over six weeks. Paroxetine was replaced with sertraline, gradually increased to 200 mg/day. Despite these adjustments, the PANSS score improved only marginally from 80 to 75 over two months. Due to persistent symptoms and worsening avoidance behaviors, aripiprazole was tapered and stopped.

Clozapine 25–100 mg/day was introduced for treatment-resistant symptoms but was discontinued due to intolerable hypotensive and sedative side effects. Brain MRI showed caudate atrophy characterized by the loss of normal caudate head protrusion into the lateral ventricles.Following clozapine discontinuation, olanzapine 10 mg/day was started and titrated to 20 mg/day, yielding a PANSS score reduction to 73. However, obsessive and psychotic symptoms persisted after three months.

Quetiapine 300 mg/day and its extended-release form at 50 mg/day were added.With the progression of neurological symptoms, including worsening choreiform movements, dysarthria, bradykinesia, and balance issues, the patient was referred to neurology. Genetic testing confirmed HD with 45 or more CAG trinucleotide repeats. Tetrabenazine 12.5 mg/day was initiated by the neurology team.Written consent was obtained from concerned patient of case report.

CONCLUSION: In patients with treatment-resistant psychotic and obsessive-compulsive symptoms, accompanying neurological findings may reduce treatment response and complicate management. While clozapine is effective for treatment-resistant psychosis, its side effects can limit its use in neurological comorbidities, such as HD.

HD exemplifies how genetic neurodegenerative disorders may present with early psychiatric symptoms, often overshadowing motor features, leading to delayed diagnosis. This highlights the importance of holistic clinical evaluations and thorough neurological assessments in unresponsive psychiatric cases to identify underlying conditions. Timely diagnosis of HD can facilitate tailored treatment strategies.

Keywords: Choreiform movements,treatment-resistant schizophrenia, obsessive-compulsive disorder

[Abstract:0405]

Parkinson's Disease: A Diagnosis to Keep in Mind in Geriatric Depression Patients

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INTRODUCTION: Parkinson's disease (PD) is a progressive neurodegenerative age-related disorder that affects the central nervous system (CNS) and is characterized by uncontrollable movements such as shaking, stiffness, and loss of balance and coordination. Depression is a common non-motor manifestation of PD. (1) It was also shown that people with depression had a higher risk of PD than those without depression. (2).In this case, we aim to present an atypical manifestation of geriatric depression that was later diagnosed as Parkinson‘s disease.

CASE PRESENTATION: Mrs. S, an 80-year-old female patient, was admitted to our inpatient clinic due to anhedonia, depressive mood, and suicidal thoughts.In 2021, the patient experienced symptoms of inner restlessness, anxiety, psychomotor agitation, widespread body pain, and tremors, which led to multiple psychiatric outpatient visits. Trials with sertraline (100 mg/daily), fluoxetine (40 mg/daily), and mirtazapine (30 mg/daily) did not achieve remission. In May 2022, after a suicide attempt with medication overdose, she was admitted to another inpatient clinic. During this admission, sertraline (150 mg/daily) and aripiprazole (5 mg/daily) were administered, but the patient signed a refusal-of-treatment form and was discharged after two weeks upon her request. In September 2023, following a suicide attempt involving bleach ingestion, she was re-admitted to our clinic. At this time, she was treated with venlafaxine (300 mg/daily), quetiapine (200 mg/daily), mirtazapine (30 mg/daily), and alprazolam (1.5 mg/daily). During her admission, she developed symptoms of pulmonary thromboembolism and was transferred to the ICU unit. After her ICU stay, she was recalled for follow-ups from our outpatient clinic.

In February 2024, due to recurrent suicidal thoughts, the patient was once again admitted to our clinic. On admission, her Geriatric Depression Scale (GDS) score was 28/30. On physical examination, rigidity in both upper extremities and tremor in the left hand were observed.REM sleep behavior disorder was observed in the patient, which was a notable finding. A neurology consultation was requested,The patient's current findings were evaluated by the neurology department as indicative of Parkinson's disease and levodopa (100 mg) and benserazide (25 mg) at a dose of 3 x 1/2 were added to her treatment regimen. The Geriatric Depression Scale was reassessed weekly. One week after the initiation of levodopa treatment, the GDS score decreased to 19, and subsequently to 9. For the first time in three years, the patient achieved remission of depressive symptoms.

CONCLUSION: In literature, depression was associated with an increased risk of subsequent Parkinson‘s disease and it was shown that depression prior to PD diagnosis increased risk of dementia and mortality. (3) In our case we have also seen that underdiagnosis of PD might lead to treatment-resistant depressive symptoms. Therefore it is important to recognize and sufficiently treat PD especially in geriatric population with resistant depressive symptoms and it is also of utmost importance manage these cases with a multidisciplinary approach involving neurologists, psychiatrists, and geriatricians, to improve diagnostic accuracy and optimize treatment outcomes.

Keywords: Parkinson‘s Disease (PD), Geriatric Depression, Depression and PD Association, Treatment-Resistant Depression

AuthorToEditor: 1) Chikatimalla, R., Dasaradhan, T., & Gadde, S. (2022). Depression in Parkinson's disease: A narrative review. Cureus, 14(8), e27750. 2) Jeong, W., Kim, H., & Park, E. (2021). Association between depression and risk of Parkinson's disease in South Korean adults. Journal of Affective Disorders, 292, 75-80. 3)Badenoch, J., Paris, A., & Waters, S. (2024). Neuroanatomical and prognostic associations of depression in Parkinson's disease. Journal of Neurology, Neurosurgery & Psychiatry, 95, 966-973

[Abstract:0409]

Exacerbation of Psychotic Symptoms After Switching from Oral Risperidone to Paliperidone Palmitate: A Case Report

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INTRODUCTION: Schizophrenia is a disorder that leads to a significant decline in quality of life and an elevated risk of premature mortality, predominantly due to suicide. The lifetime suicide rate in schizophrenia is estimated to be approximately10%. The way to reduce all these serious consequences is to ensure compliance with treatment. Risperidone and its major active metabolite-Paliperidone, are second-generation antipsychotics widely used inthe treatment of psychotic disorders. Paliperidone-long-acting-injectable(LAI) forms, provides better compliance, reduces rehospitalizations and extends relapse times compared to other oral antipsychotics. It is thought to have similar efficacy to-Risperidone and therefore it‘s often considered as the first treatment option even in early psychosis. In this case report, we wanted to present a case in which symptoms flared after switching from oral Risperidone to long-acting-Paliperidone. Consent was obtained from the patient and his relatives for this case report.

CASE PRESENTATION: A36-year-old male presented with concerns of being followed and listened by others, fearing potential harm, having auditory hallucinations; eventually superficially cutting his neck believing it was necessary to remove a chip he thought was implanted there came to our outpatient clinic and was hospitalized for treatment. From the history taken, the patient had used cannabis irregularly until 6months ago, but no substance/metabolite was detected in urine toxicology. The treatment with-Risperidone at a dosage of 4mg per day was initiated, resulting in a regression of symptoms.Initial doses were administered to switch to monthly-PaliperidonePalmitate injections, Risperidone treatment was gradually reduced and discontinued, and the patient was discharged. The patient applied to our clinic 19days after discharge with complaints of increased anxiety, delusions and hallucinations, he claimed that he had not used any substances, urine toxicology was also negative. He was hospitalized for a second-time, and the treatment regimen was altered to oral Risperidone, initially at 4mg/day, which was increased to 6mg/day. It was observed that the symptoms were in remission after 10days. 3months after discharge, the patient is still in remission with-Risperidone 6mg/day and Biperiden 2mg/day treatment and he is still being followed-up in our clinic.

CONCLUSION: LAI antipsychotics have advantages such as encouraging compliance with treatment, delaying relapse, more favorable side-effect profile and ease of administration; and the-longer duration of action seems to be more advantageous. When considered that RisperidoneLAI is administered once every 2weeks, whereas the Paliperidone LAI allows for administration intervals of up to six-months and demonstrates minimal impact from liver or kidney function, the-LAI formulation of Paliperidone appears to offer greater advantages. However, in our case, after the psychotic symptoms had significantly subsided with oral Risperidone, the symptoms relapsed when Paliperidone LAI was administered and Risperidone was discontinued, and symptoms regressed after switching back to Risperidone, suggesting that the effectiveness of Paliperidone and Risperidone are not the same.

In the literature, a case of schizophrenia was observed to have relapsed after switching from Risperidone LAI to PaliperidoneLAI, and the symptoms subsided after switching back to Risperidone. These indicate that although the-Paliperidone molecule is an active metabolite of Risperidone, Risperidone might be superior-to-Paliperidone in terms of efficacy, at least in some cases.

Keywords: Schizophrenia, Psychosis, Risperidone, Paliperidone

[Abstract:0413]

What is Media Hoarding? A Case Report

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INTRODUCTION: Hoarding disorder (HD) is a persistent difficulty in getting rid of or discarding items due to the perceived need to store them. Common types of hoarding include food hoarding, animal hoarding, garbage or trash hoarding, sentimental hoarding, and media or paper hoarding. Media hoarding involves an excessive accumulation of newspapers, magazines, books, or other forms of paper. People who struggle with media hoarding may feel overwhelmed by the sheer volume of paper they accumulate and may be unable to part with it due to the belief that it may be useful in the future. Paper products, in extreme cases of hoarding, can grow as high as the height of the ceiling. In situations where the papers are piled up so high, the hoarder may try to develop pathways through the paper products to get to the entrance of the home. The piles of paper can be extremely unstable, and even the slightest nudge may result in these paper piles collapsing on the hoarder. This avalanche of papers may result in entrapment and, in a worse case scenarios, the hoarder may be crushed under the weight of excess paper products. Fire is a constant concern in a paper hoarding situations. Collecting papers can be due to a variety of psychological and emotional reasons. In general, collecting newspapers can be a complex behavior that can develop for a variety of reasons. In this study, it is aimed to contribute to the existing literature by presenting a male patient who has been hoarding newspapers for many years, accompanied by literature results.

CASE PRESENTATION: A 38-year-old single, primary school graduate male patient came to our psychiatry clinic accompanied by his sister upon the recommendation of his family. The patient's brother, who stated that he had no complaints, reported that his brother had been collecting newspapers. During the interview, it was learned that the patient bought 5-10 newspapers almost every day, that he had been hoarding the newspapers he had bought since 2002 at home, and that some rooms in the house were unusable. The patient reported that he bought newspapers to follow the TV series he watched constantly and that he did not throw the newspapers away, saying that he would look at them again later. The patient, who has a family history of obsessive-compulsive disorder, has not received any treatment so far. The patient was started on fluoxetine 20mg/day. The dosage of the medication was gradually increased, and informed consent was obtained from the patient before starting treatment.

CONCLUSION: It is necessary to determine the etiology, clinical presentation and treatment of the subtypes of hoarding disorder. It is important to know the differences between animal hoarding and media hoarding. Paper hoarding can cause the neglect of many home systems that are necessary for a healthy living environment. Paper can fill entire rooms and make them unusable for their intended purpose. In addition, newspaper hoarding can pose a risk to the individual's family members and relatives in terms of fire and hygiene.

Keywords: Diagnosis, media hoarding, treatment

[Abstract:0416]

Cabergoline Induced Manic Episode with Psychotic Features: A Case Report

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INTRODUCTION: Cabergoline, an ergoline derivative with high affinity for D2 dopamine receptors, is commonly preferred in the treatment of hyperprolactinemia and prolactinoma. Although its long elimination half-life offers convenient dosing, excessive dopaminergic stimulation in mesolimbic and mesocortical pathways may lead to psychotic or manic episodes [1]. Manic presentations emerging in later life without a family history of bipolar disorder are often categorized as ―secondary mania" [2]. In the present case, the Naranjo Adverse Drug Reaction Probability Scale indicated a score of four points, suggesting cabergoline as a possible trigger [3]. Furthermore, post-marketing surveillance data from eHealthMe, involving 5,946 cabergoline users, identified mania in 18 of them (0.3%), highlighting that this medication, though infrequently, may elicit severe psychiatric side effects [5]. This report describes a manic episode with psychotic features associated with cabergoline therapy.

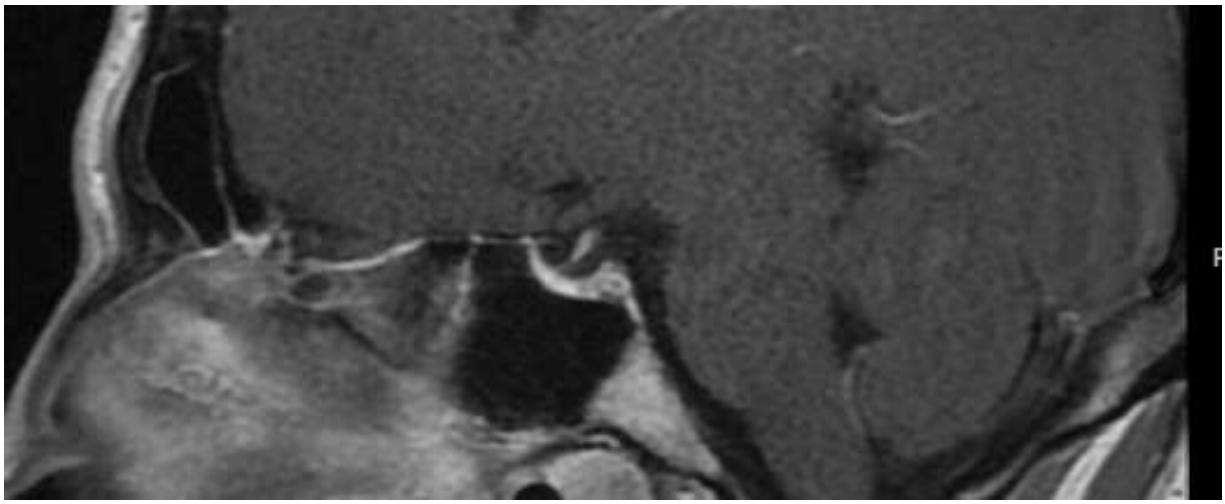
CASE PRESENTATION: A 38-year-old female patient, with no prior psychiatric history, was diagnosed with hyperprolactinemia following a cesarean delivery in 2016 due to irregular menses. In 2022, radiological examinations revealed a pituitary microadenoma, prompting initiation of cabergoline therapy (starting at 0.5 mg/week with gradual escalation). During the second month of treatment, the patient presented with heightened euphoria, irritability, grandiose ideation, reduced need for sleep, and persecutory delusions. Initial psychiatric evaluation yielded a Brief Psychiatric Rating Scale (BPRS) score of 65 and a Young Mania Rating Scale (YMRS) score of 39.

Because of agitation, haloperidol 10 mg/day and intramuscular chlorpromazine as needed were administered. Due to inadequate response, a single dose of intramuscular zuclopenthixol (50 mg/day) was given, followed by 150 mg depot intramuscular paliperidone. Laboratory tests revealed elevated prolactin levels, prompting the addition of aripiprazole (titrated from 10 mg/day to 30 mg/day), which is less likely to increase prolactin. Although there was partial improvement, complete remission was not achieved. Following endocrine consultation, cabergoline was tapered and discontinued. A mood stabilizer, valproic acid (1,000 mg/day), was then added, alongside aripiprazole 30 mg/day, quetiapine XR (initiated at 200 mg/day and titrated to 400 mg/day), and propranolol 20 mg/day. By the fourth week of combined therapy, the patient‘s mood and thought content normalized, psychotic symptoms markedly subsided, and she was discharged in partial remission.

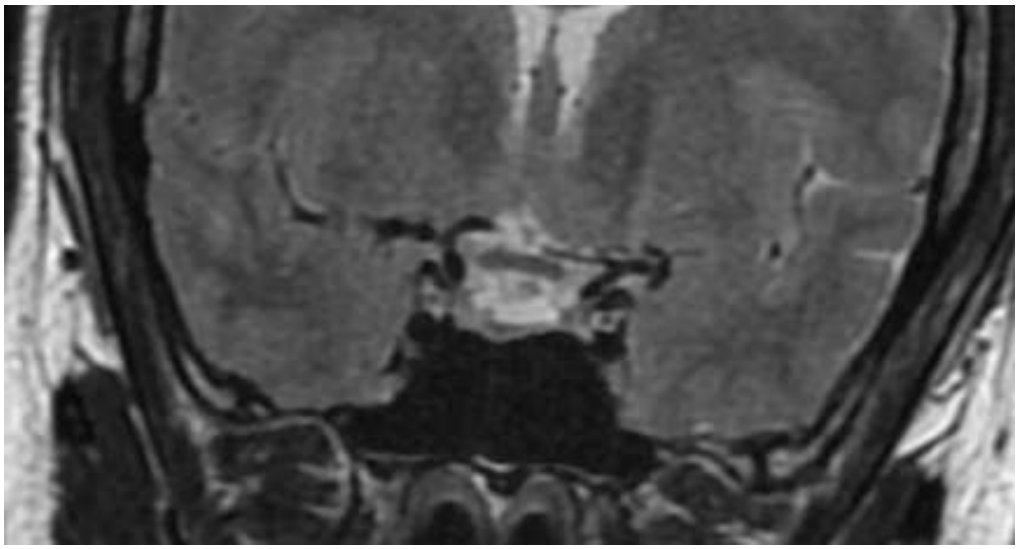
CONCLUSION: Though rare, mania is a serious psychiatric side effect of dopamine agonists and often resolves upon discontinuation of cabergoline [1,2]. In this case, ceasing cabergoline plus adding appropriate antipsychotics (especially aripiprazole) and a mood stabilizer produced clear improvement. Literature suggests cabergoline-induced mania may respond to valproic acid or lithium, underlining the need for vigilant patient monitoring [4]. While cabergoline effectively reduces prolactin levels, it can precipitate manic or psychotic episodes. Clinicians should remain alert for abrupt behavioral or mood alterations. If symptoms emerge, dose adjustment or cessation of cabergoline, along with mood stabilizers (e.g., valproic acid or lithium) and suitable antipsychotics, can rapidly restore clinical stability. Vigilant follow-up is crucial, particularly in at-risk individuals.

Keywords: Cabergoline, Manic episode, Psychotic features, Hyperprolactinemia, Dopamine agonists, Secondary mania

T1 hipofiz MRG



T2 Hipofiz MRG



Tedavi sırasında prolaktin parametreleri

Reference range 3,34-26,72	11.03.2024 (3rd day)	21.03.2024 (13th day)	26.03.2024 (18th day)	04.04.2024 (27th day)	1.04.2024 (34th day)
prolactin	82,5	121,6	66,5	42,6	36,9

[Abstract:0424]

Differentiation Between Autism Spectrum Disorder and Selective Mutism Accompanied By Stereotypes: A Case Report

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INTRODUCTION: Stereotypies are repetitive and purposeless movements that occur in a specific pattern and are distracting. Primary motor stereotypies are seen in children with normal intelligence, while secondary stereotypies occur in the setting of an additional diagnosis, such as autism spectrum disorder or other neurological disorders. They are highly associated with comorbid conditions such as anxiety, obsessive-compulsive symptoms, inattention, and tics. The pathophysiology of stereotypies involves overactive front striatal dopaminergic pathways and underactive cholinergic and GABAergic inhibitory pathways. These movements tend to occur more during increased stress, anxiety, excitement, focused concentration, or boredom. Simple motor stereotypies (also known as physiological stereotypies or pervasive behaviors) are common in both children and adults. These include leg shaking, hair flipping, and nail-biting. Complex motor stereotypies are more complex movements such as hand flapping, finger or arm wiggling, mouth opening, orofacial movements, and body shaking. One theory is that movements may be a way to express excitement or cope with overstimulation physically. Selective mutism (SM) in children is often associated with language impairment/delay, suggesting that neurobiological factors may play a role in the development of SM. Motor coordination problems decreased optimally during the prenatal and postnatal period, and minor physical anomalies represent other neurodevelopmental impairment/delay markers. In this report, a patient with stereotypy and selective mutism was presented.

CASE PRESENTATION: A 5-year-old male outpatient was referred to our clinic with complaints of not speaking and making specific movements with his hands and fingers. The patient's parent said that the child spoke to his family members (mother, father, and sister) but did not speak to strangers or socially communicate with strangers. He started talking at the age of one. He is currently attending daycare. Although he did not speak to his friends at the nursery, he joined their games. He can make eye contact. He can obey simple and complex commands. He has joint attention. Regarding the DSM-V criteria patient was diagnosed with selective mutism. A dose of 10 mg/day atomoxetine was started and titrated up to 20 mg/day in two weeks. 6 weeks later, the patient started whispering to a few friends. Then, risperidone 0.5 mg/day was added to the treatment for the ongoing stereotypies. Although the stereotypies continued in the 4th week of risperidone treatment, their severity decreased.

CONCLUSION: This report shows that anxiety disorder can be accompanied by stereotypies. When stereotypies accompany a condition such as selective mutism, such as not speaking and avoiding social communication, it is included in the differential diagnosis with the two cardinal symptoms of autism spectrum disorder. Clinicians' detailed examination and collection of data about the patient from sources of information such as family and nursery are important in the differential diagnosis.

Keywords: Autism spectrum disorder, selective mutism, stereotypies

[Abstract:0426]

Agomelatine as an Adjunct Treatment in Adolescent Bipolar Disorder: A Three-Case Series Addressing Sleep and Depression

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INTRODUCTION: Agomelatine (AGO) has attracted attention for its unique pharmacological profile, which combines melatonergic agonism with serotonin receptor antagonism. This dual action is of particular relevance in the context of mood disorders, where disturbances in sleep-wake cycles and neurotransmitter imbalances are prevalent. The mechanism of action of AGO suggests potential benefits in the treatment of conditions such as major depressive disorder (MDD) in adolescents. AGO exerts a synergistic effect as a selective agonist of the melatoninergic receptors MT1 and MT2, which play a pivotal role in the regulation of circadian rhythms and sleep-wake cycles (Yang et al., 2022). In addition to its melatonergic effects, AGO acts as a selective antagonist of 5-HT2C and 5-HT2B serotonin receptors. This antagonism has been demonstrated to increase norepinephrine and dopamine availability in the prefrontal cortex, thereby contributing to its antidepressant and nootropic effects (Fornaro et al., 2013).

CASE PRESENTATION: Case 1: In a 16-year-old patient with a history of severe trauma and accompanying psychotic symptoms, there was regression in depressive symptoms and improvement in sleep quality after the addition of agomelatine. She was diagnosed with bipolar disorder (BPD). In this patient, rapid transitions between mania and depression episodes were observed and different antipsychotics and mood stabilizers were tried. However, after the addition of agomelatine, it was observed that both sleep and mood stabilized.

Case 2: The patient, a 16-year-old female, she presented a complex picture with a history of eating disorder and bipolar disorder. Although partial remissions were achieved with discontinuation of sertraline and addition of different atypical antipsychotics and mood stabilizers, sleep problems and recurrent mood fluctuations continued. With the addition of agomelatine 25 mg, it was observed that both the patient's sleep patterns were restored and her depression was alleviated.

Case 3: The 16-year-old patient had a history of anorexia nervosa, recurrent suicide attempts and mixed episodes, and different antidepressant and antipsychotic drugs were used over time. She was diagnosed with bipolar disorder (BPD). Despite sleep regulators such as zopiclone and melatonin, persistent insomnia persisted. Agomelatine combined with lurasidone treatment provided a significant improvement in sleep quality and helped the patient to recover from depressive symptoms.

CONCLUSION: These three cases point to the benefit of agomelatine in the management of depressive episodes and sleep problems of bipolar disorder in adolescents. To our knowledge, this is the first report on symptom management in adolescents with bipolar disorder. The combined melatonergic and serotonergic effects of agomelatine seem to be effective in both alleviating insomnia and improving depressive symptoms. However, if these results are confirmed in controlled studies with larger samples, agomelatine may enter clinical practice more widely as an important supportive agent in the treatment of bipolar disorder in adolescents. The development of holistic treatment models in which risk factors and triggers are examined multidimensionally, circadian rhythm focus is centralized, and pharmacotherapy is carried out together with psychotherapies is critical for the long-term prognosis of this disease.

Keywords: Agomelatine, bipolar disorder, depression, insomnia, sleep disorders

[Abstract:0427]

Atomoxetine-Related Urinary Retention in a Pediatric Patient: A Case Report

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INTRODUCTION: Atomoxetine is a non-stimulant medication approved by the FDA for the treatment of attention deficit hyperactivity disorder (ADHD) in patients aged 6 years and older. It binds selectively to the presynaptic norepinephrine transporter and acts by increasing the concentration of norepinephrine in the synaptic cleft (1). Common side effects of atomoxetine in children include decreased appetite, nausea, and dyspepsia, while some of the most frequently reported side effects in adults include insomnia, dry mouth, sexual dysfunction, as well as difficulty urinating (2). This case report focuses on urinary retention that developed during atomoxetine treatment in a boy diagnosed with ADHD.

CASE PRESENTATION: An 8-year-old male patient came to our clinic with his mother upon the guidance of his teacher, with complaints of inability to sustain attention, getting bored easily with lessons, difficulty in reading, and confusing the letters 'b' and 'd' while writing. Based on the patient's anamnesis and psychometric test results, a diagnosis of specific learning disorder and ADHD, predominantly inattentive presentation, was made according to the DSM-5-TR criteria. For ADHD treatment, the family refused stimulant therapy. A cardiology consultation was requested for the patient, who had a known diagnosis of hyperlipidemia and a significant family history of cardiac disease, to assess the suitability of initiating atomoxetine. Since the patient's physical examination and test results were normal, for a body weight of 28 kg, atomoxetine was started at 10 mg/day and gradually increased to 35 mg/day. At the follow-up visit in the 1.5th month of treatment, no adverse effects were reported. It was learned that in the third month of atomoxetine treatment, the patient applied to the pediatric emergency department with the complaint of feeling the need to urinate for the last two days but not being able to empty his urine, 400 cc urine output was obtained after catheterization, urinalysis, urine culture and urinary system ultrasonography were reported as normal. The patient was referred to our clinic with suspected drug-induced urinary retention. However, it was later found that the family decided to continue the medication without presenting to our clinic, believing that the child had improved after catheterization. When the patient's difficulty in urination persisted, he applied to us and atomoxetine was stopped. Two days later, the patient's symptoms had completely resolved. The patient's parents provided written consent for the publication of this case report.

CONCLUSION: In this case, urinary retention was observed in a school-age child in the 3rd month of stable dose atomoxetine treatment, not at the beginning of treatment (3) or with dose increases (4). Overactivation of the sympathetic system, which may play a role in acute urinary retention, may be related to effect of atomoxetine in inhibiting the presynaptic reuptake of norepinephrine (3). Clinicians should be aware that urinary retention may occur as an adverse effect in children during treatment with atomoxetine. Perhaps, as case reports increase in the future, potential risk groups or risk factors for atomoxetine-related urinary retention can be identified and necessary precautions can be taken.

Keywords: Atomoxetine, adverse effect, child, urinary retention

AuthorToEditor: 1. Vilus JT, Engelhard C. Nonstimulant Medications for Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents. Pediatric Annals 2025;54(1), e27-e33. 2. Christman AK, Fermo JD, Markowitz JS. Atomoxetine, a Novel Treatment for Attention-Deficit—Hyperactivity Disorder. Pharmacotherapy: The Journal of Human Pharmacology and Drug Therapy 2004;24(8), 1020-1036. 3. Turan B, Dursun OB, Esin IS, Demirdöğen ŞO. Atomoxetine-induced urinary retention: a case report. Anadolu Psikiyatri Dergisi 2020;21(2), 222-224. 4. Mutlu C, Yorbik O, Ipek H, Tanju IA. Acute urinary retention associated with increased dose of atomoxetine in a child: a case report. Klinik Psikofarmakoloji Bülteni-Bulletin of Clinical Psychopharmacology 2015;25(3), 299-301.

[Abstract:0429]

A Pregnant Patient with Swallowing Phobia: A Case Report

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INTRODUCTION: Swallowing phobia, or choking phobia, is characterized by a fear of choking, accompanied by the avoidance of solid foods, liquids, and pills, without any anatomical or physiological abnormality. In the DSM-5, it is classified under the "other" category of specific phobia disorder. A case of swallowing phobia that developed during pregnancy will be presented here.

CASE PRESENTATION: Patient Z, a 38-year-old woman, is 22 weeks pregnant and on her sixth pregnancy, with one miscarriage and four healthy children. Her last two pregnancies were unplanned. Z reported having an average academic performance during her schooling, and good relationships with peers. She has no significant medical history and no notable family history. She has two children from her first marriage, which ended due to physical violence. She has had custody of the children. Z has been married for 8 years to her second husband, who is 14 years older than her and suffered a stroke 4 years ago, resulting in partial left-side weakness. She expressed feeling misunderstood by her husband, especially due to the age difference. She also mentioned frequently forgetting her pregnancy early on due to its unplanned nature.

The patient had one previous psychiatric examination due to sleep disturbances, but she has not been using any medication. It was reported that for the last 2-3 years, she has had difficulty swallowing medications and fears she will be unable to swallow them again after initially failing. Since pregnancy, she has had difficulty swallowing solid foods, such as fruits with skins and olives, and even experiences the sensation of water getting stuck in her throat. For the past two weeks, she has only been consuming liquid foods like soups due to the fear of not being able to swallow.

Examitions with otorhinolaryngology, as well as gastroenterology, were conducted, but no underlying physical cause was found. Physical examination and lab tests revealed no abnormalities. During the mental status examination, Z was alert, oriented, cooperative, and well-groomed. She displayed a respectful attitude, and her responses were focused on her swallowing issue. While her mood was mildly anxious, it was within the normal range. No issues were noted in perception, intelligence, reality testing, or judgment. Her thoughts primarily centered on family matters and her fear of swallowing.

Based on the clinical history and mental status exam, Z was diagnosed with Specific Phobia according to the DSM-5 criteria.

Information about the disease and treatment was provided to both the patient and her husband. After explaining the risk-benefit ratio of treatment during pregnancy, and after obtaining their consent, treatment with mirtazapine 15 mg/day was initiated. During follow-up, the patient's food intake gradually improved, she delivered at term, and her baby, weighing 2550 grams, was reported to be healthy.

CONCLUSION: In swallowing phobia, it is important to first rule out organic causes, and also to differentiate it from eating disorders and conversion disorders in the differential diagnosis.

Keywords: Choking phobia, pregnancy, swallowing phobia

[Abstract:0430]

A Male Adolescent Who Attempted Suicide With High Dose Long-Acting Methylphenidate

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INTRODUCTION: Attention deficit hyperactivity disorder (ADHD) is one of the most common neurodevelopmental disorders in children and adolescents. The main symptoms of ADHD are attention deficit, hyperactivity and impulsivity. Methylphenidate is commonly used in the treatment of ADHD (1). Here we present a 14 year old male adolescent who attempted suicide with 810 mg long acting oros methylphenidate and was discharged on the 6th day without any sequelae.Written informed consents were obtained from the patient and patient's legally authorized representative.

CASE PRESENTATION: A 14 year old male adolescent has been followed up in our clinic since the age of 7 with the diagnosis of ADHD + Conduct Disorder and has been treated with medication. He attempted suicide by taking five or six medications a year ago and stopped using medication for a while. The patient, who applied because his complaints had increased greatly in the last few months, was first given antipsychotic medication of olanzapine 5mg and then low dose (18 mg) long-acting methylphenidate was added to his treatment.

14 year old male adolescent diagnosed ADHD and conduct disorder attempted suicide with 45 long acting oros methylphenidate 18 mg (810 mg) and 28 olanzapine 5 mg and was administered to pediatric emergency unit after 6 hours with symptoms of letargy, confusion, hypertension, tachycardia, and Glaskov Coma Scale Score 14.

In the first examinations, SO2: 81%, O2HB:80.6, Glucose:119, CK:480 (<171), CK-MB:31 (<24), IB:1.5 (<0.8), DB: 0.28 (<0.2), TB: 1.8 (<1.2), and in the examinations repeated after 8 hours, CK: 1747, CKMB:77, LDH:337, AST:63, ALT:45, ALP:123, SO2: 86%, O2HB:85, Glucose:115 were found. The patient stayed in intensive care for 3 days and was discharged on the 6th day without any sequelae

CONCLUSION: The process of recovery without any sequelae despite the toxicity of high dose long-acting methylphenidate will be explained. Methylphenidate was reported to have high safety and tolerability in the treatment of ADHD (2).

Keywords: Attention deficit, hyperactivity, methylphenidate, suicide, toxicity

REFERENCE

1. Felt BT, Biermann B, Christner JG, Kochhar P, Harrison RV. Diagnosis and management of ADHD in children. Am Fam Physician. 2014;90:456-464.
2. Rappley MD. (1997). Safety issues in the use of methylphenidate: an American perspective. Drug Saf.; 17:143-8.

[Abstract:0431]

Diaper Fetishism a Case Report

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INTRODUCTION: Paraphilia refers to the condition in which some individuals are unable to achieve satisfaction from typical sexual behaviors and instead choose unusual sexual behaviors or objects. One type of paraphilia, known as fetishism, involves sexual attraction to a specific body part or inanimate objects. In this case, we will present a case of diaper fetishism.

CASE PRESENTATION: Mr V, a 22-year-old unmarried male with a high school education, is the youngest of three siblings and lives with his family. He works in a cleaning position at a factory and was exempt from military service due to a diagnosis of borderline intellectual functioning. His treatment regimen included risperidone consta 25 mg every 2 weeks, fluoxetine 20 mg once daily, and risperidone 2 mg once daily.

Further exploration of his history revealed that he derives sexual pleasure from wearing diapers and watching videos related to diaper bondage, experiencing orgasm during these activities. He reported that when he was around 8 years old, during a testicular surgery, he realized he enjoyed wearing diapers, and he has continued wearing them secretly ever since. He also reported searching for diaper-related content on the internet and engaging in online conversations with others who share similar interests.

Due to the absence of family members at the interviews, social work support has been requested. It was learned that the individual has difficulty keeping track of multiple tasks and requires reminders, but has not received any warning punishments. They have an introverted personality and have been using diapers for a long time. It was reported that the individual sent messages to women asking them to put diapers on them, collected diapers from the trash before starting work, and later purchased diapers, with communication on their phone detailing their use. Additionally, it was noted that the individual expressed a desire to see a female doctor. Information gathered from family members indicated that the individual did not receive sufficient attention from their parents since childhood and that both the mother and father may have limited mental capacity, according to statements from the individual's sibling.

No pathological findings were detected in the physical examination and laboratory tests. During the psychiatric examination, it was determined that the individual‘s age-appropriate self-care was adequate. Mood was euthymic, and affect was blunted. Speech rate was normal and goal-directed. The content of thoughts was primarily focused on topics related to diapering and watching diaper-related videos. The individual did not report active delusions or hallucinations. Abstract thinking was adequate, and they were able to perform simple mathematical calculations. In the psychometric evaluation, the Kent test score was 92, and the Porteus test score was 96.

Based on the clinical history, psychiatric examination, and psychometric assessment, the diagnosis of diaper fetishism, borderline intellectual functioning was made according to DSM-5 criteria.

CONCLUSION: Fetishism is a rare condition, encountered more often when there is a legal problem. However, the presented case applied for treatment voluntarily with the guidance of her family.

Keywords: Diaper fetishism, fetishism, paraphilia

[Abstract:0436]

From Traditional Scales to Artificial Intelligence: Large Language Models in Psychometric Assessment

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BACKGROUND AND AIM: INTRODUCTION: The earliest examples of self-reported psychometric assessments were developed by Robert S. Woodworth during World War I and have been in use by mental health professionals for over 100 years, continuously being updated and refined. However, factors such as the excessive number of items, prolonged administration time, increased cognitive load on participants, and low response motivation have hindered the efficient extraction of meaningful results. Moreover, challenges related to the repeatability of measurements and the practical difficulties encountered in the regular monitoring of individuals with mental health issues reveal significant gaps in current approaches. To address these shortcomings, various scale-shortening techniques have been developed, and in recent years, artificial intelligence–based algorithms have introduced a new paradigm in this process. In particular, tree-based algorithms select the most appropriate items from the scale based on the participants‘ responses and develop models using the principle of information entropy. This study aims to develop an original and more efficient assessment method by integrating decision tree models—based on the Beck Depression Inventory—into a Large Language Model framework.

METHODS: In this study, the scores of 807 participants who completed the Beck Depression Inventory were collected. Based on the total scores, four categories (minimal, mild, moderate, and severe depression) were defined, and corresponding labels were assigned to create a dataset. Subsequently, the total scores were removed from the dataset so that only the categorical labels remained. The dataset was then split into training (80%) and testing (20%) subsets. Tree-based machine learning algorithms—including Decision Trees, Random Forest, Random Tree, XGBoost, LightGBM, and Extra Trees—were applied.

RESULTS: The analysis revealed the following classification accuracies for the algorithms: Random Tree 80.25%, Decision Trees – 81.48%, Random Forest – 90.12%, XGBoost 90.12%, LightGBM 90.74%, and Extra Trees – 91.98%. Although the highest accuracy was achieved with the Extra Trees algorithm, the Decision Trees algorithm was selected as the optimal model based on its 81.48% accuracy and its performance when using an item count ranging between 3 and 12. The developed model was initially converted into a digital survey form and subsequently into a language model (digital surveyor) that operates based on direct question-and-answer interaction. In light of the system‘s successful outcomes, a model incorporating empathetic language was designed. This model analyzes patients‘ open-ended responses, selects the most appropriate answer based on the decision tree model built on the Beck Depression Inventory items, concludes the interview, and classifies the severity of depression.

CONCLUSIONS: The developed system significantly mitigates the disadvantages commonly encountered in traditional psychometric assessments. By preserving the semantic integrity of the scale items, enabling the selection of the most appropriate responses from patients‘ expressions, and adopting an empathetic evaluation approach, the system represents an innovative advancement in mental health applications. Moreover, the physician-like approach facilitates the selection of questions based on patient responses, thereby enhancing ease of use. The proposed system aims to provide a more effective evaluation, particularly in clinical settings that require regular patient monitoring and follow-up. Future work is expected to enhance the system‘s capacity for open-ended evaluation through the integration of natural language processing and semantic analysis techniques, as well as to achieve more precise results by employing personalized active learning approaches.

Keywords: Psychometric Assessment, Artificial Intelligence, Large Language Models, Beck Depression Inventory

Figure 1: Depression severity determination model based on Decision Tree Algorithm

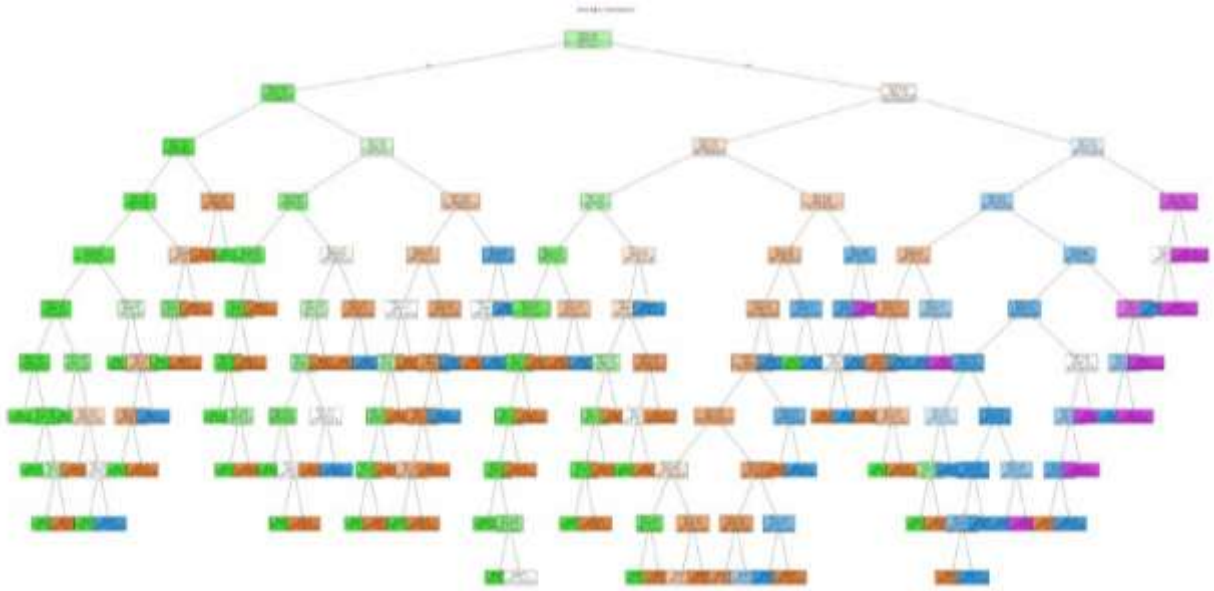


Table 1: Learning algorithms and classification performances

Learning Algorithm	Accuracy	Precision	Recall	F1 Score	
Random Tree	0.8025	0.92	0.89	0.90	Minimal Depression
		0.61	0.65	0.63	Mild Depression
		0.65	0.77	0.71	Moderate Depression
		0.75	0.60	0.67	Severe Depression
Decision Tree	0.8148	0.94	0.89	0.91	Minimal Depression
		0.60	0.71	0.65	Mild Depression
		0.68	0.68	0.68	Moderate Depression
		0.80	0.80	0.80	Severe Depression
Random Forest	0.9012	0.95	0.99	0.97	Minimal Depression
		0.78	0.85	0.82	Mild Depression
		0.83	0.68	0.75	Moderate Depression
		1.00	0.70	0.82	Severe Depression
XGBoost	0.9012	0.94	0.97	0.95	Minimal Depression
		0.80	0.82	0.81	Mild Depression
		0.89	0.77	0.83	Moderate Depression
		0.89	0.80	0.84	Severe Depression
LightGBM	0.9074	0.96	0.96	0.96	Minimal Depression
		0.81	0.88	0.85	Mild Depression
		0.86	0.82	0.84	Moderate Depression
		0.88	0.70	0.78	Severe Depression
Extra Trees	0.9198	0.94	1.00	0.97	Minimal Depression
		0.88	0.82	0.85	Mild Depression
		0.86	0.82	0.84	Moderate Depression
		1.00	0.70	0.82	Severe Depression

AuthorToEditor: References Beck, A. T., Steer, R. A., & Brown, G. K. (1996). Manual for the Beck Depression Inventory–II. Psychological Corporation. Breiman, L. (2001). Random forests. Machine Learning, 45(1), 5–32. https://doi.org/10.1023/A:1010933404324 Brown, T. B., Mann, B., Ryder, N., Subbiah, M., Kaplan, J., Dhariwal, P.,.. & Amodei, D. (2020). Language models are few-shot learners. In Advances in Neural Information Processing Systems (Vol. 33). https://papers.nips.cc/paper/2020/hash/1457c0d6bfcb4967418bfb8ac142f64a-Abstract.html Jurafsky, D., & Martin, J. H. (2021). Speech and language processing (3rd ed.). Prentice Hall. Settles, B. (2009). Active learning literature survey. University of Wisconsin–Madison. Retrieved from http://burrsettles.com/pub/settles.activelearning.pdf

[Abstract:0456]

Clonazepam in the treatment of Catatonia in a 12-Year-Old Child: Case Report

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INTRODUCTION: Catatonia is a complex syndrome characterized by motor, behavioral, emotional, and regressive symptoms. It is frequently observed in psychotic and mood disorders. In DSM-5, catatonia is classified under Schizophrenia Spectrum and Other Psychotic Disorders and includes idiopathic catatonia, catatonia associated with mental illness, and catatonia secondary to a medical condition. A diagnosis requires at least three of 12 symptoms: stupor, catalepsy, waxy flexibility, mutism, negativism, posturing, stereotypy, agitation, grimacing, echolalia, and echopraxia.The first pediatric case of catatonia was documented about 30 years after adult cases were described in the early 1900s. Despite this, research on pediatric catatonia remains limited. The first-line treatment in children and adolescents is benzodiazepines, with lorazepam being the most commonly used. Other effective benzodiazepines include diazepam, oxazepam, and clonazepam. Clonazepam has a longer half-life than lorazepam and modulates serotonin receptors (5HT1 and 5HT2). Some cases have also responded to serotonergic agents.

CASE PRESENTATION: A 12-year-old boy was admitted with mutism, self-care impairment, immobility, and hypersensitivity to sound and light for six weeks. His family reported sleep and appetite disturbances. He refused to remove his outer clothes and shoes while sleeping and required assistance with feeding. He had previously performed well academically but had not attended school for three months. Neurological imaging and medical investigations found no organic pathology. His psychiatric and family history were unremarkable. Mental status examination revealed clear consciousness and orientation but poor cooperation. Self-care was impaired, and affect was restricted. Due to mutism, assessments of orientation, perception, and memory could not be conducted. He exhibited minimal emotional response, slowed movements, and ritualistic behaviors. Based on mutism, negativism, posturing, stereotypy, and mannerisms, a diagnosis of catatonia was established. Since lorazepam was unavailable, olanzapine 5 mg was initiated. Three days later, alprazolam 0.25 mg twice daily was added. However, the patient presented to the emergency department with palpitations after discontinuing medication. Olanzapine was restarted and increased to 10 mg daily. At follow-up three days later, he showed some improvement, responding with facial expressions, but remained unable to complete tasks such as picking up objects or sleeping alone. His ritualistic behaviors persisted, so clonazepam 1 mg twice daily was introduced. One week later, significant improvement was observed. He resumed speaking, returned to school, slept independently, and could open and close doors on his own. His Clinical Global Impression-Severity (CGI-S) score improved from 6 to 1, and his Clinical Global Impression-Improvement (CGI-I) score was 1. No catatonic symptoms were present in the mental status examination.

CONCLUSION: Due to his initial mutism, details about symptom onset were unclear, and his condition was classified as unspecified catatonia. Lorazepam remains the preferred treatment due to its rapid effect, but studies suggest other benzodiazepines, such as clonazepam, may also be effective. In this case, clonazepam led to substantial improvement. Although some studies caution against using antipsychotics in catatonia, they may help manage underlying disorders after stabilization. Further research is needed to determine optimal treatment strategies for pediatric catatonia.

Keywords: Benzodiazepine Treatment, Clonazepam, Pediatric Catatonia

AuthorToEditor: American Psychiatric Association, D. S. M. T. F., & American Psychiatric Association, D. S. (2013). Diagnostic and statistical manual of mental disorders: DSM-5 (Vol. 5, No. 5). Washington, DC: American psychiatric association. Agrawal AK, Das S, Tirthalli J. Clonazepam in Catatonia: Thinking Beyond the Boundary of Lorazepam: A Case Report. Indian Journal of Psychological Medicine. 2023;45(1):97-99. doi:10.1177/02537176221116265 Micaldi SC, Dao CW, Napier DN, Samson J. A Case of Pediatric Catatonia. Kans J Med. 2021 Oct 14;14:261-264. doi: 10.17161/kjm.vol14.14985. PMID: 34671444; PMCID: PMC8523101. Weiss, M. D., Schibuk, L., Gokarakonda, S. B., Henderson, R., & Esmaeilpour, D. (2022). Catatonia with Psychosis in an 8-Year-Old Child: A Case Report and a Literature Review. Case Reports in Psychiatry, 2022(1), 4124733. Jiang, S., Brownell, K. C., Kamper, J. E., & Stewart, J. T. (2021). Clonazepam for catatonia incompletely responsive to lorazepam. Journal of the Academy of Consultation-Liaison Psychiatry, 62(1), 97-101.

[Abstract:0354]

Drug Resistance Secondary to Treatment in Schizophrenia: A Case Report

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INTRODUCTION: Schizophrenia is a disorder associated with functional impairment, social isolation, and a decreased life-expectancy. Characteristic symptoms include a range of positive, negative, and cognitive psychopathology (1). Despite the advances in pharmacological treatment of schizophrenia, 1/3 of patients do not respond adequately to therapy. Inadequate response to two antipsychotic therapies at doses of 400-600 mg/day chlorpromazine equivalents over 4-6 weeks is known as treatment resistant schizophrenia (TRS) (2).In this case presentation, the approach to TRS in child and adolescent psychiatry practice will be discussed.

CASE PRESENTATION: A 15-year-old male patient was admitted to our service in June 2024 with complaints of insomnia, auditory hallucinations, self-laughing, desorganized behaviors and hostility.

The patient's complaints began in 2021 with a decrease in communication and responsiveness, decline in school success and hearing commanding voices. In the first examination, escitalopram 5 mg was started, escitalopram was discontinued with the complaints of self-laughing, punching around, chlorpromazine 100 mg/day and Olanzapine 7.5 mg/day were started considering a psychotic episode. He used this treatment for about 1.5 years and there was a significant decrease in complaints.

In December 2023, chlorpromazine 100 mg/day and olanzapine 7.5 mg/day were discontinued and Risperidone 1 mg/day and valproate 1000 mg/day were started with complaints of aggressiveness, hostility, insomnia, laughing at herself, decreased amount and duration of speech, and not going to school. In March, risperidone was increased to 4 mg after hostility to the family due to hearing commanding voices. Flupentixol injection/20day was added upon lack of benefit. The patient who applied to our outpatient clinic due to increased hostility was admitted to our service with a diagnosis of psychotic disorder and treatment was determined as Risperidone 4 mg/day, Valproate 1000 mg/day. Since the patient had desorganized movements and aggression, quetiapine 300 mg/day was added and valproate dose was increased to 1500 mg/day. Risperidone dose was increased up to 8 mg in the patient whose psychotic symptoms did not subside. He was discharged with decreased desorganized behaviors, decreased aggression, increased communication and partial benefit in hallucinations with this medications: Risperidone 8 mg/day, valproate 1500 mg/day, quetiapine 300 mg/day.

In outpatient follow-up, risperidone was cross switched to olanzapine 20 mg due to increase in positive symptoms, hostility and desorganized behaviors. With the treatment of olanzapine 20 mg/day, ketiapine 300 mg/day, valproate 1500 mg/day, there was a partial decrease in desorganized behaviors and a significant decrease in aggression and the time spent with his family increased.

CONCLUSION: Our patient responded positively to olanzapine 7.5 mg/day, which was used at the beginning of treatment and olanzapine could have been tried for an appropriate duration and dose before changing the drug.

TRS is important because of the difficulties in treatment. It is thought that psychiatrists should not use unproven interventions such as increasing the dose and adding or changing medications. Continuous medication changes decrease the response to medication and may be disappointing for the family (3).

Keywords: Antipsychotics, Drug Resistance, Schizophrenia, Treatment Resistant Schizophrenia

Management of Negative Symptoms in A Schizophrenia Patient

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INTRODUCTION: The negative symptoms of schizophrenia are associated with poor functional outcomes and impose a significant burden on individuals with the disorder, their families, and healthcare systems. Clinically recognizing negative symptoms is challenging, as individuals with schizophrenia may be unaware of the impact of these symptoms and rarely seek help for complaints related to them. In order to provide appropriate treatment, it is crucial for clinicians to rule out other medical or psychiatric conditions that may present with symptoms resembling negative symptoms.

CASE: A 57-year-old male, a primary school graduate, married, and unemployed, presented to psychiatry for the first time after the COVID-19 pandemic with complaints of apathy, anhedonia, increased sleep duration, physical slowing, and social withdrawal. On examination, the patient was alert, oriented, and cooperative, with psychomotor retardation. There were no perceptual disturbances, the thought process was secondary, and there was thought impoverishment, with no hallucinations. The mood was depressive, and the range of affect was narrowed. Impulse control and judgment were intact. The patient was diagnosed with major depressive disorder and started on paroxetine 10 mg. After two months, due to lack of benefit, the medication was discontinued, and venlafaxine 75 mg was initiated, gradually increased to 225 mg. Despite this, the patient continued to experience daytime sedation. Modafinil 100 mg was added to venlafaxine and increased to 200 mg. Psychomotor retardation, anhedonia, and avolition persisted. Due to inadequate improvement, venlafaxine 225 mg was gradually tapered off, and duloxetine 30 mg was initiated, increasing to 60 mg, with modafinil continued at 200 mg. When the patient still did not show sufficient improvement, aripiprazole 5 mg was added and gradually increased to 20 mg. Although resistant symptoms decreased, they persisted. Upon further investigation with the patient's spouse, it was discovered that the initial complaints began with negative symptoms, followed by auditory hallucinations and paranoid delusions lasting for over a month, after which no positive symptoms were present. Modafinil treatment was discontinued, aripiprazole was increased to 30 mg, and duloxetine was reduced to 30 mg. The patient has been on this treatment for approximately one year and has shown significant improvement in negative symptoms. He is currently being followed in our clinic with a diagnosis of schizophrenia, with negative symptoms being the predominant feature. Informed consent was obtained from the patient and his family prior to the case presentation.

CONCLUSION: Antipsychotic medications are generally effective in alleviating the positive symptoms of schizophrenia, but there are limited options for treating negative symptoms. Atypical antipsychotics are preferred over typical ones in managing negative symptoms. Aripiprazole is a partial dopamine (D2/3) agonist. Due to its partial agonism at these postsynaptic receptors, it activates dopaminergic transmission in the prefrontal cortex, influences glutamatergic transmission, and contributes to the reduction of negative symptoms[1]. Clinicians consider the use of antidepressants as an adjunctive treatment for schizophrenia a reasonable approach, given the overlap between depression and negative symptomatology[2]. Studies have shown that duloxetine is effective in improving negative symptoms in schizophrenia[3].

Keywords: Schizophrenia, negative symptom, major depressive disorder

The Beneficial Effect of Celecoxib Against Repetitive Behaviors in Valproic Acid Model of Autism in Rats

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OBJECTIVE: Autism spectrum disorder (ASD) is a neurodevelopmental disorder characterized by impairments in neurodevelopmental processes, with neuroinflammation playing a significant role in its pathophysiology [1]. Molecular pathways associated with inflammation and cellular signaling, such as glycogen synthase kinase-3 beta (GSK-3β) and cyclooxygenase-2 (COX-2), have been implicated in ASD pathophysiology [2]. Celecoxib is a diaryl-substituted pyrazole compound whose mechanism of action is based on the selective inhibition of cyclooxygenase-2 (COX-2), an enzyme responsible for prostaglandin synthesis, which is integrated into the pain and inflammation pathway. In this study, the effects of COX-2 inhibition on neuroinflammation were investigated using celecoxib in a prenatal valproic acid (VPA)-induced experimental autism model.

METHODS: An autism model was induced in offspring by administering 500 mg/kg VPA intraperitoneally (i.p.) to pregnant Wistar albino rats on gestational day 12.5. The female pups were divided into seven groups as control, VPA, celecoxib 10 mg/kg, celecoxib 20 mg/kg, celecoxib 40 mg/kg, aripiprazole 2 mg/kg, and aripiprazole + celecoxib 20 mg/kg (n=4). Starting from postnatal day 30, rats were treated intraperitoneally with celecoxib and aripiprazole for 21 days. During the last five days of treatment, behavioral assessments were conducted using the open field test (OFT), novel object recognition test (NOR), three-chamber social interaction test (3CSI).

RESULTS: VPA group showed an significantly increase ($p<0.01$) in self-grooming behavior in OFT, a tendency of decreased sociability index in 3CSI, and no difference in NOR test. Celecoxib, aripiprazol and combination group markedly decreased ($P<0.05$) the self grooming behavior compared to VPA model of rats. Additionally, all treatment groups tend to increase social behaviors in 3CSI test. There were non-significant fluctuations discrimination indexes amongst treatment groups.

CONCLUSION: Our findings suggested that celecoxib, a non steroidal antiinflammatory drug, have a potency to decrease repetitive behaviors which is a core symptom of ASD in VPA model of rats. Additionally, celecoxib might have a beneficial effects for the social symptoms of ASD in rats. It has been needed to further studies to confirm these beneficial effects of celecoxib and understand the mechanisms underlying these effects in ASD.

Keywords: Autism, VPA, COX-2, Celecoxib, Neuroinflammation, Autism

REFERENCE

1. Hodges H, Fealko C, Soares N. Autism spectrum disorder: definition, epidemiology, causes, and clinical evaluation. Transl Pediatr. 2020; 9(Suppl 1): S55-S65
2. Arfeen M, Mani V. Sertraline as a Multi-Target Modulator of AChE, COX-2, BACE-1, and GSK-3β: Computational and In Vivo Studies. Molecules. 2024; 29(22): 5354

After 25 Years of Exprience: What We Know About Escitolopram?

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BACKGROUND AND AIM: Escitalopram is an antidepressant belonging to the selective serotonin reuptake inhibitors (SSRIs) class and is widely used in the treatment of depression and anxiety disorders. As the S-enantiomer of citalopram, it offers enhanced pharmacological efficacy and improved tolerability. Given its distinct pharmacodynamic and pharmacokinetic properties, escitalopram has been extensively studied to evaluate its clinical advantages over other SSRIs.

METHODS: A systematic literature review was conducted using PubMed to identify relevant studies published in the last 25 years on the pharmacodynamics, clinical efficacy, and safety profile of escitalopram. Only randomized controlled trials (RCTs), meta-analyses, and large-scale observational studies were included to ensure robust and high-quality evidence. The selected studies were analyzed to compare escitalopram with other SSRIs regarding efficacy, onset of action, tolerability, and patient adherence.Escitalopram exerts its therapeutic effect primarily by blocking the sodium-dependent serotonin transporter (SERT) protein located on the presynaptic neuron, which in turn increases serotonin levels in the synaptic cleft. This mechanism underlies its effectiveness in modulating mood and anxiety symptoms.

RESULTS: Among SSRIs, escitalopram stands out due to its superior pharmacokinetic properties, which contribute to a faster onset of clinical improvement and a more favorable side effect profile. Neuroimaging studies indicate that escitalopram's high selectivity for the serotonin transporter (SERT) may contribute to its increased efficacy and reduced side effect burden. Compared to racemic citalopram and other SSRIs, escitalopram achieves greater occupancy of SERT at lower doses, potentially explaining its superior clinical outcomes. Compared to other SSRIs, clinical studies have shown that escitalopram is associated with a more rapid reduction in depressive and anxiety symptoms, leading to earlier treatment response and remission. Additionally, it has been linked to lower rates of adverse effects such as sexual dysfunction, weight gain, and gastrointestinal disturbances, improving patient adherence and long-term treatment outcomes.

CONCLUSIONS: Various randomized controlled trials have demonstrated the efficacy and tolerability of escitalopram in the treatment of depression and anxiety disorders, further supporting its role as a first-line option in psychopharmacological treatment strategies. Compared to other SSRIs, escitalopram offers a more rapid therapeutic response and an improved safety profile, making it a preferred choice for optimizing patient outcomes.

Keywords: Escitalopram, Depression, Anxiety.

The Anxiolytic Effect of V. Officinalis Based Herbal Supplement in Subchronic Restrain Stress Model of Rats

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OBJECTIVE: Chronic stress is a significant risk factor for various neuropsychiatric disorders, including anxiety and depression [1]. In addition to existing pharmacological treatments for neuropsychiatric disorders, herbal therapies are also widely studied due to their potential to reduce stress and anxiety levels and their lower risk of side effects [2]. Relaxitin® is a herbal dietary supplement containing extracts of *Valeriana officinalis, Humulus lupulus, Lavandula angustifolia, Matricaria recutita, Curcuma longa, Rosmarinus officinalis, Nigella sativa, Pimpinella anisum, and Piper nigrum.* This study aims to investigate the effects of the herbal extract-containing dietary supplement Relaxitin on anxiety- and depression-like behaviors in rats exposed to subchronic restrain stress.

METHODS: Relaxitin, was administered to the rats via gavage at doses of 0.5 ml/kg and 1 ml/kg once daily for 16 days. To establish a subchronic stress model, the animals were exposed to restraint stress for 2 hours/day from day 8 to day 14. Anxiety- and depression-like behaviors were assessed using the Open Field Test (OFT) and Forced Swim Test (FST) on the 15th and 16th days, respectively.

RESULTS: The subchronic stress group exhibited a significant reduction in the time spent in the central area compared to the control group. Administration of Relaxitin at 1 ml/kg significantly increased the time spent in the central area, which had been reduced by chronic stress. Regarding the total number of squares crossed, Relaxitin at 1 ml/kg resulted in a significant decrease compared to the control group. Similarly, the number of rearing was significantly lower in the Relaxitin 1 ml/kg group compared to the control group. In the subchronic stress group, immobilization time was non-significantly increased compared to the control group. However, in 1 ml/kg Relaxitin group, immobilization time was tend to reduce compared to stress group.

DISCUSSION: The reduction in time spent in the center during the Open Field Test is considered an indicator of anxiety-like behavior. The increased center time in the Relaxitin 1 ml/kg group suggests that this herbal supplement may improve anxiety-like behaviors induced by subchronic stress, indicating its potential anxiolytic effects. The decrease in the total number of squares crossed and rearing behaviors in the Relaxitin 1 ml/kg group suggests potential sedative effect of it. In the Forced Swim Test, increased immobility time is regarded as an indicator of despair-like behavior. The reduction tendency in immobility time in Relaxitin groups suggests that this herbal supplement may have an antidepressant-like effect. In conclusion, this study indicates that subchronic stress leads to anxiety- and depression-like behaviors, and Relaxitin may have the potential to mitigate these effects. Future research will focus on elucidating the underlying mechanisms of these effects and assessing the impact of Relaxitin on cognitive functions through additional behavioral tests.

REFERENCES:

[1] Madeshiya AK, Quintanilla B, Whitehead C, Tomlinson S, Pillai A. Systemic Administration of a Site-Targeted Complement Inhibitor Attenuates Chronic Stress-Induced Social Behavior Deficits and Neuroinflammation in Mice. Cells 2024;13(23): 1988

[2] Kyrou I, Christou A, Panagiotakos D, Stefanaki C, Skenderi K, Katsana K, Tsigos C. Effects of a hops (Humulus lupulus L.) dry extract supplement on self-reported depression, anxiety and stress levels in apparently healthy young adults: a randomized, placebo-controlled, double-blind, crossover pilot study. Hormones (Athens) 2017;16(2): 171-180

The Cognitive Enhancer Effect of Citicoline and Its Nootropic Combinations on Healthy Rats: A Popular Supplement as Cognitive Booster

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OBJECTIVE: Cognitive dysfunction is one of the most prominent symptoms of numerous neurodegenerative and neuropsychiatric disorders [1]. The pathophysiology of these diseases commonly involves neuroinflammation, oxidative stress, and cholinergic dysfunction. Due to the complexity of neuropsychiatric disorders, current therapeutic strategies remain inadequate. Citicoline, also known as cytidine diphosphate-choline (CDP-choline) has been shown that it alleviates cognitive deficits in many animal models of cognitive dysfunction in rodents. Additionally, in rat models of experimental cerebral ischemia, the neuroprotective effects of citicoline have been attributed to the inhibition of ischemia-induced glutamate release and the attenuation of oxidative stress [2,3]. Based on the knowledge, our study aims to investigate the effects of citicoline and its combinations (including other nootropic compounds such as uridine monophosphate, phosphatidylserine, and vitamin B12) through both behavioral and molecular analyses.

MATERIAL and METHODS: The study included three groups, each consisting of seven female Wistar rats: "Healthy Control," "Citicoline (50 mg/kg)" and Neurovita (GUIS Pharmaceutical R&D, Türkiye; Citicoline + Uridine monophosphate, Phosphatydil Serine and B12) groups. The dose of Neurovita group was adjusted according to the 50 mg/kg citicoline content. All the treatments were administered 28 days and the animals underwent behavioral testing during the final seven days of treatment. To assess behavioral functions, including anxiety, learning, and memory and depressive symptoms the following behavioral tests were employed: Open Field Test (OFT), Novel Object Recognition Test (NOR), Y-Maze Test, and Forced Swim Test (FST). After sacrifice, brain tissues were isolated, and Superoxide Dismutase (SOD) ang Glutathione Peroxidase (GPX) were measured by ELISA analyses.

RESULTS: Behaviorally, the Citicoline and Neurovita groups increased discrimination index compared to control group in NOR test. It had a tendency to elevate spontaneous alternation in Y maze test. Additionally, Neurovita group increased the SOD and GPX level in the brain. There is no significant difference for forced swim and open field tests.

CONCLUSION: This study demonstrates that citicoline and its nootropic combinations enhance cognitive functions, likely through molecular mechanisms associated with synaptic plasticity and the cholinergic system. These findings suggest that novel nootropic combinations could contribute to the treatment of cognitive impairments and may serve as potential therapeutic strategies to accelerate the management of neurodegenerative and neuropsychiatric disorders.

Keywords: Citicoline, Cognitive function, Cholinergic system, Nootropic, Neuroplasticity, Uridine Monophosphate.

REFERENCES

1) Gareri P, Cotroneo AM, Montella R, Gaglianone M, Putignano S. Citicoline: A Cholinergic Precursor with a Pivotal Role in Dementia and Alzheimer's Disease. J Alzheimers Dis. 2024;100(2):725-733
2) Abdel-Zaher AO, Hamdy MM, Abdel-Rahman MS, Abd El-Hamid DH. Protective effect of citicoline against aluminum-induced cognitive impairments in rats. Toxicol Ind Health. 2017;33(4):308-317
3) Cavalu S, Saber S, Ramadan A, et al. Unveiling citicoline's mechanisms and clinical relevance in the treatment of neuroinflammatory disorders. FASEB J. 2024;38(17):e70030

The Cognitive Outputs of Chronic AlCl3 Administration in Rats: A potantial Alzheimer Model for Preclinical Researches

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BACKGROUND: Alzheimer‘s disease is a neurodegenerative disorder characterized by memory loss, cognitive decline, and impaired problem-solving abilities (1). It has a complex and multifactorial pathophysiology. To mimic Alzheimer‘s disease pathophysiology, various experimental animal models have been developed. Among these, active metals trigger reactive oxygen species (ROS) production, leading to oxidative stress, which is a key factor in Alzheimer‘s pathology (2). The aluminum chloride ($AlCl_3$) model induces oxidative stress-related brain damage by promoting tau hyperphosphorylation and amyloid-beta (Aβ) accumulation. Due to its resemblance to human pathogenesis, $AlCl_3$ exposure has been widely used in experimental models of Alzheimer‘s disease (3). To investigate the behavioral effects of aluminum chloride administration in rats and compare them with a control group of healthy animals.

MATERIAL AND METHODS: Eighteen 12-week-old female Wistar rats were divided into two groups: control and Alzheimer‘s disease model. The Alzheimer‘s group received 100 mg/kg $AlCl_3$, administered in drinking water, with dosages adjusted according to individual body weight and water intake. This protocol was maintained for 42 days. Cognitive performance was evaluated using the new object recognition test and the Morris water maze test.

RESULTS: An unpaired t-test was conducted to compare the two groups. The statistical analysis yielded $p = 0.5145$, indicating no significant difference between the groups. In the New Object Recognition Test, $AlCl_3$ administration did not result in a significant change in recognition performance. In the Morris Water Maze Test, the control group exhibited better learning performance compared to the Alzheimer‘s group; however, the difference was not statistically significant. Additionally, no significant difference was observed in the distance traveled within the target quadrant between the two groups.

CONCLUSION: All preclinical models has their own advantagesand limitatios. Chronic ALCI3 administration is one of the common used model to mimick Alzheimer Disease in rodents. Our findings suggest that there is slight changes in cognitive functions of rats whereas some of the previous studies indicated moderate cognitive dysfunction for this model.

Keywords: Alzheimer‘s disease, aluminum chloride, Morris water maze, new object recognition

REFERENCES

1. DutheyB. https://www.who.int/medicines/areas/priority_medicines/BP6_11Alzheimer.pdf
2. Zhang, L., Chen, C., Mak, M. S., Lu, J., Wu, Z., Chen, Q., Han, Y., Li, Y., & Pi, R. (2020). Advance of sporadic Alzheimer's disease animal models. Medicinal research reviews, 40(1), 431–458. https://doi.org/10.1002/med.21624
3. Shrief, A.I., Elshenawy, D.S., Elsukary, A.E. et al. Behavioral and histological study on the neuroprotective effect of thymoquinone on the cerebellum in AlCl3-induced neurotoxicity in rats through modulation of oxidative stress, apoptosis, and autophagy. J Mol Histol 56, 81 (2025). https://doi.org/10.1007/s10735-025-10361-2

Severe Anxiety Induced by Dalfampridine: The First Case Report in the Literature

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OBJECTIVE: Dalfampridine (Fampyra) is a potassium channel blocker commonly prescribed to improve walking ability in patients with multiple sclerosis (MS). It enhances nerve conduction by prolonging action potential duration in demyelinated fibers, thereby improving motor function (Goodman et al., 2009). While its known adverse effects include headache, dizziness, nausea, paresthesia, insomnia, and gastrointestinal discomfort, its potential to induce anxiety remains largely unexplored (Lamore III et al., 2010). This report presents the first documented case of severe anxiety associated with dalfampridine use and explores the possible underlying mechanism.

METHODS: A 45-year-old male patient with a 17-year history of MS was transitioned from Glatiramer Asetat to dalfampridine (Fampyra) 20 mg/day. The patient had no prior psychiatric history. Within 48 hours of initiating dalfampridine, he experienced insomnia and worsening anxiety, which escalated into a severe anxiety attack characterized by pronounced fear of death. Electrokardiography (ECG) was performed, along with blood and urine analyses, blood tests and screening test was normal. Imaging studies were conducted, none of which revealed any significant abnormalities, thereby excluding relevant differential diagnoses The patient was evaluated in the emergency department using the Beck Anxiety Inventory, where he scored 37, indicating severe anxiety. Treatment with alprazolam 0.5 mg twice daily provided symptomatic relief. Informed written consent was obtained from the patient or their legally authorized representative.

RESULTS: The patient exhibited severe anxiety symptoms shortly after initiating dalfampridine therapy. His anxiety symptoms improved significantly with alprazolam treatment and were completely resolved following discontinuation of dalfampridine. These findings suggest a possible causal relationship between dalfampridine and heightened anxiety responses in susceptible individuals.

DİSCUSSION: Several potassium channel blockers have been linked to anxiety, particularly due to their effects on neuronal excitability. Aminopyridines such as 4-aminopyridine (4-AP) and 3,4-diaminopyridine (3,4-DAP) have been associated with agitation, restlessness, and anxiety at higher doses, suggesting a dose-dependent neuropsychiatric risk (Stork & Hoffman, 1994). In clinical trials, patients using 4-AP for MS or spinal cord injury have reported symptoms ranging from mild nervousness to severe anxiety, likely due to its excitatory effects on the central nervous system (Goodman et al., 2009). Although dalfampridine‘s neuropsychiatric side effects have not been extensively studied, there are reports of psychiatric symptoms worsening in some patients, particularly those with preexisting anxiety (Goodman et al., 2009). Additionally, aminopyridine derivatives, including dalfampridine, have been linked to agitation, anxiety, palpitations, tremors, and seizures, especially at higher doses (up to 40 mg/day) (Strupp et al., 2011). Mechanistically, potassium channel blockade is known to heighten neuronal excitability, which may predispose individuals to anxiety symptoms. Kv7 (KCNQ) channels play a crucial role in stabilizing neuronal firing, and their inhibition has been found to increase susceptibility to fear and anxiety (Brown et al., 2009). Additionally, small-conductance calcium-activated potassium channels regulate synaptic plasticity in fear-related circuits, and their dysfunction has been implicated in heightened fear responses (Lamore III et al., 2010). Given that dalfampridine is a broad potassium channel blocker, it may contribute to an imbalance in excitatory and inhibitory neural pathways, resulting in increased anxiety vulnerability. Alprazolam, a gaba alpha receptor modulator, enhances GABAergic inhibition by increasing chloride influx into neurons, which reduces excitability and produces anxiolytic, sedative, and anticonvulsant effects. (Brown et al., 2009) This mechanism makes alprazolam a suitable agent to counteract the heightened neural excitability induced by dalfampridine. In our case, the patient demonstrated significant improvement in anxiety symptoms following alprazolam administration, further suggesting a functional antagonism between dalfampridine‘s excitatory effects and alprazolam‘s GABAergic inhibition. However, further research is needed to explore the efficacy and safety of benzodiazepines in managing potassium channel blocker-induced anxiety. Future studies should investigate whether alternative

therapeutic strategies may offer similar benefits with a lower risk of sedation or dependence. Increased clinical awareness is crucial to optimizing patient management and minimizing unexpected adverse reactions in MS patients undergoing this therapy.

REFERENCES

1. Goodman, A. D., n, T. R., Krupp, L. B., Schapiro, R. T., Schwid, S. R., Cohen, R., Marinucci, L. N., & Blight, A. R. (2009). Sustained-release oral fampridine in multiple sclerosis: a randomized, double-blind, controlled trial. The Lancet, 373(9665), 732–738. https://doi.org/10.1016/S0140-6736(09)60442-6
2. Lamore III, R., Jacob, E., Jacob, S. C., & Hilas, O. (2010). Dalfampridine (Ampyra): An aid to walking in patients with multiple sclerosis. US Pharmacist, 35(12), 665–673. Available from: https://pmc.ncbi.nlm.nih.gov/articles/PMC3008376/
3. Strupp, M., Kalla, R., Claassen, J., Adrion, C., Mansmann, U., Klopstock, T., Freilinger, T., Neugebauer, H., Spiegel, R., Dichgans, M., Lehmann-Horn, F., Jurkat-Rott, K., Brandt, T., Jen, J. C., & Jahn, K. (2011). A randomized trial of 4-aminopyridine in EA2 and related familial episodic ataxias. Neurology, 77(3), 269–275. https://doi.org/10.1212/WNL.0b013e318225ab07
4. Stork, C. M., & Hoffman, R. S. (1994). Characterization of 4-aminopyridine overdose: Toxic dose and possible mechanisms of toxicity. Journal of Toxicology: Clinical Toxicology, 32(5), 583-592. https://doi.org/10.3109/15563659409000396
5. Brown, D. A., & Passmore, G. M. (2009). Neural KCNQ (Kv7) channels. British Journal of Pharmacology, 156(8), 1185–1195. https://doi.org/10.1111/j.1476-5381.2009.00119.x

Award Nominated Poster Presentation

[Abstract:0168]

Anxiety Induced by Dalfampridine: The First Case Report in the Literature

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BACKGROUND AND AIM: Dalfampridine (Fampyra) is a potassium channel blocker commonly used to improve walking speed in patients with multiple sclerosis (MS). While known side effects include headache, dizziness, nausea, and insomnia, anxiety has not previously been reported as a side effect of this medication. This report aims to present the first documented case of anxiety associated with dalfampridine use and explore its potential mechanism.

METHODS: A 45-year-old male patient with a 17-year history of MS was transitioned from Copaxone to Fampyra 20 mg/day treatment. Following the medication change, the patient developed insomnia and anxiety, which escalated to a severe anxiety attack with pronounced fear of death. The patient was evaluated in the emergency department using the Beck Anxiety Inventory, and the therapeutic approach involved symptomatic management with alprazolam. Informed written consent was obtained from the patient or their legally authorized representative.

RESULTS: The patient scored 37 on the Beck Anxiety Inventory, indicating severe anxiety. Treatment with Alprazolam 0.5 mg twice daily resulted in significant symptom relief. Discontinuation of dalfampridine led to the complete resolution of anxiety symptoms, suggesting a causal relationship between the medication and the observed psychiatric effects.

CONCLUSIONS: Dalfampridine may induce anxiety through its potassium channel blocking mechanism, potentially disrupting central nervous system neurotransmitter balance. This case emphasizes the importance of clinicians being vigilant about unexpected psychiatric side effects during dalfampridine therapy and highlights the need for further research into its neuropsychiatric safety profile.

Keywords: Adverse Drug Reaction, Anxiety, Dalfampridine, Neuropsychiatric Side Effects, Potassium Channel Blocker

[Abstract:0214]

Lithium-Induced Hyperthyroidism in a Patient with Bipolar Disorder

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INTRODUCTION: Lithium therapy is well known for causing hypothyroidism, but lithium-induced hyperthyroidism (LiI-Hyper) is rare, particularly in pediatric patients. This case report discusses a 16-year-old female with bipolar disorder who developed hyperthyroidism during lithium treatment, highlighting the importance of thyroid monitoring in such cases. Written informed consent was obtained from the patient‘s guardians for the publication of this case.

CASE PRESENTATION: A 16-year-old female with ADHD (diagnosed at 6, treated with methylphenidate) was diagnosed with bipolar disorder at 12 after a manic episode. She had a family history of schizoaffective disorder and was initially treated with aripiprazole and quetiapine. Lithium was added following a hypomanic episode, with a dose increase to 1200 mg/day and a good response over three years. In September 2024, she presented with suicidal ideation, medication noncompliance, and suspected mixed episode. Mental status examination revealed a patient with normal intellectual functioning, distractible attention, increased speech rate and volume, mildly elevated mood, and irritable affect. On physical examination, she was tachycardic (110 bpm), afebrile, and her blood pressure was 120/70 mmHg. Upon the patient's admission, a thorough review of the medical records indicated an absence of any previous thyroid dysfunction. However, the results of the laboratory tests conducted upon admission revealed biochemical hyperthyroidism in the patient (TSH 0.013 mU/L, free T4 3.19 ng/dL, free T3 9.80 ng/dL), and lithium level was 0.41 mmol/L, below the therapeutic range (0.6–1.2 mmol/L), likely due to recent noncompliance. Thyroid autoantibodies were negative. The ESR, CRP and CBC were normal. The thyroid ultrasound examination revealed no pathological findings. The patient was started on methimazole (10 mg/day) and propranolol (80 mg/day), while continuing her lithium treatment. Two weeks later, free T4 decreased to 2.84 ng/dL, but TSH remained suppressed, prompting an increase in methimazole to 15 mg/day.

The patient, who presented with medication noncompliance, had her lithium treatment reinitiated and subsequently increased. She was discharged on propranolol (80 mg/day), methimazole (15 mg/day), aripiprazole (20 mg/day), quetiapine (300 mg/day), and lithium (1200 mg/day). On follow-up, her free T4 was low (0.92 ng/dL), and methimazole was reduced to 10 mg/day. At her most recent endocrinology visit (1 month ago), she was euthyroid and remained on 10 mg/day methimazole.

CONCLUSION: Lithium-induced hyperthyroidism occurs in 0.1% to 1.7% of cases, potentially due to antithyroid autoantibodies, iodine metabolism issues, or the Jod-Basedow effect. Its onset can range from weeks to years after lithium initiation. Although there is no consensus on discontinuing lithium, the condition may resolve or progress to euthyroidism or hypothyroidism. Antithyroid drugs like methimazole are effective. In this case, lithium was continued, and hyperthyroidism was managed with methimazole and propranolol, achieving remission of both thyroid and psychiatric symptoms.This rare case highlights that lithium-induced hyperthyroidism, though less common than hypothyroidism, can mimic manic episodes and lead to lithium toxicity. Differentiating between bipolar relapse and thyroid dysfunction is crucial, and regular thyroid monitoring is essential in lithium-treated patients.

Keywords: Bipolar disorder, Lithium-induced hyperthyroidism, Thyroid monitoring

[Abstract:0266]

Comparison of the Severity of Autistic Features Between Obsessive Compulsive Disorder, Panic Disorder and Healthy Controls

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BACKGROUND AND AIM: Recent studies have demonstrated that autistic traits are prevalent in individuals diagnosed with Obsessive Compulsive Disorder (OCD), and that the severity of autistic traits is associated with the severity of OCD symptoms. Studies of Autism Spectrum Disorder (ASD) have revealed clinical forms that are milder in severity and show continuity and prevalence in the general population (BAP, Broad Autism Phenotype). These findings are of particular interest as they have a detrimental effect on quality of life and influence the severity of various psychiatric disorders. In light of the findings observed in Panic Disorder (PD), including agoraphobia, other avoidance behaviours, differences in introceptive and other senses, and social-cognitive deficits, the potential impact of BAP effects on PD warrants further investigation. The objective of this study was to utilise the Autism Quotient (AQ) to compare the severity of autistic traits among individuals with OCD, individuals with PD, and healthy controls.

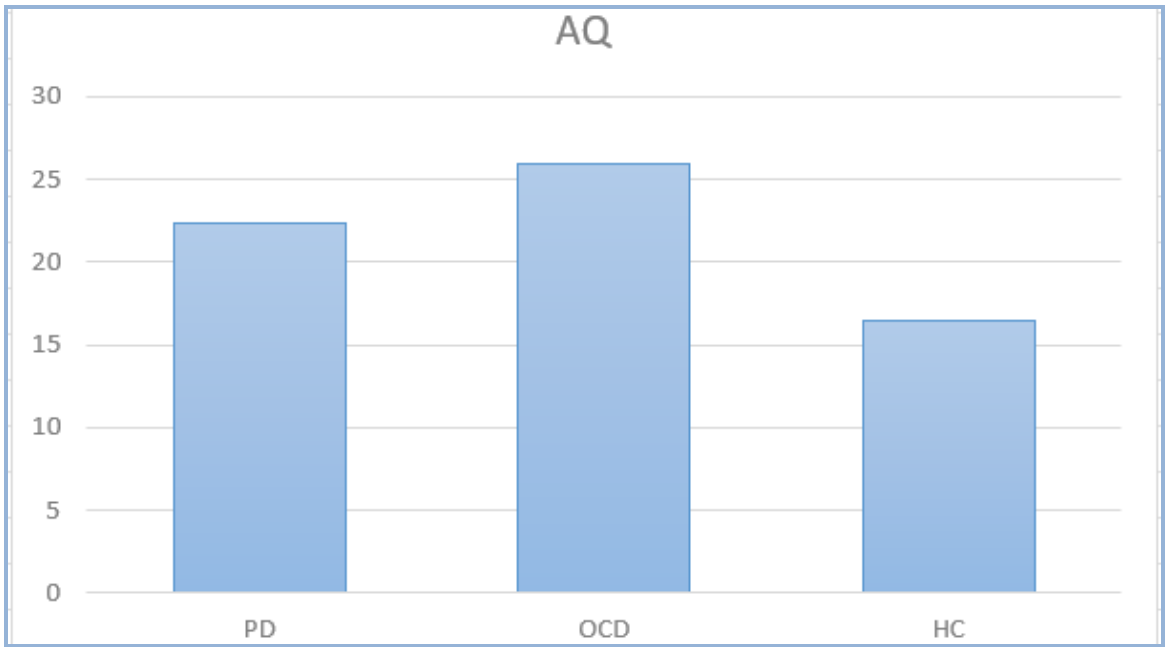
METHODS: The AQ was administered to 24 participants (mean age: 37.08 years (SD 13.46); male: 9/24) in the OCD group and 28 participants (mean age: 42.25 years (SD 10.25); male: 11/28) in the PD group. A healthy control group was established, comprising 16 volunteers (mean age: 33.75(15.95); male: 7/16) who exhibited comparable characteristics in terms of age, gender and educational attainment to both groups. Participants in the OCD and PD groups were outpatients of Dinar State Hospital, while the control group volunteers were hospital employees and their relatives. Informed consent was obtained from all participants.The exclusion criteria encompassed past or current psychotic disorder, bipolar disorder or alcohol-substance use disorder, and cognitive deficits that precluded understanding and completion of the scales to be applied. One-way ANOVA analyses were performed by utilising the IBM SPSS (25) programme to assess the scale data. Ethics committee approval: AFSU, 06.12.2024, T-2024/10.

RESULTS: A significant difference was observed between the groups in terms of AQ total (P=0.001) and Social Skills (P=0.023), Attention Shifting (P=0.027), Communication (P=0.033) and Imagination (P<0.001) sub-scores. Post-hoc analyses showed that the OCD group differed statistically significantly from the Healthy Controls in Social Skills (P=0,025) and Attention Shifting (P=0,049) sub-scores, and marginally in Communication sub-score (P=0,057). In addition, the PD group differed significantly from both the Healthy Controls (P=0.016) and OCD (P<0.001) groups in the Imagination subscore.

CONCLUSIONS: In view of these findings, the prevalence and severity of autistic traits in the OCD group, as demonstrated in earlier studies, were reconfirmed. The present study investigated the prevalence of autistic traits in the PD group, in addition to OCD and control groups. The results demonstrated that the severity of autistic traits in the PD group was higher than in healthy controls. Additionally, this study highlighted that the Imagination subscale scores in the PD group exceeded those of both the OCD and control groups, underscoring the necessity for further exploration of this autism domain in individuals with PD.

Keywords: Otistic Traits, Broad Autism Phenotype, Panic Disorder, Obsessive Compulsive Disorder

AQ total score



AQ total score comparison between groups

Sociodemographic Data

	PD (n=28)	OCD (n=24)	HC (n=16)	Signifiance
Age (SD)	42,25 (10,25)	37,75 (15,95)	33,75 (13,65)	p=0,100
Gender (Male)	11/28	9/24	7/16	p=0,068
Education Level (SD)	9,75 (3,77)	10,58 (3,65)	10,38 (3,70)	p=0,700
Family History	18/28	10/24	5/16	p=0,77

Comparison of sociodemographic characteristics of the groups

AuthorToEditor: 1- Carpita, B., Nardi, B., Bonelli, C., Massimetti, E., Amatori, G., Cremone, I. M., Pini, S., & Dell'Osso, L. (2024). Presence and correlates of autistic traits among patients with social anxiety disorder. Frontiers in psychiatry, 14, 1320558. https://doi.org/10.3389/fpsyt.2023.1320558 2- Mito H, Matsuura N, Mukai K, Yanagisawa Y, Nakajima A, Motoyama M, et al. The impacts of elevated autism spectrum disorder traits on clinical and psychosocial features and long-term treatment outcome in adult patients with obsessive-compulsive disorder. Compr Psychiatry. 2014 Oct;55(7):1526–33. 3- Dell'Osso L, Carpita B, Bertelloni CA, Diadema E, Barberi FM, Gesi C, et al. Subthreshold autism spectrum in bipolar disorder: prevalence and clinical correlates. Psychiatry Res. (2019) 281:112605. doi: 10.1016/j.psychres.2019.112605 4- Donati, M. A., Berrocal, C., Primi, C., Petracchi, G., Carpita, B., Cosci, F., Ruiz, A., Carmassi, C., & Dell'Osso, L. (2019). Measuring subthreshold autistic traits in the general population: Psychometric properties of the Adult Autism Subthreshold Spectrum (AdAS Spectrum) scale. Psychiatry research, 281, 112576. https://doi.org/10.1016/j.psychres.2019.112576

REFERENCES

1. Cipriani A, Furukawa TA, Salanti G, Chaimani A, Atkinson LZ, Ogawa Y, Leucht S, Ruhe HG, Turner EH, Higgins JPT, Egger M, Takeshima N, Hayasaka Y, Imai H, Shinohara K, Tajika A, Ioannidis JPA, Geddes JR. Comparative efficacy and acceptability of 21 antidepressant drugs for the acute treatment of adults with major depressive disorder: a systematic review and network meta-analysis. Lancet. 2018 Apr 7;391(10128):1357-1366. doi: 10.1016/S0140-6736(17)32802-7. Epub 2018 Feb 21. PMID: 29477251; PMCID: PMC5889788.
2. Yin J, Song X, Wang C, Lin X, Miao M. Escitalopram versus other antidepressive agents for major depressive disorder: a systematic review and meta-analysis. BMC Psychiatry. 2023 Nov 24;23(1):876. doi: 10.1186/s12888-023-05382-8. PMID: 38001423; PMCID: PMC10675869
3. Sanchez C, Reines EH, Montgomery SA. A comparative review of escitalopram, paroxetine, and sertraline: Are they all alike? Int Clin Psychopharmacol. 2014 Jul;29(4):185-96. doi: 10.1097/YIC.0000000000000023. PMID: 24424469; PMCID: PMC4047306.
4. Murdoch D, Keam SJ. Escitalopram: a review of its use in the management of major depressive disorder. Drugs. 2005;65(16):2379-404. doi: 10.2165/00003495-200565160-00013. PMID: 16266205.

Symposia Presentations

[Abstract: 0013]

Psychology, Selfhood, and Human Flourishing in the 21st Century

Muhammad U. Faruque

University of Cincinnati

In the 21st century, humanity faces unprecedented challenges that profoundly shape our psychological well-being and sense of self. This talk explores the intersection of psychology, selfhood, and human flourishing in an era characterized by rapid technological advancements, shifting social norms, and global crises. Drawing from Sufi psychological theories, philosophical perspectives, and insights from psychopharmacology and psychotherapy, I examine how our understanding of the self has evolved and the implications for mental health. Central to the discussion is the role of self-concept in fostering resilience, adaptability, and flourishing amidst these changes. I will argue for an integrative approach that balances biological, psychological, and sociocultural dimensions of selfhood, emphasizing the need to address deeper existential questions. By doing so, we can create frameworks that not only mitigate mental health challenges but also nurture authentic and meaningful lives for individuals across all stages of development. This exploration is particularly pertinent to child and adolescent mental health, as the foundations of selfhood are laid during these critical developmental periods. The talk will conclude with practical insights for clinicians and researchers, highlighting strategies for promoting well-being in a rapidly changing world.

Keywords: Sufi psychology, self-concept, human flourishing, consciousness, psychotherapy, spirituality

[Abstract:0017]

High Dose Psychiatry

Chris Aiken

Carlat Psychiatry Report

What happens when we dose beyond the regulatory limits? Some plateau, some cause harm, and a few work better as the dose goes higher. We‘ll learn from the mistakes of history and the latest research on dose-response curves for antipsychotics, antidepressants, stimulants, and mood stabilizers.

Keywords: Psychopharmacology, Schizophrenia, Depression, ADHD, Bipolar Disorder

AuthorToEditor: Baldessarini RJ et al. Arch Gen Psychiatry. 1988; 45(1): 79-91 Leucht S et al, Am J Psychiatry. 2020; 177(4): 342-353. Furukawa TA et al. Lancet Psychiatry. 2019;6(7):601-609. Holper L. EClinicalMedicine. 2020; 18: 100219 Farhat LC, et al. JAMA Psychiatry. 2024; 81(2): 157-166

[Abstract:0018]

Moving The Needle on Improving Mental Health Care in Canada: Reflections From The Parliamentary Crucible

Stanley Kutcher

Senate of Canada and Dalhousie University, Halifax, NS

BACKGROUND AND AIM: To provide the audience with an understanding of how mental health policy and interventions are created and implemented at the level of the federal government of Canada.

METHODS: Personal experience as a Senator.

RESULTS: The effect of expert impact on policy and interventions is mixed. Political considerations and ideologies play important roles.

CONCLUSIONS: There are avenues available for mental health experts to influence policy development. But the influencers need to know how to use them.

Keywords: Mental health, policy, government.

AuthorToEditor: References are not necessary - this is a presentation that is based solely on parliamentary experience

[Abstract:0021]

Neurobiology of ADHD Across The Lifespan: From Basic Research Towards Clinical Applications

Barbara Franke

Radboud University Medical Center and Donders Institute for Brain, Cognition and Behaviour, Nijmegen, The Netherlands

Although the first description of ADHD dates back more than 200 years, there is still little knowledge about its etiology. Biological research into ADHD has taken a flight in the last few years, as team-science and Open Science approaches have allowed studies to become more powerful and results more meaningful.

The high heritability of ADHD provides an excellent entry point for studies of ADHD biology. In this presentation, Prof. Franke will take you along a number of key-findings in the field of genetic research looking into the biological mechanisms involved in ADHD across the lifespan and the potential biological underpinnings of the co-occurrence of ADHD with other conditions. In addition, she will touch on recent developments in other areas of biological research, especially epigenetic as well as brain imaging research. Beyond focusing on the biological meaning of the findings for our understanding of the mechanisms underlying ADHD, she will discuss research that aims to investigate the utility of the findings for clinical use.

Keywords: ADHD, lifespan, molecular research, neuroimaging, somatic comorbidity

[Abstract:0022]

Psychopharmacology Algorithm for Generalized Anxiety Disorder

David Osser

Department of Psychiatry, Harvard Medical School at Department of Veterans Affairs Boston Healthcare System, Brockton Division

BACKGROUND AND AIM: This is a revision of previous algorithms for the pharmacotherapy of generalized anxiety disorder developed by the Psychopharmacology Algorithm Project at the Harvard South Shore Program. This revision of the GAD algorithm responds to issues raised by new treatments under development such as pregabalin and organizes the evidence systematically for practical clinical application.

METHODS: Algorithms published in 1999, 2010, and 2016 and associated references were re-evaluated. Newer studies and reviews published since 2016 were obtained from PubMed and analyzed with focus on their potential to justify changes in the recommendations.

RESULTS: Exceptions to the main algorithm for special patient populations, such as women of childbearing potential and pregnant women, the elderly, and those with common medical and psychiatric comorbidities were considered. Selective serotonin reuptake inhibitors are still the basic first-line medication. Early alternatives include duloxetine, buspirone, hydroxyzine, pregabalin, or bupropion. If response is inadequate, then the second recommendation is to try a different SSRI. Additional alternatives now include benzodiazepines, venlafaxine, kava, or agomelatine. If there is an unsatisfactory response to the second SSRI, then the recommendation is to try a serotonin-norepinephrine reuptake inhibitor. Other alternatives to SSRIs and SNRIs for treatment-resistant or treatment-intolerant patients include tricyclic antidepressants, second generation antipsychotics, and valproate.

CONCLUSIONS: It is proposed that clinicians use this algorithm as a consultative guide only and employ it in collaboration with the patient, considering the patient's values and goals of care.

Keywords: Psychopharmacology, anxiety, algorithms, evidence-based practice

[Abstract:0023]

Neuroinflammation in Mental Disorders, From Biomarkers to Treatment

Marek Kubicki

Departments of Psychiatry and Radiology, Harvard Medical School, USA

Neuroinflammation has emerged as one of the critical factors in understanding the pathophysiology of mental disorders, including schizophrenia, depression, and bipolar disorder. Research has indicated presence of increased blood-brain permeability, activated microglia, or increased levels of cytokines, chemokines, and neurotrophic factors, and their link to cognitive and clinical presentation. While those findings thus far have not translated to established neuroinflammatory biomarkers, researchers are trying to utilize advanced imaging techniques and biofluid analyses to detect and tract inflammation in vivo. Understanding the link between neuroinflammation and mental health disorders not only enhances our grasp of their underlying mechanisms but also opens avenues for intervention strategies that may mitigate neuroinflammatory responses.

In my talk, I will review the potential biomarkers investigated in the context of neuroinflammatory processes in mental disorders. I will first review central and peripheral markers obtained from plasma and cerebro-spinal fluid. I will then discuss established and emerging neuroimaging methods for visualizing, quantifying and monitoring brain inflammatory processes, and will discuss how these measures are being linked to clinical symptoms and cognition. The development of biomarkers for neuroinflammation might hold the key to improving outcomes for individuals with mental health disorders.

Keywords: Psychiatry, psychopharmacology, psychotherapy

[Abstract:0024]

Head Heart and Hormones: ADHD in Women, Hormonal Mood Changes Across The Lifespan, & The Female Heart

Sandra Kooij

Professor on Adult ADHD, dept. of Psychiatry, Amsterdam University, Holland

ADHD in women is underdiagnosed and misdiagnosed compared to ADHD in men, but the gender ratio in adults is 1: 1. Reasons are a different presentation of ADHD symptoms, the socialization of women in general, leading to masking, perfectionism and pleasing behaviour in females with ADHD trying to fit in. Women with ADHD therefore are often several times burnout during their lifespan. Further, ADHD is too little considered in females by physicians or psychologist due to lack of knowledge. Hormonal moodchanges occur 2-3 fold more often compared to women in the general population, leading to premenstrual, postpartum and perimenopausal increased mood- and ADHD symptoms. Especially during perimenopause, women with ADHD may experience a mental and physical breakdown due to the long period of lower oestrogen levels, sleep loss, physical complaints, palpitations or onset of other cardiovascular diseases, and increased mood- and ADHD symptoms. ADHD may then for the first time be considered, which is very late for a childhood onset neurodevelopmental disorder. In this presentation, symptom presentations, hormonal changes in mood and ADHD severity across the lifespan, the impact on the female heart and treatment options will be discussed.

Keywords: Psychiatry, psychopharmacology, psychotherapy

REFERENCES

- Dorani F, Bijlenga D, Beekman ATF, van Someren EJW, Kooij JJS. Prevalence of hormone-related mood disorder symptoms in women with ADHD. J Psychiatr Res. 2021 Jan; 133: 10-15. doi: 10.1016/j.jpsychires. 2020.12.005. Epub 2020 Dec 3.

- Ter Beek LS, Böhmer MN, Wittekoek ME, Kooij JJS. Lifetime ADHD symptoms highly prevalent in women with cardiovascular complaints. A cross-sectional study. Arch Womens Ment Health. 2023 Dec; 26(6): 851-855. doi: 10.1007/s00737-023-01356-7. Epub 2023 Aug 18.

- de Jong M, Wynchank DSMR, van Andel E, Beekman ATF, Kooij JJS. Female-specific pharmacotherapy in ADHD: premenstrual adjustment of psychostimulant dosage. Front Psychiatry. 2023 Dec 13; 14: 1306194. doi: 10.3389/fpsyt.2023.

[Abstract:0025]

Rapid Antidepressant Effects of Yueju, The Clinic Evidence and Novel Mechanism

Gang Chen

Faculty of Medicine and Dentistry, University of Alberta, Guangzhou, China

Conventional mainstream antidepressants have disadvantages in delayed onset of the action whereas the recently disclosed rapid antidepressant ketamine has abuse/toxic potential. Our team in the past decade attempted to address the issue of discovery of rapid and safe antidepressant using Traditional Chinese Medicine (TCM) scientifically in both clinic and basic research levels. Clinically, we demonstrated the relative fast-onset antidepressant effects of a TCM formula Yueju, invented 800 years ago, in MDD patients. At preclinic and molecular levels, we identified the novel mechanism underlying the effects by a neuropeptide PACAP, which was recently shows to also act similarly for ketamine. Furthermore, based on the novel mechanisms, we also identified the active compounds acts in a synergistic manner to active PACAP and elicit rapid antidepressant effects. Our findings provide the compelling evidence to support the advantage of TCM in treating MDD.

Keywords: Psychiatry, psychopharmacology, psychotherapy

[Abstract:0026]

Lifestyles and Adolescent Depression in China

Hongbo He

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BACKGROUND: Depression and anxiety are prevalent in adolescents, while there is little evidence on the association between patterns of unhealthy lifestyle and mental health among this population. This study examinesthe patterns of unhealthy lifestyle associated withdepressive and anxiety symptoms among adolescents in south China.

METHOD: The Guangdong Adolescents Mental Health Survey was conducted from September to Decemberin 2023. Multistage stratified equal volume systematic sampling was used and a total of 5,759 middle and high school students were interviewed using standardized structured questionnaires. Latent class analysis was used to categorize adolescents‘ patterns of unhealthy lifestyle, and multiplelogistic regression was used to explore their associations with depressive and anxiety symptoms.

RESULT: The prevalence rates of depressive and anxiety symptoms among Guangdong adolescents were 5.5% and 13.0%, respectively. There were 40.5%of adolescents who have two to three kinds of unhealthy lifestyle behaviors. Multiple logistic regression analysis showed that depressive and anxiety symptoms were associated with a series of unhealthy lifestyle, and those had more unhealthy lifestyle behaviors were more likely to have mental health problems. Four unhealthy lifestyle behaviors patterns were identified by latent class analysis. Compared to the ―relatively healthy lifestyle” class, the class with nearly all unhealthy lifestyles had the highest risk for depressive (OR=16.06, 95% CI: 10.64-24.24) and anxiety (OR= 10.17, 95 % CI: 7.95-13.01) symptoms. Significantly, mental healthy literacy could decrease the risk of depressive and anxiety symptoms due to unhealthy lifestyle.

Limitations: The cross-sectional design limited causal inference, and adolescents‘ reporting bias may exist.

CONCLUSIONS: The prevalence rates of depressive and anxiety symptoms among adolescents in Guangdong province were high, and unhealthy lifestyles were prevalent. Unhealthy lifestyles may lead to depression and anxiety symptoms through independent, interactional, synergistic or cumulative effects. Researchers need to consider distinct patterns of unhealthy lifestyle and develop targeted intervention strategies to improve adolescents‘ life behaviors and health patterns, as well as mental health literacy to promote adolescents‘ psychological well-being.

Keywords: Depression, Anxiety, Unhealthy lifestyle behaviors, Mental health, Adolescents

[Abstract:0028]

Lithium: How Low Could We Go?

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Notwithstanding its position as the gold standard mood stabiliser, lithium is under-used for several reasons including its adverse events when dosed within its known therapeutic window. Several strands of evidence are converging to establish lithium as neuroprotective, including preclinical and clinical neurobiological studies and trials of lithium for preventing or ameliorating cognitive impairments. These benefits may occur even at low doses.

Combining data from three studies, this presentation will discuss potential neuropsychiatric benefits that lithium may confer in low doses. Our findings indicate a protective association (particularly >80µg/L) between the quantity of trace lithium in publicly available drinking water and total suicide mortality (meta-analysis; subsequent data). Across studies of 300µg to ~200mg ionic lithium, a consistent effect emerges in attenuating cognitive decline, and more tentatively on depression and/or mania when adjunct to other therapies (systematic review). Studies unanimously reported safety. Safety was supported in our community survey of individuals who have taken commercially-available lithium supplements (~5 to 60mg per day) where wide-ranging subjective advantages were apparent, particularly in mood enhancement/stabilisation and cognition. Improvement was associated with longer durations of supplement use.

Together, these data suggest that 'sub-therapeutic' lithium could have further benefits than have previously been supposed. There may be a trade-off between duration and quantity of lithium exposure in benefits. Commercially-available lithium has not been subjected to rigorous research and should be examined in long-term trials for people with subclinical cognitive or mood symptoms, and/or those at risk of neurodegenerative or affective illnesses.

Keywords: Lithium, cognition, mood, supplement

[Abstract:0030]

Profile and Mental Health Characterization of Childhood Overprotection/ Overcontrol Experiences Among Chinese University Students: A Nationwide Survey

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INTRODUCTION: The childhood experiences of being overprotected and overcontrolled by family members have been suggested to be potentially traumatic. However, the possible associated factors of these experiences among young people are still not well studied. This study aimed to partly fill such gaps by a relatively large, nationwide survey of Chinese university students.

METHODS: A total of 5,823 university students across nine different provinces in China were included by the convenience sampling method in the data analyses. All participants completed the overprotection/overcontrol (OP/OC) subscale in a recently developed 33-item childhood trauma questionnaire (CTQ- 33). Data were also collected on all participants‘ socio-demographic profiles and characterization of mental health. Binary logistic regression was conducted to investigate the associated socio-demographic and psychological factors of OP/ OC.

RESULTS: The prevalence of childhood OP/OC was estimated as 15.63% (910/5,823) based on a cutoff OP/OC subscale score of ≥ 13. Binary logistic regression suggested that being male, being a single child, having depression, having psychotic-like experiences, lower family functioning, and lower psychological resilience were independently associated with childhood OP/OC experiences (all corrected-$p < 0.05$). The OP/OC was also positively associated with all the other trauma subtypes (abuses and neglects) in the CTQ-33, while there are both shared and unique associated factors between the OP/OC and other trauma subtypes. Post-hoc analyses suggested that OP/OC experiences were associated with depression in only females and associated with anxiety in only males.

CONCLUSION: Our results may provide initial evidence that childhood OP/OC experiences would have negative effects on young people‘s mental health which merits further investigations, especially in clinical populations.

Keywords: Childhood trauma, overprotection, overcontrol, mental health, depression, psychotic-like experience

[Abstract:0042]

The Precise Diagnosis and Treatment For Depressive Disorder

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SUMMARY: Major Depressive disorder (MDD) is the most common severe mental disorder and ranks second in the total global burden of human diseases. However, so far, its diagnosis still depends on clinical manifestations and reliable biomarkers of clinical diagnostic are still under investigation. Thereby, it is an urgent scientific problem how to screen and verify the candidate biomarkers and to further elucidate their molecular function and targeted intervention. We first used multi-omics combined with bioinformatics and multiple validation based on the extreme trait strategy to screen out differentially expressed candidate molecules between the MDD patient group and the matched control group. Then combined with cross-species cross-validation to identify brain-derived molecular diagnostic biomarkers for depression. Further elucidate the causal mechanisms of key molecules regulating depression-like behavior in specific brain regions and neural circuits based on model animals. And develop a variety of molecular targeted interventions, in addition to developing magnetic neural regulation methods and promote central penetration targeted interventions depression. The ultimate goal is to identify molecular diagnostic biomarkers for MDD and advance the precise targeting of antidepressants. This speak will report the progress in this field, especially the findings of tour research team.

Keywords: Psychiatry, psychopharmacology, psychotherapy

[Abstract:0044]

The Key Role Of The Gastric-Vagal Sensory Neuron Feedback On Sleep Modulation And İts Neural Circuitry Mechanisms

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Sleep and wakefulness are crucial events in all organisms. About a third of the population suffers from general sleep disturbance including insomnia, sleep apnea, etc. Growing evidence shows that the gut-brain axis contributes to the regulation of sleep, however, the direct neural circuitry mechanisms mediating the gut-brain axis regulation of sleep and wakefulness have not yet been illustrated. The afferent vague nerve directly connects the gut and the brain. Here, we explored the function of GI-tract originating vagal afferent and identified its role in regulating sleep and wakefulness. Chemogenetic activation of the stomach-duodenum originating vagal afferents (SI-VGA), instead of the small intestine-originating vagal afferents significantly reduced the duration of wakefulness and complementarily extended the duration of NREM sleep. Silencing the SI-VGA blocked the elongation of NREM sleep caused by refeeding after the overnight fasting. We also showed that the SI-VGA activation induced significant activation of GABAergic neurons in the NTS(NTS(GABA)) and opto/chemo activation of NTS(GABA) as well as its long-range projection to the paraventricular hypothalamic nucleus (PVH) promoted the NREM sleep. These findings established the key role of SI-VGA in modulating sleep and wakefulness and identified its underlying neural circuitry mechanisms.

Keywords: Psychiatry, psychopharmacology, psychotherapy

[Abstract:0045]

The Role of Oxytocin in Bipolar Disorder: From Animal Model to Postmortem Human Brain Study

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Although bipolar disorder (BD) and major depressive disorder (MDD) have similar pathogenesis, such as stress response disorders, they have differential pathogenesis based upon their distinct clinical symptoms. Revealing such differential pathogenesis will contribute to precise diagnosis and treatment.

Previous clinical studies have found that elevated blood oxytocin (OXT) levels seem to be a trait marker of BD. We used chemical genetic methods to activate hypothalamic paraventricular nucleus (PVN) OXT neurons (OXTPVN) or both PVN and supraoptic nucleus (SON) OXT neurons (OXTPVN+SON) in female and male OXT-cre transgenic mice respectively, and in an acute and chronic mode respectively. Meanwhile we detected depression-like and mania-like behavioral changes, together with changes in mRNA expression of stress-related molecules in the medial frontal cortex. Subsequently, we quantified the levels and ratios of OXT-ir and vasopressin (AVP)-ir in the postmortem hypothalamus of BD patients, with well-matched MDD patients and control group as respective controls. We found that hypothalamic OXT activation causes depression-like or manic-like (bipolar) behaviors in a dose-dependent and sex-dependent manner. The elevated OXT-ir/AVP-ir ratio, or the imbalance of OXT-AVP, may be a trait marker of BD especially male BD patients, that serves as an important molecular mechanism and basis for the pathogenesis of BD.

Keywords: Psychiatry, psychopharmacology, psychotherapy

[Abstract:0076]

Efficacy and Safety of Repeated Intravenous Esketamine on Adolescents with Major Depressive Disorder and Suicidal Ideation: A Randomized Active-Placebo-Controlled Trial

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OBJECTIVE: Suicide is a major cause of death in adolescents with limited treatment options. Ketamine and its enantiomers have shown rapid antisuicidal effects in adults with major depressive disorder (MDD), but their efficacy in adolescents is unknown. We conducted an active, placebo-controlled trial of intravenous esketamine‘s safety and efficacy in this population.

METHOD: A total of 54 adolescents (aged 13-18) with MDD and suicidal ideation were included from an inpatient setting and randomly assigned (1:1) to receive three infusions of esketamine (0.25 mg/kg) or midazolam (0.045 mg/kg) over 5 days, with routine inpatient care and treatment. Changes from baseline to 24 hours after the final infusion (Day 6) in the scores of the Columbia Suicide Severity Rating Scale (C-SSRS) Ideation and Intensity (primary outcome) and Montgomery–Åsberg Depression Rating Scale (MADRS, key secondary outcome) were analyzed using linear mixed models. Additionally, the 4-week clinical treatment response was a key secondary outcome. Treatment-emergent adverse events including cardiorespiratory, psychiatric, dissociative and cognitive effects were recorded.

RESULTS: The mean changes in C-SSRS Ideation and Intensity scores from baseline to Day 6 were significantly greater in the esketamine group than in the midazolam group (Ideation, -2.6 [SD=2.0] vs. -1.7 [SD=2.2], P=0.007; Intensity, -10.6 [SD=8.4] vs. -5.0 [SD=7.4], P=0.002), and the changes in MADRS scores from baseline to Day 6 were significantly greater in the esketamine group than in the midazolam group (-15.3 [SD=11.2] vs. -8.8 [SD=9.4], P=0.004). The rates of antisuicidal and antidepressant responses at 4 weeks posttreatment were 69.2% and 61.5% after esketamine, and 52.5% and 52.5% after midazolam, respectively.

The most common adverse events in the esketamine group were nausea, dissociation, dry mouth, sedation, headache and dizziness. No serious cardiorespiratory adverse events were reported, but transient elevations in blood pressure (maximum mean increase from the preinfusion measurement: systolic, 5.4±9.0 mm Hg; diastolic, 5.8±8.2 mm Hg) and pulse (5.8±7.0 beats per minute) on infusion days were observed in esketamine group. The severity of psychiatric and dissociative symptoms were higher after esketamine on Day 1 than after midazolam, but no group differences were observed at other time points. A significant time main effect (F=12.803, P<0.001), drug main effect (F=6.607, P=0.013), and interaction effect (F=3.315, P=0.041) was found in processing speed. Other dimensions including working memory and verbal learning showed significant time main effect (all P<0.05), but no significant drug or interaction effect (all P>0.05). Esketamine group showed improvement in processing speed from baseline to Days 6 and 12, and working memory from baseline to Day 12 (all P<0.05).

CONCLUSION: These preliminary findings indicate that three-dose intravenous esketamine, added to routine inpatient care and treatment, was an effective and well-tolerated therapy for treating adolescents with MDD and suicidal ideation.

Keywords: Psychiatry, psychopharmacology, psychotherapy

[Abstract:0281]

Beyond the Clinic: Rethinking Mental Health Access, From Stigma to Support Through Digital Solutions

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The demand for mental health services has surged dramatically in recent years, fueled by shifts in social structures after COVID-19, economic pressures, and the exacerbating impacts of climate change. This urgent need underscores the critical need to enhance mental health care access. While digital solutions present a unique opportunity for a paradigm shift in service delivery, there is a tendency to simply integrate these tools into existing frameworks rather than fostering a transformative approach.

Recognizing that traditional mental health services face myriad challenges—including capacity constraints, workforce burnout, entrenched stigma, low mental health literacy, and geographical barriers—digital mental health solutions emerge as essential pathways to enhance accessibility and support. Some countries have led the way in this domain, showcasing best practices founded on robust evidence, consumer engagement, and supportive infrastructure, offering valuable lessons for effective implementation.

This keynote address will delve into two primary OBJECTIVES: first, to cultivate a comprehensive understanding of effective digital mental health strategies and their implementation, and second, to explore the transformative role of artificial intelligence in reshaping mental health care delivery. By emphasizing collaborative efforts and innovative approaches, we aim to dismantle stigmas and pave the way for a more inclusive and supportive mental health landscape that prioritizes the needs of individuals and communities alike.

Let us envision a future where access to mental health care is not defined by barriers but rather thrives through digital empowerment and community engagement.

Keywords: Psychiatry, psychopharmacology, psychotherapy

[Abstract:0282]

Innovations in PTSD Therapy: A Personalized Framework for the Future

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BACKGROUND: Trauma-focused psychotherapies are among the most evidence-based interventions for Posttraumatic Stress Disorder (PTSD). Despite their efficacy, a significant proportion of patients experience suboptimal outcomes, with nearly half suffering chronic symptoms and maintaining their diagnosis following treatment. High dropout rates further limit the effectiveness of these therapies, highlighting an urgent need for innovative and personalized approaches. Multi-modal, Motion-assisted Memory Desensitization and Reconsolidation (3MDR) is an emerging personalized trauma-focused therapy that integrates elements of established psychotherapies with treadmill walking in a virtual reality environment, aiming to address these challenges.

METHODS: This presentation will address two key objectives. First, Dr. Burback will summarize findings from a comprehensive review of emerging psychotherapies for PTSD, highlighting important concepts, trends and interventions. Second, 3MDR will be introduced as an example of a trauma psychotherapy innovation addressing barriers to optimal outcomes. This will include its main theoretical foundations, evidence base, and initial findings from the Alberta 3MDR study implementing 3MDR into real world clinical settings in Canada. A video demonstration will allow participants to see 3MDR in action.

RESULTS: Many strategies are being developed to advancing trauma therapy, including enhancing existing evidence-based treatments, adapting psychotherapies originally designed for other mental health conditions, and reimagining exposure therapies through innovations such as virtual and augmented reality, the application of memory reconsolidation science (e.g., Reconsolidation of Traumatic Memories), and insights from embodied cognition. Novel therapeutic modalities are also emerging, including somatic therapies focusing on somatosensory and bodily experiencing, brainstem level treatments addressing orienting responses to trauma cues (e.g., Deep Brain Reorienting), and treatments addressing moral injury, spirituality, and Self. Combination and multi-modal treatments will also be highlighted, including pharmacological and psychedelic augmented psychotherapies.

3MDR is a multi-modal treatment that uniquely combines treadmill walking within a personalized virtual reality-assisted environment, a unique exposure protocol, dual attention tasks, and a focus on memory reconsolidation to desensitize and process traumatic memories. International findings, including four randomized controlled trials, demonstrate its utility to address some of the limitations of traditional trauma-focused therapies for PTSD by engaging embodied cognition and leveraging immersive technology to facilitate emotional processing. Case studies also suggest potential for treating complex trauma and dissociation when delivered within a trauma and attachment informed framework.

DISCUSSION: This presentation will discuss the implications of these findings and propose how a PTSD staging model could guide effective treatment personalization, evaluation and implementation of these novel interventions.

CONCLUSION: Advances in psychotherapy for PTSD are on the horizon, with implications for clinical care. 3MDR is one such innovation, with compelling evidence for addressing PTSD through personalization, incorporation of neuroscientific principles and engagement of the body.

Keywords: Psychiatry, psychopharmacology, psychotherapy

[Abstract:0283]

The Potential of Personalized PTSD Networks

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BACKGROUND: Addressing the spectrum of mental health requires innovative methods. Network theory views psychopathological symptoms as complex dynamic systems, potentially allowing for the identification of better monitoring and intervention targets. This article advocates for the Dynamic Time Warping (DTW) algorithm to construct symptom networks, building on two recent studies on Post-Traumatic Stress Disorder (PTSD).

METHOD: The studies used a cohort of 55,632 Japan Ground Self-Defense Force personnel who completed the Impact of Event Scale-Revised annually from 2013 to 2018. The first study applied DTW to create symptom networks for individuals with significant PTSD symptoms (IES-R > 25, n = 1,120). The second study analyzed dynamic symptom networks in four PTSD symptom trajectories (cumulative IES-R > 5, n = 10,211), generating in- and out-strength profiles to reflect symptom improvement and worsening.

RESULTS: The first study identified four PTSD symptom clusters, yielding evidence for a new dissociation cluster. In the second study, lower network density in undirected DTW analyses was associated with chronic PTSD. Directed analyses showed that dissociation symptoms decreased first during recovery, while emotional reactivity persisted. Conversely, in worsening PTSD avoidance symptoms escalated first, while dissociation symptoms intensified last.

CONCLUSIONS: These findings demonstrate the potential of DTW as a tool for constructing interpretable networks that capture the complex dynamics of psychological processes. This approach could enhance our understanding and treatment of a wide range of mental health conditions. Future research should further explore its applications to enable more personalized and effective mental health interventions.

Keywords: Psychiatry, psychopharmacology, psychotherapy

[Abstract:0287]

Towards Precision Psychiatry: Predicting Excellent Lithium Response

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BACKGROUND AND AIM: Lithium is recommended as a first line treatment for bipolar disorders. However, only 30% of patients show an optimal outcome and variability in lithium response and tolerability is poorly understood. It remains difficult for clinicians to reliably predict which patients will benefit without recourse to a lengthy treatment trial. Greater precision

METHODS:The R-LiNK consortium includes leading research groups on lithium in 8 European countries (Denmark, Italy, France, Germany, Norway, Spain, Sweden, UK) (see full description of the consortium and the protocol at https://rlink.eu.com/)

The main objective of the R-LiNK research program is to identify the eligibility criteria for treatment with lithium in BDI in terms of response, safety and tolerability. R-LiNK proposes a pragmatic study of individuals with BDI when lithium treatment is initiated, to identify early biomarkers to stratify individuals with BDI according to their response to lithium assessed prospectively (two years). The detailed baseline assessment before and after lithium initiation includes extensive clinical evaluation with measures of blood ―omics", anatomic/structural Magnetic Resonance Imaging (MRI) and 7Li-MRI derived-markers. These markers are tested as predictors of the response status at the endpoint (2 years). Translation is assessed in terms of positive and negative predictive values of markers, the utility of markers when employed alone or in combination (i.e. additivity or redundancy), patient acceptability and cost-effectiveness.

This project has received funding from The European Union's Horizon 2020 Research and Innovation programme Under Grant Agreement N° 754907

RESULTS: A total of 169 participants have been included, the follow-up of the last included patient ended in June 2024

CONCLUSIONS: Baseline and follow-up data are currently analyzed. Preliminary results will be presented

Keywords: Lithium, bipolar disorders, predictive biomarkers, OMIC, Neuroimaging, Lithium imaging

[Abstract:0435]

AI Techniques and Clinical Applications

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Machine learning (ML) has emerged as a powerful tool for extracting meaningful patterns from complex and high-dimensional datasets, particularly in healthcare settings.Rapidly increasing volumes of clinical data, alongside advancements in computational power, have fueled the development of models aimed at improving diagnostics, prognostics, and treatment strategies. Nevertheless, healthcare datasets are often subject to critical limitations such as small sample sizes, missing data, and imbalanced class distributions, posing substantial obstacles to building robust and generalizable predictive models.

ML techniques in healthcare typically involve supervised, unsupervised, or reinforcement learning. Supervised methods leverage labeled data to perform classification or regression, making them suitable for binary disease identification or prognosis. Logistic regression stands out for its interpretability and solid statistical foundation, while support vector machines (SVMs) use kernel functions to capture nonlinear relationships. In contrast, unsupervised approaches identify latent structures in unlabeled data, as exemplified by principal component analysis (PCA) for dimensionality reduction and clustering algorithms (e.g., k-means or hierarchical clustering) for revealing subgroups of patients.

A systematic methodological framework enhances the effectiveness of ML models, encompassing data collection, preprocessing, dimensionality reduction, hyperparameter tuning, and model validation. Rigorous data cleaning is particularly essential in healthcare, where erroneous entries or missing values frequently appear. To mitigate overfitting and underfitting, partitioning the dataset into training, validation, and test sets is recommended, supplemented by cross-validation for more reliable results.

Critically, models intended for clinical use must undergo extensive external validation and thorough performance assessment in diverse patient populations. High predictive accuracy alone does not guarantee real-world clinical utility, as erroneous predictions carry significant implications for patient safety. Achieving an optimal balance between model complexity and interpretability remains crucial, particularly given the collaborative nature of clinical decision-making.

In conclusion, ML offers substantial potential for enhancing healthcare outcomes by enabling data-driven decision support, personalized treatment plans, and improved prognostic models. Yet, addressing methodological and data-related challenges through careful design, rigorous validation, and transparent reporting is indispensable for integrating ML applications effectively into clinical practice.

Keywords: Machine learning, Artificial Intelligence, Clinical Desicion Support System

AuthorToEditor: 1. Bishop CM. Pattern Recognition and Machine Learning. Springer; 2006. 2. Maleki F. Overview of Machine Learning Part 1: Fundamentals and Classic Approaches, Neuroimaging Clinics of North America, Volume 30, Issue 4, November 2020, Pages e17-e32 3. Goodfellow I, Bengio Y, Courville A. Deep Learning. MIT Press; 2016. 4. James G, Witten D, Hastie T, Tibshirani R. An Introduction to Statistical Learning with Applications in R. Springer; 2013. 5. Obermeyer Z, Emanuel EJ. Predicting the future — big data, machine learning, and clinical medicine. N Engl J Med. 2016;375:1216-1219.

[Abstract:0437]

Initial Myelination in the Central Nervous System

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Myelin, the protective sheath around nerve fibers, is essential for efficient neural communication. Its abnormal formation contributes to cognitive and behavioral impairments seen in disorders such as schizophrenia, bipolar disorder, autism spectrum disorder (ASD), and attention-deficit/hyperactivity disorder (ADHD).

Myelination is regulated by both genetic and environmental factors, with microglia playing a crucial role in regulating this process. We have utilized various culture systems of neural stem cells (NSCs) and spinal cord tissues to explore the effects of microglia secretomes on myelination. Our findings demonstrated that NSCs alone, lacking microglia, showed significantly lower myelin coverage compared to spinal cord cultures where microglia were present. The introduction of microglia-conditioned medium (MCM) into NSC cultures successfully induced myelination, confirming the importance of microglial factors in this process.

We further found that C1q was present in spinal cord culture medium but absent in NSC cultures. When C1q was added to NSC cultures, there was a noticeable increase in myelin coverage in a dose- and time-dependent manner. This suggests that C1q is not only necessary but also sufficient to stimulate myelination in vitro.

To elucidate the role of C1q in vivo, we created a conditional C1q knockout (KO) mouse model, specifically targeting C1q in the brain. The results indicated that early deletion of C1q led to reduced myelin thickness and altered g-ratio values, indicating impaired myelination. However, when C1q was deleted after the onset of myelination, no significant differences in myelin thickness were observed, suggesting that C1q is critical during the initial stages of myelination but not afterward.

Interestingly, C1q deficiency did not affect the overall expression of myelin basic protein (MBP), a key component of myelin, highlighting that while C1q is crucial for the formation and alignment of myelin around axons, it may not influence the production of MBP itself. The study found poor alignment between myelin and axons in C1q KO mice, indicating that C1q facilitates the proper wrapping of myelin around axons during development.

The findings contribute significantly to understanding the mechanisms underlying CNS myelination, particularly the role of microglia and C1q. While previous studies have linked C1q to neurodegenerative conditions, our research emphasizes its essential function in the developing brain. Future investigations are necessary to explore the detailed signaling pathways involved in myelination and the potential implications of C1q in remyelination and neurodegenerative/mental disorders.

Limitations of the study include the potential for C1q from other sources to influence outcomes and the challenges of achieving complete deletion of C1q before myelination. Despite these limitations, our findings underscore the significance of microglia-derived C1q in the initiation of myelination, enhancing our understanding of neurodevelopmental processes and their relationship to mental health disorders.

Keywords: Myelination, microglia, C1q

[Abstract:0454]

Exploring the Metabolomic Signatures of Major Depressive Disorder and Non-Suicidal Self-Injury in Adolescent Girls

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Major Depressive Disorder (MDD) and Non-Suicidal Self-Injury(NSSI) are prevalent mental health issues among adolescents, with a high rate of comorbidity.These conditions pose significant challenges for early diagnosis and intervention, especially in female adolescents.Recent advances in metabolomics have shown promise in identifying biomarkers for psychiatric disorders, but the specific metabolomic profiles associated with NSSI in MDD patients remain understudied.This study aims to fill this gap by evaluating the serum metabolomic profiles in female adolescents with MDD, with and without a history of NSSI, to identify potential biomarkers that may elucidate the underlying mechanisms of these conditions.

In this retrospective case-control study, we analyzed serum samples from 25 female adolescents with MDD,35 with MDD+NSSI, and 35 healthy controls.Metabolic profiling was performed using Q300 technology, which allows for comprehensive and sensitive detection of metabolites.Differential metabolites were identified through multivariate and univariate statistical analyses.Our results revealed a total of 58 distinct metabolites, with 48 showing significant differences between the MDD+NSSI group and healthy controls, and 10 differing between the MDD+NSSI and MDD groups. Notably, azelaic acid, isobutyric acid, and heptanoic acid emerged as effective biomarkers for classifying MDD+NSSI patients versus healthy controls.Additionally, 9-pentadecanoic acid was identified as a potential biomarker for differentiating MDD+NSSI patients from those with MDD alone.

These findings suggest that the serum metabolomic profile of female adolescents with MDD and NSSI is characterized by distinct metabolic alterations.The identified biomarkers may serve as auxiliary diagnostic indicators, providing valuable insights into the pathophysiology of MDD and NSSI.This study highlights the potential of metabolomics in uncovering the biological mechanisms underlying these conditions, which could lead to improved therapeutic strategies and personalized interventions for affected adolescents.Future research should focus on validating these biomarkers in larger cohorts and exploring their clinical applications in early diagnosis and treatment monitoring.

Keywords: Major depressive disorder, Metabolism, Serum, self-injury, Q300, Female adolescents

REFERENCE:

1. Deng H, Wen F, Xu H, Yang H, Yan J, Zheng Y, et al. Prevalence of affective disorders in Chinese school-attending children and adolescents aged 6–16 based on a national survey by MINI-Kid. J Affect Disord. 2023; 331: 192–199.
2. Wang YJ, Li X, Ng CH, Xu DW, Hu S, Yuan TF. Risk factors for non-suicidal self-injury (NSSI) in adolescents: A meta-analysis. E clinical Medicine. 2022; 46: 1–12.
3. Huang T, Balasubramanian R, Yao Y, Clish CB, Shadyab AH, Liu B, et al. Associations of depression status with plasma levels of candidate lipid and amino acid metabolites: a meta-analysis of individual data from three independent samples of US postmenopausal women. Mol Psychiatry. 2021; 26: 3315–3327.
4. Zhou X, Liu L, Lan X, Cohen D, Zhang Y, Ravindran A V, et al. Polyunsaturated fatty acids metabolism, purine metabolism and inosine as potential independent diagnostic biomarkers for major depressive disorder in children and adolescents. Mol Psychiatry. 2019; 24: 1478–1488.
5. Ritter C, Buchmann A, Müller ST, Volleberg M, Haynes M, Ghisleni C, et al. Evaluation of Prefrontal γ-Aminobutyric Acid and Glutamate Levels in Individuals With Major Depressive Disorder Using Proton Magnetic Resonance Spectroscopy. JAMA Psychiatry. 2022; 79: 1209–1216.

[Abstract:0455]

The Use of Long-Acting Injectable Antipsychotics in Elderly Patients

Selin Balki Tekin

Psikiyatri Kliniği, Denizli Devlet Hastanesi, Denizli

Although the use of long-acting antipsychotics in the elderly population is increasing, there are currently very few studies and data on ideal doses, safety levels and side-effect profiles. Elderly patients are at particular risk of adverse effects such as extrapyramidal symptoms, sedation and hypotension, anticholinergic effects and hypotension associated with antipsychotic agents due to comorbidities, polypharmacy and age-related changes in pharmacokinetic and pharmacodynamic metabolism. Therefore, studies and psychopharmacological guidelines recommend treating older patients with lower doses than younger patients. Appropriate initial and maintenance doses of an antipsychotic in older people may be approximately 25-50% of the usual adult dose [1].

Risperidone is one of the first discovered second-generation long-acting injectable antipsychotics and has been reported to be effective and safe in older patients, particularly for psychotic disorders. It is well tolerated and may be useful in patients with poor compliance or who have difficulty taking oral medication. According to the literature, it can be started at 25 mg every two weeks and continued at 37.5-50 mg depending on the patient's tolerance. After a period of treatment with oral risperidone, it seems more appropriate to switch to long-acting treatment to confirm tolerability and monitor possible side effects [2]. Although few studies have been conducted on other long-acting antipsychotics, particularly aripiprazole and paliperidone, it seems that more data and studies are needed.

In a study in which schizophrenia patients over 60 years of age were followed for 1 year after discharge, the group receiving long-acting antipsychotics had a significantly lower rate of rehospitalisation and a longer duration of rehospitalisation within 1 year of discharge than the group receiving oral antipsychotics [3]. Another study showed that second-generation injectable long-acting antipsychotics are increasingly being used in older people, although at lower rates and doses than in the adult population [4].

The use of long-acting injectable antipsychotics in older patients with characteristics such as inadequate social support, non-compliance with treatment regimens, difficulties in attending scheduled follow-up visits and the presence of chronic mental illness is an issue that should be considered. The safety and tolerability of these agents in the elderly appear to be well established. Further studies and guidelines are needed in this area.

Keywords: Depot antipsychotic, long-acting injectable antipsychotics, elderly

AuthorToEditor: 1. Masand PS, Gupta S. Long-acting injectable antipsychotics in the elderly: guidelines for effective use. Drugs Aging. 2003; 20(15):1099-1110. doi:10.2165/00002512-200320150-00003 2. Singh D, O'Connor DW. Efficacy and safety of risperidone long-acting injection in elderly people with schizophrenia. Clin Interv Aging. 2009;4:351-355. doi:10.2147/cia.s3252 3. Lin CH, Chen FC, Chan HY, Hsu CC. A Comparison of Long-Acting Injectable Antipsychotics With Oral Antipsychotics on Time to Rehospitalization Within 1 Year of Discharge in Elderly Patients With Schizophrenia. Am J Geriatr Psychiatry. 2020; 28(1): 23-30. doi: 10.1016/j.jagp.2019.08.005 4. Doolabh U, Yeap S. Examining long-acting injectable antipsychotic (depot) medication in the elderly: a five-year retrospective cross-sectional study evaluating depot use in an Australian psychogeriatric service. Australas Psychiatry. 2022; 30(1): 31-36. doi:10.1177/10398562211029951

[Abstract:0457]

The Role of Citicoline in Adult Psychiatric Disorders

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Citicoline is the generic name for the pharmaceutical substance cytidine-5'-di-phosphocholine (CDP-choline). Citicoline is derived from two precursors, choline and cytidine, obtained from dietary sources or endogenous metabolism. CDP-choline is involved as an essential intermediate in the synthesis of structural phospholipids of cell membranes. Phospholipids play an important role in inflammatory processes. As inflammation occurs in the body, microglial activation, cytokine, chemokine, increased SOR, release of inflammatory mediators such as TNF-α, IL-1β and IL-6 that can disrupt synaptic plasticity, cytokine-induced apoptosis, and reactive astrocyte formation occur. Citicolin has anti-inflammatory and neuroprotective effects. Citicolin has anti-inflammatory and neuroprotective effects. Citicoline has protective effects on inflammation by inhibiting NF-κB activation in the body, reducing the production of proinflammatory cytokines such as TNF-α, IL-1β and IL-6, and increasing the activity of antioxidant enzymes such as SOD and GPx. By increasing phospholipid synthesis, citicoline also plays a role in the production of acetylcholine (Ach), a neurotransmitter that mediates cognitive processes such as memory, attention, and learning.

The bioavailability of Citicoline following oral and IV administration is similar. Citicoline is water-soluble and widely distributed in the body. It is metabolized in the intestinal wall and liver. It is excreted via urine, feces and respiration. Plasma levels peak 1 hour after Citicoline intake and a second peak occurs 24 hours later. In the 21st century, it has been allowed to be used in the USA and Europe with the status of Generally Recognized as Safe food. Side effects are generally not expected with the use of Citicoline, which is quite tolerable. The most common side effects are restlessness and GIS intolerance.

Citicoline is frequently used in individuals whose cognitive functions may be affected due to its neuroinflammatory, neuroprotective and neurotransmitter action mechanisms. It has been shown to be beneficial in many disorders including traumatic brain injury, ischemic stroke, hypoxia, Parkinson's, dementia, glaucoma, depression and addiction. Different studies in healthy people show that citicoline improves memory, recollection, episodic memory and attention processes in healthy people. Citicoline has been shown to improve scores on cognitive assessment scales in patients with vascular cognitive impairment, while it has been shown to halt the course of the disease in patients with senile dementia of the Alzheimer type. Beneficial effects on memory function and behavior have been demonstrated in populations with mild to moderate dementia. Citicoline is thought to be beneficial for higher-level mental functions, such as increased memory and concentration, improved counting functions, improved specific imagination efficiency, and improved visual-motor coordination and dynamic practice.

Keywords: Citicoline, cognitive impairment, dementia

REFERENCES

1. Secades JJ, Gareri P. Citicoline: pharmacological and clinical review, 2022 update. Rev Neurol. 2022 Nov 30;75(s05):S1-S89. English, Spanish. doi: 10.33588/rn.75s05.2022311.
2. Bonvicini M, Travaglini S, Lelli D, Antonelli Incalzi R, Pedone C. Is Citicoline Effective in Preventing and Slowing Down Dementia?-A Systematic Review and a Meta-Analysis. Nutrients. 2023 Jan 12;15(2):386. doi: 10.3390/nu15020386.
3. Cavalu S, Saber S, Ramadan A, Elmorsy EA, Hamad RS, Abdel-Reheim MA, Youssef ME. Unveiling citicoline's mechanisms and clinical relevance in the treatment of neuroinflammatory disorders. FASEB J. 2024 Sep 15;38(17):e70030. doi: 10.1096/fj.202400823R.

[Abstract:0461]

Circadian Rhythm and Schizophrenia

Özge Bebek İrem

Erenköy Ruh ve Sinir Hastalıkları Eğitim ve Araştırma Hastanesi

Schizophrenia is a psychiatric disorder associated with positive, negative and cognitive symptoms, often accompanied by sleep abnormalities. It has been reported that sleep disorders, including early stage, first episode and chronic period, are quite common in schizophrenia patients and the prevalence of sleep and circadian rhythm disorders is approximately 80%.

The circadian rhythm defines a period of approximately 24 hours and is regulated by the suprachiasmatic nucleus (SCN) located at the base of the hypothalamus, just above the optic chiasm. The strongest stimulus of this rhythm, which is produced by the SCN and synchronizes with the outside world, is light. It is essential for physical and mental health that the physiological functions of organisms work in harmony with the external environment and maintain their rhythmic functioning under different conditions. There is also strong evidence that mental illnesses are associated with disturbances in the circadian rhythm.

Severe circadian mismatches such as non-24 hour periods, phase advances and delays have been reported in patients with schizophrenia. In addition, differences in physiological circadian variables such as body temperature and rhythmic hormone production have also been observed. In addition, some mutations in circadian clock genes have been shown to increase the risk of schizophrenia. All these findings suggest that sleep and circadian rhythm disturbances in schizophrenia are not only a symptom but may also play a causal role in the development of the disease.

Alterations in dopamine signaling in schizophrenia are thought to be important in circadian rhythm pathogenesis. Dopaminergic neurons in the dorsal raphe nucleus and ventral tegmental area are a major component in the regulation of the sleep/wake cycle and dopamine has been shown to increase alertness. Although dopamine release is under the control of the circadian clock, there is evidence that the SCN has effects on the regulation of the master clock. Therefore, dopamine is closely related to sleep and circadian system. Considering that dopamine is involved in both the pathogenesis of schizophrenia and the sleep and circadian system, it suggests that disruption in one may increase abnormalities in the other.

There is ample evidence that the dopaminergic system is regulated by melatonin. The melatonin receptor is expressed in dopaminergic regions of the brain. In general, studies have shown that melatonin has an inhibitory effect on dopamine. Melatonin affects dopamine signaling and abnormalities in melatonin rhythm may affect the dopamine system in schizophrenia. Dysregulation of the dopamine system can lead to disruption of sleep and circadian rhythms and this may be the underlying mechanism of circadian rhythm disturbances in schizophrenia. On the other hand, dopamine release is also under the control of circadian rhythm, and it is likely that disruption of sleep and circadian rhythms can lead to dysregulation of dopamine release.

Understanding the link between schizophrenia and circadian rhythm will enable the development of circadian-based therapies and treatments and approaches to improve quality of life.

Keywords: Circadian rhythm, schizophrenia, sleep disorder

AuthorToEditor: 1-Chaiyakunapruk N, Chong HY, Teoh SL, Wu DBC, Kotirum S, Chiou CF. Global economic burden of schizophrenia: A Systematic Review. Neuropsychiatr Dis Treat. 2016;12:357-67. 2-Cosgrave J, Wulff K, Gehrman P. Sleep, circadian rhythms and schizophrenia: where we are and where we need to go. Curr Opin Psychiatry. 2018;31(3):176-82. 3-Ashton A, Jagannath A. Disrupted sleep and circadian rhythms in schizophrenia and their interaction with dopamine signaling. Front Neurosci. 2020;14:636.

[Abstract:0464]

Neuroleptic Malignant Syndrome Due to Antipsychotics Used in Children and Adolescents: From Diagnosis to Treatment

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Neuroleptic malignant syndrome due to antipsychotics used in children and adolescents: From diagnosis to treatment Neuroleptic malignant syndrome (NMS) is an idiosyncratic adverse reaction with potentially fatal outcome related to neuroleptic and other medications.(1) With the use of first-generation antipsychotics (FGAs), the incidence of NMS in the 1980s and 1990s was reported to be 0.2%. More recent studies have reported the incidence with second generation antipsychotics (SGAs) to be 0.01 0.03% (2) As classically described,NMS presents with abrupt onset of fever, autonomic instability, extrapyramidal signs (EPS) and altered mental state. This classical tetrad may be accompanied by raised serum creatine kinase, impaired liver function tests, leukocytosis, electrolyte disturbance, renal impairment, altered coagulation studies and electrocardiogram abnormalities. (3) Aggressive supportive management is the basis of treatment of NMS, and a reasonable pharmacotherapeutic approach based on drug efficacy, availability, and experience would be to start drug therapy with a benzodiazepine and bromocriptine, and escalate to the addition of dantrolene in severe cases. (4) Mortality, which in the past ranged from 20 to 30%, has ranged from 4.7% at 30 days to 9.9% at 90 days and up to 15.1% at 1 year in more recent studies, which suggests that there are late complications that may be fatal, such as aspiration pneumonia or renal failure (5) Despite this, there are still few studies in the child–adolescent population. Apparently, it is postulated that the course and treatment in children and adolescents is usually the same as in adults (6)

Keywords: Children, adolescent, neuroleptic malign sydrome

REFERENCES

1- Kellam AMP. The Neuroleptic Malignant Syndrome, So-called: A Survey of the World Literature. British Journal of Psychiatry. 1987;150(6):752-759. doi:10.1192/bjp.150.6.752

2- Wadoo, Ovais, Ouanes, Sami, Firdosi, Mudasir (2021) Neuroleptic malignant syndrome: a guide for psychiatrists. BJPsych Advances, 27 (6). pp. 373-382

3- Trollor JN, Chen X, Chitty K, Sachdev PS. Comparison of neuroleptic malignant syndrome induced by first- and second-generation antipsychotics. Br J Psychiatry. 2012 Jul;201(1):52-6. doi: 10.1192/bjp.bp.111.105189

4- van Rensburg R, Decloedt EH. An Approach to the Pharmacotherapy of Neuroleptic Malignant Syndrome. Psychopharmacol Bull. 2019 Feb 15;49(1):84-91

5- Wijdicks EFM, Ropper AH. Neuroleptic Malignant Syndrome. N Engl J Med. 2024 Sep 26;391(12):1130-1138

6- Despite this, there are still few studies in the child–adolescent population. Apparently, it is postulated that the course and treatment in children and adolescents is usually the same as in adults

[Abstract:0465]

Treatment Practices in the High-Security Forensic Psychiatry Adolescent Unit

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High-Security Forensic Psychiatry Hospitals (HSFPH) adolescent units are closed psychiatric wards with enhanced security measures where forensic psychiatric evaluation and rehabilitation processes are conducted for juvenile offenders referred by judicial authorities. These units serve as facilities for both outpatient and inpatient forensic psychiatric procedures.HSFPH adolescent units play a crucial role in providing expert witness services for juvenile offenders, either through outpatient assessment or observation, resulting in the preparation of forensic reports. Additionally, these units are instrumental in the rehabilitation and social reintegration of adolescents with mental disorders who are subject to security measures or in need of protection.HSFPHs are designed to prevent patients under protective custody and treatment from committing crimes by restricting their movement and ensuring they remain under the supervision of healthcare professionals rather than in penal institutions.In Turkey, high-security health institutions, as stipulated in Article 57 of the Turkish Penal Code, are established within healthcare facilities under the Ministry of Health. Admissions to these units are exclusively based on referrals from judicial authorities, law enforcement agencies, and penal institutions, in accordance with relevant legislation.HSFPH units provide both expert witness services and protective treatment services. Expert witness services evaluate various factors, including the necessity for observation, minority status, mental illness, deafness and muteness, temporary causes, and the influence of alcohol or substances.Protective treatment services are provided in compliance with the measures ordered under the Child Protection Law. Juvenile offenders or children with mental disorders in need of protection, who are deemed dangerous based on medical reports, are admitted to high-security health institutions for treatment. Furthermore, adolescents subject to security measures specific to individuals with mental disorders, as per Article 57 of the Turkish Penal Code, are also treated in these institutions.Currently, the sole unit providing these services in Turkey is the adolescent unit of the High-Security Forensic Psychiatry Hospital at Adana City Hospital. This hospital, which commenced operations on January 23, 2018, is the first HSFPH in Turkey. The hospital houses one adolescent ward with 10 beds, divided into 7 beds for male patients and 3 beds for female patients in separate corridors. The ward is equipped with single-occupancy rooms and high-level security measures, ensuring that patients receive appropriate physical conditions and standardized care and rehabilitation services in accordance with scientific principles.HSFPH adolescent units are vital in determining the criminal responsibility of severely disturbed children and adolescents (SDCAs) and ensuring public safety. These units play a critical role in the rehabilitation and social reintegration of SDCAs.

Keywords: High-Security Forensic Psychiatry Hospitals, Juvenile Delinquency, Forensic Psychiatry

[Abstract:0466]

Catatonia in Child and Adolescent Depression and Bipolar Disorder

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Catatonia is a neuropsychiatric syndrome that can involve motor, speech, behavioural, affective, and autonomic dysregulation, with the potential for severe morbidity and mortality (1)

Pediatric catatonia usually presents acutely but its onset can also be insidious. Duration can be transient or chronic for weeks or months. Similar to adults, children and adolescents with catatonia are at risk for severe complications due to akinesia, including pneumonia, decubitus ulcers, malnutrition, dehydration, contractures or thrombosis (2)

Schizophrenia is the most common disorder associated with catatonia in children. Catatonic schizophrenia was associated with more unfavorable course of the disorder in children and adolescents when compared to other types of schizophrenia. Mood disorder is the second most common psychiatric disorder associated with catatonia in the population of children and adolescents, following schizophrenia spectrum disorder. Mood disorders associated with catatonia include episodes of major depression and mania. (3) Management of catatonia includes specific treatments, treatment of the underlying disorder, and prevention of complications. The primary treatment of catatonia should be initiated as soon as possible after the condition has been identified, since the likelihood of a response declines with time. Both lorazepam administration, as noted above, and electroconvulsive therapy (ECT) lead to a response in 60 to 100% of patients, and ECT is also effective after insufficient response to benzodiazepine administration (4)

Keywords: Catatonia, child and adolescent,depression and bipolar

REFERENCES

1- Nejati N, Etches S. Identifying and treating catatonia in children with neurodevelopmental disorders: A case series. J Can Acad Child Adolesc Psychiatry. 2024 Nov; 33(3): 215-222.
2- Benarous X, Raffin M, Ferrafiat V, Consoli A, Cohen D. Catatonia in children and adolescents: New perspectives. Schizophr Res. 2018 Oct; 200:56-67
3- Remberk B, Szostakiewicz Ł, Kałwa A, Bogucka-Bonikowska A, Borowska A, Racicka E. What exactly is catatonia in children and adolescents. Psychiatr Pol. 2020 Aug 31; 54(4): 759-775
4- Heckers S, Walther S. Catatonia. N Engl J Med. 2023 Nov 9; 389(19): 1797-1802

[Abstract:0471]

Use of Guanfacine in Physical and Psychiatric Comorbid Conditions Accompanying Attention Deficit Hyperactivity Disorder in Children and Adolescents

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Guanfacine, a selective alpha-2A adrenergic receptor agonist, was originally formulated for hypertension treatment; nevertheless, its application has recently broadened to include attention deficit hyperactivity disorder and associated mental disorders. Its application in many psychiatric diseases beyond attention deficit hyperactivity disorder is becoming progressively prevalent.

Owing to its processes that augment synaptic transmission in the prefrontal cortex, bolster executive skills, and enhance impulse control, it is particularly assessed as a non-stimulant option in the management of attention deficit hyperactivity disorder. Guanfacine's function in treating attention deficit hyperactivity disorder is attributed to its ability to enhance concentration by maintaining neural connections and attenuating extraneous stimuli. Randomized controlled trials demonstrate that guanfacine is especially efficacious in symptoms frequently comorbid with attention deficit hyperactivity disorder, including impulsivity, hyperactivity, and oppositional defiant disorder. Nonetheless, its effectiveness in alleviating attention deficit symptoms was determined to be inferior to that of stimulant drugs. In ADHD, it may serve as a first-line treatment based on the presence of comorbid conditions, while in other instances, it acts as an alternative treatment.

In addition to ADHD, guanfacine may also be beneficial in addressing symptoms related to other neurodevelopmental diseases, including autism spectrum disorder and tic disorders. Although it may enhance hyperactivity and oppositional behaviors in autism spectrum condition, it is noted to have a minimal impact on repetitive activities. In individuals with tic disorder and Tourette's syndrome, it may assist in modulating hyperkinetic symptoms without directly influencing dopaminergic processes.

The cardiovascular and neurological adverse effects of Guanfacine must be taken into account. Exercise caution in people susceptible to hypotension, bradycardia, and syncope, as it may reduce blood pressure. Concurrently, adverse symptoms such as pronounced sedation and somnolence may be evident throughout the day. Guanfacine has been documented to reduce sleep onset latency and enhance total sleep duration in the context of sleep disorders.

In conclusion, guanfacine possesses significant potential for extensive application in child psychiatry and may serve as a helpful therapeutic alternative, particularly for individuals unresponsive to stimulant drugs or exhibiting low tolerance. Nevertheless, further investigation is required to assess its long-term effectiveness and safety.

Keywords: Alfa-2 agonist, ADHD, guanfacine

REFERENCES

1. Chappell, P. B., Riddle, M. A., Scahill, L., Lynch, K. A., Schultz, R. T., Arnsten, A. F., & Leckman, J. F. (2001). A placebo-controlled study of guanfacine in the treatment of children with tic disorders and attention deficit hyperactivity disorder. American Journal of Psychiatry, 158(7), 1067-1074.
2. Newcorn, J. H., Huss, M., Connor, D. F., Hervás, A., Werner-Kiechle, T., & Robertson, B. (2020). Efficacy of guanfacine extended release in children and adolescents with attention-deficit/hyperactivity disorder and comorbid oppositional defiant disorder. Journal of the American Academy of Child & Adolescent Psychiatry, 59(5), 512-523.
3. Dulcan, M. K. (Ed.). (2021). Dulcan‘s textbook of child and adolescent psychiatry (3rd ed.). American Psychiatric Association Publishing.

[Abstract:0472]

The Place of Guanfacine in the Treatment of Psychiatric Disorders in Adulthood

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Guanfacine is a drug that acts as an alpha-2A adrenergic receptor agonist in the central nervous system and is primarily used in the treatment of attention deficit hyperactivity disorder. Originally developed for the treatment of hypertension, guanfacine has also been investigated in neuropsychiatric disorders due to its regulatory effects on cognitive functions and impulse control. It increases synaptic stability by balancing noradrenaline release in the prefrontal cortex, thereby improving attention, executive functions and working memory, while suppressing sympathetic activity via the locus sereleus, it shows positive effects on anxiety, hyperarousal and sleep disorders. In adult psychiatry, its use has been investigated in various conditions such as attention deficit hyperactivity disorder, tic disorders, post-traumatic stress disorder, schizotypal personality disorder and traumatic brain injury. Although it has been shown to increase attention span and decrease hyperactivity in placebo-controlled studies in the treatment of attention deficit hyperactivity disorder, it is generally used as an alternative or additional treatment option to stimulant drugs due to side effects such as sedation. Although it has the advantage of being better tolerated than antipsychotic drugs in tic disorders, especially in mild cases, its efficacy is relatively limited. In studies conducted after mild traumatic brain injury, it has been shown to strengthen working memory and support cognitive functions, and it is thought to be beneficial in the neurorehabilitation process. Although it has been shown to improve context processing and cognitive flexibility in individuals with schizotypal personality disorder, more research is needed on its effects on the schizophrenia spectrum. In the treatment of post-traumatic stress disorder, its superiority to placebo has not been proven, but it may be considered as an adjunctive agent, especially due to the suppression of sympathetic nervous system activity. In general, guanfacine is a drug that may be beneficial in certain patient groups in adult psychiatry, but more large-scale randomized controlled trials are needed to demonstrate its efficacy and safety more clearly.

Keywords: Adults, cognitive functions, guanfacine

REFERENCES

1. Butterfield, M. E., Saal, J., Young, B., & Young, J. L. (2016). Supplementary guanfacine hydrochloride as a treatment of attention deficit hyperactivity disorder in adults:A double blind, placebo-controlled study. Psychiatry Research, 236, 136–141.
2. Taylor, F. B., & Russo, J. (2001). Comparing guanfacine and dextroamphetamine for the treatment of adult attention-deficit/hyperactivity disorder. Journal of Clinical Psychopharmacology, 21(2), 223–228.
3. Cortese, S., Adamo, N., Del Giovane, C., Mohr-Jensen, C., Hayes, A. J., Carucci, S., et al. (2018). Comparative efficacy and tolerability of medications for attention-deficit hyperactivity disorder in children, adolescents, and adults:A systematic review and network meta-analysis. The Lancet Psychiatry, 5(9), 727–738.

[Abstract:0473]

Chronotherapeutic Approaches in the Treatment of Mood Disorders

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Mood disorders have been closely associated with disruptions in circadian rhythms, with sleep-wake cycle alterations being among the most significant contributors. Empirical evidence suggests that abrupt changes in sleep-wake patterns can precipitate mood episodes. Given the established effects of pharmacological agents such as lithium, valproate, and various antidepressants on circadian regulation, as well as the impact of Interpersonal and Social Rhythm Therapy on sleep-wake cycles and social rhythms, chronotherapeutic interventions offer a novel perspective in the management of mood disorders.1

The beneficial effects of increased exposure to natural light on both physical and mental health, coupled with the known synchronizing influence of light on circadian rhythms, have led to the clinical implementation of artificial bright light therapy in mood disorders. This approach has been most extensively employed in the treatment of Seasonal Affective Disorder (SAD). The therapeutic efficacy of light is contingent on parameters such as timing of exposure, intensity, duration, and wavelength. Notably, in both SAD and other depressive conditions, morning administration of light therapy yields the most favorable outcomes.2

Sleep deprivation therapy represents another chronotherapeutic strategy targeting circadian rhythms and has demonstrated efficacy in both unipolar and bipolar depression. This intervention exerts a rapid antidepressant effect, with approximately 60% of patients exhibiting significant symptomatic improvement following a single session. Notably, its effectiveness appears to be slightly greater in individuals with bipolar depression.

Sleep Phase Advance therapy is an additional chronotherapeutic modality that involves advancing the sleep-wake cycle by approximately six hours, followed by a gradual return to the baseline routine over subsequent days. This method has been associated with antidepressant effects manifesting within a few days.

In addition to circadian rhythm disturbances, alterations in melatonin levels have also been documented in mood disorders. The therapeutic potential of melatonergic antidepressants in depressive conditions further underscores the relevance of melatonin in mood regulation. Given its well-documented role in treating circadian rhythm sleep disorders, melatonin may hold promise as a chronotherapeutic agent in mood disorders. Importantly, its mechanism of action on circadian rhythms is opposite to that of light therapy, warranting further investigation into its clinical applications.

Chronotherapeutic interventions can be effectively integrated with psychopharmacological treatments and can be used in combination with other chronotherapeutics. Such combinatory approaches typically enhance therapeutic efficacy while mitigating some of the limitations inherent to standalone chronotherapeutic treatments.3

Given the pivotal role of circadian rhythm disruptions in the pathophysiology of mood disorders, the capacity of chronotherapeutic interventions to induce rapid circadian realignment and their demonstrated antidepressant efficacy highlight their potential for broader clinical application. Future research and clinical practice are likely to witness an expanded role for chronotherapeutic strategies in the comprehensive management of mood disorders.

Keywords: Circadian rhythms, chronotherapy, light therapy, sleep deprivation therapy, sleep phase advance

REFERENCES

1. Dollish, H.K., M. Tsyglakova, and C.A. McClung, Circadian rhythms and mood disorders: Time to see the light. Neuron, 2024. 112(1)
2. Meesters, Y., E.J.D. vanuinen, and M.C.M. Gordijn, 35 years of light treatment for mental disorders in the Netherlands. Ann Med, 2023 55(2)
3. Humpston, C., et al., Chronotherapy for the rapid treatment of depression: A meta-analysis. J Affect Disord, 2020. 261

[Abstract:0475]

Understanding Sounds, Grasping Information: Auditory Processing in Children with Specific Learning Disability

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Specific Learning Disabilities (SLD) refers to academic difficulties such as reading difficulties (dyslexia), math difficulties (dyscalculia) and writing difficulties (dysgraphia) in children with normal intelligence. Studies suggest that these children may show deficits in auditory processing skills, which involve the perception, discrimination and interpretation of auditory stimuli. A significant proportion of children with dyslexia experience phonological processing difficulties that directly affect language acquisition and reading skills. Children with Auditory Processing Disorder (APD) have difficulty understanding speech in noisy environments, distinguishing similar sounds and following verbal instructions.

Neuroscientific research reveals that children with ASD show deficits in temporal synchronization and neural processing in the auditory cortex and brainstem. Studies suggest that the neural responses of individuals with dyslexia to speech sounds are delayed and disorganized, indicating that they have difficulty processing rapid auditory changes. However, given the neuroplasticity of the brain, early interventions can lead to improvements in auditory processing skills.

The diagnosis of IIB mandates a comprehensive assessment process that requires differentiation from other developmental disorders such as Attention Deficit Hyperactivity Disorder (ADHD) and Specific Language Disorder (SLD). Diagnostic procedures usually include audiological testing, electrophysiological measurements and neuropsychological assessments to determine whether auditory difficulties are due to peripheral hearing loss or central processing deficits. Due to the overlap of IOP with other neurodevelopmental conditions, a multidisciplinary approach should be adopted for accurate diagnosis.

Intervention strategies for children with auditory processing difficulties fall into three main categories:

• Adjustments to the learning environment: Reducing background noise, sitting close to the teacher and the use of Frequency Modulation (FM) systems are recommended.

• Compensatory strategies: Using visual aids to alleviate auditory processing difficulties, simplifying verbal instructions, providing note-taking support, and extending exam periods can be implemented.

• Auditory rehabilitation: Phonological awareness training, auditory discrimination exercises and computer-based auditory training programs are used to improve processing skills.

Music therapy and rhythmic training improve temporal auditory mechanisms, allowing children to better recognize speech patterns. Studies show that such interventions have positive effects on reading performance.

Recent advances in neuroimaging techniques such as Magnetoencephalography (MEG) and Magnetic Resonance Imaging (MRI) have revealed structural and functional abnormalities in the auditory cortex of children with ID and SLD. These findings suggest that biomarkers that can objectively identify auditory processing deficits can be identified, thereby increasing the sensitivity of the diagnostic process.

Technological innovations such as digital therapy programs, virtual reality applications and neurofeedback methods are increasingly being explored to enhance auditory perception in children with processing difficulties. Aligning educational policies with these scientific advances may improve the academic achievement of children with SLD by enabling early diagnosis and individualized interventions.

In conclusion, auditory processing deficits significantly affect learning and language development. However, with appropriate interventions, environmental arrangements and individualized education plans, children can maximize

their academic potential. Ongoing research on the development of evidence-based educational and therapeutic approaches to effectively address auditory processing difficulties is of great importance.

Keywords: Auditory Processing Disorder, Intervention strategies, Specific Learning Disabilities

AuthorToEditor: 1) Bishop, D. V. M., & Snowling, M. J. (2004). Developmental dyslexia and specific language impairment: Same or different? Psychological Bulletin, 130(6), 858-886. https://doi.org/10.1037/0033-2909.130.6.858 2)Goswami, U. (2011). A temporal sampling framework for developmental dyslexia. Trends in Cognitive Sciences, 15(1), 3-10. https://doi.org/10.1016/j.tics.2010.10.001 3)Habib, M. (2000). The neurological basis of developmental dyslexia: An overview and working hypothesis. Brain, 123(12), 2373-2399. https://doi.org/10.1093/brain/123.12.2373 4)Snowling, M. J. (2013). Early identification and interventions for dyslexia: A contemporary view. Journal of Research in Special Educational Needs, 13(1), 7-14. https://doi.org/10.1111/j.1471-3802.2012.01262.x 5)Mayo Clinic. (2024). Auditory Processing Disorder: Symptoms, diagnosis, and treatment. Retrieved from https://www.mayoclinic.org

[Abstract:0476]

Extra Pyramidal Symptoms Due to Antipsychotics Used in Children and Adolescents. From Diagnosis to Treatment

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INTRODUCTION: Extrapyramidal symptoms (EPS) are drug-induced movement disorders that commonly result from antipsychotic medications (especially those that block dopamine D_2 receptors). They were first noted in the 1950s with chlorpromazine, which produced Parkinson‘s disease-like side effects. Antipsychotic medications, particularly first-generation antipsychotics (FGAs), disrupt the normal balance between dopamine and acetylcholine, leading to various motor side effects.(1) EPS includes acute and chronic movement disorders such as acute dystonia, akathisia, drug-induced parkinsonism, and tardive dyskinesia. Understanding the prevalence, risk factors, and treatment options for EPS is crucial in managing patients receiving antipsychotic medications (1-2)

Pathophysiology and Types of EPS

EPS occurs due to excessive dopamine blockade, particularly when receptor occupancy exceeds 75-80% (1). The main types of EPS include:

Acute Dystonia: Sudden muscle contractions leading to abnormal postures, commonly occurring within 48 hours of antipsychotic use (3).

Akathisia: A strong feeling of restlessness that develops within days to weeks of treatment. It affects 15-35% of patients.

Drug-Induced Parkinsonism: Symptoms mimic Parkinson‘s disease and typically appear within weeks. Prevalence is 15-40% in patients taking high-potency first-generation antipsychotics (FGAs)

Tardive Dyskinesia (TD): A chronic, often irreversible movement disorder, affecting 20-30% of long-term FGA users. Risk is lower with second-generation antipsychotics (SGAs) (2).

Risk Factors

Key factors increasing EPS risk include:

Type of Antipsychotic: FGAs, especially high-potency agents like haloperidol, have the highest risk, whereas SGAs like clozapine have a lower risk (2). Dosage and Duration: Higher doses and long-term use increase EPS likelihood. Patient Demographics: Young males are more prone to dystonia, while elderly females have a higher risk of TD (3).

Co-administration of Dopamine-Blocking Medications: Drugs like metoclopramide may exacerbate EPS. Treatment and Management EPS management includes dose adjustments, switching to lower-risk antipsychotics, and adjunct therapies:

Acute Dystonia: Treated with benztropine (1-2 mg IM/IV) or diphenhydramine (25-50 mg IM/IV) (3)

Akathisia: Managed with beta-blockers (propranolol, 30-80 mg/day) and benzodiazepines Parkinsonism: Anticholinergics like benztropine or trihexyphenidyl, or amantadine may help Tardive Dyskinesia: VMAT2 inhibitors (valbenazine, deutetrabenazine) are first-line treatments Clinical Guidelines and Recommendations APA (2020) guidelines recommend routine EPS screening and dose adjustments. NICE (2014) guidelines emphasize individualized treatment plans and regular monitoring.

CONCLUSION: EPS remains a major concern in antipsychotic therapy, particularly with FGAs. Although SGAs have reduced EPS risk, certain drugs like risperidone still pose concerns at higher doses. (2) Early recognition and intervention, including VMAT2 inhibitors for TD and beta-blockers for akathisia, can improve patient outcomes (1) Regular monitoring is essential to minimize long-term complications and ensure adherence to treatment.

Keywords: Extrapyramidal symptoms, antipsychotic medications, dopamine blockade, tardive dyskinesia, akathisia, drug-induced parkinsonism

AuthorToEditor: References 1) Siafis, S., et al. (2023). Antipsychotic Dose, Dopamine D_2 Receptor Occupancy, and Extrapyramidal Side Effects: A Dose–Response Meta-Analysis. Molecular Psychiatry. 2) Carbon, M., et al. (2017). Tardive Dyskinesia Prevalence in the Period of Second-Generation Antipsychotic Use: A Meta-Analysis. Journal of Clinical Psychiatry. 3) Cornett, E. M., et al. (2017). Medication-Induced Tardive Dyskinesia: A Review and Update. Ochsner Journal.

[Abstract:0479]

Restructuring Individuals and Society in a Digitalized World

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In today's world, particularly for those born into the digital era—the so-called "digital natives"—the internet and digital technologies seem to have always existed. It is difficult to imagine that a world without these technologies existed merely 20–25 years ago. The rapid advancement of technology and the drive to keep pace with it often create the illusion that digitalization has always been an inevitable part of human history.(1)

The term "digital" comes from French and English, meaning "numerical," and traces back to the Latin digitus (finger), symbolizing counting on fingers. It refers to converting real-world data into numerical values, often with some information loss. After computers were invented, it came to mean representing content as binary code—1s and 0s—known as "bits," the new atoms of the digital world.(1)

The effects of digitalization on human life can be broadly categorized into individual and social dimensions.

At the individual level, digitalization has transformed communication, social interaction, and daily habits:

• Increased virtual communication at the expense of face-to-face interactions.

• Development of close relationships predominantly through social media platforms.

• Reduced physical activity and increased sedentary lifestyles.

• Digital addiction affecting daily life routines and academic performance.

• Changes in body image perception and decreased self-esteem.

• Shifts in perceptions of sexuality and romantic relationships.

• Greater autonomy among children, adolescents, and young adults due to reduced parental control.

• Transformation in identity development, with digital platforms shaping self-perception and identity construction.(2)

On a broader social scale, digitalization has led to significant changes in production, labor, privacy, and governance:

• The rise of automation systems and smart production has reduced the need for human labor.

• Certain professions face extinction, while new fields and occupations emerge, such as data analysis and cybersecurity.

• Digital footprints left online are used for marketing and behavioral analysis, blurring privacy boundaries.

• The constant need to stay connected and visible at work and in social life due to digital communication tools.

• Digitalization of education through smart boards and remote learning has made education independent of time and place.

• Cybercrimes and data breaches have increased, highlighting the need for enhanced cybersecurity measures.

• Political movements and protests are increasingly organized through social media, influencing global politics.

• Transformation of state systems and communication through e-government and e-document systems.

• Rise of cryptocurrencies and digital assets, altering financial markets and introducing new forms of economic exchange.(3)

This new digital reality offers increased freedoms but also introduces challenges such as identity confusion, privacy concerns, security risks, digital addiction, and social isolation. In a world where virtual and real-life interactions are

increasingly intertwined, the development of a healthy identity requires a conscious and balanced use of technology. Encouraging individuals to engage with digital platforms responsibly and critically will be key to fostering positive identity formation and maintaining social cohesion in the digital era.

Keywords: Computer Security, Internet, Psychological Identity, Social Media, Social Networking, Technology

AuthorToEditor: 1. Özbaş Anbarlı Z. Dijitalin Kısa Tarihi. 2022. p. 1. 2. Coyne SM, Padilla-Walker LM, Howard E. Emerging in a Digital World: A Decade Review of Media Use, Effects, and Gratifications in Emerging Adulthood. Emerging Adulthood. 2013; 1(2): 125-37. 3. Şahin İM, Mermutlu MB. Dijitalleşme ve Topluma Etkisi. SSD Journal. 2022; 7(32): 123-31.

[Abstract:0481]

The Journey of Sound: Auditory Processing Mechanisms in Brain Function

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Auditory processing (AP) mechanisms involve complex processes related to how the human brain perceives and processes sounds. These processes start with the outer ear capturing sound waves, which then vibrate the eardrum. These vibrations are transformed into electrical signals in the cochlea of the inner ear. These electrical signals reach the brain, are processed via the auditory nerve pathway, and undergo detailed analysis in the auditory cortex. The auditory cortex categorizes and interprets sounds, utilizing past experiences.

When combined with other sensory data, auditory information is evaluated in a broader context. This process helps us understand how sounds are used in social communication. AP also includes spatial processing abilities, such as determining the direction and distance of a sound, which enhances the ability to distinguish and focus on sounds, especially in noisy environments or when multiple sound sources are present.

The perception of sounds continuously interacts with other cognitive functions in the brain. Auditory attention facilitates focusing on a specific sound source, altering how sounds are represented in the brain. For example, we can immediately notice our name being called in a crowded place because our attention system prioritizes this sound. Auditory memory is linked with short-term and long-term memory; the brain retains sounds momentarily in echoic memory, enabling us to process rapidly flowing information like speech. The hippocampus plays a significant role in long-term memory, effectively storing auditory experiences. In decision-making processes, the brain actively uses auditory information to make decisions about sounds. The auditory cortex generates signals that can influence sound decisions, and this process is integrated between auditory perception and cognitive evaluation, showing how the brain not only processes but also makes sound decisions.

Current neuroscientific research deepens our understanding of AP, leading to innovations in hearing technologies. Studies on the interactions between the auditory cortex and subcortical brain structures show that subcortical structures can undertake more complex functions in the auditory perception process. Technological innovations include Brain-Computer Interfaces and Smart Hearing Devices, which analyze auditory attention to determine the speaker a user focuses on and adjust the sound settings accordingly. Advanced imaging and modeling techniques are also used to understand how sounds are processed in the auditory cortex. Research on brain plasticity in hearing loss and advanced methods like optogenetics are enabling more normal development of the auditory cortex and developing new treatments.

In conclusion, AP mechanisms involve more than simple sensory transmission; they include interactions across multiple levels and regions of the brain. Auditory perception, attention, and memory work integratively to create meaningful sensations in complex acoustic environments. Ongoing neuroscientific research continues to enhance our understanding of the hearing system. Brain-computer interfaces, AI-supported analyses, and advanced neurotechnological implants offer significant scientific and clinical developments in the AP field. Ultimately, understanding the brain's AP mechanisms is crucial for grasping how the sense of hearing works and advancing in the fields of language development, communication, education, and neurotechnology.

Keywords: Auditory Processing, Auditory Perception, Neuroscientific Research, Hearing Technologies

[Abstract:0482]

Neurocognitive Functions in OCD

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Obsessive-Compulsive Disorder (OCD) is a disorder characterized by the presence of obsessions and/or compulsions, typically chronic in nature but also capable of occurring with acute exacerbations, severely impairing the functionality of affected individuals. The prevalence of OCD in children and adolescents is estimated to range between 0.25% and 4%.

Due to the involvement of the prefrontal-striatal circuit in the neurobiological origins of OCD, it is expected that individuals with this disorder would exhibit functional impairments related to memory, attention, and verbal fluency. Research supports the presence of disturbances in various neurocognitive domains, aligning with the observed fronto-striatal circuit dysfunction in the etiology of OCD. Neurocognitive evaluations of individuals diagnosed with OCD have shown impairments in areas such as processing speed, executive functions, sustained attention, and non-verbal memory. Meta-analysis studies have identified significant impairments in visual memory tests among individuals with OCD, with mild to moderate impairments in executive functions, verbal fluency, and verbal memory.

In children and adolescents diagnosed with OCD, recognizing this disorder is of great importance due to the brain's neuroplasticity during the developmental process. Early diagnosis and treatment contribute to preserving cognitive functions and supporting the individuals' healthy developmental trajectory.

Keywords: OCD, neurocognition, children, adolescents

AuthorToEditor: Obsessive-Compulsive Disorder (OCD) is a disorder characterized by the presence of obsessions and/or compulsions, typically chronic in nature but also capable of occurring with acute exacerbations, severely impairing the functionality of affected individuals (1). The prevalence of OCD in children and adolescents is estimated to range between 0.25% and 4% (2). Due to the involvement of the prefrontal-striatal circuit in the neurobiological origins of OCD, it is expected that individuals with this disorder would exhibit functional impairments related to memory, attention, and verbal fluency (3). Research supports the presence of disturbances in various neurocognitive domains, aligning with the observed fronto-striatal circuit dysfunction in the etiology of OCD (4). Neurocognitive evaluations of individuals diagnosed with OCD have shown impairments in areas such as processing speed, executive functions, sustained attention, and non-verbal memory (5). Meta-analysis studies have identified significant impairments in visual memory tests among individuals with OCD, with mild to moderate impairments in executive functions, verbal fluency, and verbal memory (6). In children and adolescents diagnosed with OCD, recognizing this disorder is of great importance due to the brain's neuroplasticity during the developmental process. Early diagnosis and treatment contribute to preserving cognitive functions and supporting the individuals' healthy developmental trajectory. 1. Zayman EP. DSM-5‘te obsesif kompulsif bozukluk. Cukurova Medical Journal. 2016 Jun 30;41(2):360. 2. Krebs G, Heyman I. Obsessive-compulsive disorder in children and adolescents. Arch Dis Child. 2015 May;100(5):495–9. 3. Chudasama Y, Robbins TW. Functions of frontostriatal systems in cognition: comparative neuropsychopharmacological studies in rats, monkeys and humans. Biol Psychol. 2006 Jul;73(1):19–38. 4. Kashyap H, Kumar JK, Kandavel T, Reddy YCJ. Neuropsychological functioning in obsessive-compulsive disorder: are executive functions the key deficit? Compr Psychiatry. 2013 Jul;54(5):533–40. 5. Olley A, Malhi G, Sachdev P. Memory and executive functioning in obsessive–compulsive disorder: A selective review. J Affect Disord. 2007 Dec;104(1–3):15–23. 6. Shin NY, Lee TY, Kim E, Kwon JS. Cognitive functioning in obsessive-compulsive disorder: a meta-analysis. Psychol Med. 2014 Apr;44(6):1121–30.

[Abstract:0483]

Historical Background and Clinical Features of Complex PTSD

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The idea that traumatic events could lead to problems beyond physical harm began to emerge following the Franco-Prussian War in 1870. After World War I and World War II, various terms were proposed to describe the psychological effects of trauma. While the psychological impact of trauma on individuals was implicitly acknowledged during this period, attention was not directed toward the traumatic life events themselves. Trauma was primarily regarded as a triggering factor for disorders rather than a phenomenon in its own right. Although trauma has been addressed in diagnostic classification systems since the DSM-I, the formal inclusion of post-traumatic stress disorder (PTSD) in the DSM-III was based on research conducted with Vietnam War veterans in the 1970s. In the DSM-5, trauma is defined as direct exposure to a distressing event, witnessing distressing events affecting others, learning that a close relative has experienced a distressing event, or repeated and extreme exposure to aversive details of a traumatic incident. With the DSM-5, PTSD was reclassified from the category of anxiety disorders to trauma- and stressor-related disorders. PTSD primarily describes a limited psychopathological response to a singular or specific traumatic event. However, research indicates that the psychopathology and symptoms arising from chronic and repetitive traumatic experiences are significantly more complex. The concept of complex trauma was first introduced by Judith Herman (1992), who described the long-term adverse effects of chronic stress on emotional regulation, self-regulation, self-perception, and interpersonal functioning, defining it as "complex trauma." While complex trauma was not included in the DSM classification system, it was recognized in the ICD-11 under the newly introduced diagnosis of complex post-traumatic stress disorder (CPTSD). CPTSD is proposed to be associated with prolonged, repeated, or multiple forms of traumatic exposure, such as genocidal campaigns, childhood sexual abuse, child soldiering, severe domestic violence, torture, or enslavement. Studies have identified risk factors for CPTSD, including a history of childhood sexual abuse, maladaptive trauma-related cognitions, low stress tolerance, and unemployment. Additionally, CPTSD carries a higher risk than PTSD for comorbid conditions such as depression, anxiety, borderline personality disorder, and suicidality. Overall, CPTSD is considered a more severe and debilitating disorder, with a higher likelihood of developing as a result of prolonged traumatic experiences. As a relatively new diagnosis, increasing awareness of CPTSD is crucial for examining its risk factors, distinguishing it from related disorders, and improving diagnostic and treatment approaches. This presentation will review the historical development and clinical aspects of CPTSD based on current literature.

Keywords: Childhood, chronic, complex trauma

REFERENCES

1- Karatzias T, Hyland P, Bradley A, Cloitre M, Roberts NP, Bisson JI, Shevlin M. Risk factors and comorbidity of ICD-11 PTSD and complex PTSD: Findings from a trauma-exposed population based sample of adults in the United Kingdom. Depress Anxiety. 2019 36(9):887-894

2- Cloitre M, Hyland P, Bisson JI, Brewin CR, Roberts NP, Karatzias T, Shevlin M. ICD-11 Posttraumatic Stress Disorder and Complex Posttraumatic Stress Disorder in the United States: A Population-Based Study. J Trauma Stress. 2019;32(6):833-842.

[Abstract:0485]

Catatonia in Autism Spectrum Disorder

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The neuropsychiatric syndrome known as catatonia is typified by abnormalities in behavior, speech, and movement. Although it has typically been linked to schizophrenia, studies have revealed that it can also happen in other illnesses, such as autism spectrum disorders (ASD). Since several symptoms, including mutism, stereotypical movements, echolalia, and stiffness, overlap, diagnosing catatonia in ASD can be difficult. Since catatonia in ASD frequently occurs later in adolescent or adulthood, a proper diagnosis is essential. Mutism, stereotypical speech, repetitive behaviors, echolalia, posturing, mannerisms, purposeless agitation, and rigidity are examples of catatonic symptoms that are frequently misinterpreted as characteristics of ASD in clinical practice. Given the overlap of symptoms, it is important to distinguish between these two conditions correctly. While not all autistic patients exhibiting these symptoms should be classified as catatonic, any autistic patient exhibiting alterations in their symptomatology should be assessed for catatonia. Similar but slightly distinct symptom profiles, as well as variations in the course and outcome of these illnesses, can be explained by the age at which catatonia and ASDs first appear. In particular, catatonic regression's age of beginning is usually later than that of autistic symptoms. Studies indicate that 6-17% of individuals with ASD develop catatonia. Although various theories have been put out and the similarities between catatonic symptoms and some characteristics of ASDs can help to clarify this matter, the mechanisms behind catatonia remain unexplained to this day. According to some publications, a severe dopamine blockage may cause catatonia. As a result, drugs like dopamine-blocking antipsychotics might exacerbate catatonic symptoms by aggravating dopamine insufficiency, particularly at the D2 receptor. To control dopamine activity, excitatory neurotransmitters like glutamate may be released in response to a decrease in D2 receptor activation. On the other hand, glutamate hyperactivity may damage neurons and result in symptoms that resemble catatonia. Some research has also shown that a change in the regulation of the basal ganglia may be responsible for the etiology of catatonia. This theory suggests that a lack of cerebral gamma-aminobutyric acid (GABA), the primary inhibitor neurotransmitter, may be the source of the motor symptoms associated with catatonia. The therapeutic effects of benzodiazepines and electroconvulsive therapy (ECT), which raise GABA activity, can therefore be explained by this theory. For individuals with ASD, there are two main ways to treat catatonia. The first involves taking high doses of benzodiazepines, such lorazepam. In people with ASD, benzodiazepines might have an odd reaction that makes them agitated and irritable.Electroconvulsive therapy (ECT) is the second-line treatment. There is some debate about the use of ECT in people with neurodevelopmental problems, especially when those individuals are unable to give informed permission. Importantly, both therapy approaches frequently require ongoing maintenance.

Keywords: Catatonia, Autism spectrum disorder, Electroconvulsive therapy

AuthorToEditor: 1- Mazzone L, Postorino V, Valeri G, Vicari S. Catatonia in patients with autism: prevalence and management. CNS Drugs. 2014 Mar;28(3):205-15. doi: 10.1007/s40263-014-0143-9. PMID: 24504828. 2- Thom RP, McDougle CJ. Case Reports: Clozapine for the Treatment of Catatonia in Autism Spectrum Disorder. J Autism Dev Disord. 2022 Jun;52(6):2855-2858. doi: 10.1007/s10803-021-05149-8. Epub 2021 Jul 20. PMID: 34283358. 3-Fink M, Taylor MA, Ghaziuddin N. Catatonia in autistic spectrum disorders: a medical treatment algorithm. Int Rev Neurobiol. 2006;72:233-44. doi: 10.1016/S0074-7742(05)72014-6. PMID: 16697301. 4-Wing L, Shah A. Catatonia in autistic spectrum disorders. Br J Psychiatry. 2000 Apr;176:357-62. doi: 10.1192/bjp.176.4.357. PMID: 10827884.

[Abstract:0487]

Circadian Rhythm and Bipolar Disorders

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Bipolar disorder is a psychiatric condition characterized by mood fluctuations and is closely linked to circadian rhythm disruptions. Circadian rhythms are approximately 24-hour biological cycles that regulate various physiological processes, such as the sleep-wake cycle, hormone secretion, and body temperature. These rhythms are controlled by the suprachiasmatic nucleus (SCN) in the hypothalamus and are influenced by external factors like light. Disruptions in circadian rhythm can contribute to mood disorders and exacerbate bipolar symptoms.

Circadian Disruptions in Bipolar Disorder

Circadian rhythm disturbances are common in bipolar disorder, including irregular sleep-wake cycles, abnormal melatonin secretion, sensitivity in clock genes, and social time cue disruptions. Research suggests that these disturbances may serve as biological markers for the onset and recurrence of mood episodes in bipolar disorder.

Circadian Biomarkers in Bipolar Disorder

•Sleep Disorders: Bipolar patients often experience irregular sleep-wake cycles. Manic episodes are associated with decreased sleep need and increased REM intensity, while depressive episodes often involve early awakening and fragmented sleep. Even during euthymic periods, sleep irregularities can negatively impact the disease course.

•Hormone Secretion: Melatonin secretion peaks earlier and increases in mania, whereas it is delayed and reduced in depressive states. Elevated cortisol and ACTH levels are frequently observed in bipolar disorder.

•Genetic Factors: Several genes related to circadian rhythm (CLOCK, BMAL1, PER, CRY, NPAS2, etc.) have been linked to bipolar disorder. Mutations in the CLOCK gene can increase dopamine levels, contributing to manic-like behavior.

Chronotype and Social Time Cues

Bipolar patients often exhibit an evening chronotype, meaning they are more biologically active at night. Disruptions in sleep timing and irregular social rhythms (e.g., inconsistent work schedules, stressful life events) can trigger mood episodes.

Circadian Rhythm-Based Treatment Approaches

•Pharmacological Treatments: Lithium helps regulate circadian rhythm by inhibiting the GSK-3β enzyme. Melatonin and agomelatine may also aid in stabilizing sleep and mood cycles.

•Light and Dark Therapy: Light therapy can alleviate depressive symptoms, while dark therapy and blue light-blocking glasses may help reduce manic symptoms.

CONCLUSION: The relationship between circadian rhythm and bipolar disorders is an area of growing research. Future studies may enhance circadian-targeted treatment strategies, ultimately improving patients' quality of life.

Keywords: Circadian rhythm, bipolar disorder, melatonin, cortisol, chronotype, genetic factors

[Abstract:0488]

Hearing or Understanding? Auditory Processing Disorder Diagnostic Criteria and Assessment Processes

[1]Sümeyye Sarıbaş Akmehmet, [1]Ümmügülsüm Gündoğdu,[1] Meryem Gençtürk,[1] Çağla Develi Tekbıyık, [1]Atakan Demirbağ

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Auditory Processing Disorder (APD) is a condition in which an individual has difficulty processing auditory information at the central nervous system level, despite having normal hearing thresholds. Individuals with APD often struggle to understand speech in noisy environments, follow fast speech, or comply with complex instructions. The prevalence rate can vary between 2% and 96%, depending on the diagnostic criteria used.

Diagnostic Criteria and Evaluation METHODS: APD has been defined by organizations such as the American Speech-Language-Hearing Association (ASHA), the American Academy of Audiology (AAA), and the British Society of Audiology (BSA). Although APD is now recognized as a true clinical disorder, there is no single universally accepted diagnostic standard.The diagnosis of APD should not be made with a single test but with a battery of multiple tests. The evaluation process begins with pure-tone audiometry, tympanometry, and acoustic reflex measurements to confirm the health of the auditory system. Then, auditory processing tests are administered, including auditory discrimination, temporal processing, dichotic listening, and speech understanding in noise tests. Additionally, an individual's cognitive and language skills should be assessed to determine whether auditory processing difficulties stem from language or attention problems.

Differential Diagnosis of APD and Its Relationship with Other Disorders

Due to its symptoms, APD can be confused with developmental conditions such as Attention Deficit Hyperactivity Disorder (ADHD), specific language disorder, dyslexia, and autism spectrum disorder.

BSA classifies APD into three categories:

1.Developmental APD – Conditions that arise during childhood without any apparent neurological cause.

2.Acquired APD – APD that develops due to stroke, head trauma, or neurological diseases.

3.Secondary APD – APD that accompanies another developmental disorder or hearing loss.

The diagnosis of APD in children can generally be made reliably from the age of 7, considering the maturation process of the central auditory system. The diagnostic process should include a comprehensive evaluation using parental and teacher observations, individual case history, and test batteries.

Challenges and Recommendations in the Diagnosis of APD

One of the biggest challenges in diagnosing APD is the lack of standardization. When different criteria and test batteries are used, the same individual may receive different results at different centers. Additionally, debates continue regarding whether APD is an independent diagnosis separate from language and cognitive disorders.

A multidisciplinary approach should be adopted in the diagnostic process. Audiologists, speech-language pathologists, psychologists, and educators should collaborate to enhance diagnostic accuracy. Even if APD is diagnosed, appropriate education and support strategies should be developed based on the difficulties the individual experiences in daily life.

CONCLUSION: APD is associated with dysfunctions in the central auditory system and is a clinical condition that requires careful differential diagnosis. The diagnostic process should consider audiological tests, auditory processing evaluations, and cognitive/language assessments together. Due to ongoing debates and a lack of standardization, there are differing views on whether APD should be recognized as an independent disorder. However, the most important aspect is to provide appropriate interventions to alleviate the auditory difficulties experienced by individuals.

Keywords: Auditory Processing Disorder, Diagnostic Criteria, Evaluation Methods

AuthorToEditor: American Academy of Audiology (AAA). (2010). Clinical Practice Guidelines: Diagnosis, Treatment and Management of Children and Adults with Central Auditory Processing Disorder. Reston, VA: AAA. American Speech-Language-Hearing Association (ASHA). (2005). (Central) Auditory Processing Disorders [Technical Report]. Available from ASHA Practice Portal. British Society of Audiology (BSA). (2018). Position Statement & Practice Guidance: Auditory Processing Disorder (APD). Chermak, G.D., & Musiek, F.E. (1997). Central auditory processing disorders: New perspectives. Ear and Hearing, 18(6), 342–344. Moore, D.R., Rosen, S., Bamiou, D.E., Campbell, N.G., & Sirimanna, T. (2013). Evolving concepts of developmental auditory processing disorder (APD): A British Society of Audiology APD Special Interest Group ―white paper". International Journal of Audiology, 52(1), 3–13.

[Abstract:0489]

Artificial Intelligence and Ethical Boundaries in Child Psychiatry: Privacy, Security, and Patient Rights

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BACKGROUND: The integration of artificial intelligence (AI) in child and adolescent psychiatry has opened new frontiers in clinical assessment, diagnostic support, and personalized treatment planning. However, as AI systems become more sophisticated, ethical concerns surrounding patient privacy, data security, and children‘s rights demand critical attention.

OBJECTIVE: This presentation aims to explore the ethical boundaries of AI applications in child psychiatry, with a focus on privacy protection, security challenges, and patient rights. We will discuss real-world case scenarios to illustrate the benefits and risks of AI implementation.

Privacy Concerns: AI-driven mental health applications and decision-support tools often require large datasets, including sensitive patient information. While these technologies can enhance diagnostic accuracy, they raise significant concerns about data ownership, consent, and confidentiality. The risk of re-identification in anonymized datasets and unauthorized third-party access further complicates ethical considerations.

Security Risks: AI models, particularly those used in telepsychiatry and automated mental health screening, are vulnerable to cyberattacks and data breaches. The compromise of sensitive psychiatric data can have severe consequences, especially for minors. We will discuss current security measures, including encryption protocols and regulatory frameworks, to mitigate these risks.

Patient Rights and Ethical Dilemmas: Children and adolescents represent a vulnerable patient population with evolving capacities for decision-making. The use of AI in psychiatric evaluations raises questions about informed consent, algorithmic bias, and the extent to which AI-generated recommendations should influence clinical decisions. In this context, we will examine ethical guidelines and legal frameworks governing AI applications in child psychiatry.

Case Scenarios:

1. AI-Based Early Detection System in ADHD – A case illustrating how an AI-powered diagnostic tool improves screening but raises concerns about false positives and data storage ethics.

2. Telepsychiatry and Predictive Analytics in Depression – A scenario where AI predicts suicide risk in a teenager but prompts ethical dilemmas about privacy, parental involvement, and mandatory reporting obligations.

CONCLUSION: While AI has the potential to revolutionize child psychiatry, its implementation must be guided by strict ethical standards. Ensuring robust privacy protections, enhancing cybersecurity, and prioritizing patient rights are essential to maintaining trust in AI-driven mental health care. By establishing clear regulatory frameworks and ethical guidelines, clinicians can harness AI‘s potential while safeguarding the well-being of young patients.

Keywords: Child psychiatry, artificial intelligence, ethics, patient rights

AuthorToEditor: American Psychological Association. (2024, November 21). Artificial intelligence in mental health care. https://www.apa.org/practice/artificial-intelligence-mental-health-care Naik, N., Hameed, B. M. Z., Shetty, D. K., Swain, D., Shah, M., Paul, R., Aggarwal, K., Ibrahim, S., Patil, V., Smriti, K., Shetty, S., Rai, B. P., Chlosta, P., & Somani, B. K. (2022). Legal and ethical consideration in artificial intelligence in healthcare: Who takes responsibility? Frontiers in Surgery, 9. https://doi.org/10.3389/fsurg.2022.862322 Murdoch, B. Privacy and artificial intelligence: challenges for protecting health information in a new era. BMC Med Ethics 22, 122 (2021). https://doi.org/10.1186/s12910-021-00687-3

[Abstract:0492]

Risk Prediction and Early Intervention in Psychiatric Disorders with Artificial Intelligence: Toward Preventive Mental Health

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Psychiatric disorders often develop over time, with subtle early indicators that, if identified, could enable timely intervention and prevent disease progression. The integration of artificial intelligence (AI) into mental health care has opened new avenues for risk prediction and early intervention, shifting the focus toward preventive mental health strategies. AI-driven models, utilizing machine learning and big data analytics, have demonstrated the ability to analyze genetic, neurobiological, behavioral, and environmental factors to assess an individual's risk for developing psychiatric conditions such as depression, anxiety disorders, schizophrenia, and bipolar disorder. In addition to risk assessment, AI-powered tools offer novel approaches for early intervention. Digital phenotyping, wearable technology, and natural language processing (NLP) allow for continuous monitoring of behavioral and physiological markers. AI-driven chatbots, personalized therapy applications, and predictive algorithms contribute to proactive mental health care by detecting warning signs before clinical symptoms fully manifest. These innovations have the potential to bridge the gap between traditional psychiatric care and emerging digital health solutions, ensuring timely and personalized intervention. However, the widespread adoption of AI in psychiatric care raises ethical and practical challenges, including data privacy concerns, algorithmic bias, and the interpretability of AI-generated predictions. Addressing these issues is crucial to integrating AI into routine psychiatric practice in a way that complements human expertise while ensuring patient safety and confidentiality.

Keywords: Artificial Intelligence, Psychiatric Disorders, Risk Prediction, Early Intervention, Preventive Mental Health, Machine Learning

AuthorToEditor: Psychiatric disorders often develop over time, with subtle early indicators that, if identified, could enable timely intervention and prevent disease progression. The integration of artificial intelligence (AI) into mental health care has opened new avenues for risk prediction and early intervention, shifting the focus toward preventive mental health strategies. AI-driven models, utilizing machine learning and big data analytics, have demonstrated the ability to analyze genetic, neurobiological, behavioral, and environmental factors to assess an individual's risk for developing psychiatric conditions such as depression, anxiety disorders, schizophrenia, and bipolar disorder. In addition to risk assessment, AI-powered tools offer novel approaches for early intervention. Digital phenotyping, wearable technology, and natural language processing (NLP) allow for continuous monitoring of behavioral and physiological markers. AI-driven chatbots, personalized therapy applications, and predictive algorithms contribute to proactive mental health care by detecting warning signs before clinical symptoms fully manifest. These innovations have the potential to bridge the gap between traditional psychiatric care and emerging digital health solutions, ensuring timely and personalized intervention. However, the widespread adoption of AI in psychiatric care raises ethical and practical challenges, including data privacy concerns, algorithmic bias, and the interpretability of AI-generated predictions. Addressing these issues is crucial to integrating AI into routine psychiatric practice in a way that complements human expertise while ensuring patient safety and confidentiality.
1. Zhou S, Zhao J and Zhang L (2022) Application of Artificial Intelligence on Psychological Interventions and Diagnosis: An Overview. Front. Psychiatry 13:811665. doi: 10.3389/fpsyt.2022.811665

[Abstract:0493]

Artificial Intelligence in Child Psychiatry: Diagnosis, Treatment, and Clinical Decision Support Systems

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The integration of computational approaches into child psychiatry is transforming the field by improving diagnostic accuracy, optimizing treatment strategies, and enhancing clinical decision-making. Statistical modeling techniques and large-scale data analysis facilitate the early identification of neurodevelopmental and psychiatric disorders such as autism spectrum disorder (ASD), attention-deficit/hyperactivity disorder (ADHD), anxiety disorders, and depression. The analysis of multimodal data, including neuroimaging, behavioral assessments, genetic markers, and digital phenotyping, refines diagnostic precision and helps identify risk factors at an early stage.

In treatment, technology-supported interventions are becoming increasingly common. Digital cognitive-behavioral therapy applications, mobile health solutions, and wearable technologies provide personalized support for children and adolescents with psychiatric conditions. These tools enable continuous symptom monitoring, behavioral tracking, and real-time feedback, improving patient engagement and treatment adherence. Predictive models based on data analysis contribute to the development of personalized therapy plans, making medication management and psychotherapeutic approaches more effective.

Clinical decision support systems assist child psychiatrists in synthesizing large-scale patient data, predicting treatment responses, and conducting risk assessments more effectively. These systems, integrated with electronic health records, guide clinicians in selecting appropriate interventions while reducing diagnostic errors and improving patient outcomes.

Despite these advancements, the widespread use of computational tools in child psychiatry presents ethical and practical challenges. Data privacy, biases in predictive models, and the interpretability of statistical assessments must be carefully considered to ensure the responsible application of these technologies in mental health care. Addressing these challenges is essential to integrating computational solutions into clinical practice in a way that upholds the highest standards of patient safety and ethical responsibility.

Keywords: Machine Learning in Psychiatry, Artificial Intelligence, Decision Support, Child Psychiatry, Digital Phenotyping

AuthorToEditor: The integration of computational approaches into child psychiatry is transforming the field by improving diagnostic accuracy, optimizing treatment strategies, and enhancing clinical decision-making. Statistical modeling techniques and large-scale data analysis facilitate the early identification of neurodevelopmental and psychiatric disorders such as autism spectrum disorder (ASD), attention-deficit/hyperactivity disorder (ADHD), anxiety disorders, and depression. The analysis of multimodal data, including neuroimaging, behavioral assessments, genetic markers, and digital phenotyping, refines diagnostic precision and helps identify risk factors at an early stage. In treatment, technology-supported interventions are becoming increasingly common. Digital cognitive-behavioral therapy applications, mobile health solutions, and wearable technologies provide personalized support for children and adolescents with psychiatric conditions. These tools enable continuous symptom monitoring, behavioral tracking, and real-time feedback, improving patient engagement and treatment adherence. Predictive models based on data analysis contribute to the development of personalized therapy plans, making medication management and psychotherapeutic approaches more effective. Clinical decision support systems assist child psychiatrists in synthesizing large-scale patient data, predicting treatment responses, and conducting risk assessments more effectively. These systems, integrated with electronic health records, guide clinicians in selecting

appropriate interventions while reducing diagnostic errors and improving patient outcomes. Despite these advancements, the widespread use of computational tools in child psychiatry presents ethical and practical challenges. Data privacy, biases in predictive models, and the interpretability of statistical assessments must be carefully considered to ensure the responsible application of these technologies in mental health care. Addressing these challenges is essential to integrating computational solutions into clinical practice in a way that upholds the highest standards of patient safety and ethical responsibility. 1. Jin KW, Li Q, Xie Y, Xiao G. Artificial intelligence in mental healthcare: an overview and future perspectives. Br J Radiol. 2023 Oct;96(1150):20230213. doi: 10.1259/bjr.20230213. Epub 2023 Sep 12. PMID: 37698582; PMCID: PMC10546438.

[Abstract:0494]

Digital Psychiatric Biomarkers: The Future Tools For Diagnosis and Treatment

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Recent advancements in digital health technologies have revolutionized the identification and application of psychiatric biomarkers. Digital psychiatric biomarkers, derived from wearable devices, mobile applications, and neuroimaging tools, offer objective, real-time data to enhance the diagnosis, monitoring, and treatment of mental health disorders. Unlike traditional symptom-based assessments, these biomarkers provide continuous, quantifiable insights into an individual's mental state, thus facilitating precision psychiatry.

One of the key developments in this field is the use of mobile applications and passive data collection to track behavioral and physiological indicators of mental health conditions. Studies have demonstrated that smartphone-derived biomarkers, such as speech patterns, typing speed, and geolocation data, can predict psychiatric symptoms and disease progression with high accuracy (Smith et al., 2022). These applications integrate artificial intelligence (AI) algorithms to analyze vast amounts of personal data, identifying subtle changes indicative of mental health deterioration.

Another major advancement is the alignment of digital biomarkers with standardized psychiatric diagnostic frameworks, such as the National Institute of Mental Health‘s Research Domain Criteria (RDoC) (Johnson et al., 2024).By integrating digital biomarkers into research paradigms, clinicians and researchers can develop more objective, data-driven diagnostic models, reducing reliance on subjective clinical assessments.

In the treatment domain, digital biomarkers play a crucial role in monitoring treatment response and optimizing personalized interventions. Wearable devices, including smartwatches and EEG-based headsets, track physiological metrics such as heart rate variability and sleep patterns, which are critical indicators of psychiatric conditions like depression and anxiety (Anderson et al., 2023).The continuous monitoring of these biomarkers allows clinicians to tailor interventions based on real-time feedback, enhancing the efficacy of psychopharmacological and psychotherapeutic treatments.

Furthermore, machine learning and neuroimaging-based digital biomarkers are driving innovations in precision psychiatry (Williams et al., 2022).Functional MRI (fMRI) and EEG-derived resting-state connectivity markers provide valuable insights into the neural correlates of psychiatric disorders, facilitating individualized treatment strategies. Studies have demonstrated the potential of neurofeedback techniques, where patients learn to modulate their brain activity using real-time fMRI feedback, thereby improving outcomes in conditions such as depression and anxiety (Brown et al., 2017).

Despite their promising potential, digital psychiatric biomarkers face several challenges, including data privacy concerns, standardization issues, and ethical considerations. The continuous collection of personal health data raises concerns regarding security, while the lack of universal validation protocols limits their widespread clinical adoption. Addressing these challenges through regulatory frameworks and interdisciplinary collaboration is essential for integrating digital biomarkers into routine psychiatric practice.

In conclusion, digital psychiatric biomarkers represent a transformative advancement in mental health care, offering real-time, personalized diagnostic and therapeutic tools. As research continues to evolve, the integration of AI, wearable technology, and neuroimaging will further refine these biomarkers, paving the way for precision psychiatry and improved patient outcomes. By overcoming current challenges, digital biomarkers will redefine the landscape of psychiatric diagnosis and treatment, enabling more effective and individualized mental health care strategies.

Keywords: Digital, psychiatric biomarkers, future tools

[Abstract:0496]

Auditory Processing Disorder: Therapy and Intervention Approaches

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Auditory training is one of the most common treatment approaches for APD(Auditory processing disorder), involving auditory training exercises to train the individual's brain to better process sounds. Auditory training can be done in one-on-one sessions, usually with an audiologist or speech-language pathologist, or through computer-based programs. The goal of this approach is to take advantage of the brain's plasticity to auditory stimuli, resulting in a lasting improvement in auditory processing over time. The various auditory therapy modalities target different subcomponents of APD, and although each has a different mode of delivery, the overall goal is to retrain the auditory system.

Cognitive-behavioral therapy (CBT) may be used specifically to address secondary emotional or behavioral problems caused by APD. For example, children with IBD may experience feelings of failure in the classroom and develop self-esteem problems because they have difficulty hearing. CBT does not directly improve hearing skills, but provides indirect support by improving the psychological impact of APD on the individual.Cognitive-behavioral and education-based interventions aim for a holistic recovery by enabling the individual with APD to acquire strategies to cope with auditory difficulties and to support their academic skills.

Technological solutions help individuals with APD to communicate better, especially in noisy environments, and increase their access to auditory information. The most common technological interventions include FM (Frequency Modulation) systems and other auditory assistive devices. Other technological interventions include computer or tablet-based specialized educational software. These programs are designed to be implemented in the home environment and include gamified auditory tasks. FM systems and similar assistive listening devices in particular have the most scientifically proven effectiveness.

APD in children Since children are in a period of high developmental plasticity of the brain, they should benefit from IC therapies as early as possible. The goal in children is to support academic and social development by closing the gap in auditory skills

It is emphasized that therapies for children with APD should be multidisciplinary (audiologist, SLP, psychologist, educator collaboration) and tailored to the specific needs of the child. For example, for some children, the priority may be speech discrimination in noise, while for others, strengthening language knowledge may be the priority; in this case, the focus of therapy is determined according to the specific deficits diagnosed in the child.

In adults, the therapeutic approach has a slightly different focus compared to children. Compensatory strategies are of primary importance for adults. They are taught methods such as effective listening techniques (e.g. taking notes of important information) In order for students with auditory processing disorders to be successful in education, the teaching environment and methods may need to be adapted to their needs.

There is no single —miracle" cure for auditory processing disorder; rather, successful remediation often requires a multidimensional and individualized intervention plan. When auditory training, cognitive-behavioral approaches, technological devices and educational environment adjustments are used in a complementary manner, significant improvements in communication skills and quality of life can be achieved in individuals with APD.

Keywords: Auditory Processing Disorder, Intervention Approaches, Therapy

AuthorToEditor: American Speech-Language-Hearing Association (ASHA). (2005). (Central) auditory processing disorders. Retrieved from https://www.asha.org Bellis, T. J. (2003). Assessment and management of central auditory processing disorders in the educational setting: From science to practice (2nd ed.). Delmar Learning. Mayo Clinic. (2024). Auditory Processing Disorder: Symptoms, diagnosis, and treatment. Retrieved from https://www.mayoclinic.org

[Abstract:0497]

Sleep and Immune System

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Sleep is a physiological process that accounts for approximately one-third of human life. Although its mechanisms are not yet fully understood, sleep is known to interact closely with the immune system. The regulation of the immune system during sleep is influenced by psychoneuroimmunological mechanisms. Sleep is directly related to the hypothalamic-pituitary-adrenal axis and the sympathetic nervous system. The innate and adaptive immune systems are sequentially regulated during sleep.

During sleep, cortisol, adrenaline, and noradrenaline levels decrease, while growth hormone, prolactin, and melatonin levels increase. In cases of chronic sleep disturbances, hyperactivity of the hypothalamic-pituitary-adrenal axis and the sympathetic nervous system leads to increased cortisol secretion, which suppresses antiviral and pro-inflammatory immune responses. The sympathetic nervous system plays a regulatory role between antiviral and pro-inflammatory immune responses. Stimulation of adrenergic receptors increases norepinephrine levels in peripheral tissues, primary and secondary lymphoid organs, and the vascular system. This leads to the suppression of antiviral gene transcription while increasing the transcription of pro-inflammatory cytokines such as IL-1B, TNF, and IL-6.

Some changes in the immune system during sleep are regulated by circadian rhythms, while others are directly influenced by sleep itself. The distribution of adaptive immune cells follows a circadian rhythm; the highest levels occur at sleep onset and gradually decrease until morning. This rhythm aligns with cortisol secretion. During sleep, IL-2 and interferon-gamma production by T cells increases, along with an elevation in dendritic cell precursors, IL-12, and monocytes. IL-12 is a key cytokine for the Th1-type adaptive immune response. Sleep, particularly the first half of the night dominated by slow-wave sleep, enhances adaptive immunity, whereas different mechanisms become prominent in the later stages dominated by REM sleep.

The innate immune system is also regulated during sleep. The number and activity of natural killer cells, crucial for innate immunity, increase throughout the night. NK cells are at their lowest levels in the first half of the night and peak in the morning. However, in individuals with sleep disturbances, this physiological increase is significantly diminished.

In chronic insomnia, levels of IL-6, CRP and TNF-alpha increase, which may explain the sleep-related issues observed in conditions such as diabetes mellitus and hypertension. Sleep restriction or deprivation induces various changes in the immune system. Hypnotic drugs, in addition to their effects on sleep, may influence inflammatory pathways and cytokine levels.

Sleep deprivation reduces CD3+, CD4+, and CD8+ T cell counts, impairing cellular immunity and immune memory formation. As a result, individuals with sleep deprivation may be at a higher risk of developing autoimmune diseases. Sleep fragmentation leads to the accumulation of reactive oxygen species in metabolism, increasing oxidative stress. Oxidative stress and antigen exposure contribute to autoantibody formation.

In conclusion, sleep plays a critical role in maintaining an optimal immune system. Slow-wave sleep regulates interactions between antigen-presenting cells and T cells, supporting immune memory formation. Sleep deprivation, on the other hand, negatively impacts the immune system and may predispose individuals to autoimmune diseases and other chronic conditions (1–3).

Keywords: Cytokines, Inflammation, Immune, Neuroimmunology, Sleep

AuthorToEditor: 1. Irwin MR. Sleep and inflammation: partners in sickness and in health. Vol. 19, Nature Reviews Immunology. Nature Publishing Group; 2019. p. 702–15. 2. Besedovsky L, Lange T, Born J. Sleep and immune function. Vol. 463, Pflugers Archiv European Journal of Physiology. 2012. p. 121–37. 3. Besedovsky L, Lange T, Haack M. The Sleep-Immune Crosstalk in Health and Disease. Physiol Rev. 2019; 99: 1325–80.

[Abstract:0498]

Auditory Perception Difficulties in Individuals with ADHD

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Attention Deficit Hyperactivity Disorder (ADHD) is a common neurodevelopmental disorder characterized by symptoms of inattention, hyperactivity, and impulsivity. ADHD can affect not only attention and executive functions but also sensory information processing. Individuals with ADHD exhibit significant difficulties in tasks that require auditory attention. Specifically, a decline in performance is observed in tasks that involve distinguishing simultaneous or rapidly successive auditory stimuli and isolating a target sound from others.

Another indicator of auditory attention issues in individuals with ADHD is an increased attentional response to unexpected sounds and a tendency to struggle with sustaining attention. It has been shown that children and adolescents with ADHD need a higher signal-to-noise ratio than usual to accurately perceive speech, especially in environments where multiple people are speaking in the background. Additionally, individuals with ADHD are reported to expend more cognitive resources when listening in noisy environments, which slows their perceptual speed and reduces their comprehension accuracy.

Significant difficulties are also observed in auditory memory and auditory working memory in individuals with ADHD. This, on one hand, forms the neurocognitive basis of ADHD symptoms, while on the other hand, it limits the ability to temporarily hold auditory information in daily life.

Auditory Processing Disorder (APD) refers to specific difficulties in perceiving and interpreting sounds at the auditory pathway and brain levels. Individuals with APD have normal hearing thresholds on hearing tests but show weaknesses in understanding speech in noisy environments, following verbal instructions, determining the direction of sounds, and similar tasks. Although ADHD and APD present similar patterns, they are based on different neurological mechanisms. In ADHD, the primary issue is attention control and executive function deficits, whereas in APD, the problem lies in the brain's ability to properly process auditory information. Therefore, APD is diagnosed and evaluated by an audiologist, while ADHD is diagnosed through clinical evaluation by a psychiatrist.

The auditory perception difficulties observed in individuals with ADHD are influenced by both neurobiological and cognitive differences. From a neurobiological perspective, it has been shown that individuals with ADHD may have reduced gray matter volume in the Heschl's gyrus, known as the primary auditory cortex. These structural/functional differences are thought to reduce the speed and efficiency with which individuals with ADHD process auditory stimuli. Neurochemically, neurotransmitters such as dopamine and norepinephrine regulate attention and inhibition processes in the prefrontal cortex and associated networks, while also influencing the filtering of sensory inputs and the proper encoding of stimuli.

The management of auditory perception difficulties in individuals with ADHD involves both medical treatments and educational/behavioral strategies. Stimulants can improve attention and working memory performance in individuals with ADHD and may also enhance auditory processing skills. Educational and environmental adjustments help individuals with ADHD cope with auditory perception problems. Speech and language therapy can be particularly beneficial for individuals with significant auditory processing issues. Supportive technologies can also play an important role in educational settings. Finally, psychosocial support and education are also crucial.

Keywords: Attention Deficit Hyperactivity Disorder (ADHD), Auditory Processing Disorder (APD), Neurobiology, Neurochemical

[Abstract:0500]

Will I Never Get Off, Doctor? Antidepressant Withdrawal Syndromes?

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Antidepressant withdrawal symptoms gained recognition in the late 1990s, but pharmaceutical industry influence led to a decline in research and awareness. While mainstream psychiatry minimized withdrawal risks, patient-led initiatives documented withdrawal experiences, highlighting the lack of medical guidance. Systematic reviews later confirmed that withdrawal symptoms occur with all SSRIs and SNRIs, but paroxetine and venlafaxine had the highest prevalence. These symptoms included flu-like discomfort, dizziness, anxiety, panic attacks, mood swings, cognitive impairment, and sensory disturbances. Contrary to common belief, gradual tapering did not always prevent withdrawal, and some patients developed persistent post-withdrawal syndromes (PPWS), lasting months or even years.

PPWS is characterized by symptoms that extend beyond six weeks after discontinuation. Cosci and Chouinard (1,2) identified four distinct clinical patterns: new withdrawal symptoms, rebound symptoms, persistent post-withdrawal syndromes, and relapse. Unlike relapse, PPWS can involve the emergence of entirely new psychiatric conditions, such as anxiety disorders or mood instability, that were absent before treatment. Research suggests that withdrawal is often misdiagnosed as relapse leading physicians to reinstate antidepressants. The term "discontinuation syndrome" has been criticized for downplaying the severity of withdrawal; instead, it should be referred to as "withdrawal syndrome", acknowledging its impact.

The oppositional model of tolerance explains why long-term antidepressant use increases vulnerability to withdrawal and relapse. Over time, the brain adapts by developing counter-regulatory mechanisms that oppose the drug‘s effects. When medication is stopped, these changes persist, leading to protracted withdrawal symptoms, paradoxical reactions, and treatment resistance upon re-exposure. This model suggests that prolonged antidepressant use may increase the chronicity of mood disorders and create iatrogenic comorbidities.

Studies challenge the assumption that long-term antidepressant use prevents relapse. A five-year study found that patients treated with antidepressants for over a year had a 23% higher relapse risk than those who discontinued earlier (3). This raises concerns that many relapses may actually be withdrawal-related rather than a true return of depression. Despite this, withdrawal syndromes remain underdiagnosed and mismanaged, leaving many patients to seek support through online communities rather than medical professionals.

The lack of awareness and research on withdrawal syndromes has led to overprescription and prolonged antidepressant use. Physicians are often guided by pharmaceutical-driven protocols that overestimate benefits and underestimate risks. This has resulted in a silent public health crisis, where many individuals find themselves dependent on medication without proper guidance on safe discontinuation. As a result, psychiatry must acknowledge withdrawal syndromes as a serious medical issue, develop better tapering protocols, and ensure that patients are fully informed before initiating antidepressant treatment. Without these changes, long-term antidepressant use may continue to increase dependency rather than promote true recovery.

Keywords: Antidepressants, persistent postwithdrawal syndrome, rebound symptoms, withdrawal symptoms

AuthorToEditor: References 1. Chouinard G, Chouinard VA: New classification of selective serotonin reuptake inhibitor withdrawal. Psychother Psychosom 2015; 84:63–71. 2. Cosci F, Chouinard G: Acute and persistent withdrawal syndromes following discontinuation of psychotropic medications. Psychother Psychosom 2020; 89:283–306. 3. Gardarsdottir H, van Geffen EC, Stolker JJ, Egberts TC, Heerdink ER: Does the length of the first antidepressant treatment episode influence risk and time to a second episode? J Clin Psychopharmacol 2009; 29:69–72.

[Abstract:0502]

Working with Autism Spectrum Disorder and PEERS-YA Program from the Perspective of a Young Psychiatrist

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Autism Spectrum Disorder (ASD) is a neurodevelopmental condition that affects individuals' ability to engage in social communication and interaction. During young adulthood, individuals with ASD encounter significant difficulties in achieving academic and professional goals, developing independent living skills and maintaining social relationships. These challenges often stem from difficulties in understanding social cues, initiating and sustaining conversations and forming meaningful connections with peers. Addressing these issues requires structured interventions that provide individuals with the necessary skills to navigate social interactions more effectively.

PEERS-YA (Program for the Education and Enrichment of Relational Skills - Young Adults) is an evidence-based social skills training program specifically designed for high-functioning autistic individuals. This program focuses on key social interaction areas, including making friends, initiating and maintaining conversations, understanding verbal and non-verbal social cues and navigating social conflicts. One of the distinguishing aspects of PEERS-YA program is that it includes training for young adults‘ social coaches, often parents or caregivers, who support them throughout the intervention process. By incorporating social coaches, the program ensures that the skills learned during sessions are reinforced in real-life social settings.

Working with individuals with autism and their families entails both challenges and invaluable learning experiences for psychiatrists. Interventions targeting social interaction difficulties in ASD require personalized and flexible approaches, as each individual's developmental trajectory and needs differ. Moreover, working with families introduces another layer of complexity; parental concerns, expectations and varying levels of motivation shape the intervention process. Managing these dynamics helps young psychiatrists develop essential communication skills, crisis management strategies and flexibility in clinical practice. As a young psychiatrist, actively participating in PEERS program—both as an instructor and behavioral coach—provides significant opportunities for professional development. The experience allows for a deeper understanding of autism‘s symptomatology, developmental trajectories and comorbid conditions. Furthermore, clinical observations and case experiences gathered throughout the program enable psychiatrists to refine their approach to working with individuals with ASD, fostering the development of evidence-based strategies. The hands-on nature of PEERS training allows for direct engagement with participants, offering insights into the various clinical presentations of ASD across individuals. Additionally, witnessing even small improvements in individuals with ASD over time fosters a deep sense of professional fulfillment and motivation.

This presentation will emphasize the critical role of evidence-based interventions in enhancing the social skills of individuals with ASD. By reflecting on firsthand experiences from a young psychiatrist‘s perspective, it aims to provide valuable insights for professionals working in the field. In this context, the professional and personal impact of being involved in the PEERS program will be analyzed through real case examples, highlighting both the challenges and rewards of working with young adults on the autism spectrum.

Keywords: Autism Spectrum Disorder, High-Functioning Autism, Social Skills Training, Evidence-Based Interventions

AuthorToEditor: 1. Laugeson EA. The PEERS® Curriculum for School-Based Professionals: Social Skills Training for Adolescents with Autism Spectrum Disorder. Routledge; 2017. 2. Laugeson EA, Frankel F. Social Skills for Teenagers with Developmental and Autism Spectrum Disorders: The PEERS Treatment Manual. Routledge; 2010. 3. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders (DSM-5). American Psychiatric Publishing; 2013. 4. Howlin P, Moss P, Savage S, Rutter M. Social outcomes in mid- to later adulthood among individuals diagnosed with autism and average nonverbal IQ as children. J Am Acad Child Adolesc Psychiatry. 2013;52(6):572-581. doi: 10.1016/j.jaac.2013.02.017 5. Gantman A, Kapp SK, Orenski K, Laugeson EA. Social skills training for young adults with high-functioning autism spectrum disorders: a randomized controlled pilot study. J Autism Dev Disord. 2012;42(6):1094-1103. doi:10.1007/s10803-011-1350-6

[Abstract:0503]

An Overview of Guanfacine Treatment

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The drug guanfacine is classified as an alpha 2 A receptor agonist that is selective. For the treatment of hypertension, it was approved in 1986. The FDA gave its approval to the long-acting variant of the medication for Attention Deficit Hyperactivity Disorder in the year 2009. After then, it was decided that it might be used alongside stimulants (1). Through the stimulation of postsynaptic receptors, it has the potential to bring norepinephrine signals back to normal levels, particularly in the context of attention-deficit/hyperactivity disorder (ADHD). Drug misuse is prevented as a result of its ineffectiveness on the dopamine receptor. There is a high level of bioavailability as well as binding to plasma proteins. The CYP3A4 enzyme in the liver is responsible for its metabolism. Studies have shown that it is effective in treating tic disorders, Tourette syndrome, anxiety disorders, post-traumatic stress disorder, and autism spectrum disorder when it is not intended for use in these conditions. The dosage of ADHD medication is adjusted based on the patient's age and weight. After beginning with a low dose and gradually increasing it by 1 mg per week, the best target dose is indicated to be between 0.05 and 0.12 mg/kg per day. During treatment, it is important to keep a close eye on someone's heart rate and blood pressure. Symptoms such as upper abdomen pain, weariness, drowsiness, and somnolence are among the most often experienced adverse effects (2). Guanfacine is considered to be an important option for the treatment of patients with attention-deficit/hyperactivity disorder (ADHD) who are unable to tolerate stimulants, who do not accept the use of stimulants, and who do not receive sufficient benefit from the use of stimulants (3).

Keywords: ADHD, Guanfacine, side effects, treatment

AuthorToEditor: REFERENCES: 1. FDA, Cder. Intuniv (guanfacine) extended-release tablets. [cited 2023 Jan 15]; Available from: http://www.fda.gov/ForIndustry/ DataStandards/StructuredProductLabeling/default.htm 2. Martinez-Raga, J., Knecht, C., & de Alvaro, R. (2015). Profile of guanfacine extended release and its potential in the treatment of attention-deficit hyperactivity disorder. Neuropsychiatric disease and treatment, 11, 1359–1370. https://doi.org/10.2147/NDT.S65735 3. Pliszka S; AACAP Work Group on Quality Issues. Practice parameter for the assessment and treatment of children and adolescents with attention-deficit/hyperactivity disorder. J Am Acad Child Adolesc Psychiatry. 2007;46:894-921.

[Abstract:0504]

Differences Between Metacognitive Processes in Autogenous and Reactive OCD

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Obsessive-Compulsive Disorder (OCD) is a heterogeneous psychiatric disorder with a chronic course and significant loss of function. Autogenous and reactive obsessions subgroups have been proposed to homogenise its heterogeneous nature in terms of development, clinical presentation and treatment options.

Autogenous obsessions include sexual, aggressive and religious obsessions that come to consciousness suddenly without a clear stimulus and are perceived as foreign to the self, and such obsessions are usually accompanied by implicit compulsions. In contrast, reactive obsessions include obsessions with contamination-contamination, symmetry, accidents and somatic themes, which are usually triggered by more realistic external stimuli, less alien to the self and accompanied by prominent compulsions.

In the metacognitive model, the person with OCD usually feels distressed by triggers in the form of thoughts/emotions/impulses, and this distress leads to the activation of metacognitions about the importance and reality of the triggers, and these metacognitive beliefs are usually beliefs about the fusion of internal experiences with the reality of the external world. These beliefs lead to the negative evaluation of intrusive thoughts as a sign of threat and to the intensification of emotions such as anxiety, anger or guilt. The intensification of emotions reinforces arousal and the belief in the reality of rituals and leads to the emergence of rituals or neutralising behaviours to reduce the threat. Rituals occur in the form of explicit behaviours such as checking, sorting, or implicit behaviours such as thinking, suppressing neutralising images, which are determined by specific internal or stop signals. These behaviours cause the awareness of thoughts to increase and the thoughts to behave as if they are meaningful.

Individuals with autogenous obsessions often view their thoughts as irrational and intrusive, leading them to suppress them or rely on avoidance strategies. Their urge to control these thoughts is driven by superstitious beliefs, self-punishment, and a strong sense of responsibility to manage negative thoughts. In the studies of metacognitive differences between autogenous and reactive obsessions, a significant difference was found in the autogenous group in areas such as responsibility, importance given to the thought, importance of control and exaggeration of danger compared to the reactive group. In different studies, no significant difference was found in OCD patients with autogenous and reactive obsessions, except for healthy control and positive beliefs, and no significant difference was found between subtypes.

It is thought that this subgrouping to be used in OCD may be useful. Sub-typing seems to be important in terms of the development of psychopathology, prediction of co-morbidity or future disorders, identification of findings and the use and development of effective treatment options.

Keywords: Obsessive-Compulsive Disorder, Autogenic Obsession, Reactive Obsession, Metacognitions

AuthorToEditor: Lee HJ, Kwon SM. Two different types of obsession: autogenous obsessions and reactive obsessions [Internet]. Vol. 41, Behaviour Research and Therapy. 2003. Available from: www.elsevier.com/locate/brat Lee HJ, Lee SH, Kim HS, Kwon SM, Telch MJ. A comparison of autogenous/reactive obsessions and worry in a nonclinical population: A test of the continuum hypothesis. Behaviour Research and Therapy. 2005 Aug;43(8):999–1010. Wells A. Emotional Disorders and Metacognition. Wiley; 2002. Yucens B, Erdogan NO, Gündüz M, Tumkaya S. Comparison of autogenous and reactive type obsessive-compulsive disorders in terms of clinical characteristics: A meta-analysis study. J Psychiatr Res. 2024 Aug 1; 176:338–47.

[Abstract:0508]

Combined Use of Guanfacine Treatment with Other Psychotropic Drugs in Children and Adolescents

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Guanfacine extended-release (GXR), a selective alpha-2A adrenoceptor agonist, is approved for use as both monotherapy and adjunctive therapy alongside psychostimulant medications for ADHD in individuals aged 6 to 17 years. Multiple studies have shown that the safety and tolerability profile of GXR, when used in combination with psychostimulants, remains consistent with the established profiles of each medication. Research suggests that combination therapy is more effective than monotherapy. Atomoxetine was the first non-stimulant drug used in the treatment of ADHD and is generally preferred for patients who do not respond to or cannot tolerate stimulant treatment. Guanfacine and atomoxetine have distinct mechanisms of action and side effect profiles. Therefore, further research is needed to evaluate the efficacy and safety of their combined use. In clinical practice, such combination therapies should be assessed carefully. The literature regarding the use of guanfacine in combination with psychiatric medications other than psychostimulants is extremely limited. Nevertheless, based on its potential benefits and empirical evidence, researchers support combination therapy when deemed necessary. Guanfacine is believed to have therapeutic synergy when administered alongside certain antidepressants, particularly selective serotonin reuptake inhibitors (SSRIs) and serotonin-noradrenaline reuptake inhibitors (SNRIs). It may be used in combination with these medications for the treatment of anxiety and depression, as it is thought to enhance mood stability by balancing the stimulating effects of SSRIs and SNRIs. However, careful monitoring is required due to the risks of hypotension and sedation associated with centrally acting alpha-2 agonists. While antipsychotics used in schizophrenia, bipolar disorder, and other psychiatric conditions primarily target dopamine and serotonin receptors, guanfacine modulates noradrenergic pathways. The administration of guanfacine, particularly in combination with atypical antipsychotics, may help alleviate symptoms such as anxiety and sleep disturbances. However, this combination must be carefully evaluated due to an increased risk of sedation and orthostatic hypotension. Guanfacine can be used alone or in combination with benzodiazepines, buspirone, and SSRIs for the treatment of anxiety disorders. Since combining guanfacine with benzodiazepines may heighten the risk of sedation, treatment should begin with a low dose, and patients should be closely monitored. Guanfacine may improve sleep patterns and contribute to the management of anxiety disorders by reducing anxiety symptoms. Guanfacine is metabolized through the CYP3A4 enzyme system, which can lead to interactions with enzyme inhibitors or inducers. This may alter plasma concentrations of guanfacine and other concurrently administered medications.The combination of guanfacine with other psychotropic agents may offer therapeutic benefits, particularly in conditions such as ADHD, anxiety, and mood disorders. However, potential risks, including sedation, hypotension, and pharmacokinetic interactions, must be carefully considered.

Keywords: Guanfacine, combined treatment, psychotropic drugs

[Abstract:0510]

Attention Deficit Hyperactivity Disorder and Resilience: Unpacking the Interplay of Strenghts and Vulnerabilities

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Attention Deficit Hyperactivity Disorder (ADHD) is a neurodevelopmental disorder that can cause difficulties in emotional regulation, social skills, and academic achievement (Barkley et al., 2014). However, research has shown that individuals with ADHD can also be successful in social, emotional, and educational domains (Biederman et al., 1998). Despite this, most studies focus on the deficits of ADHD, while strengths and resilience mechanisms receive less attention.

Resilience is defined as positive adaptation in the face of adversity. Factors contributing to resilience in typically developing children include family support (e.g., parenting skills), individual factors (e.g., self-esteem), and environmental factors (e.g., well-functioning community and school).

Viewing ADHD solely as a disorder overlooks the potential and strengths that individuals may possess (Sherman et al., 2006). Studies suggest that individuals with ADHD may exhibit strengths in divergent thinking, adventurousness, perseverance, and humor. Particularly, women with ADHD identify creativity, determination, curiosity for new things, and risk-taking as positive traits. Additionally, hyperfocus—the ability to work intensively for hours on tasks of interest—is frequently reported as an advantage (Sedgwick et al., 2019).

Studies on ADHD populations indicate that social factors play a crucial role. Children with higher perceived social support tend to have better self-concept and emotional well-being. Social acceptance serves as a buffer against negative parenting and behavioral problems. Similarly, positive self-perceptions in academic, athletic, behavioral, and social competence contribute to resilience.

Research indicates that individuals with ADHD are not only faced with challenges but also possess unique strengths. Social support, positive self-perception, and family cohesion play a critical role in fostering resilience. Educators and healthcare professionals should focus on identifying and supporting the strengths of individuals with ADHD (Charbin et al., 2023)

Moreover, addressing negative societal perceptions of ADHD is crucial. As resilience is a dynamic process, it can vary based on the challenges individuals face.

Keywords: ADHD, resilience, strenght, vulnerability, neurodevelopmental disorder

AuthorToEditor: References: 1.Barkley R. A. (Ed.). (2014). Attention-deficit hyperactivity disorder: A handbook for diagnosis and treatment (4th ed.). The Guilford Press. 2.Biederman J., Mick E., Faraone S. V. (1998). Normalized functioning in youths with persistent attention-deficit/hyperactivity disorder. Journal of Pediatrics, 133(4), 544–551. 3.Charabin E, Climie EA, Miller C, Jelinkova K, Wilkins J. "I'm Doing Okay": Strengths and Resilience of Children With and Without ADHD. J Atten Disord. 2023 Jul;27(9):1009-1019. 4.Sedgwick J. A., Merwood A., Asherson P. (2019). The positive aspects of attention deficit hyperactivity disorder: A qualitative investigation of successful adults with ADHD. ADHD Attention Deficit and Hyperactivity Disorders, 11(3), 241–253. 5.Sherman J., Rasmussen C., Baydala L. (2006). Thinking positively: How some characteristics of ADHD can be adaptive and accepted in the classroom. Childhood Education, 82(4), 196–200.

[Abstract:0511]

Effects of Technology and Screen Use on Sleep

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Technology is present in many areas of human life. The use of technology and digital-based devices is increasing. This increase brings with it many benefits that make life easier, as well as some negative effects. These include slowing down attention and cognitive functions, decreasing school and academic success, deterioration in social relationships, increasing psychiatric diagnoses such as anxiety and depression, deterioration in peer relationships, muscle pain, obesity, and increasing risk of cardiovascular disease. One of the negative effects is the deterioration of sleep and related parameters. Sleep is an indispensable part of a person's healthy life. Studies show the importance of sufficient and quality sleep for mental and physical health. There may be situations that disrupt sleep. Physical or mental health problems can have increased negativities on sleep. Increased use of screen-based devices also stands out among the factors that negatively affect sleep. Increased use of screen-based devices causes changes in parameters such as sleep quality, total sleep time, and time to fall asleep. The effects of digital device use on sleep parameters include decreased total sleep time, delayed falling asleep, shifting in sleep phases, daytime sleepiness, insufficient sleep, and not feeling sufficient rest. It is thought that factors such as melatonin release, blue light effect, and disruption of sleep routine may be responsible for these effects. It is thought that light types in the blue light spectrum may suppress melatonin release and indirectly disrupt circadian rhythm. Melatonin is a hormone released in circadian rhythm. It has a regulatory effect in many areas, especially sleep, with the effect of circadian release. One of these areas is sleep. It is thought that disruption of melatonin release has direct and indirect effects on sleep. The most prominent of these are the sleep transition phase and the processes of falling asleep. Using screen-based devices in the hours before going to bed can disrupt sleep routines. In addition, using screen-based devices in the hours before falling asleep disrupts sleep routines. The disruption of the sleep routine causes changes in sleep habits, resistance to sleep, and shifting the time allocated to sleep to technology-related activities. Increased arousal due to the content watched can also be shown among the conditions that negatively affect sleep. By looking at the studies in the literature from this perspective, the effects of technology and screen use on sleep have been tried to be addressed in a multifaceted way. With the results revealed in the studies, the negative effects of sleep, which is an integral part of a healthy life, with the use of technology and screen-based devices and the underlying mechanisms have been examined. Within the framework of the studies examined, suggestions that can be made to reverse the negative effects of screen-based device use on sleep have been shared.

Keywords: Sleep, technology, screen use

[Abstract:0512]

Catatonia in Childhood and Adolescent Schizophrenia

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Catatonia is a severe neuropsychiatric syndrome that manifests with a range of motor, behavioral, and autonomic disturbances. While it has historically been associated with schizophrenia, contemporary research acknowledges its presence across multiple psychiatric, neurological and medical conditions. Catatonia in childhood and adolescent schizophrenia is a rare but severe condition that requires careful diagnosis and management. The prevalence of catatonia among hospitalized youth ranges from 0.6% to 17%. A study conducted in child psychiatry outpatient clinics reported a prevalence of 5% in the general patient group and 17% in the subgroup with psychotic disorders. Unlike in adults, catatonia in youth is more frequently associated with schizophrenia than with mood disorders. Studies indicate that schizophrenia is the most common underlying psychiatric diagnosis in young patients with catatonia. In a clinical cohort, 43 out of 89 youth (48.3%) with catatonia were found to have schizophrenia spectrum disorders, including schizophrenia, schizoaffective disorder, or brief psychotic disorder. Catatonic episodes may still emerge in patients diagnosed with schizophrenia even after the prescription of antipsychotic medications. When comparing youth with schizophrenia with and without catatonia, those who experienced catatonic episodes exhibited more severe schizophrenic symptoms, lower overall functional levels, and required longer hospitalization durations. The condition is characterized by a range of psychomotor symptoms, and its clinical presentation in children and adolescents closely resembles that in adults, with common features including mutism, immobility, staring, negativism, and rigidity. However, some symptoms, such as psychomotor regression, are more prominent in younger populations. The diagnosis can be complicated by the overlap of symptoms with other conditions, such as autism spectrum disorders and pervasive developmental disorders, potentially leading to underdiagnosis or misdiagnosis. Its pathophysiology remains incompletely understood but is hypothesized to involve dysregulation of γ-aminobutyric acid (GABA), glutamate, and dopamine neurotransmitter systems. The interplay between cortical, basal ganglia, and thalamic dysfunction contributes to its motor and behavioral manifestations. Early identification and treatment are crucial to prevent life-threatening complications such as malignant catatonia and autonomic instability. Diagnostic accuracy can be improved using structured tools such as the Bush-Francis Catatonia Rating Scale. First-line treatment includes benzodiazepines, particularly lorazepam, with electroconvulsive therapy serving as an effective intervention for refractory cases. The role of NMDA receptor modulators, such as amantadine and memantine, is an emerging area of interest. Continued research is essential to better understand the underlying mechanisms and improve outcomes for affected individuals. Long-term management requires a multidisciplinary approach, integrating pharmacological and behavioral assessments to personalize treatment strategies and prevent recurrence.

Keywords: Catatonia, Child and adolescent psychiatry, Neuropsychiatric syndrome, Psychotic disorders, Schizophrenia

AuthorToEditor: References 1. Benarous, X., Raffin, M., Ferrafiat, V., Consoli, A., & Cohen, D. (2017). Catatonia in children and adolescents: New perspectives. Schizophrenia Research, 200, 56-67. https://doi.org/10.1016/j.schres.2017.07.028. 2. Grover, S., Chauhan, N., Sharma, A., Chakrabarti, S., & Avasthi, A. (2017). Symptom profile of catatonia in children and adolescents admitted to psychiatry inpatient unit. Asian journal of psychiatry, 29, 91-95. https://doi.org/10.1016/j.ajp.2017.04.016. 3. Rogers, J. P. et al. (2023). Evidence-based consensus guidelines for the management of catatonia: recommendations from the British Association for Psychopharmacology. J. Psychopharmacol. 37, 327–369. https://doi.org/10.1177/02698811231158232

[Abstract:0513]

Management of Weight, Metabolic Syndrome and Diabetes in Patients with Schizophrenia

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Schizophrenia is a chronic psychiatric disorder affecting approximately 1% of the global population, characterized by positive and negative symptoms, leading to functional impairment and disability. Since the introduction of second-generation antipsychotics in the 1990s, obesity rates have increased significantly. Rapid weight gain occurs after initiating antipsychotic treatment, and overall, the prevalence of overweight and obesity in individuals with schizophrenia is 2 to 3 times higher than in the general population. Studies indicate that approximately 50% of schizophrenia patients have obesity, 40% have metabolic syndrome, 25% have glucose intolerance, and 15% have diabetes. Antipsychotic medications, the cornerstone of schizophrenia treatment, contribute to weight gain, glucose intolerance, and other metabolic complications. The prevalence of metabolic syndrome in patients using atypical antipsychotics is reported to be four times higher than in the healthy population. Additionally, lower socioeconomic status, lower education levels, and suboptimal living conditions contribute to inadequate nutrition and insufficient physical activity among individuals with schizophrenia. The prevalence of metabolic syndrome varies globally from 5.6% to 63% and in Turkey from 18.9% to 42.3%. The most commonly used diagnostic criteria in clinical practice are those of the National Cholesterol Education Program Adult Treatment Panel III (NCEP ATP III), which include low HDL cholesterol, elevated triglycerides, impaired glucose tolerance, obesity, and hypertension. Cardiovascular complications resulting from metabolic syndrome are among the leading causes of mortality in schizophrenia patients. Metabolic syndrome significantly increases the risk of type 2 diabetes, cardiovascular diseases, and other serious health conditions, making early diagnosis and intervention crucial. In a study of over 400 schizophrenia patients, the prevalence of diabetes and impaired glucose tolerance was reported as 6.3% and 23.4%, respectively, with diabetes rates being 4 to 5 times higher across all age groups. Schizophrenia patients represent a high-risk population for developing diabetes, weight gain, and metabolic syndrome. The etiology is multifactorial, involving genetic susceptibility, biological pathways, environmental factors, and antipsychotic treatment. Despite growing awareness of high morbidity and early mortality in this population, screening and treatment rates remain low. This presentation will review the management of weight, metabolic syndrome, and diabetes in schizophrenia patients.

Keywords: Diabetes, Metabolic Syndrome, Schizophrenia, Weight

REFERENCES

1) Annamalai, A., & Tek, C. (2015). An overview of diabetes management in schizophrenia patients: office based strategies for primary care practitioners and endocrinologists. International journal of endocrinology, 2015, 969182.
2) De Hert, M., van Winkel, R., Van Eyck, D., Hanssens, L., Wampers, M., Scheen, A., & Peuskens, J. (2006). Prevalence of diabetes, metabolic syndrome and metabolic abnormalities in schizophrenia over the course of the illness: a cross-sectional study. Clinical Practice and Epidemiology in Mental Health, 2, 1-10.
3) Yazıcı, H. G., Şahiner, İ. V., Didin, M., & Öner, S. Şizofreni Hastalarında Kilo Alımı, Ruhsal Belirtiler ve Benlik Saygısı.

[Abstract:0514]

The Association Of Incel Concept With Psychiatric Disorders

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The possibility of anonymity in online environments provides individuals with significant freedom, courage, and comfort in expressing themselves. While this may seem like a positive aspect, it can be easily exploited, turning the internet into an "ideal" platform for spreading hate and extremist ideologies. In this context, it is evident that there are malicious forums on the internet dedicated to specific ideologies, aiming to radicalize their members. It is well known that the internet serves as a platform for the spread of hate crimes against women and misogynistic extremist ideologies. The incel (involuntary celibate) movement, an online group within the broader male-dominated sphere, promotes a derogatory attitude toward women and even the glorification of violence. On various platforms, incels blame women and feminism for their inability to engage in sexual relationships, expressing their frustration and anger over being rejected by women. In recent years, mass violence linked to incels has become an increasing concern, raising questions about its connection to mental illness. In general, the prevalence of mental disorders among those involved in incel-related violence, as well as the high rates of self-reported mental health struggles within incel forums, suggest that mental health issues may contribute to the path toward inceldom and, for some, violence. An online survey of 665 incels revealed that participants were young men between the ages of 18 and 30, living with their parents, and lacking intimate experiences. Most respondents reported experiencing dissatisfaction with their lives. Studies of incel literature have revealed that depression-related symptoms of low mood, hopelessness and suicidality are common themes. 71% of incels viewed their circumstances as permanent, which suggests that self-deprecation contributes more to the hopelessness experienced by most incels. Hopelessness is a common theme in incel-related violence and is argued to be a central risk factor for mass violence by incels, withmost attackers displaying suicidal ideation. However, hopelessness is not enough to trigger extreme violence among those incels who transition from depressionand loneliness to a mission-oriented plan to ‗punish' those they deem responsible for their frustrations. Hopelessness, significantly exacerbated by cognitive distortions such asover-generalisations, all-or-nothing thinking (across multiple contexts), misattributions, lack of empathy, neutralisation and victim stances, provides a justification for subsequent acts of extreme violence.

Keywords: Mental disorder, incel, involuntary celibate, internet

[Abstract:0515]

Serotonin Syndrome Due to SSRIs Used in Children and Adolescents: From Diagnosis to Treatment

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Serotonin syndrome or serotonin toxicity that can affect children, adolescents and adults is a life-threatening syndrome caused by increased serotonin concentrations in the central and peripheral nervous systems due to the intake of serotonergic agents (1,2). It has an acute onset and manifests within hours of exposure to the causative agent(s), presenting with changes in mental status, autonomic symptoms such as tachycardia and hyperthermia, and neuromotor hyperactivity, including clonus, hyperreflexia, and rigidity (1). Serotonin syndrome is a clinical diagnosis and the most important stage of the diagnosis is to determine whether there is an agent that may cause an increase in serotonin in the central nervous system. Agents that may cause the emergence of serotonin syndrome can be grouped as serotonin precursors, serotonin receptor agonists, drugs that inhibit serotonin reuptake from the synaptic cleft, inhibitors of serotonin metabolism and drugs that sensitise serotonin receptors (2). These agents include not only prescription medications such as SSRIs that act on the serotonergic system but also illicit drugs, dietary supplements, and medications prescribed for other medical conditions. Therefore, obtaining a detailed history of all medications, supplements, and substances used by the patient is crucial for an accurate diagnosis (1). The differential diagnosis of serotonin syndrome includes central nervous system infections, neuroleptic malignant syndrome, anticholinergic toxicity, malignant hyperthermia (2). Since there is no gold standard laboratory test for the diagnosis of serotonin syndrome, some criteria such as Radomski's criteria, Sternbach's criteria and Hunter serotonin toxicity criteria have been proposed (2). Hunter serotonin toxicity criteria include some rules determined according to the presence or absence of clonus, agitation, hyperprexia, diaphoresis, agitation, hyperreflexia, tremor, ocular clonus criteria following the intake of a serotonergic agent (3). Following the diagnosis, it is essential to make a appropriate treatment plan. The most important step of the treatment is discontinuation of sertonergic drugs and providing supportive care according to the severity of the clinical situation. It is recommended to monitor vital signs such as pulse, blood pressure and temperature, to ensure adequate hydration and to sedate the patient in necessary cases. In mild to moderate cases, symptoms typically resolve within one to three days after discontinuation of the serotonergic agent and initiation of supportive treatment. However, in severe cases, preventing multiple organ failure and providing intensive supportive care are critical (1).

Keywords: Serotonin syndrome, serotonin toxicity, SSRI, adverse effect

REFERENCES

1. Buckley NA, Dawson AH, Isbister GK. Serotonin syndrome. BMJ. 2014; 348: g1626. doi:10.1136/bmj.g1626
2. Scotton William J, Hill Lisa J, Williams Adrian C, Barnes Nicholas M. Serotonin Syndrome: Pathophysiology, Clinical Features, Management, and Potential Future Directions. Int J Tryptophan Res. 2019; 12: 1178646919873925. doi:10.1177/1178646919873925
3. Dunkley EJC, Isbister GK, Sibbritt D, Dawson AH, Whyte IM. The Hunter Serotonin Toxicity Criteria: simple and accurate diagnostic decision rules for serotonin toxicity. QJM An Int J Med. 2003; 96(9): 635-642. doi: 10.1093/qjmed/hcg109

[Abstract:0518]

The Role of Complement Proteins in the Etiology of OCD

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Obsessive-Compulsive Disorder (OCD) is a chronic neuropsychiatric disorder characterized by obsessions and/or compulsions, which has a seriously negative impact on an individual's quality of life.

Epidemiological studies have found that the prevalence of obsessive-compulsive disorder in the child and adolescent population is approximately between 0.25% and 4%. It is known that symptoms begin in childhood in approximately one-third to one-half of adult obsessive-compulsive disorder cases.

Multifactorial causes such as genetic, neurochemical, structural, and psychosocial factors are thought to play a role in the etiology of obsessive-compulsive disorder.

In recent years, evidence supporting the role of immune mechanisms in the etiology of OCD has been increasing. The fact that children with Sydenham's chorea associated with Group A beta-hemolytic streptococcus (GABHS) infection have higher rates of obsessive-compulsive disorder and that patients with obsessive-compulsive disorder have higher levels of anti-basal ganglia antibodies compared to healthy controls are findings supporting the possible role of immune changes in the pathogenesis of obsessive-compulsive and compulsive disorders. Pediatric autoimmune neuropsychiatric disorder associated with streptococcal infection (PANDAS), which was defined by Swedo et al. in 1998, is a childhood disorder characterized by OCD and/or tics that appear suddenly following streptococcal infection. This situation has led to the necessity of examining the immunological differences between OCD patients who meet the PANDAS criteria and those who do not. The fact that there is no evidence of GABHS infection in every child with a PANDAS clinical presentation, and the identification of OCD and tic disorders that occur following viral infections, also highlights the potential role of non-GABHS infectious agents in childhood-onset acute OCD cases.

Among different immunological mechanisms, there is increasing evidence that microglial dysfunction and autoimmune responses may play a role in the pathogenesis of OCD in some patients. Some studies have identified various immunological abnormalities in individuals with OCD, primarily involving pro-inflammatory cytokines and anti-neuronal antibody levels.

Studies have indicated that mice deficient in early components of the complement system, such as C1q and C3, as well as mice with C4 deficiency, exhibit defects in synaptic pruning. Significant elevations in C4 levels have been detected in patients with chronic schizophrenia, and significant elevations in C3 and C4 levels have been found in patients at ultra-high risk for psychosis. Complement system dysfunction is increasingly associated with neurodevelopmental and neurodegenerative disorders such as schizophrenia, autism spectrum disorder, bipolar disorder, Rett syndrome, Alzheimer‘s disease, and Huntington‘s disease.

Despite the interest in immunological abnormalities in OCD, only a few studies have examined cytokines in this disorder. TNF-alpha, IL-6, and IL1β are the most studied cytokines in comprehensive cytokine studies related to OCD.

Although future studies will allow us to obtain more definitive data on this subject, further research is needed to gain clearer information.

Keywords: Complement C1q, Complement C3, Complement C4, Obsessive-Compulsive Disorder

[Abstract:0519]

Post-Trauma Journey: The Interplay of PTSD, Psychological Resilience, and Post-Traumatic Growth

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Psychological reactions to traumatic experiences exhibit considerable variability, with certain individuals experiencing intense distress while others demonstrate adaptability and recovery over time. The formal acknowledgment of Post-Traumatic Stress Disorder (PTSD) in DSM-III underscored its significant ramifications for individuals subjected to distressing incidents (Andreasen, 2010). However, it is important to recognize that not every individual who encounters trauma experiences PTSD, which highlights the significance of protective and mediating factors. (Lauth-Lebens & Lauth, 2016).

Psychological resilience, framed as the skill to adapt and recover from difficulties, has been highlighted as a significant aspect that influences post-trauma developments Empirical research indicates that resilience functions as a protective buffer against PTSD, attenuating its onset and severity by fostering emotional regulation, cognitive flexibility, and the effective utilization of social support (Horn & Feder, 2018). A comprehensive understanding of the mechanisms underpinning resilience can enhance therapeutic modalities, thereby enabling mental health practitioners to cultivate these attributes in individuals undergoing recovery from trauma and promoting overall well-being (Haglund et al., 2007). This emphasis on resilience not only facilitates the treatment of PTSD but also underscores the significance of preventative strategies that can be integrated into mental health care, equipping individuals with the requisite skills to adeptly navigate future adversities (Horn et al., 2016). The cultivation of resilience through targeted interventions can empower individuals to develop coping mechanisms that optimize their capacity to manage stress and adversity, ultimately culminating in healthier emotional outcomes and an enhanced quality of life.

While resilience diminishes the risk of PTSD, it concurrently assumes a fundamental role in facilitating Post-Traumatic Growth (PTG)—a phenomenon wherein individuals experience positive psychological transformation following adversity (Bensimon, 2012). PTG manifests across diverse domains, encompassing increased personal strength, enhanced interpersonal relationships, heightened appreciation for life, and augmented existential or spiritual development (Taylor, 2023).Research findings indicate that individuals demonstrating heightened levels of resilience are more likely to report occurrences of PTG, suggesting that resilience functions not only as a protective factor against psychopathology but also facilitates transformative outcomes following trauma (Levine et al., 2009) Such beneficial transformations can empower individuals to confront subsequent challenges with enhanced confidence and positivity, ultimately contributing to their overall mental well-being and life satisfaction (Flood, 2018).

This lecture will provide the intricate relationship among PTSD, resilience, and PTG, emphasizing particularly the mechanisms by which resilience influences post-trauma adaptation. Furthermore, evidence-based strategies for enhancing resilience within clinical and community contexts will be examined to optimize psychological outcomes for survivors of trauma.

Keywords: PTSD, psychological resilience, post-traumatic growth, trauma

REFERENCES

1. Andreasen, N. C. (2010). Posttraumatic stress disorder: a history and a critique. Annals of the New York Academy of Sciences. https://doi.org/10.1111/J.1749-6632.2010.05699.X
2. Lauth-Lebens, M., & Lauth, G. W. (2016). Risk and Resilience Factors of Post-Traumatic Stress Disorder: A Review of Current Research. https://doi.org/10.4172/2471-2701.1000120
3. Horn, S. R., & Feder, A. (2018). Understanding Resilience and Preventing and Treating PTSD.Harvard Review of Psychiatry. https://doi.org/10.1097/HRP.0000000000000194
4. Haglund, M. E. M., Nestadt, P. S., Cooper, N. S., Southwick, S. M., & Charney, D. S. (2007). Psychobiological mechanisms of resilience: relevance to prevention and treatment of stress-related psychopathology. Development and Psychopathology. https://doi.org/10.1017/S0954579407000430

AuthorToEditor: References Andreasen, N. C. (2010). Posttraumatic stress disorder: a history and a critique. Annals of the New York Academy of Sciences. https://doi.org/10.1111/J.1749-6632.2010.05699.X Lauth-Lebens, M., & Lauth, G. W. (2016). Risk and Resilience Factors of Post-Traumatic Stress Disorder: A Review of Current Research. https://doi.org/10.4172/2471-2701.1000120 Horn, S. R., & Feder, A. (2018). Understanding Resilience and Preventing and Treating PTSD.Harvard Review of Psychiatry. https://doi.org/10.1097/HRP.0000000000000194 Haglund, M. E. M., Nestadt, P. S., Cooper, N. S., Southwick, S. M., & Charney, D. S. (2007). Psychobiological mechanisms of resilience: relevance to prevention and treatment of stress-related psychopathology. Development and Psychopathology. https://doi.org/10.1017/S0954579407000430 Horn, S. R., Charney, D. S., & Feder, A. (2016). Understanding resilience: New approaches for preventing and treating PTSD.Experimental Neurology. https://doi.org/10.1016/J.EXPNEUROL.2016.07.002 Bensimon, M. (2012). Elaboration on the association between trauma, PTSD and posttraumatic growth: The role of trait resilience. Personality and Individual Differences. https://doi.org/10.1016/J.PAID.2012.01.011 Taylor, E. (2023). Post-Traumatic Growth: A Paradigm for Psychological Change.Journal of Student Research. https://doi.org/10.47611/jsr.v11i4.1720 Levine, S. Z., Laufer, A., Stein, E., Hamama-Raz, Y., & Solomon, Z. (2009). Examining the Relationship Between Resilience and Posttraumatic Growth.Journal of Traumatic Stress. https://doi.org/10.1002/JTS.20409 Flood, F. (2018). Reframing Trauma: The Transformative Power of Meaning in Life, Work, and Community. https://doi.org/10.26502/JPPD.2572-519X0052

[Abstract:0521]

Cognitive Functions in Children and Adolescents with Major Depressive Disorder: What Do Neurocognition and Social Cognition Tell Us?

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In this panel, we wanted to discuss neurocognitive and social cognitive functions in children and adolescents diagnosed with major depressive disorder (MDD). In recent years, there has been an increase in studies reporting cognitive deficits such as attention, executive functions, and theory of mind in cases diagnosed with MDD.

Neurocognition covers cognitive functions that include the ability to perceive, comprehend, remember, comment on external stimuli, and produce problem solutions. These cognitive functions consist of areas such as executive functions, memory, processing speed, working memory, social cognition, and visual and verbal memory.

Social cognition, which we can describe as a subset of neurocognitive functions, includes the ability to understand and interpret the intentions and thoughts of the person with whom the person interacts and to respond following social norms. Social cognition also includes mental processes such as theory of mind, emotion processing and social perception and plays an essential role in social interactions. It is reported that social cognitive deficits are effective both in the etiology of depression and in the impairment of functionality in the clinical course.

When the literature in recent years is examined; It has been reported that research on neurocognition in depressive disorders in children and adolescents is more limited compared to adult cases and that inconsistent data are obtained in existing publications. A study from 2024 found a more pronounced neurocognitive impairment in adolescent cases diagnosed with MDD compared to adult cases. Another study found a significant decrease in neurocognitive and social cognition performances in adolescent cases diagnosed with MDD compared to healthy controls.

In the literature, although publications on adult cases examining the effects of social cognition in depression are especially mentioned in the publications on the theory of mind, it is seen that there are not many studies in this area in the child and adolescent age group. In a study evaluating female adolescent cases diagnosed with depressive disorder in 2022, it was reported that the increase in the severity of depressive symptoms was associated with impairment in social-moral reasoning. In a study conducted in Turkey in 2020; It has been reported that there is no impairment in social cognitive functions in adolescent cases who have had their first depressive episode compared to the healthy control group. Considering the bio-psycho-social changes that adolescence brings, the importance of conducting more research on social cognitive effects in adolescent depression is indisputable in terms of both clinical course and treatment. It is known that early depression that begins in the child and adolescent age group can present with negative results such as more pronounced impairment in functionality, psychosocial difficulties, poor prognosis, and resistance to treatment. In this context, it is important to focus on neurocognitive and social cognitive effects that may affect the course and treatment of child and adolescent MDD. Psychosocial and pharmacological interventions need to be clarified to prevent cognitive impairment.

Keywords: Neurocognition, social cognition, major depressive disorder, adolescents

AuthorToEditor: 1-) Bora, E., & Berk, M. (2016). Theory of mind in major depressive disorder: A meta-analysis. Journal of affective disorders, 191, 49-55. 2-) Bienek, O., Allott, K., Antonucci, L., Bertolino, A., Bonivento, C., Borgwardt, S.,.. & Müller, J. M. (2024). Neurocognitive dysfunction in adolescents with recent onset major depressive disorder: a cross-sectional comparative study. European Child & Adolescent Psychiatry, 1-10. 3-) Yavuz, B. E., Turan, S., Mutlu, C., & Çamlı, Ş. E. (2024). A comparison of the social cognition and neurocognitive characteristics of adolescents with suicide behavior, adolescent with depression and healthy controls. Suicide and Life-Threatening Behavior, 54(4), 785-797.

[Abstract:0522]

Sexual Side Effects of Antidepressants: Mechanisms and Management Strategies

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Antidepressants, particularly SSRIs and SNRIs, are commonly prescribed for mood and anxiety disorders. However, one of their major side effects is sexual dysfunction, affecting up to 80% of users (1). These adverse effects often lead to poor adherence and a reduced quality of life. Sexual dysfunction related to antidepressants can impact desire, arousal, and orgasm. The primary mechanism is excessive serotonergic activity, particularly through 5-HT2 and 5-HT3 receptor stimulation, which suppresses sexual desire and delays orgasm. Inhibition of dopamine release in the mesolimbic system further reduces sexual motivation and pleasure. Some antidepressants also increase prolactin levels, contributing to decreased sexual desire and erectile dysfunction. Moreover, adrenergic and cholinergic changes may affect sexual function (2).

The management of antidepressant-induced sexual dysfunction requires an individualized approach. One strategy is dose reduction, which may help reduce sexual side effects while maintaining efficacy. However, this carries the risk of symptom relapse. Another strategy is switching to an antidepressant with a lower risk of sexual dysfunction, such as bupropion, mirtazapine, or agomelatine. These medications have distinct neurotransmitter profiles that are less likely to interfere with sexual function. Adjunct pharmacological treatments may be beneficial. Bupropion, a norepinephrine-dopamine reuptake inhibitor, is often used to reduce SSRI-induced sexual dysfunction. Phosphodiesterase-5 inhibitors like sildenafil and tadalafil improve erectile function and orgasmic response. Buspirone, a serotonin 5-HT1A receptor partial agonist, has also been explored as a potential remedy. Non-pharmacological approaches play a significant role. Cognitive-behavioral therapy and sex therapy help address psychological distress and improve relationship dynamics. Open communication with healthcare providers is crucial, as many individuals hesitate to report sexual side effects due to embarrassment. Additionally, post-SSRI sexual dysfunction (PSSD) is a distressing and persistent condition where sexual side effects continue despite SSRI discontinuation. Symptoms include genital anesthesia, weak or pleasureless orgasm, decreased sexual desire, erectile dysfunction, and premature ejaculation. The prevalence remains unknown, and no definitive treatment exists, though serotonergic antagonists, dopaminergic agonists, and phototherapy have shown potential (3,4). Given the high prevalence of sexual dysfunction associated with antidepressants, clinicians should proactively screen for these side effects. Understanding the underlying mechanisms enables targeted interventions that balance mental health treatment with sexual well-being. While pharmacological strategies can help reduce these effects, non-pharmacological approaches should also be considered. Addressing sexual dysfunction as part of antidepressant therapy can improve adherence, enhance patient satisfaction, and lead to better mental health outcomes.

Keywords: Antidepressant-induced sexual dysfunction, Post-SSRI sexual dysfunction, Serotonergic activity and sexual function

REFERENCES:

1. de Aquino ACQ, Sarmento ACA, Teixeira RL de A, Batista TN, de Freitas CL, Mármol JMP, et al. Pharmacological treatment of antidepressant-induced sexual dysfunction in women: A systematic review and meta-analysis of randomized clinical trials. Clinics. 2025;80.
2. Clayton AH, Croft HA, Handiwala L. Antidepressants and sexual dysfunction: Mechanisms and clinical implications. Postgrad Med. 2014;126(2):91–9.
3. Lach F, Bottemanne H, Hingray C, Papeta D, Rousseau A, Javelot H. Management strategies for antidepressant-related sexual dysfunction. Encephale. 2024 Oct 1;50(5):578–81.
4. Montejo AL, Prieto N, de Alarcón R, Casado-Espada N, de la Iglesia J, Montejo L. Management strategies for antidepressant-related sexual dysfunction: A clinical approach. J Clin Med. 2019;8(10):1–19.

[Abstract:0524]

Management of Antidepressant Therapy During Pregnancy: Clinical Considerations

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Antenatal depression represents the most prevalent major psychiatric condition during pregnancy, with a global prevalence exceeding 20% [1]. Over the past several decades, the prescription of antidepressant medications during pregnancy has steadily increased. However, the safety of antidepressant use in this period remains a subject of debate due to an incomplete understanding of its effects on fetal development and subsequent outcomes in offspring. A substantial body of research has examined the consequences of antidepressant exposure on various stages of pregnancy, including maternal health, early gestational outcomes, late pregnancy effects, neonatal health, and long-term child development.

Meta-analyses on prenatal antidepressant exposure have identified an increased risk of major congenital malformations (paroxetine and fluoxetine), as well as congenital heart defects (paroxetine, fluoxetine, and sertraline), preterm birth, neonatal adaptation difficulties, and persistent pulmonary hypertension in newborns [1]. Additionally, limited evidence suggests potential risks for postpartum hemorrhage, stillbirth, and impairments in motor and intellectual development. However, findings regarding the risks of spontaneous abortion, low birth weight, small-for-gestational-age status, respiratory distress, convulsions, feeding difficulties, and autism remain inconclusive. Importantly, meta-analyses have not found a significant increase in the risk of gestational hypertension, preeclampsia, or attention-deficit/hyperactivity disorder as a result of prenatal antidepressant use [1].

Nevertheless, untreated perinatal depression and anxiety disorders also pose significant risks, including increased incidence of preeclampsia, gestational diabetes, preterm birth, intrauterine growth restriction, cesarean delivery, substance use, suicidal behavior, and poor adherence to prenatal care [2].

Clinical guidelines generally share common recommendations for managing perinatal depression. Psychotherapy is advocated as the primary intervention for mild to moderate perinatal depressive disorders. Guidelines recommend selective serotonin reuptake inhibitors (SSRIs) as the first-line pharmacological treatment for depression and anxiety disorders during pregnancy, noting that risk profiles are largely similar across SSRIs, though medication selection should be based on patient history. Due to conflicting data regarding paroxetine‘s association with fetal cardiac malformations, The Canadian Network for Mood and Anxiety Treatments (CANMAT) recommends citalopram, escitalopram, and sertraline as first-line treatments for major depressive disorder, categorizing paroxetine as a third-line option, considered only if the patient has responded previously.The Royal Australian and New Zealand College of Psychiatrists (RANZCP) also supports pharmacotherapy for severe major depressive disorder during pregnancy, prioritizing SSRIs while advising against the use of paroxetine, fluoxetine, and venlafaxine where possible.

Ultimately, the decision to initiate pharmacotherapy in pregnant individuals necessitates a careful risk-benefit assessment. Specifically, the potential risks of fetal exposure to antidepressants must be weighed against the adverse consequences of untreated maternal mood disorders, ensuring an approach that optimally safeguards both maternal and fetal health [3].

Keywords: Antidepressants, depressive disorder, guidelines, perinatal depression, pregnancy, SSRIs

REFERENCES

1. Desaunay, P., et al., Benefits and Risks of Antidepressant Drugs During Pregnancy: A Systematic Review of Meta-analyses. Pediatric Drugs, 2023. 25(3): p. 247-265.
2. Weingarten, S.J. and L.M. Osborne, Review of the Assessment and Management of Perinatal Mood and Anxiety Disorders. Focus, 2024. 22(1): p. 16-24.
3. Dagher, M., C.M. Cahill, and A.M. Andrews, Safety in treatment: Classical pharmacotherapeutics and new avenues for addressing maternal depression and anxiety during pregnancy. Pharmacological Reviews, 2025. 77(3).

[Abstract:0525]

The Role of Citicoline in Childhood Psychiatric Disorders

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Citicoline is endogenously synthesized from choline as an intermediate step in the biosynthesis of cell membrane phospholipids. When administered orally, citicoline exhibits more than 90% bioavailability. It functions as both a metabolite and a precursor of the neurotransmitter acetylcholine and serves as a fundamental component of cell membrane phospholipids. Consequently, citicoline plays a crucial role in neuronal structure and signaling. It has been shown to increase norepinephrine levels in the cerebral cortex and hypothalamus, as well as dopamine levels in the corpus striatum. Additionally, citicoline enhances serotonin levels in the cerebral cortex, striatum, and hypothalamus, and acetylcholine levels in the hippocampus and neocortex. Citicoline may also reduce brain glutamate activity by upregulating excitatory amino acid transporter-2 expression. Finally, citicoline increases tyrosine levels in the striatum and stimulates both tyrosine hydroxylase activity and dopamine release. Citicoline has been extensively studied in neurological disorders and appears to have potential beneficial effects in various conditions such as dementia, glaucoma, and stroke. However, the literature on citicoline in psychiatric disorders is more limited. Animal studies have shown that citicoline can increase acetylcholine, norepinephrine, dopamine, and serotonin concentrations in different brain regions, while human trials have demonstrated its therapeutic potential as an antidepressant and in mood management. It has been successfully used to reduce cravings in patients with substance use disorder and for mood stabilization in bipolar disorder. Citicoline has also shown positive effects on attention in various contexts, including improvements in sustained attention, cognitive effort, reaction time, and overall memory performance in healthy adolescents and adults. Given its role in enhancing dopamine synthesis, which is involved in attentional processes, citicoline may be a promising candidate for improving attention in patients with Attention-Deficit/Hyperactivity Disorder. Additionally, citicoline may exert an anti-inflammatory role by preventing excessive inflammatory responses in the brain through inhibition of free fatty acid release and reduction of blood-brain barrier disruption. Due to these effects, citicoline also appears to have beneficial therapeutic potential in patients with schizophrenia. In addition to its current effects, citicoline has been indicated as safe for use, including in pediatric patients, due to its low toxicity and rapid metabolism. This presentation will discuss the role of citicoline use in childhood psychiatric disorders.

Keywords: Attention-deficit/hyperactivity disorder, ADHD, childhood, citicoline, psychiatric disorder

[Abstract:0528]

Exploring The Connection Between Schizophrenia And Alzheimer's

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Schizophrenia (Sch) and Alzheimer's disease (AD) are neurodegenerative diseases characterized by structural changes in the brain and progressive cognitive impairment. It is known that their clinical features, pathophysiology, and courses differ substantially. Nevertheless, the connection between these two diseases has become an important research topic today, explored through various biological, genetic, and environmental factors. The fact that both diseases lead to cognitive impairment and exhibit some common symptoms has been a significant area of interest for researchers. This presentation aims to examine the possible relationships between Sch and AD, their similarities and differences, common pathological mechanisms, and treatment approaches.

Sch is a chronic mental disorder that typically begins in young adulthood and affects an individual's thought processes, emotional state, and behavior. It is characterized by symptoms such as hallucinations, delusions, and disorganized thinking. Particularly in elderly individuals, cognitive symptoms such as cognitive impairment, distractibility, and memory problems may arise. On the other hand, AD is a type of progressive dementia that is more commonly observed in older age groups, characterized primarily by memory loss, cognitive decline, communication difficulties, disorientation, and a decrease in daily functionality. In the later stages of the disease, personality changes, depression, and in some cases, behavioral anomalies may be observed. In elderly Sch patients, conditions may arise that can be confused with AD. Individuals with Sch have a higher incidence of developing dementia at older ages compared to the general population. This situation may likely be explained by a high prevalence of chronic medical conditions and exposure to antipsychotic medications. There have been reports suggesting that Alzheimer's-type pathology may be 6 to 12 times more prevalent in elderly Sch patients compared to the general population. Psychotic symptoms are frequently observed in AD, affecting 40-60% of patients. Compared to Alzheimer‘s patients without psychosis, the coexistence of AD and psychosis is associated with faster cognitive decline and worse outcomes.

Research suggests that there may be some shared pathological mechanisms between Sch and AD. Biological processes such as neuroinflammation, oxidative stress, and neurotransmitter imbalances play significant roles in both disorders. Radiological and pathological findings indicate a predisposition towards limbic involvement, and structural and atrophic changes in the medial temporal region are predominant in both conditions. Neurochemical alterations affecting the dopaminergic/cholinergic axis appear to be central to both Sch and AD. Although the underlying pathologies of the two disorders are different, there are similarities in regional brain dysfunction, biochemical dysfunction, and symptomatology.

The treatment for both disorders aims to alleviate symptoms. While the existing treatment options for AD focus on supporting cognitive functions, the treatment for Sch emphasizes the necessity of antipsychotic medications. Cognitive supportive therapy and psychoeducation can be included in the treatment processes for both conditions. Future research may reveal more connections between these two disorders and pave the way for the development of innovative treatment methods.

Keywords: Alzheimer Disease, pathogenesis, Schizophrenia, treatment

[Abstract:0530]

Obsessive-Compulsive Disorder (OCD) and Parental Attitudes

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Obsessive-Compulsive Disorder (OCD) is a mental health condition characterized by recurring obsessions, which are unwanted and distressing thoughts, and compulsions, which are repetitive behaviors performed to reduce the anxiety caused by these thoughts. OCD can significantly interfere with daily life and is influenced by genetic, neurobiological, and environmental factors. Among these factors, parenting plays a crucial role in both the development and progression of OCD.

Individuals exposed to overprotective, intrusive, or punitive parenting styles during childhood are at a higher risk of developing OCD symptoms. Overprotective parenting can limit a child's ability to develop problem-solving skills independently and reduce their tolerance for uncertainty, making them more vulnerable to obsessive thoughts. When children are not allowed to experience and manage uncertainty, they may develop compulsive behaviors as a way to regain a sense of control. Similarly, excessively punitive parenting can lead to heightened anxiety and perfectionistic tendencies, further increasing the likelihood of OCD symptoms.

In addition to parenting styles, childhood emotional neglect and traumatic experiences can also trigger OCD symptoms. Children who grow up in highly controlling or perfectionistic family environments may develop a deep-seated fear of making mistakes. As a coping mechanism, they might engage in repetitive thoughts and behaviors to avoid perceived failure or punishment. This pattern can persist into adulthood, reinforcing obsessive-compulsive tendencies. Studies have shown that individuals who experienced critical or emotionally distant parenting during childhood tend to exhibit higher levels of obsessive-compulsive behaviors later in life.

Furthermore, children of parents with OCD may develop heightened sensitivity to stress and uncertainty. Growing up in an environment where rigid routines and strict rules dominate can lead to difficulties in adapting to new situations. This can make them more prone to anxiety disorders, including OCD. The cycle of anxiety and compulsive behaviors can continue across generations if not addressed through appropriate interventions.

Despite these risks, a supportive and balanced parenting approach can help mitigate the impact of OCD. Encouraging children to develop independence, promoting emotional resilience, and allowing them to experience uncertainty in a controlled manner can reduce the likelihood of OCD development. Parents who recognize their own obsessive-compulsive tendencies can benefit from psychoeducation and therapy to prevent passing these behaviors on to their children.

Ultimately, parenting plays a fundamental role in the emergence and transmission of OCD. Understanding how different parenting styles contribute to OCD risk can help in developing preventive strategies. By fostering a nurturing and flexible environment, parents can support their children's emotional well-being and reduce their vulnerability to anxiety disorders.

Keywords: Ocd, parental attitudes, etiology

AuthorToEditor: [1] Vazquez M, Palo A, Schuyler M, et al. The relationship between adverse childhood experiences, symptom severity, negative thinking, comorbidity, and treatment response in youth with obsessive-compulsive disorder. Child Psychiatry Hum Dev. 2022. [2] Boger S, Ehring T, Berberich G, Werner GG. Impact of childhood maltreatment on obsessive-compulsive disorder symptom severity and treatment outcome. Eur J Psychotraumatol. 2020;11(1):1753942. [3] Destrée L, Brierley ME, Albertella L, Jobson L, Fontenelle LF. The effect of childhood trauma on the severity of obsessive-compulsive symptoms: A systematic review. J Psychiatr Res. 2021;142:345 360. [4] Tonna M, Ottoni R, Borrelli DF, et al. The association between childhood trauma and motor structure in obsessive-compulsive rituals: an ethological and evolutionary approach. Psychol Trauma. 2023.

[Abstract:0532]

Effects of Artificial Light at Night on Sleep

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Artificial light at night (ALAN) is an increasing environmental concern with significant consequences for sleep and overall health. The widespread use of light-emitting diodes (LEDs), electronic devices, and urban lighting has disrupted natural circadian rhythms, leading to sleep disturbances. This paper explores the mechanisms through which ALAN affects sleep, including melatonin suppression, circadian misalignment, and alterations in sleep architecture.

Melatonin, a hormone essential for sleep regulation, is highly sensitive to light exposure, particularly blue light (460–480 nm) emitted by screens and energy-efficient lighting. Research indicates that exposure to blue light in the evening delays sleep onset, reduces total sleep duration, and alters sleep quality (Chang et al., 2015). Additionally, studies show that ALAN affects sleep architecture, leading to increased sleep latency, reduced deep sleep (slow-wave sleep), and disrupted REM sleep, all of which are critical for cognitive function and overall well-being (Cajochen et al., 2011).

Beyond its impact on sleep, chronic exposure to ALAN has been associated with adverse mental and physical health outcomes. Epidemiological studies suggest a link between nighttime light exposure and mood disorders, metabolic dysregulation, obesity, and cardiovascular diseases (Chellappa et al., 2019). Moreover, shift workers exposed to irregular lighting schedules face an increased risk of metabolic syndrome and certain cancers, further highlighting the significance of circadian disruption.

To mitigate the negative effects of ALAN, various strategies have been proposed, including limiting screen time before bed, using blue light filters, adopting dim and warm lighting in the evening, and implementing urban lighting policies to reduce light pollution. Public health initiatives and regulatory changes may also play a role in addressing this growing concern.

In conclusion, artificial light at night is a major contributor to sleep disturbances and long-term health risks. While modern lighting technology has enhanced convenience, it is crucial to develop strategies to minimize exposure and promote healthy sleep hygiene. Future research should explore interventions to counteract the effects of ALAN and improve sleep health in an increasingly illuminated world.

Keywords: Artificial Light at Night, Circadian Rhythm Disruption, Light Pollution, Melatonin Suppression, Sleep Architecture

REFERENCES

1. Chang, A.-M., Aeschbach, D., Duffy, J. F., & Czeisler, C. A. (2015). Evening use of light-emitting eReaders negatively affects sleep, circadian timing, and next-morning alertness. Proceedings of the National Academy of Sciences, 112(4), 1232–1237.
2. Cajochen, C., Frey, S., Anders, D., Späti, J., Bues, M., Pross, A., et al. (2011). Evening exposure to blue light stimulates the human circadian clock. Journal of Sleep Research, 20(4), 407–413.
3. Chellappa, S. L., Morris, C. J., & Scheer, F. A. (2019). Effects of light on human circadian rhythms, sleep, and mood. Journal of Sleep Research, 28(5), e12810.

[Abstract:0533]

Child and Adolescent Mental Health After The Earthquake, Common Psychopathologies, and Post Traumatic Growth

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Every year, millions of children around the world are affected by natural disasters such as earthquakes, floods, hurricanes, and fires. Children are more vulnerable to the impacts of disasters and other traumatic events, both because of their emotional and developmental stages and due to their lack of experience, skills, and resources to meet their needs independently. Disasters have both short- and long-term effects on children. They can cause serious problems, particularly in physical, emotional, cognitive development, and psychosocial functioning and adaptation. The psychological impact of disasters on children can manifest as post-traumatic stress disorder (PTSD), depression, anxiety, emotional distress, sleep disturbances, increased fear, internalizing and externalizing behaviors, separation anxiety, re-enacting events, and heightened emotional numbness and arousal.

Depressive disorders and other mental health conditions, especially PTSD, are common among children and adolescents following earthquakes. While the exact prevalence of PTSD in this age group is still unclear, long-term studies have reported high rates. Adolescents had a 30.7% PTSD rate 21 months after a significant earthquake in Italy. A cross-sectional study also found that 64.8% of children in Pakistan had substantial PTSD symptoms 18 months after the 2005 Kashmir earthquake. Up to 50% of school-age children in Haiti were reported to have severe post-traumatic symptoms a year after the earthquake. In Turkey, 40.69% of adolescents displayed severe PTSD symptoms six months after the 2011 Van earthquake. In a Chinese study of children and adolescents exposed to two significant earthquakes, the 12-month PTSD rate was 43.9% and the depression rate was 20.9%. A 30-month assessment of the same sample revealed that 15.7% of subjects met the criteria for PTSD and 21.6% for depression. Factors contributing to the emergence of post-earthquake psychiatric disorders in children include the earthquake's magnitude, being trapped under rubble, loss of loved ones, witnessing deaths, gender, prior traumatic experiences, parental relationships, and their level of functioning before the earthquake. According to research, young people's psychological reactions to a disaster may be lessened by acceptance, emotional expression, and cognitive reframing. On the other hand, social disengagement, blame and resentment, and avoidant coping mechanisms have all been linked to increased levels of depression and symptoms of PTSD in young people.

Some children experience positive change due to their struggles with the disaster and its aftermath, described as posttraumatic growth (PTG). Just as the severity of a traumatic event influences the development of PTSD, it also relates to the occurrence of PTG. Current research indicates that trauma severity is a prerequisite for PTG development, rather than an obstacle. Although findings on the specific relationship between indicators of severity and PTG are mixed, it seems that the event's severity contributes to distress, which can catalyze aspects of the PTG process, such as questioning one's core belief a fundamental step for growth to occur. Besides trauma severity, parameters such as sociocultural characteristics, collective and religious coping strategies, perceived social support, and age were also linked to the development of PTG.

Keywords: Earthquake, children, Trauma, psychopathology, Post-traumatic growth

[Abstract:0534]

Psychological Interventions in The Acute Post-Earthquake Period in The Hatay Sample

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On February 6, 2023, a 7.7-magnitude earthquake struck the Pazarcık district of Kahramanmaraş, marking one of Turkey's most devastating disasters in the past 80 years. Affecting 11 provinces, with Hatay being one of the hardest hit, the earthquake directly impacted approximately 15 million people and caused extensive structural destruction. Beyond its physical devastation, the psychological effects of the earthquake have been profound. Individuals who experience the disaster may exhibit various psychological responses as they cope with loss and destruction. In particular, psychological interventions in the acute phase can help individuals navigate the traumatic process more healthily.

Factors that hinder the provision of essential needs during natural disasters can also limit the implementation of psychosocial support. The Kahramanmaraş Earthquake of February 6 presented nearly all adverse conditions simultaneously, including severe weather, extensive destruction, disrupted transportation, a vast affected region, and inadequate rescue and support efforts. Post-disaster psychological interventions primarily include Psychological First Aid (PFA) and Skills for Psychological Recovery (SPR). According to the World Health Organization (WHO), PFA is a humane and practical approach that supports individuals in crisis and helps them avoid maladaptive coping mechanisms (1). This process prioritizes ensuring safety, activating social support mechanisms, and fostering individuals' self-efficacy. SPR, on the other hand, aims to enhance individuals' functionality after trauma without framing psychological distress as a disorder (2).

Common psychological responses observed in individuals during the acute phase include recurrent traumatic memories, nightmares, intense anxiety, avoidance behaviors, emotional numbness, and hypervigilance. Additionally, difficulty managing anger, depressive symptoms, and heightened arousal may occur (3). Most of these reactions are considered normal psychological responses to extraordinary circumstances. However, in some individuals, these symptoms may intensify and develop into long-term mental health disorders. Mental health professionals working in the field should assess the general psychological state of individuals, identify those exhibiting severe symptoms, and refer them for necessary interventions. Those at risk of harming themselves or others should be carefully evaluated for psychiatric conditions (3).

Guidelines indicate that traditional psychotherapy methods are not suitable during the first month following a disaster. Techniques such as analytical therapy, Eye Movement Desensitization and Reprocessing (EMDR), and cognitive processing therapy are not recommended in this period. Additionally, medication should be considered only in specific cases. Pharmacological interventions may be warranted in cases where acute stress reactions involve self-harm risk or severe treatment noncompliance. In instances of agitation, severe re-experiencing symptoms, psychosis, or severe dissociation, low-dose atypical antipsychotics may be considered, whereas benzodiazepines are not recommended (4). For sleep disorders, ensuring a safe environment and promoting sleep hygiene should be prioritized, with hypnotic agents used only when necessary.

In conclusion, post-earthquake psychological interventions in the acute phase should ensure individuals' safety and strengthen their psychological resilience. Psychological First Aid (PFA) and Skills for Psychological Recovery (SPR) emerge as the most effective early interventions. Long-term psychological support should be planned to help individuals cope with potential mental health challenges in the future.

Keywords: Earthquake, Trauma, Acute intervention

AuthorToEditor: 1. Erdur-Baker Ö. Psychological First Aid: A Guide for Field Workers. World Health Organization (WHO); 2014. 2. Basterzi A, Yüksel S, Aker A, et al. Assessment and Immediate Interventions After Mass Traumas Caused by Human Factors. 2017. 3. Yıldız MI, Basterzi AD, Yıldırım EA, Yüksel Ş, Aker AT, Semerci B, et al. Mental Health Services for the Protection and Treatment in the Early Period After an Earthquake – Turkish Psychiatric Association Expert Opinion. Turk J Psychiatry. 2023;34(1). 4. Nasrallah HA, Sarihan P. The Use of Antipsychotics in PTSD. In: Nemeroff C, Marmar C, editors. Post-Traumatic Stress Disorder. New York: Oxford University Press; 2018.

[Abstract:0535]

Why We Need Norms?

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Traditional neuroimaging studies in schizophrenia have primarily relied on mean group statistical comparisons to investigate differences in brain structure or function between patient groups and healthy controls. These approaches typically involve calculating average measures, such as gray matter volume or cortical thickness, and testing for statistically significant differences at the group level. While this methodology has led to important discoveries about schizophrenia-associated brain alterations, it inherently focuses on central tendencies and often overlooks the substantial heterogeneity within patient populations. Specifically, mean group comparisons tend to average out individual differences, potentially masking clinically relevant patterns that exist in subgroups or outliers within the schizophrenia population.

Normative modeling represents a methodological advancement that addresses these limitations. Instead of comparing group averages, normative modeling builds a reference model based on data from healthy individuals, accounting for variables such as age, sex, and other covariates. Each patient‘s brain measurements are then compared to this normative reference to quantify the degree and direction of deviation on an individual basis. This approach produces deviation scores (often in the form of z-scores) that reflect how atypical a patient‘s brain structure is relative to the normative population.

In schizophrenia research, normative modeling offers distinct advantages. First, it allows researchers to capture and quantify the heterogeneity within the patient group, identifying individuals who show marked deviations in specific brain regions while others may appear neuroanatomically typical. Second, it facilitates the identification of neurobiological subtypes or biotypes within schizophrenia by clustering patients based on their individual deviation patterns. These subtypes may correspond to differences in symptom profiles, cognitive impairments, or treatment responses, offering the potential for more tailored clinical interventions.

Moreover, normative modeling provides an effective framework for integrating neuroimaging data with clinical and cognitive assessments, advancing the goals of precision psychiatry. By moving beyond average group-level effects, it enables a more nuanced understanding of the relationship between brain abnormalities and clinical outcomes in schizophrenia. Recent studies applying normative modeling have demonstrated that only a subset of schizophrenia patients exhibit extreme deviations from normative brain structure, reinforcing the notion that schizophrenia is not a uniform disorder but rather encompasses diverse neurobiological trajectories.

In conclusion, normative modeling offers significant methodological and clinical benefits over traditional mean group statistics in schizophrenia research. It enhances the ability to detect individual differences, uncover latent subtypes, and bridge neuroimaging findings with personalized treatment strategies, thereby contributing to a deeper, more individualized understanding of the disorder.

Keywords: Biomarkers, Magnetic Resonance Imaging, Neuroimaging,Precision Medicine, Schizophrenia

[Abstract:0536]

Psychological Pathologies Emerging After The Earthquake and Predisposing Factors

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Earthquakes, due to their sudden occurrence and uncontrollable nature, are classified as traumatic events, providing a foundation for the emergence of psychological pathologies. Individual differences can exist in the impact of stress and trauma. An individual's resilience to an earthquake's traumatic effects depends on multiple factors. Factors such as the magnitude and duration of the earthquake, preparedness for such an event, personal characteristics, coping skills, the significance of losses, prior experiences, a history of psychological trauma or psychiatric disorders, and social support influence an individual's response to trauma. The most commonly observed psychological disorders following earthquakes include post-traumatic stress disorder (PTSD), depression, anxiety disorders, and substance use disorders.

Additionally, psychological conditions such as sleep disturbances, grief, and somatic disorders may also arise. Early psychological symptoms following disasters should generally be regarded as a normal response to an abnormal event. Intense negative emotions are common in the aftermath of such traumatic events. In the early phase, individuals may experience a sense of reliving the event, recurrent nightmares, or intrusive flashbacks. These symptoms may be accompanied by anxiety, worry, fear, and distress. Moreover, physical symptoms such as palpitations and difficulty breathing may also emerge. Over time, avoidance behaviors, hyperarousal symptoms, and depressive mood states may develop.

In the long term, untreated psychological conditions may lead to chronic psychiatric disorders that persist for a lifetime. These disorders include PTSD, depression, anxiety disorders, alcohol and substance use disorders, somatic symptom disorders, dissociative disorders, sexual dysfunctions, sleep disorders, pain disorders, and psychotic disorders. Some of these disorders may have existed in individuals before the traumatic event. However, earthquakes and their traumatic effects can trigger the onset of these conditions or exacerbate mild symptoms, leading to more severe manifestations [1]. The pooled incidence of PTSD has been reported as 28.76%, while the incidence among earthquake survivors diagnosed more than nine months after the disaster was found to be 19.48% [2]. The prevalence of anxiety disorders is 20.49%, while depression prevalence is reported as 32.16% [3]. A study conducted after an earthquake revealed that the prevalence of problematic alcohol use one year after the disaster was 8.5%. Disaster-related factors such as occupational changes and physical and psychological health problems were identified as risk factors contributing to increased alcohol consumption over time [4].

Psychological pathologies emerging in the aftermath of an earthquake pose serious threats to the well-being of individuals and communities. Early intervention, professional support, and community-based approaches play crucial roles in managing these pathologies. Adopting a multidisciplinary approach can help support individuals' recovery following trauma and minimize the long-term psychological effects.

Keywords: Earthquake, psychopathology,Predisposing Factors, adult

AuthorToEditor: 1. Polat I, Anuk D, Özkan M, Bahadır G. Mental health in the aftermath of disasters: Psychological effects, treatment approaches, and coping. J Istanbul Fac Med. 2023; 86(4): 393-401. 2. Dai W, Chen L, Lai Z, Li Y, Wang J, Liu A. The incidence of post-traumatic stress disorder among survivors after earthquakes: A systematic review and meta-analysis. BMC Psychiatry. 2016;16:1-11. 3. Cénat JM, McIntee SE, Blais-Rochette C. Symptoms of posttraumatic stress disorder, depression, anxiety, and other mental health problems following the 2010 earthquake in Haiti: A systematic review and meta-analysis. J Affect Disord. 2020; 273: 55-85. 4. Ueda Y, Murakami M, Maeda M, Yabe H, Suzuki Y, Orui M, et al. Risk factors for problem drinking among evacuees in Fukushima following the Great East Japan Earthquake: The Fukushima Health Management Survey. Tohoku J Exp Med. 2019; 248(4): 239-52.

[Abstract:0537]

Positive Change After the Earthquake: Post Traumatic Growth

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Traumatic experiences are as old as human history. However, until the 20th century, when trauma was mentioned, physical trauma came to mind. Post-disaster traumatic stress reactions include a wide range of reactions, such as grief, fear, and anxiety, as well as more serious psychiatric disorders, such as post-traumatic stress disorder (PTSD). However, there are also various positive changes after trauma. The literature explains these experiences with concepts such as finding benefits, construing benefits, perceived benefits, thriving, positive psychological change, flourishing, and stress-related development. Tedeschi and Calhoun introduced the concept of post-traumatic growth in the 1990s. Although they used the term perceived benefit in their first study, they abandoned this concept since there are situations where a person can benefit without transforming. For PTG to occur, an adverse life event that challenges and destroys one's hypothetical world is required. Tedeschi and Calhoun have described such events as seismic events. Similar to the impact of an earthquake, they emphasized the destructive effects of traumatic experiences on one's core beliefs about oneself, the world, and the future. PTG is not based on acute reactions after a challenging event. On the contrary, the cognitive and emotional changes that develop in the person over months and years are related to PTG. In this context, it is both a process and an outcome. PTG is a serious process of struggle after a traumatic event. Initially, the struggle for survival turns into a process of change and development. For this reason, it is different from resilience, which indicates resistance to trauma and return to old functioning. The occurrence of PTG does not exclude the presence of psychological stress in the person. A person may develop both PTSD and PTG at the same time.

PTG can be examined in five dimensions: personal strength, Relating to others, new possibilities, appreciation of life, and spiritual and existential change. Although traumatic and challenging life events are theoretically necessary for the development of PTG, later studies have shown the presence of PTG as a result of life events such as giving birth and achieving serious success. PTG can also develop as a result of positive events that can potentially transform one's schemas. PTG has been demonstrated in many regions of the world and different cultures. In light of these results, it has been suggested that PTG is not an element of a particular culture but a universal condition. Research over many years has consistently demonstrated the presence of PTG. Therefore, positive changes, as well as psychopathological conditions such as PTSD that develop after trauma, deserve more attention from the academic world.

Keywords: Earthquake, trauma, traumatic stress, posttraumatic growth

[Abstract:0538]

What is the Role of Cholinergic Neurotransmission in Schizophrenia Symptoms?

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Schizophrenia is a complex and heterogeneous mental disorder characterized by positive symptoms, negative symptoms, and cognitive dysfunction. Considering the disability it causes, uncovering its causes and treating it is critical. The role of the dopaminergic system in schizophrenia has been extensively studied before. However, increasing evidence suggests that cholinergic neurotransmission also plays a significant role in the pathophysiology of schizophrenia. Studies have shown that various symptoms of schizophrenia are associated with the cholinergic system. Nicotinic and muscarinic receptors have been held responsible for this relationship.

Post-mortem and neuroimaging studies have revealed changes in the density and function of muscarinic and nicotinic acetylcholine receptors in patients with schizophrenia. The decreased function of muscarinic acetylcholine receptors has been associated with more severe positive and negative symptoms. In fact, it has been suggested that some patients with severe hallucinations and cognitive dysfunction may represent a subtype associated with decreased muscarinic 1 receptor density and function. In addition, it has been determined that there is altered cholinergic transmission in the basal forebrain, a critical region for attention processes and sensory gating. This change is associated with cognitive impairments. This finding demonstrates the role of muscarinic acetylcholine receptor dysfunction in the emergence of symptoms of schizophrenia.

Nicotinic acetylcholine receptors are also thought to play an important role in the pathophysiology of schizophrenia. Nicotinic receptors are particularly dense in the hippocampus and prefrontal cortex, which are closely associated with information processing and sensory gating. Studies using positron emission tomography revealed a decrease in nicotinic acetylcholine receptor density in the hippocampus of schizophrenia patients. This decrease was associated with more severe positive symptoms and worse cognitive function.

The functions of the cholinergic system are related to the pathophysiology of schizophrenia not only at the receptor level but also at the level of acetylcholine release and disruptions in signaling pathways. Dysfunction in the basal forebrain cholinergic nuclei has been linked to negative symptoms and attention deficits. The basal forebrain is critical for sending widespread cholinergic projections to the cortex and hippocampus. In addition, patients with schizophrenia often exhibit reduced cholinergic activity in frontal brain regions. This may contribute to the lack of motivation and loss of cognitive flexibility in patients with schizophrenia.

In conclusion, cholinergic dysfunction can be considered as a factor directly related to the symptoms of schizophrenia. While muscarinic acetylcholine receptor disorders significantly affect positive and negative symptoms, nicotinic acetylcholine receptor disorders seem to be related to cognitive dysfunction in schizophrenia. Future research should clarify the underlying causes of cholinergic dysregulation. In addition, they should focus on determining the optimal therapeutic approaches and developing cholinergic agents that maximize efficacy while minimizing side effects. Furthermore, investigating combined therapies that integrate cholinergic modulation with other neurotransmitter-targeting strategies will contribute to developing more comprehensive treatments and improved treatment outcomes.

Keywords: Schizophrenia, cholinergic system, muscarinic receptors, nicotinic receptors, neurotransmission, psychotic symptoms

AuthorToEditor: Dean, B., Bakker, G., Ueda, H. R., Tobin, A. B., Brown, A., & Kanaan, R. A. A. (2023). A growing understanding of the role of muscarinic receptors in the molecular pathology and treatment of schizophrenia. Frontiers in Cellular Neuroscience, 17, 1124333. Eickhoff, S., Franzen, L., Korda, A., Rogg, H., Trulley, V.-N., Borgwardt, S., & Avram, M. (2022). The basal forebrain cholinergic nuclei and their relevance to schizophrenia and other psychotic disorders. Frontiers in Psychiatry, 13, 909961. Wong, N. R., Rubin, L. H., Harrington, C. K., et al. (2024). Hippocampal availability of the α7 nicotinic acetylcholine receptor in recent-onset psychosis. JAMA Network Open, 7(8), e2427163.

[Abstract:0539]

Malpractice in Psychiatric Diseases

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Malpractice is defined by the World Medical Association as a health professional‘s failure to follow standard protocols, inadequate patient care, or lack of knowledge that results in harm to a patient. Psychiatry is considered a field where medical malpractice is rarely seen. Studies report that psychiatric malpractice cases are clustered as misdiagnosis, incorrect or ineffective treatment, medication errors, forced detention in hospital, violations of patient-doctor relationships that exceed boundaries, and incorrect assessment of patients at risk of suicidal and homicidal tendencies (1).

In recent years, the nature of the relationships between physicians and other health professionals and patients and their relatives in the field of medicine has changed significantly. The paternalistic approach, in which the physician traditionally played an active role, has evolved towards a common understanding and collaboration between the physician and the patient. In this process, factors such as incomplete information or pressure should be avoided. These can negatively affect the patient's autonomy and decision-making capacity (2).

Failure to make a correct diagnosis makes the reliability of medical decisions made during the clinical course questionable. It is possible to start the wrong medication after making a wrong diagnosis. Although suicidal ideation and attempts are associated with an increased risk of suicide, most individuals with suicidal ideation or a history of suicide attempts do not die by suicide. In this context, even under the best of circumstances, attempting to predict a rare behavior such as suicide inevitably yields a large number of false positives or false negatives (1). There is a widespread belief in society that psychiatrists can identify potential perpetrators of violence. From a malpractice perspective, psychiatrists are not expected to predict who will commit violence or prevent all acts of violence (3). Boundary violations are an uncommon but still significant cause of malpractice lawsuits against psychiatrists. The decision of "compulsory hospitalization", which restricts the patient's freedom, must be based on solid foundations, even if it is for the purpose of treatment. Otherwise, it can be considered medical malpractice (1). Various aspects of telepsychiatry include diagnosis, prescribing, health information exchange, social media use, smartphone applications, and mobile health screenings. The use of information and communication technologies may be a particular area of psychiatric malpractice.

Psychiatrists may face professional liability arising from malpractice lawsuits and investigations and hearings conducted by healthcare institutions. Many psychiatrists fail to adequately anticipate the severity of regulatory sanctions they may face and may overlook potential risks. The uncertain effectiveness of legislative and systemic efforts to reduce physicians' exposure to malpractice claims suggests that the most effective measures lie in the hands of individual clinicians.

Keywords: Malpractice, psychiatric diseases, suicide, telepsychiatry

REFERENCES

1. Karataş Kader Semra; Okumuş Burak. Psikiyatrik Hastalıklarda Malpraktis. Turkiye Klinikleri Forensic Medicine-Special Topics, 2024, 10.1: 73-81.
2. Kurt MG. Tıbbi Müdahalelerde Aydınlatılmış Onam. TBB Dergisi. 2020, (146):187–218.
3. Resnick P, Saxton A. Malpractice Liability Due to Patient Violence. Focus (American Psychiatric Publishing). 2019, 17(4):343–348.

[Abstract:0540]

Artificial Intelligence and Psychiatry

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Intelligence can be defined as the ability of people to think logically, interpret, learn and produce solutions to problems in the face of events and situations they encounter. The concept of artificial intelligence (AI) is the study of developing algorithms and computer software that have the ability to think, interpret and make decisions like humans, which means that these cognitive abilities inherent in humans are analyzed and adopted by machines. AI has long been used in the field of medicine to facilitate early diagnosis, provide a better understanding of disease progression, optimize drug/treatment dosages and reveal new treatments. Although it is unlikely to completely replace clinicians, intelligent systems are increasingly being used to support clinical decision-making. Mental health disorders are a difficult field to work with the concept of AI. AI has also made a place for itself in behavioral sciences because it can use very large data sets and rapidly synthesize information to optimize complex human behavior patterns that are difficult for humans to extract (1).

AI has been coupled with machine learning to develop discriminatory factors to create a learning algorithm that continuously becomes more efficient, which helps in the early detection and prevention of patients with psychosis. Machine learning algorithms have successfully discriminated healthy patients from patients with psychotic disorders with the accuracy more than 70%. AI has been used in studies to assay disordered language production and to differentiate speech samples of patient with psychotic disorders from healthy controls (2).

Much work has been done using AI on affective disorders, obsessive compulsive disorders, posttraumatic stres disorders. AI techniques are also used in insomnia, parasomnia and respiratory sleep disorders (3). However, since psychiatry adopts a more applied and patient-centered approach in clinical practice and directly observes patient emotions and behaviors, the use of AI in psychiatry may pose a problem. Since mental health is based on skills such as establishing relationships, empathizing, and observing patient emotions and behaviors, AI can sometimes be disadvantageous when it comes to psychiatric problems. Again, issues such as patient privacy, data reliability, and AI ethics come to the fore. In this sense, we believe that it is important to investigate the importance of AI in psychiatric diseases, treatment, and prognosis, and ethical and judicial issues that may arise.

Keywords: Artificial intelligence, psychiatry, ethic

REFERENCES

1. Turan, B., Gülşen, M., Yılmaz AE. (2022). Psikiyatrik Bozukluklarda Yapay Zeka Uygulamaları. J Ankara Univ Fac Med.,75(1): 56-62.
2. Abd-Alrazaq, A., Alhuwail, D., Schneider, J., Toro, C. T., Ahmed, A., Alzubaidi, M.,. & Househ, M. (2022). (The performance of artificial intelligence-driven technologies in diagnosing mental disorders: an umbrella review. Npj Digital Medicine, 5(1), 87.
3. Goldstein, C. A., Berry, R. B., Kent, D. T., Kristo, D. A., Seixas, A. A., Redline, S., & Westover, M. B. (2020). Artificial intelligence in sleep medicine: background and implications for clinicians. Journal of Clinical Sleep Medicine, 16(4), 609-618.

[Abstract:0541]

Cognitive Functions in Early-onset Bipolar Affective Disorders: What Do Neurocognition and Social Cognition Tell Us?

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Bipolar Disorder (BD) is a chronic, recurrent disorder, characterized by mood and energy fluctuations, and impairments in mood, energy, thought processes, psychomotor activity, and functioning. It affects more than 1% of the population, regardless of socioeconomic level and race. Early-onset BD (EBD) is defined as the onset of symptoms before the age of 18 (1),and thought to have a significant and high-level effect on functioning. Neurocognition encompasses all aspects of learning about, understanding and knowing the world around oneself, includes all mental abilities, such as attention, perception, memory, language processing, visuospatial ability, executive functions and others used to interact with and make sense of the environment. Social cognition is defined as the ability of a person to perceive social and verbal cues about other people and themselves. The ability to predict, interpret and explain the feelings and thoughts of others is called theory of mind (2).

Neurocognitive tests are objective performance-based measurement tools used to measure cognitive functions in the evaluation of many different psychiatric disorders, especially psychotic disorders, BD and major depressive disorder (MDD). Previous research indicated that neurocognitive functions are parallel to the daily functioning of the patients in both manic episode and remission periods. There are numerous meta-analyses and studies in the literature about the impairment in neurocognition in EBD, and the results are various regarding the domains of impairment, although the most consistent results were about the impairment in verbal memory (3). Also, previous systematic review and meta-analysis indicated ToM deficits with large effect sizes in EBD (4).

Mood state might have an effect on neurocognitive deficits in EBD. However, previous studies suggested no correlation between mood state and neurocognition (3), nevertheless, to the best of our knowledge, there is no previous research evaluating neurocognition and social cognition comparing mood states in hospitalized adolescents with manic episode as well as their euthymic phase and in comparison to euthymic patients in the outpatient clinic. In our study, we aimed to compare the neurocognitive and social cognitive abilities in manic episode and remission period in EBD both in independent case groups, and also with the reassessments in different phases in same individuals. Our results suggested that patients in manic episode had significant impairments in all domains, while cases in remission period had impairments in all domains except attention, additionally, impairments in attention, response inhibiton, problem-solving and processing speed were more pronounced during manic phase in repeated measures. The ToM deficits were present in the patients with EBD regardless of mood state.

Keywords: Adolescent, Bipolar Disorder, Neurocognition, Social Cognition

[Abstract:0542]

Psychiatric Disorders and Current Treatment Approach in HIV Cases

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Human immunodeficiency virus (HIV) attacks the body's immune system and, at its most advanced stage, leads to acquired immunodeficiency syndrome (AIDS). HIV remains a significant global public health challenge, having claimed nearly 42.3 million lives to date. While there is no cure for HIV infection, various psychiatric conditions may be observed throughout the course of the illness. Common neuropsychiatric disorders associated with HIV include minor cognitive motor disorder, delirium, HIV-associated dementia, major depressive disorder, bipolar disorder, schizophrenia, substance use disorders, and post-traumatic stress disorder. Neuroinflammation, social stigmatization, and adverse effects of antiretroviral therapy are potential contributing factors to psychiatric disorders in individuals living with HIV. Untreated psychiatric conditions may lead to a lower quality of life, reduced adherence to treatment, increased morbidity and mortality, and social isolation. Thus, the management of psychiatric disorders in HIV patients is quite important. Determining the side effects of treatment and evaluating potential drug interactions are critical aspects of psychiatric care for this population. This study aims to provide a comprehensive review of the current evaluation and treatment strategies for psychiatric disorders in individuals living with HIV.

Keywords: Depression, HIV, neuroinflammation, substance use

REFERENCES:

1) Goodlet, K. J., Zmarlicka, M. T., & Peckham, A. M. (2019). Drug–drug interactions and clinical considerations with co-administration of antiretrovirals and psychotropic drugs. CNS spectrums, 24(3), 287-312.
2) Chhatre, S., Woody, G., Metzger, D. S., & Jayadevappa, R. (2021). Burden of chronic conditions among persons with HIV/AIDS and psychiatric comorbidity. Current HIV research, 19(6), 504-513.
3) Oyedun, A. R., & Oluwatoyin, G. O. (2023). HIV associated psychiatric comorbidity among attendees at a tertiary hospital, North-Eastern Nigeria. South African Journal of Psychiatry, 29(1).

[Abstract:0544]

The Use of Event-Related Potentials in Child and Adolescent Psychiatry: Its Role in the Diagnosis of Neurodevelopmental Disorders

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Event-related potentials (ERPs) are a neurophysiological technique that measures the brain's electrical activity. ERPs record the brain's electrical responses to specific stimuli (e.g., auditory or visual) and the timing and amplitude of these responses contribute to understanding the brain's cognitive and emotional processes. The use of ERPs in child and adolescent psychiatry offers a significant innovation in the diagnosis and treatment of neurodevelopmental disorders. It is known that brain functions differ in conditions such as Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorder (ASD), learning disabilities, and other neurodevelopmental disorders. ERPs can objectively measure these differences, helping to accelerate the diagnostic process and leading to more accurate diagnoses. In studies related to ADHD, one of the most common neurodevelopmental disorders, disruptions in brain responses to specific stimuli have been observed. In these studies, it has been found that the P300 wave is typically of smaller amplitudes and longer latencies in individuals with ADHD [1]. This suggests that these individuals have difficulty focusing their attention on stimuli. ERPs provide some criteria that may be decisive in the diagnosis of ADHD and may also be effective in monitoring the treatment process. In autism, ERPs have been used to evaluate brain responses to social stimuli. It has been found that individuals with ASD generally show weak brain responses to social cues such as face recognition and eye contact, and that there are timing differences in these responses. Specifically, the N170 wave has been found to have lower amplitudes or be delayed [2]. These types of disorders can affect children's ability to engage in social interaction and empathize, so ERPs can aid in diagnosis and treatment planning in this area.ERPs are also used in the assessment of learning disabilities and language development disorders. In children and adolescents with learning disabilities, the N400 wave is generally observed to have lower amplitudes. This indicates disruptions in the processing of language meaning. Abnormalities in language processing can lead to significant changes in the characteristics of ERP waves, providing objective data in the assessment of children with language disorders [3]. The role of ERPs in the diagnosis of neurodevelopmental disorders not only helps confirm the diagnosis but also contributes to the development of treatment strategies. ERPs are also used to track changes in the brain during the treatment process and to evaluate the response to therapy. In conclusion, ERPs offer a powerful tool for diagnosing neurodevelopmental disorders in child and adolescent psychiatry. By revealing subtle differences in brain function, they can help create early intervention and accurate treatment plans. However, using this method in conjunction with other diagnostic tools can contribute to a more comprehensive and accurate evaluation.

Keywords: Children, adolescent, event related potentials (ERPs), neurodevelopmental disorder

AuthorToEditor: References 1. Kaiser, A., Aggensteiner, P. M., Baumeister, S., Holz, N. E., Banaschewski, T., & Brandeis, D. Earlier versus later cognitive event-related potentials (ERPs) in attention-deficit/hyperactivity disorder (ADHD): a meta-analysis. Neuroscience & Biobehavioral Reviews. 2020;112, 117-134. 2. Kang, E., Keifer, C. M., Levy, E. J., Foss-Feig, J. H., McPartland, J. C., & Lerner, M. D. Atypicality of the N170 event-related potential in autism spectrum disorder: a meta-analysis. Biological Psychiatry: Cognitive Neuroscience and Neuroimaging. 2018;3(8), 657-666. 3. Basma, B., Savage, R., & Bertone, A. The N400 in readers with dyslexia: A systematic review and meta-analysis. International Journal of Psychophysiology. 2024; 196, 112283.

[Abstract:0545]

Digital Addiction and the Developing Brain: Neurobiological Mechanisms and Pharmacological Approaches

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Behavioral addictions encompass excessive and uncontrollable repetitive behaviors that result in significant harm or distress, with digital addictions being recognized as a subset within this category. The increasing prevalence of digital addiction has raised growing concerns, particularly regarding its impact on the developing brain. As digital technologies become more integrated into daily life, excessive and uncontrolled use has been linked to alterations in neural pathways associated with reward processing, impulse control, and cognitive development. Emerging research suggests that prolonged digital engagement may contribute to structural and functional changes in the brain, potentially affecting attention, emotional regulation, and decision-making abilities. Given these implications, there is a pressing need for further investigation into the neurobiological mechanisms underlying digital addiction and the development of effective intervention strategies. This panel aims to explore the neurobiological mechanisms of digital addiction and assess the potential of pharmacological interventions.

Advancements in understanding the brain's reward circuitry have led to a paradigm shift in addiction theory, suggesting that individuals are not necessarily addicted to a specific substance or activity, but rather to the neurological response it triggers. Therefore, researchers argue that the neurobiological models used in substance use disorders can also be integrated into the study of digital addictions. Although addictive substances and stimulating digital technologies differ in the way they are processed by the brain, both appear to activate a shared pathway responsible for experiencing, reinforcing, and regulating pleasure: the mesocorticolimbic dopamine system. Dysfunction in this system is considered a hallmark of both substance use disorders and behavioral addictions.

One of the most comprehensive neurobiological models explaining the relationship between addictive behavior and brain dysfunction is the dual processing model. The dual processing model explains addiction as an imbalance between the "go" network (reactive system, RaS) and the "stop" network (reflective system, RfS). The go network, involving the mesolimbic and mesocortical dopamine pathways, nucleus accumbens, striatum, and amygdala, drives impulsive, reward-seeking behavior. In contrast, the stop network, including the ventromedial, dorsolateral, and anterior cingulate prefrontal cortices, regulates inhibitory control and long-term decision-making. Although the long-term effects of digital addiction on brain development are not yet fully understood, studies suggest its impact on anxiety, hyperactivity, memory, and learning.

In the treatment of digital addictions, psychotherapeutic and psychoeducational approaches should be the primary interventions. However, pharmacotherapy may be considered as an adjunct to these approaches. Various psychopharmacological agents may play a role in the medical management of Internet addiction and related disorders; however, research on pharmacological interventions remains limited in scope and depth. Some degree of efficacy has been observed with different classes of medications, including antidepressants, opioid receptor antagonists and partial agonists, mood stabilizers, antipsychotics, glutamatergic agents, N-methyl-D-aspartate (NMDA) receptor antagonists, and psychostimulants.

Keywords: Digital addiction, neurobiology, pharmacological approaches

[Abstract:0546]

Progression in Schizophrenia: Longitudinal Studies

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PROGRESSION IN SCHIZOPHRENIA: LONGITUDINAL STUDIES

Longitudinal studies for schizophrenia are being conducted at an increasing pace and their results are being shared. Longitudinal studies are ongoing in many areas, especially high-risk groups, transdiagnostic approaches, treatment efficacy, disease prognosis and natural follow-up studies. Today, I will talk about the groundbreaking and guiding studies on disease prognosis published in the last few years.

The first study is the study by Fan et al. in March 2025, in which they followed 49 First Episode Psychosis patients for 12 weeks with risperidone at 2–6 mg/day and examined the difference between brain age and healthy individuals. The brain age gap was found to be high in patients who did not respond to treatment.

The second study is the study by Kreis et al. in September 2024, in which they examined 10 years of follow-up of 192 psychosis patients and their substance use during this follow-up. The high use of stimulants and cannabis, especially in the delayed psychotic remission and psychotic relapse subgroups, is a notable result of the study.

In the Finnish cohort investigating the relationship between polygenic scores and hospitalizations, approximately 10,000 patients with psychotic symptoms were examined, and it was shown that schizophrenia diagnosis and schizophrenia polygenic score were most associated with hospitalizations over the years.

In a 2-year follow-up study examining which brain region is associated with relapses in schizophrenia patients and the pathophysiology of the disease, the thalamus was identified as the central region and was suggested as a key region for further psychosis research.

In a 20-year follow-up study conducted to evaluate cognitive impairment in schizophrenia patients and its change over the years, 49.2% of the patients showed stable, 20.3% had improving and 30.5% had deteriorating global neurocognitive scores.

In a study conducted to investigate the effect of age of onset on the prognosis of the disease, 74 First-episode psychosis patients with a wide age range at onset (15-35 years) were included and followed for 2 years. It was determined that cortical thinning in the temporal region was evident in those with early onset of the disease.

It is known that schizophrenia can show symptoms like other psychiatric diseases during the prodrome period and is especially closely related to OCD. 35,255 adolescents and adults with OCD were enrolled between 2001 and 2010 and followed up at the end of 2011 for the identification of de novo schizophrenia. At the end of the 11-year follow-up period, the crude cumulative progression rate from OCD to schizophrenia was 6%, and the estimated progression rate totaled 7.80%. Male sex (hazard ratio: 1.23), obesity (1.77), cluster A personality disorder (2.50), and a family history of schizophrenia (2.57) were also related to an elevated likelihood of subsequent progression to schizophrenia in patients with OCD.

In a study monitoring the weight gain side effects of antipsychotic drugs used in schizophrenia, At 5-year follow-up, 53.6% of those psychosis patients with a healthy BMI (18.5–25.0 kg/m2) transitioned to obese/overweight BMI.

Keywords: Schizophrenia progression, longitudinal studies, psychosis

AuthorToEditor: References Chen, M. H., Tsai, S. J., Liang, C. S., Cheng, C. M., Su, T. P., Chen, T. J., & Bai, Y. M. (2023). Diagnostic progression to schizophrenia in 35,255 patients with obsessive-compulsive disorder: a longitudinal follow-up study. European archives of psychiatry and clinical neuroscience, 273(3), 541–551. https://doi.org/10.1007/s00406-021-01361-w Fan, L., Zhang, Z., Ma, X., Liang, L., Yuan, L., Ouyang, L., Wang, Y., Li, Z., Chen, X., He, Y., & Palaniyappan, L. (2025). Brain Age Gap as a Predictor of Early Treatment Response and Functional Outcomes in First-Episode Schizophrenia: A Longitudinal Study: L'écart d'âge cérébral comme prédicteur de la réponse en début de traitement et des résultats fonctionnels dans un premier épisode de schizophrénie: une étude longitudinale. Canadian journal of psychiatry. Revue canadienne de psychiatrie, 70(3), 240–250. https://doi.org/10.1177/07067437241293981 Kreis, I., Lagerberg, T. V., Wold, K. F., Åsbø, G., Simonsen, C., Flaaten, C. B., Engen, M. J., Lyngstad, S. H., Widing, L. H., Ueland, T., & Melle, I. (2024). Behind the heterogeneity in the long-term course of first-episode psychosis: Different psychotic symptom trajectories are associated with different patterns of cannabis and stimulant use. Schizophrenia research, 271, 91–99. https://doi.org/10.1016/j.schres.2024.07.006

[Abstract:0547]

Methods for Identifying Psychotic-Like Experiences Using Neuroimaging and Artificial Intelligence

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Psychotic-like experiences (PLEs) are subclinical phenomena, often transient, but predictive of psychotic disorders in the future in a proportion of cases. Advances in neuroimaging and artificial intelligence (AI) have enabled better identification and characterization of such experiences, with new implications for early detection and intervention.

Neuroimaging studies consistently implicate self-other processing, reward systems, and emotional regulation disturbances in individual with PLE. Functional MRI results reveal adolescents following an increasing PLE trajectory exhibit dorsomedial prefrontal cortex (dmPFC) hypoactivation and reduced connectivity with the cerebellum during self-referential processing.These alterations can undermine the distinction between self and others, a hallmark of psychosis onset (Assaf et al., 2022). Similarly, abnormalities in reward processing circuitry, particularly in prefrontal and striatal regions, have also been observed in adolescents with high PLEs, resonating with potential mechanisms od deviant salience attribution (Papanastasiou et al., 2018).

Structural neuroimaging has also highlighted early neurodevelopmental deviations in at-risk adolescents. Machine learning (ML) models algorithms applied to T1-weighted MRI data can predict ―brain age" deviations, outlining accelerated brain maturation patterns in clinically high-risk individuals who later develop psychosis (Chung et al., 2018). These deviations are most pronounced in early adolescents, reinforcing the role of atypical neurodevelopmental trajectories.

Artificial intelligence, particularly machine learning and deep learning algorithms, is increasingly integrated into these neuroimaging pipelines. Support vector machines, logistic regression, and neural networks have been effectively employed to classify individuals across the psychosis spectrum based on cortical thickness, subcortical volumes, and functional connectivity patterns. Recent studies demonstrate that ML classifiers can distinguish ultra-high-risk (UHR) individuals and first-episode psychosis (FEP) patients with reasonable accuracy (Yassin et al., 2020). Notably, multiple instance learning (MIL) approaches applied to large-scale MRI datasets have shown promise in identifying severe mental illness (SMI) with an AUC of 0.82, outperforming traditional models in generalizability and real-world applicability (Zhang et al., 2023).

Despite these advances, methodological challenges remain. Heterogeneity of data, small sample sizes, and overfitting are challenges that limit the clinical translation of AI models. Multi-site validation, standardized imaging protocols, and rigorous cross-validation frameworks are crutial for establishing reproducible biomarkers (Vieira et al., 2020).

Multimodal data fusion— neuroimaging alongside cognitive, electrophysiological, and digital phenotyping markers—is set to refine risk prediction models (Yassin et al., 2024). Cognitive impairments in working memory and executive functioning, which can be quantified using fMRI, have shown predictive validity for psychosis transition when combined with machine learning procedures that monitor complex data intercommunication.

In conclusion, AI-enhanced neuroimaging is poised to transform early identification strategies for psychotic disorders by detecting at-risk individuals during critical neurodevelopmental windows. Future directions should emphasize personalized prediction models that can inform preventive interventions, ultimately improving functional outcomes for vulnerable adolescents.

Keywords: Artificial intelligence, Machine learning, Neuroimaging, Psychotic-like experiences

AuthorToEditor: 1. Assaf, R., Ouellet, J., Bourque, J., Stip, E., Leyton, M., Conrod, P., & Potvin, S. (2022). A functional neuroimaging study of self-other processing alterations in atypical developmental trajectories of psychotic-like experiences. Scientific reports, 12(1), 16324. https://doi.org/10.1038/s41598-022-20129-3 2.Papanastasiou, E., Mouchlianitis, E., Joyce, D. W., McGuire, P., Banaschewski, T., Bokde, A. L. W., Bromberg, U., Büchel, C., Quinlan, E. B., Desrivières, S., Flor, H., Frouin, V., Garavan, H., Spechler, P., Gowland, P., Heinz, A., Ittermann, B., Martinot, J. L., Paillère Martinot, M. L., Artiges, E., … IMAGEN Consortium (2018). Examination of the Neural Basis of Psychoticlike Experiences in Adolescence During Reward Processing. JAMA psychiatry, 75(10), 1043–1051. https://doi.org/10.1001/jamapsychiatry.2018.1973 3. Chung, Y., Addington, J., Bearden, C. E., Cadenhead, K., Cornblatt, B., Mathalon, D. H., McGlashan, T., Perkins, D., Seidman, L. J., Tsuang, M., Walker, E., Woods, S. W., McEwen, S., van Erp, T. G. M., Cannon, T. D., & North American Prodrome Longitudinal Study (NAPLS) Consortium and the Pediatric Imaging, Neurocognition, and Genetics (PING) Study Consortium (2018). Use of Machine Learning to Determine Deviance in Neuroanatomical Maturity Associated With Future Psychosis in Youths at Clinically High Risk. JAMA psychiatry, 75(9), 960–968. https://doi.org/10.1001/jamapsychiatry.2018.1543 4. Yassin, W., Nakatani, H., Zhu, Y., Kojima, M., Owada, K., Kuwabara, H., Gonoi, W., Aoki, Y., Takao, H., Natsubori, T., Iwashiro, N., Kasai, K., Kano, Y., Abe, O., Yamasue, H., & Koike, S. (2020). Machine-learning classification using neuroimaging data in schizophrenia, autism, ultra-high risk and first-episode psychosis. Translational psychiatry, 10(1), 278. https://doi.org/10.1038/s41398-020-00965-5 5. Zhang, W., Yang, C., Cao, Z., Li, Z., Zhuo, L., Tan, Y., He, Y., Yao, L., Zhou, Q., Gong, Q., Sweeney, J. A., Shi, F., & Lui, S. (2023). Detecting individuals with severe mental illness using artificial intelligence applied to magnetic resonance imaging. EBioMedicine, 90, 104541. https://doi.org/10.1016/j.ebiom.2023.104541 6.Vieira, S., Gong, Q. Y., Pinaya, W. H. L., Scarpazza, C., Tognin, S., Crespo-Facorro, B., Tordesillas-Gutierrez, D., Ortiz-García, V., Setien-Suero, E., Scheepers, F. E., Van Haren, N. E. M., Marques, T. R., Murray, R. M., David, A., Dazzan, P., McGuire, P., & Mechelli, A. (2020). Using Machine Learning and Structural Neuroimaging to Detect First Episode Psychosis: Reconsidering the Evidence. Schizophrenia bulletin, 46(1), 17–26. https://doi.org/10.1093/schbul/sby189 7. Yassin, W., Loedige, K. M., Wannan, C. M. J., Holton, K. M., Chevinsky, J., Torous, J., Hall, M. H., Ye, R. R., Kumar, P., Chopra, S., Kumar, K., Khokhar, J. Y., Margolis, E., & De Nadai, A. S. (2024). Biomarker discovery using machine learning in the psychosis spectrum. Biomarkers in neuropsychiatry, 11, 100107. https://doi.org/10.1016/j.bionps.2024.100107

[Abstract:0548]

Cognitive Functions in Childhood Anxiety Disorders: What Do Neurocognition and Social Cognition Tell Us?

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Cognition is thought of as a term consisting of two subgroups, both neurocognition and social cognition (1). While neurocognition is concerned with mental processes related to language processing, memory, problem solving, attention and information processing, social cognition is the mental processes underlying social interaction, including how people think about other people, form opinions, make inferences about other people's beliefs and intentions, and weigh social situational factors (1,2). When the literature is examined, it is noteworthy that both subgroups of cognition are affected in many psychopathologies such as autism spectrum disorder and psychotic disorders (3). Childhood anxiety disorders are common mental disorders of childhood and in this panel, we planned to present you the cognitive processes in anxiety disorders from the perspective of neurocognition and social cognition with current literature. In a meta-analysis examining the relationship between social anxiety disorder and social cognition in children and adolescents, it was reported that there was a small but significant relationship and that social cognition levels decreased as social anxiety levels increased (4). In a systematic review examining cognitive function areas (visual functions, episodic memory, motor skills, attention, executive functions and language) in young people diagnosed with anxiety disorders, it was reported that while there were deficits in receptive language and motor skills in anxious young people, there were no problems in attention, visuospatial skills and inhibition of executive functions, and anxiety disorders were not associated with decreased IQ (5). It has been reported that adolescents with anxiety symptoms have increased planning time and inhibition probability among executive functions, better cognitive flexibility, and poorer working memory compared to adolescents without anxiety symptoms (6). It has been reported that the evaluation of executive functions in adolescents with generalized anxiety disorder may be a guide in guiding the choice of psychopharmacological treatment and may predict the response to treatment (7). In conclusion, the current literature provides us with important information in the field of social cognition and neurocognition in childhood anxiety disorders, and it may be very important to determine the cognitive impact on the course of the disorders from diagnosis to treatment and to include this area in intervention methods.

Keywords: Anxiety disorders, childhood, neurocognition, social cognition

AuthorToEditor: References 1) Agartz, I., & Smelror, R. E. (Eds.). (2023). Adolescent Psychosis: Clinical and Scientific Perspectives. Elsevier. 2) Green, M. F., Penn, D. L., Bentall, R., Carpenter, W. T., Gaebel, W., Gur, R. C.,.. & Heinssen, R. (2008). Social cognition in schizophrenia: an NIMH workshop on definitions, assessment, and research opportunities. Schizophrenia bulletin, 34(6), 1211-1220. 3) Rashidi, A. G., Oliver, L. D., Moxon-Emre, I., Hawco, C., Dickie, E. W., Pan, R.,.. & Ameis, S. H. (2025). Comparative Analysis of Social Cognitive and Neurocognitive Performance Across Autism and Schizophrenia Spectrum Disorders. Schizophrenia Bulletin, sbaf005. 4) Pearcey, S., Gordon, K., Chakrabarti, B., Dodd, H., Halldorsson, B., & Creswell, C. (2021). Research Review: The relationship between social anxiety and social cognition in children and adolescents: a systematic review and meta-analysis. Journal of Child Psychology and Psychiatry, 62(7), 805-821. 5) Rabner, J. C., Ney, J. S., & Kendall, P. C. (2024). Cognitive functioning in youth with anxiety disorders: A systematic review. Clinical Child and Family Psychology Review, 27(2), 357-380. 6) Murphy, Y. E., Luke, A., Brennan, E., Francazio, S., Christopher, I., & Flessner, C. A. (2018). An investigation of executive functioning in pediatric anxiety. Behavior modification, 42(6), 885-913. 7) Baumel, W. T., Mills, J. A., Schroeder, H. K., Specht, A. M., Rothenberg, R., Peris, T. S., & Strawn, J. R. (2022). Executive functioning in pediatric anxiety and its relationship to selective serotonin reuptake inhibitor treatment response: A double-blind, placebo-controlled trial. Journal of Child and Adolescent Psychopharmacology, 32(4), 215-223.

[Abstract:0549]

Methods for Identifying Psychotic-Like Experiences Using Neuroimaging and Artificial Intelligence

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Psychotic-like experiences (PLEs) are subclinical phenomena, often transient but predictive of psychotic disorder in the future in a proportion of cases. Advances in neuroimaging and artificial intelligence (AI) have enabled better identification and characterization of such experiences, with new implications for early detection and intervention.

Neuroimaging studies consistently implicate self-other processing, reward systems, and emotional regulation disturbances in individuals with PLE. Functional MRI results reveal that adolescents following an increasing PLE trajectory exhibit dorsomedial prefrontal cortex (dmPFC) hypoactivation and reduced connectivity with the cerebellum during self-referential processing. These alterations can undermine the distinction between self and others, a hallmark of psychosis onset (Assaf et al., 2022). Similarly, abnormalities in reward processing circuitry, particularly in prefrontal and striatal regions, have also been observed in adolescents with high PLEs, resonating with potential mechanisms of deviant salience attribution (Papanastasiou et al., 2018).

Structural neuroimaging has also highlighted neurodevelopmental abnormalities early in vulnerable adolescents. Machine learning algorithms applied to T1-weighted MRI data can predict "brain age" deviations, outlining accelerated brain maturation trajectories in clinically high-risk adolescents who later develop psychosis (Chung et al., 2018). These deviations are most pronounced in early adolescence, again arguing for the involvement of aberrant neurodevelopmental trajectories.

Artificial intelligence, in particular machine learning and deep learning algorithms, is being increasingly integrated into such neuroimaging pipelines. Support vector machines, logistic regression, and neural networks have successfully been applied to classify individuals along the psychosis spectrum based on cortical thickness, subcortical volumes, and functional connectivity patterns. Recent studies demonstrate that ML classifiers can distinguish ultra-high-risk (UHR) individuals and first-episode psychosis (FEP) patients with reasonable accuracy (Yassin et al., 2020). Notably, multi-instance learning (MIL) approaches on large-scale MRI data have shown promise in the detection of severe mental illness (SMI) with AUC 0.82, with greater generalizability and real-world applicability than traditional models (Zhang et al., 2023).

Despite these advances, methodological challenges remain. Heterogeneity of data, small sample sizes, and overfitting are challenges that limit the clinical translation of AI models. Multi-site validation, standardized imaging protocols, and rigorous cross-validation frameworks are crucial for creating reproducible biomarkers (Vieira et al., 2020).

Multimodal data fusion—neuroimaging alongside cognitive, electrophysiological, and digital phenotyping markers—is set to refine risk prediction models (Yassin et al., 2024). Cognitive impairments in working memory and executive functioning, which can be quantified using fMRI, have shown predictive validity for psychosis transition when combined with machine learning procedures that monitor complex data intercommunications.

In conclusion, AI-enhanced neuroimaging is poised to transform early identification strategies for psychotic disorders by detecting at-risk individuals during critical neurodevelopmental windows. Future directions should emphasize personalized prediction models that can inform preventive interventions, ultimately improving functional outcomes for vulnerable adolescents.

Keywords: Artificial intelligence, Machine learning, Neuroimaging, Psychotic-like experiences

[Abstract:0550]

The Role of Citicolinein Adult Psychiatric Disorders -Part II

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Potential of Citicoline in Schizophrenia Treatment Citicoline shows promise as a part of multi-drug treatment strategies for schizophrenia, potentially improving symptom management and cognitive outcomes. It may be particularly effective in patients with specific core features, such as low auditory deviation detection, suggesting the need for personalized treatment approaches. Combining citicoline with other agents like galantamine has shown potential in improving symptoms and cognitive function in schizophrenia. Mechanisms of Action Citicoline exhibits neuroprotective properties by stabilizing cellular membranes, reducing inflammation, and inhibiting the release of pro-inflammatory neurotransmitters like glutamate, which is beneficial in schizophrenia where neuroinflammation and oxidative stress play a role. It plays a role in the synthesis of acetylcholine, a critical neurotransmitter for cognitive function, and can enhance cholinergic neurotransmission, potentially improving cognitive deficits associated with schizophrenia. Citicoline's ability to modulate dopamine and norepinephrine levels further enhances its therapeutic effects. Safety and Tolerability Citicoline is generally well-tolerated, with studies reporting no significant difference in adverse events compared to placebo. Common side effects are mild and transient, such as gastrointestinal disturbances. Its low toxicity makes it a valuable adjunctive treatment option. Applications in ADHD and Cognitive Enhancement Citicoline has shown potential in improving attention and reducing impulsivity in chronic cannabis users, which is relevant for ADHD where impulsivity is a core symptom. It is considered a potential cognitive enhancer due to its role in the synthesis of phospholipids and acetylcholine, contributing to improved attention and memory processes. Studies have demonstrated its ability to improve attention performance, as evidenced by fewer errors in continuous performance tests. Potential in Substance Use Disorders While citicoline was well-tolerated in a study on alcohol use disorder, it did not result in a reduction in alcohol use or craving. In chronic cannabis users, citicoline improved impulsivity and cognitive performance. A study on methamphetamine addiction showed that citicoline increased gray matter volumes, potentially linked to reduced craving and use. Role in Mood Disorders Citicoline may enhance the effects of antidepressants and anxiolytics, providing additional support in managing mood symptoms in bipolar disorder. Its high safety profile makes it suitable for long-term use in managing chronic conditions like bipolar disorder.

CONCLUSION: Citicoline is a promising adjunctive treatment for schizophrenia, with evidence supporting its efficacy in improving negative symptoms, cognitive function, and overall psychopathology. Further research is needed to fully elucidate its mechanisms and optimal dosing regimens, but its safety profile and therapeutic potential make it a valuable addition to the treatment arsenal for schizophrenia.

Keywords: Citikoline, schizophrenia, substance use disorders, mood disorders

AuthorToEditor: 1-A Randomized, Double-Blind, Placebo-Controlled Trial of Citicoline in Patients with Alcohol Use Disorder Alcohol Clin Exp Res. 2019 February; 43(2): 317–323. doi:10.1111/acer.13928. 2- Citicoline: pharmacological and clinical review, 2022 update Julio J. Secades, Pietro Gareri Rev Neurol 2022; 75 (Supl. 5): S1-89. doi: 10.33588/rn.75S05.2022311. 3-Effects of cytidine-5′-diphosphate choline on gray matter volumes in methamphetamine-dependent patients: a randomized, double-blind, placebo-controlled study J Psychiatr Res. 2021 November; 143: 215–221. doi:10.1016/j.jpsychires.2021.09.006. 4- Citicoline (CDP-choline) add-on therapy to risperidone fortreatment of negative symptoms in patients with stable schizophrenia: A double-blind, randomized placebo-controlled trial Alireza Ghajar1* | Faezeh Gholamian1* | Maryam Tabatabei-Motlagh1* | Mohsen Afarideh1 |Farzin Rezaei2 | Maryam Ghazizadeh-Hashemi3 | Shahin Akhondzadeh1 Hum Psychopharmacol Clin Exp. 2018;e2662. 5- Nutraceuticals and phytoceuticals in the treatment of schizophrenia: a systematic review and network meta-analysis Michele Fornaro

[Abstract:0551]

The Digital Spiral: The Relationship Between Problematic Technology Use and Psychological Resilience

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The term ‗Psychological Resilience' generally refers to the process through which an individual successfully adapts to, copes with, and recovers from the negative effects and trajectories associated with adversity. Over the past decade, considerable empirical research has explored the relationship between Problematic Technology Use (PTU) and psychological resilience. These studies have consistently found a negative correlation between PTU and resilience, indicating that higher levels of problematic technology use tend to correspond with lower levels of psychological resilience (1).

Interestingly, while research examining other behavioral addictions, such as gambling disorder, has not revealed similar consistent correlations with resilience (2), this disparity underscores the complexity of the relationship between different forms of behavioral addictions and resilience, necessitating further investigation into their underlying dynamics. Additionally, a growing body of literature suggests that PTU may function as a mediator between resilience and other psychological conditions, particularly depression (3). Such findings imply that during an individual's struggle with adverse events, PTU might emerge as a maladaptive, distractive coping mechanism—an interpretation supported by several empirical studies (4).

It is widely recognized that technology use holds significant potential for temporary relief from distress. However, evidence indicates that this short-term coping strategy typically fails to address underlying issues and may instead exacerbate problems in the long run (5). Research has consistently shown that escapist motivations play a central role in technology-based activities, especially gaming. Furthermore, technology use—particularly activities involving gaming—can initiate a self-reinforcing cycle by providing immediate pleasure and gratification. This reinforcing effect strengthens maladaptive coping patterns, diminishing resilience and rendering individuals increasingly susceptible to future adversities.

While acknowledging that technology use might occasionally offer short-term adaptive benefits depending on the nature and context of specific adversities, it remains essential to conduct individualized assessments to discern whether PTU constitutes a transient coping response or indicates a deeper, chronic maladaptive pattern.

In clinical practice, PTU frequently appears as an issue requiring intervention, often highlighted by concerns raised by families regarding its negative impacts on daily life. Undoubtedly, excessive or problematic technology use interferes negatively with individuals' functioning. However, certain studies indicate that, in specific contexts or domains, technology use might also produce positive outcomes. Instead of categorically viewing PTU as an absolute problem requiring immediate elimination, it is important to consider the possibility that problematic technology engagement could be serving as a secondary, compensatory coping mechanism arising from an underlying psychological difficulty. This perspective promotes a more holistic and nuanced assessment and allows clinicians to implement targeted interventions addressing root issues rather than solely managing surface-level behavioral symptoms.

Keywords: Child Psychiatry, Psychological Resilience, Technology Addiction

[Abstract:0552]

An Overview of the Concept of Psychological Resilience

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Psychological resilience can be defined as the process of being able to adapt well to significant stressors such as adversity, trauma, family and relationship problems, serious health problems, work and financial stress. It refers to the ability to overcome stressful events, recover and become stronger. It is not just about resisting the negative effects of a stressful situation. It also includes areas such as turning stressful life events into development opportunities, becoming competent and empowered in stress management.

The concept of resilience has been studied for a long time and it can be said that there is no single exact definition. It can be conceptualised in ways as it is a set of characteristics, a stable trait, a dynamic process, an outcome in response to adversity, or all of the above. Although there are many definitions, two core concepts are necessary to define psychological resilience: the difficulties experienced by the individual and the individual's positive adaptation to them.

Sisto et al. (2019) identified five macro-categories that summarize what has been reported in the literature regarding the description of resilience phenomenon: 1. Ability to recover, 2. Type of functioning that characterizes the individual, 3. Capacity to bounce back, 4. Dynamic process evolving over time, 5. Positive adaptation to life conditions (1).

Resilience is dependent on balance between protective factors and risk factors. Protective and risk factors can each derive from the individual, family, and the community. Examples for individual protective factors include having effective problem-solving skills or an easygoing temperament, whereas individual risk factors include having chronic diseases or low intelligence. At the family level, examples are emotionally responsive caregiving as opposed to divorce or death of parents. An example of a community-level protective factor is good peer relationships at school while exposure to migration or war can be examples of a community-level risk factors.

Commonly used scales for the measurement of resilience are The Resilience Scale for Adults (RSA) and Connor-Davidson Resilience Scale (CD-RISC). The RSA was identified in dimensions: 1. Self-perception, 2. Future perception, 3. Social competence, 4. Structured style, 5. Family cohesion, 6. Social resources (2). CD-RISC included the factors: 1. Personal competence, high standards, and tenacity, 2. Trust in one‘s instincts, tolerance of negative affect, and strengthening effects of stress, 3. Positive acceptance of change and secure relationships, 4. Control, 5. Spiritual influences (3).

Psychlogical resilience has become an important area of mental health research. Further studies are needed to improve our understanding about it. Beyond the focus of psychiatric studies on risk-conferring factors, the contribution of factors that promote resilience should also be further explored.

Keywords: Adversity, definition, mental health, psychological resilience, resilience

REFERENCES:

1. Sisto A, Vicinanza F, Campanozzi LL, Ricci G, Tartaglini D, Tambone V. Towards a Transversal Definition of Psychological Resilience: A Literature Review. Medicina (Kaunas). 2019; 55(11): 745.
2. Friborg O, Barlaug D, Martinussen M, Rosenvinge JH, Hjemdal O. Resilience in relation to personality and intelligence. Int J Methods Psychiatr Res. 2005; 14(1): 29-42.
3. Connor KM, Davidson JR. Development of a new resilience scale: the Connor-Davidson Resilience Scale (CD-RISC). Depress Anxiety. 2003; 18(2): 76-82.

AuthorToEditor: References: 1. Sisto A, Vicinanza F, Campanozzi LL, Ricci G, Tartaglini D, Tambone V. Towards a Transversal Definition of Psychological Resilience: A Literature Review. Medicina (Kaunas). 2019; 55(11): 745. 2. Friborg O, Barlaug D, Martinussen M, Rosenvinge JH, Hjemdal O. Resilience in relation to personality and intelligence. Int J Methods Psychiatr Res. 2005; 14(1): 29-42. 3. Connor KM, Davidson JR. Development of a new resilience scale: the Connor-Davidson Resilience Scale (CD-RISC). Depress Anxiety. 2003; 18(2): 76-82.

[Abstract:0553]

Psychosocial Interventions for Digital Addiction

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Digital addiction, characterized by excessive and compulsive digital device use, has become a growing concern in child and adolescent psychiatry. The rising prevalence of problematic digital behaviors, including gaming disorder and social media addiction, necessitates effective psychosocial interventions.

Cognitive-Behavioral Therapy (CBT) is one of the most widely used interventions, focusing on modifying maladaptive thought patterns and behaviors related to excessive digital use. Ding KY et al. reported that the most effective interventions for digital addiction in children and adolescents were CBT- or CBT-based, improving anxiety, depression, and addiction-related symptoms. However, other psychosocial strategies have also shown promising results.

Family-Based Interventions play a crucial role, as parental involvement significantly influences children's digital behaviors. Strategies such as setting clear screen-time limits, promoting open family communication, and modeling healthy digital use can reduce problematic behaviors. The PIPATIC program, developed by Torres-Rodríguez et al. (2018), treats internet gaming disorder and its comorbid symptoms while enhancing individual and social skills and family relationships. A comparative study with adolescents aged 12–18 found that both PIPATIC and standard CBT reduced internet gaming disorder symptoms, but PIPATIC led to greater improvements in comorbid conditions, social abilities, and family dynamics.

Motivational Interviewing (MI) is a patient-centered approach that enhances intrinsic motivation for behavior change. MI helps adolescents recognize excessive screen time‘s negative consequences, set achievable goals, and develop healthier digital habits, particularly benefiting those who do not yet acknowledge their problematic use.

School-Based Interventions enhance digital literacy and self-regulation skills. Educational programs that teach responsible digital use, cyber safety, and offline activities have been integrated into school curricula. Studies show school-based CBT interventions effectively reduce internet and gaming addiction among adolescents. Additionally, most school-based CBT programs not only decrease internet addiction but also improve time management, social interaction, and self-regulation while reducing social anxiety and procrastination behaviors.

Studies also show that physical activity interventions, such as structured exercise programs, effectively reduce internet addiction in children and adolescents. These interventions also improve cognitive skills, mental health, and overall well-being. Despite the growing body of research, challenges remain in identifying the most effective intervention models, ensuring long-term adherence, and addressing comorbid psychiatric conditions. Future directions should emphasize personalized intervention strategies, integrating digital detox programs into routine clinical practice, and fostering collaboration between healthcare providers, educators, and families. This presentation provides an overview of current evidence-based interventions aimed at reducing digital addiction and promoting healthier digital habits in children and adolescents.

Keywords: Digital addiction, problematic internet use, internet gaming disorder, psychosocial interventions

REFERENCES:

1. Ding K, Li H. Digital addiction intervention for children and adolescents: a scoping review. Int J Environ Res Public Health. 2023; 20(6): 4777.
2. Torres-Rodriguez A, Griffiths MD, Carbonell X, Oberst U. Treatment efficacy of a specialized psychotherapy program for Internet Gaming Disorder. J Behav Addict. 2018; 7: 939–952.
3. Greenfield DN. Treatment Considerations in Internet and Video Game Addiction: A Qualitative Discussion. Child Adolesc Psychiatr Clin N Am. 2018 Apr; 27(2): 327-344.
4. Alkan, D., Toprak, B., Yıldız, E. Ç., & Görmez, V. (2024). Ergenlerde İnternet ve Oyun Bağımlılığına Yönelik Okul Temelli Bilişsel Davranışçı Terapi Uygulamaları: Sistematik Bir Derleme. Journal of Cognitive Behavioral Psychotherapies and Research

[Abstract:0555]

Childhood in Front of Screens: The Psychological Effects of Technological Games on Children

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The rapid advancement of digital technology has reshaped childhood, making screens an integral part of daily life. Video games, mobile applications, and interactive platforms are widely used by children, raising concerns about their psychological impacts. While digital games offer cognitive engagement, creativity, and social interaction, they also pose risks to self-regulation, emotional development, and peer relationships.

Early latency (ages 5–8) is a crucial stage for cognitive, emotional, and social growth. It is also when children's digital device use surges, coinciding with their increasing autonomy, expanding cognitive abilities, and the early formation of moral consciousness (superego). This heightened exposure raises important questions about its effects on self-regulation, emotional resilience, and peer interactions.

The latency period is marked by growing independence, emotional self-regulation, and engagement beyond the family, particularly in school (1). As children explore the outside world, they encounter cultural and technological experiences shaping their development. Digital games, now increasingly designed for younger children, introduce both opportunities and challenges to this process.

Some scholars argue that digital games foster autonomy and creativity, while others warn they may distort reality, encourage instant gratification, and influence moral development. As the boundary between real and virtual play blurs, key questions arise: Can digital games function as pretend play, supporting young children‘s developmental needs? How do fast-paced, highly stimulating environments affect self-regulation? To what extent do virtual interactions shape children's understanding of relationships and social norms?

From a psychoanalytic perspective, early latency is defined by growing autonomy, expanding cognitive abilities, and the initial development of moral consciousness. However, children at this stage are still learning to differentiate reality from fantasy, regulate impulses, and internalize ethical principles (2). Digital play can either support or hinder these processes. Games that encourage problem-solving and collaboration may enhance cognitive flexibility, while exposure to violent imagery, unrealistic social portrayals, and instant rewards may weaken self-regulation, increase frustration intolerance, and reinforce problematic behaviors.

Technological games also impact peer relationships in complex ways. Online multiplayer games allow children to connect globally, fostering new forms of socialization. However, these interactions often occur in anonymous environments with reduced accountability, increasing the risk of aggression, cyberbullying, and superficial connections rather than meaningful relationships. The shift from face-to-face play to screen-based interaction raises concerns about its effects on empathy, emotional intelligence, and the ability to navigate real-world social dynamics.

As digital engagement becomes increasingly prevalent, understanding its effects on children's psychological development is essential. While digital games offer benefits, they also introduce risks that require careful consideration from parents, educators, and mental health professionals.

Keywords: Digital play, Latency stage, Peer relationships, Self-regulation

AuthorToEditor: 1. Erikson, E. H. 1950. Childhood and society. New York, NY: Norton. 2. Pamela Meersand (2017) Early Latency and the Impact of the Digital World: Exploring the Effect of Technological Games on Evolving Ego Capacities, Superego Development, and Peer Relationships, The Psychoanalytic Study of the Child, 70:1, 117-129

[Abstract:0556]

Inpatient Treatment Practise in Child and Adolescent Substance Abuse Treatment Center

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Substance use continues to be an important public health problem in our country, as well all over the world. It is known that the age of exposure to substances with addictive potential often extends into adolescence (1).Substance use at an early age has been found to be an important predictor of the development of substance use disorders later in life (2).

It is included in the The Diagnostic and Statistical Manual of Mental Disorders, DSM-5 as ―Substance Related Disorders". In DSM-5, 10 different substance groups are defined: "alcohol, tobacco, caffeine, hallucinogens, sedative hypnotic anxiolytics, stimulants, inhalants, cannabis, opioids and other".

It is known that the epidemiological studies conducted in the field of substance use disorders in Turkey, especially in the child and adolescent age group, are not sufficient. In a recent large sample study conducted on secondary school age children; It was determined that inhalant use was 5.1%, marijuana use was 4.0%, and heroin and 3,4-methylenedioxy-N-methylamphetamine (MDMA, ecstasy) use was 2.5% (3).

Treatment of substance use disorder in adolescents should include biopsychosocial models. Treatments can vary from outpatient, partial hospitalization, day treatment and long-term treatment. However, very few of these adolescents can access treatment. Prevention studies aim to identify and eliminate risk factors and increase protective factors in adolescents.

Primary prevention in addiction means that the person has never encountered the substance yet. Secondary prevention includes screening and early interventions for individuals who have used substances but have not yet developed addiction.For this purpose, school-based approaches are recommended.

Keywords: Child and adolescent, substance use disorders, inpatient treatment

RESOURCES

1. Şirin, H., & Uzun, M. E. (2021). Sociodemographic and Clinical Characteristics of Adolescent Patients Treated in ÇEMATEM With the Diagnosis of Substance Use Disorders: Bursa Sample. Turkish Journal of Child & Adolescent Mental Health, 28(2).
2. Garofoli, M. (2020). Adolescent substance abuse. Primary Care: Clinics in Office Practice, 47(2), 83-394.
3. Ogel, K., Corapçioğlu, A., Tamar, M., Tot, S., Doğan, O., Uğuz, S. et al. (2004). Tobacco, alcohol and substance use prevalence among elementary and secondary school students in nine cities of Turkey. Turk psikiyatri dergisi= Turkish journal of psychiatry, 15(2), 112-118.

[Abstract:0559]

Next-generation Executive Functions: The Cognitive Impacts of The Digital World

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Executive function is a collective term for a set of interrelated cognitive processes responsible for regulating and coordinating other mental functions, enabling individuals to achieve their goals (1). These functions, including cognitive control, inhibitory regulation, attention, memory, and reasoning, are fundamental for adapting to dynamic environments. Adolescents are particularly vulnerable to the adverse effects of excessive digital media exposure due to the heightened neuroplasticity of their developing brains, making them more susceptible to external stimuli. Recent findings from the World Health Organization indicate that over 90% of teenagers globally engage with electronic devices for at least two hours daily, with a substantial portion exceeding this threshold. Such high levels of digital consumption may significantly affect brain development, particularly executive functions, by altering neural networks involved in social-emotional behavior and cognitive regulation (2).

The phenomenon of digital dementia—a term describing cognitive decline associated with excessive digital media use—has been linked to neurobiological changes in brain structure and function. Neuroimaging studies suggest that overreliance on smartphones correlates with reductions in gray matter in critical regions associated with cognitive and emotional regulation, including the prefrontal cortex, anterior cingulate cortex, and amygdala. These structural alterations may contribute to deficits in memory, attention, and executive function. Furthermore, prolonged exposure to fast-paced digital content during early developmental stages can negatively impact motor skills, spatial awareness, problem-solving abilities, and language acquisition (2).

For young adults, frequent use of digital platforms, particularly social media, has been linked to declining academic performance and mental health concerns. Conversely, digital technology can offer cognitive benefits for older adults, such as enhanced memory and attention through targeted cognitive training applications. However, excessive usage may contribute to cognitive decline and social isolation. If these neural circuits remain underdeveloped into adulthood, they may increase susceptibility to early-onset mild cognitive impairment and Alzheimer's disease-related dementias (2).

Despite the adverse effects, not all digital media consumption is detrimental. Interactive and educational screen content, when aligned with recommended screen time guidelines, can support language development and executive functions. However, excessive passive screen exposure, such as prolonged television watching, is associated with cognitive and social deficits, including reduced attention span, impaired memory retention, and difficulties in emotional regulation. Studies highlight the importance of high-quality parent-child interactions, where active engagement and verbal scaffolding during screen exposure can mitigate negative outcomes. Additionally, socioeconomic and cultural factors influence digital media consumption patterns. Families with higher socioeconomic status often have better resources to regulate screen time and utilize digital tools for educational purposes, thus supporting cognitive development (3).

Therefore, while digital technology is an essential component of modern society, adopting a balanced approach to its use is imperative for preserving cognitive health across the lifespan. Implementing preventive strategies—such as reducing screen time, engaging in alternative cognitive activities, and raising public awareness about healthy digital habits—is crucial in mitigating potential cognitive risks.

Keywords: Cognitive function, digital dementia, digital media, executive function, screen time, internet

AuthorToEditor: References 1. Welsh, M. C., Pennington, B. F., & Groisser, D. B. (1991). A normative-developmental study of executive function: A window on prefrontal function in children. Developmental Neuropsychology, 7(2), 131–149. https://doi.org/10.1080/87565649109540483 2. Ali, Z., Janarthanan, J., & Mohan, P. (2024). Understanding digital dementia and cognitive impact in the current era of the internet: A review. Cureus, 16(9), e70029. https://doi.org/10.7759/cureus.70029 3. Bal, M., Kara Aydemir, A. G., Tepetaş Cengiz, G. Ş., & Altındağ, A. (2024). Examining the relationship between language development, executive function, and screen time: A systematic review. PLOS ONE, 19(12), e0314540. https://doi.org/10.1371/journal.pone.0314540

[Abstract:0560]

The Neurobiological Basis of Psychotic-Like Experiences in Adolescents

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Psychotic-like experiences (PLEs) are defined as experiences that resemble psychotic symptoms in qualitative aspects, but that occur in the general population in the absence of a psychotic disorder. Distinct from the psychotic symptoms of schizophrenia, these experiences are characterised by their non-bizarre nature, stress dependency, and atypical characteristics. While frequently transient, PLEs have the potential to become persistent due to environmental interactions, the progression to a disorder, or the co-occurrence with non-psychotic psychiatric conditions. From a clinical perspective, subclinical visual and auditory hallucinations, bizarre behaviours, paranoid and grandiose delusions may be observed.

The period of early childhood and adolescence is considered to represent a critical phase in the onset of PLEs. It is a period of rapid brain development and the presence of active neurodevelopmental processes. The latter stage of adolescence is of particular importance, due to the ongoing changes in neural circuits, and the increased capacity for brain plasticity. This renders it a vulnerable period for the emergence of psychotic disorders.

From a neurobiological perspective, PLEs are associated with functional impairments in specific brain regions, neurotransmitter imbalances, and developmental factors.One of the most widely accepted theories of psychosis is the dopaminergic hyperactivity theory, which suggests that hyperactivity in the mesolimbic dopamine system and reduced mesocortical dopaminergic activity lead to psychotic symptoms. However, dopamine dysregulation has also been linked to various other psychiatric disorders, emphasising that psychosis cannot be explained solely by dopamine imbalance.Recent research highlights the importance of network dysfunctions in the limbic system, prefrontal cortex, hippocampus, and thalamus, along with the role of the hypothalamic-pituitary-adrenal (HPA) axis and other neurotransmitters. Furthermore, insufficient activity of NMDA receptors, in conjunction with the hyperactivity of 5HT2A receptors, has been proposed as a contributing factor to the manifestation of psychosis-like symptoms.

Structural alterations in the brain have been demonstrated to be associated with PLEs and psychosis. Prefrontal cortex dysfunction has been linked to cognitive deficits and negative symptoms, while the presence of hippocampal hyperactivity has been associated with misperceptions and delusions. Dopaminergic hyperactivity in the basal ganglia has been linked to movement and motivation impairments. Thalamic dysfunction can result in abnormal sensory processing. Reduced brain volume, grey matter loss, and ventricular enlargement have been observed in chronic psychotic disorders.

Another significant theory in the neurobiology of psychosis is microglial overactivation, which may result in synaptic loss and brain tissue deterioration. Increased levels of pro-inflammatory cytokines, particularly IL-6 and TNF-α, have been implicated in the development of psychosis.

Genetic factors have been demonstrated to play a significant role in the development of psychosis. Mutations in genes such as COMT, DISC1, and DRD2 have been associated with an increased risk of psychosis.Genetic factors also play a significant role in psychosis development. Environmental factors, including stress, trauma, exposure to toxins, birth complications, and early-life viral infections, have the potential to alter gene expression through epigenetic mechanisms, thereby contributing to the aetiology of PLEs.

In conclusion, a deeper understanding of the neurobiology of psychosis may aid in the development of early diagnosis and intervention strategies.

Keywords: Psychotic-like experiences, psychosis, neurobiology

[Abstract:0561]

Digital Health vs Digital Addiction

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The rapid advancement of digital technologies has significantly impacted psychiatric practice and public mental health. While digital health enhances psychiatric diagnosis, treatment, and monitoring, excessive and uncontrolled use of digital technologies increases the risk of digital addiction. This presentation explores digital health and digital addiction from a psychiatric perspective, highlighting clinical applications, potential risks, and balancing strategies.

Digital health applications have improved mental health services, particularly for individuals with limited access. Telepsychiatry, mobile health apps, virtual reality (VR) therapies, and AI-supported clinical decision tools are transforming psychiatric assessment and treatment. Digital cognitive-behavioral therapy (CBT) has proven effective in treating depression and anxiety disorders, while VR-assisted exposure therapy shows promise for post-traumatic stress disorder (PTSD) and phobias.

The recognition of digital addiction increased after the World Health Organization (WHO) classified gaming disorder in the International Classification of Diseases (ICD-11) in 2019. Internet gaming disorder, social media addiction, and problematic internet use negatively affect cognitive function, academic and occupational performance, and psychosocial well-being. These issues are linked to sleep disturbances, attention deficits, impulsivity, and mood dysregulation, requiring psychiatric evaluation and intervention.

Distinguishing between digital health and digital addiction necessitates a multidimensional approach. Digital addiction involves reward mechanisms, particularly the dopaminergic system, similar to other addictive behaviors. Promoting ethical digital health use requires raising awareness of mindful technology consumption and expanding psychoeducation initiatives.

A multidisciplinary strategy is essential to ensure the safe and effective use of digital health applications. Clinical guidelines should encourage the healthy utilization of digital technologies while implementing policies to prevent digital addiction. As psychiatry embraces digital advancements, it is crucial to address the associated risk factors affecting psychosocial development.

This presentation will examine the benefits of digital health, the risks of digital addiction, and preventive and therapeutic approaches to maintaining a balance between these domains.

Keywords: Digital addiction, Digital health, Telepsychiatry

REFERENCES:

1- Torous J, Bucci S, Bell IH, Kessing LV, Faurholt-Jepsen M, Whelan P, Carvalho AF, Keshavan M, Linardon J, Firth J. The growing field of digital psychiatry: current evidence and the future of apps, social media, chatbots, and virtual reality. World Psychiatry. 2021 Oct;20(3):318-335. doi: 10.1002/wps.20883. PMID: 34505369; PMCID: PMC8429349.

2- Marsch LA. Digital Health and Addiction. Curr Opin Syst Biol. 2020 Apr;20:1-7. doi: 10.1016/j.coisb.2020.07.004. Epub 2020 Jul 7. PMID: 32885099; PMCID: PMC7462117.

3- Hutton JS, Piotrowski JT, Bagot K, Blumberg F, Canli T, Chein J, Christakis DA, Grafman J, Griffin JA, Hummer T, Kuss DJ, Lerner M, Marcovitch S, Paulus MP, Perlman G, Romeo R, Thomason ME, Turel O, Weinstein A, West G, Pietra PH, Potenza MN. Digital Media and Developing Brains: Concerns and Opportunities. Curr Addict Rep. 2024;11(2):287-298. doi: 10.1007/s40429-024-00545-3. Epub 2024 Mar 4. PMID: 38606363; PMCID: PMC11003891.

[Abstract:0563]

Current Treatment Approach in Psycho-Oncology

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Cancer and its treatments lead to a wide range of physical and psychosocial issues, extending from physical pain and fatigue to anxiety, depression, and difficulties in personal relationships. The prevalence rates of depression and dysthymia in these patients range from approximately 30-40%, while anxiety disorders are seen in 10.2% and adjustment disorders in 12.5% of cases. Studies have shown that psychiatric comorbidities in patients negatively affect cancer treatment prognosis. It is recommended that oncological patients routinely undergo psycho-oncological screening to assess the difficulties they experience at various stages of the disease. New approaches are continuously being developed in the fields of psychology and psychiatry, especially in areas such as psychotherapy and pharmacotherapy. Meaning-focused psychotherapy programs have shown promising results in the treatment of cancer patients over the last 10-15 years. Techniques such as Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy (MBCT) have been found to be effective in improving psychosocial quality of life, distress symptoms, anxiety, fatigue, and insomnia in oncological settings. Acceptance and Commitment Therapy (ACT) has demonstrated positive effects in increasing the psychological flexibility of cancer patients and promoting a value-oriented life. Virtual reality has been introduced to help patients relax during cancer treatment. VR offers simulations that can help patients reduce stress, fear, and anxiety. The interaction of biological rhythms with cancer treatments, particularly immunotherapies, is being studied. Improving circadian rhythms may enhance the effectiveness of immunotherapy. Additionally, regulating biological rhythms can lead to a better response to treatment. All treatment approaches in psycho-oncology aim to help patients undergo the treatment process in a more quality and healthy way, and studies in this field continue to grow and evolve.

Keywords: Psycho-Oncology. Psychotherapy, Pharmacotherapy. Virtual Reality, Circadian Rhythm

REFERENCES

1. Lang-Rollin, I., & Berberich, G. (2018). Psycho-oncology. Dialogues in clinical neuroscience, 20(1), 13-22.
2. Rankin, N. M., & Jacobsen, P. B. (2024). Implementation science and psycho-oncology: Advancing the translation of evidence into practice. Psycho-Oncology, 33(6), e6363.
3. Weissflog, G., & Dunne, S. (2024). Highlights in psycho-oncology: study protocols-improving evidence for future personalised cancer care. Frontiers in Psychology, 15, 1422054.

[Abstract:0564]

Real Effects of the Virtual World: Emotions, Impulses, and Behaviors

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With the advancement of technology, the widespread digitalization across various fields, and the development of artificial intelligence, the field of psychiatry has also been significantly impacted. The integration of digitalization into psychiatry promises new methods for diagnosis, treatment, and follow-up processes. It facilitates the collection of large amounts of data in a shorter time and is expected to enhance these processes in terms of accuracy and efficiency through advanced learning and algorithmic techniques.

Digital Phenotyping refers to the AI-supported analysis of data obtained from computers, smartphones, and other electronic devices. It aims to develop preventive strategies for psychiatric disorders, enable early diagnosis, and provide early interventions by monitoring disease progression and treatment processes, as well as offering online therapy applications (1).

Technological advancements have also increased the applicability of Ecological Momentary Assessment (EMA). EMA refers to data collection methods that allow for real-time information gathering in everyday life. Its key features include capturing data within the natural flow of an individual's daily activities and prompting individuals to reflect on their experiences. Literature review indicates that EMA is utilized in conditions such as schizophrenia, depression, anxiety disorders, and eating disorders(2). Its application in suicide prevention is especially noteworthy. Additionally, applications using virtual and augmented reality have been developed to examine the relationship between objective elements in the physical world and the subjective perceptions they create in individuals. These applications are designed for use in participants' homes or rehabilitation centers (3)

While digital techniques offer potential advantages, they fall short in capturing a person's subjective experience, gestures, and facial expressions, as well as evaluating them in different contexts. In a therapeutic relationship, the importance of an empathetic and individualized approach is essential. Psychiatric patients often experience a loss of participation in social relationships, and digital self-management will likely not be effective in addressing this. Digital therapies are unable to provide the dynamic relationship that is necessary (1).

The introduction of digital and artificial intelligence technologies into psychiatry holds potential benefits, such as early diagnosis of psychiatric disorders, predicting the course of illness, and preventing relapses. However, these technologies also come with risks, including the psychiatrization of daily life and the objectification of psychological experiences.

Keywords: Artificial Intelligence in Psychiatry, Digital Phenotyping,Ecological Momentary Assessment

REFERENCES

1. Fuchs, T. Digitalisierte Psychiatrie. Nervenarzt 92, 1149–1154 (2021).
2. Kivelä, L., van der Does, W. A. J., Riese, H., & Antypa, N. (2022). Don't Miss the Moment: A Systematic Review of Ecological Momentary Assessment in Suicide Research. Frontiers in digital health, 4, 876595.
3. Inuggi, A., Domenici, N., Tonelli, A., & Gori, M. (2024). PsySuite: An android application designed to perform multimodal psychophysical testing. Behavior research methods, 56(8), 8308–8329.

[Abstract:0565]

Activation Syndrome Due to SSRIs Used in Children and Adolescents: From Diagnosis to Treatment

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Activation Syndrome is a constellation of heightened emotional states (such as irritability or anxiety) and behavioral symptoms (such as impulsivity or disinhibition) associated with the use of selective serotonin reuptake inhibitors (SSRIs). The definition of activation syndrome and underlying mechanisms are still being explored. Young children, as well as children with neurodevelopmental disorders, may be at higher risk. Although activation syndrome could be seen at anytime during the SSRI treatment, it is often thought to occur early in the treatment process, typically within the first 2–3 weeks. It could also be seen after following an increase in SSRI dose. SSRI treatment for major depressive disorder may carry a slightly higher risk of activation syndrome compared to SSRI treatment for anxiety disorders. While it is believed that the risk of mania and suicide may increase with activation syndrome, there is insufficient evidence to confirm this link. Slow dose titration with close monitoring is recommended to reduce the risk of activation syndrome. If symptoms arise, reducing the dose or discontinuing the drug is advised.

In this presentation; the diagnosis, epidemiology, and treatment of activation syndrome due to SSRIs used in children and adolescents will be discussed.

Keywords: Activation syndrome, adolescents, children, selective serotonin reuptake inhibitors

AuthorToEditor: 1. Amitai M, Chen A, Weizman A, Apter A. SSRI-induced activation syndrome in children and adolescents—what is next?. Curr Treat Options Psychiatry. 2015; 2: 28-37. 2. Luft MJ, Lamy M, DelBello MP, McNamara RK, Strawn JR. Antidepressant-induced activation in children and adolescents: risk, recognition and management. Curr Probl Pediatr Adolesc Health Care. 2018; 48(2): 50-62. 3. Pulzara Velasco DM, Ospina-Pinillos L. Activation syndrome in children and adolescents treated with selective serotonin reuptake inhibitors. Rev Colomb Psiquiatr (Engl Ed). 2024 Apr-Jun; 53(2): 184-191.

[Abstract:0566]

Catatonia in Child and Adolescent Psychiatry: From History to Present

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Catatonia is an important psychomotor disorder that has been known to affect children and adolescents for many years, although it has been described in adults (1,2). Although catatonia is a rare condition, pediatric catatonia is a life-threatening condition with serious complications such as malnutrition, dehydration, decubitus ulcers, thrombosis and pneumonia similar to adults (1). Catatonia was scientifically defined by Kahlbaum about 150 years ago, and has been addressed by many different scientists with different perspectives and included in various diagnostic systems (3). In the 20th century, it was generally considered as a component of schizophrenia due to the influence of Kraepelin (3), but today, in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), it is classified under the title 'Schizophrenia Spectrum and Other Psychotic Disorders' and is categorized into three headings: catatonia associated with another mental disorder, catatonia due to another health condition, and unspecified catatonia (2). Since the nosological concepts, definitions and rating scales used in the diagnosis of catatonia have changed over time, it is thought to be seen up to 35% in individuals diagnosed with schizophrenia, although prevalence data vary (2,3). According to DSM-5 diagnostic criteria, it is a condition characterized by the presence of three or more of the following symptoms: stupor, catalepsy, waxy flexibility, mutism, negativism, posturing, agitation, mannerism, echolalia, echopraxia, streotypic behavior (2). Mood disorders, schizophrenia, autism spectrum disorder, central nervous system infections, autoimmune diseases, Wilson's disease, porphyria and many other psychiatric disorders and medical conditions may underlie catatonia (1,2). Although the clinical picture of catatonia in children and adolescents is largely similar to that of adults, especially the frequency of underlying organic causes and the association with neurodevelopmental disorders in addition to schizophrenia and mood disorders should be taken into consideration during the evaluation phase (1). Treatment of catatonia is still mostly based on clinical experience and observational evidence, and benzodiazepines, especially lorazepam, have an important role in case management (3).Electroconvulsive therapy may be used in benzodiazepine-resistant cases, and it is important to identify and treat the underlying etiologic causes appropriately. Supportive care in the form of adequate hydration, prevention of aspiration and thrombosis prophylaxis, enteral nutrition in cases of refusal to eat should be applied in necessary cases (1). The life-threatening nature of catatonia, the definition of which has been debated for many years, seems to require large-sample studies and randomized controlled trials to provide strong evidence for early diagnosis, case management and appropriate treatment strategies.

Keywords: Catatonia, Kreapelin, schizophrenia, historical perspective

REFERENCES

1. Benarous X, Raffin M, Ferrafiat V, Consoli A, Cohen D. Catatonia in children and adolescents: New perspectives. Schizophr Res. 2018; 200: 56-67. doi:10.1016/j.schres. 2017.07.028
2. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. fifth edit.; 2013. doi: 10.1176/appi.books.9780890425596.744053
3. Csihi L, Ungvari GS, Caroff SN, Gazdag G. First 150 years of catatonia: Looking back at its complicated history and forward to the road ahead. World J Psychiatry. 2024; 14(5): 600-606. doi:10.5498/wjp.v14.i5.600

[Abstract:0567]

Current Neuropsychiatric Treatment Approaches in Obesity

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Obesity is a complex disorder involving genetic, environmental, behavioral, and neurobiological factors. Advances in neuropsychiatric research have highlighted the role of brain circuits, neurotransmitter systems, and cognitive-affective processes in its pathophysiology. Given the high prevalence of obesity and its association with psychiatric comorbidities such as depression, anxiety, and binge-eating disorder (BED), neuropsychiatric treatments have gained attention.

A key neurobiological mechanism in obesity is dysregulated reward processing, particularly involving dopamine. Neuroimaging studies show altered activity in the mesolimbic reward system, contributing to excessive food intake and impulse control deficits. Dopaminergic agents like bupropion modulate reward sensitivity, while GLP-1 receptor agonists (e.g., liraglutide, semaglutide) regulate appetite via central pathways, particularly the hypothalamus and brainstem.

Selective serotonin reuptake inhibitors (SSRIs) and norepinephrine-dopamine reuptake inhibitors (NDRIs) impact mood and appetite control. Fluoxetine and sertraline reduce binge-eating episodes, while topiramate, an antiepileptic drug, suppresses appetite and reduces impulsivity through GABAergic and glutamatergic mechanisms.

Cognitive-behavioral therapy (CBT) is a key intervention, addressing maladaptive eating behaviors and emotional dysregulation. Integrating mindfulness-based therapies, acceptance and commitment therapy (ACT), and neurofeedback may further improve self-regulation and stress-related eating.

Neuromodulation techniques, such as transcranial magnetic stimulation (TMS) and deep brain stimulation (DBS), offer novel treatment avenues. TMS targeting the dorsolateral prefrontal cortex enhances impulse control and reduces cravings, while DBS in the nucleus accumbens modulates reward-related eating behaviors in treatment-resistant cases. Given the bidirectional relationship between obesity and psychiatric disorders, a multidisciplinary approach combining pharmacotherapy, psychotherapy, and neuromodulation appears most effective. Future research should focus on personalized treatments, integrating genetic, neuroimaging, and behavioral data.

This panel will explore the latest neuropsychiatric treatments for obesity, emphasizing pharmacological, psychological, and neuromodulatory approaches. By bridging neuroscience and clinical practice, we aim to provide insights into innovative strategies that enhance patient outcomes and address the global obesity crisis.

Keywords: Neuromodulation, obesity, pharmachology, therapy

REFERENCES

1. Berthoud, H. R., Münzberg, H., & Morrison, C. D. (2017). Blaming the brain for obesity: Integration of hedonic and homeostatic mechanisms. Gastroenterology, 152(7), 1728–1738. https://doi.org/10.1053/j.gastro.2016.12.050
2. Lowe, C. J., Reichelt, A. C., & Hall, P. A. (2019). The prefrontal cortex and obesity: A health neuroscience perspective. Trends in Cognitive Sciences, 23(4), 349–361. https://doi.org/10.1016/j.tics.2019.01.005
3. Müller, T. D., Blüher, M., Tschöp, M. H., & DiMarchi, R. D. (2022). Anti-obesity drug discovery: Advances and challenges. Nature Reviews Drug Discovery, 21(3), 201–223. https://doi.org/10.1038/s41573-021-00317-8
4. Volkow, N. D., Wang, G. J., Tomasi, D., & Baler, R. D. (2013). Obesity and addiction: Neurobiological overlaps. Obesity Reviews, 14(1), 2–18. https://doi.org/10.1111/j.1467-789X.2012.01031.x
5. Yu, C., Zhang, J., Zhang, Y., & He, Y. (2023). The role of neuromodulation in obesity treatment: Advances and perspectives. Neuroscience & Biobehavioral Reviews, 149, 105168. https://doi.org/10.1016/j.neubiorev.2023.105168

[Abstract:0568]

Adolescent Interpersonal Psychology

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Interpersonal Psychotherapy (IPT) is a structured, time-limited therapy initially developed to treat major depression that focuses on resolving interpersonal issues to alleviate psychological symptoms and increased social support (Cornes, 1993; Lipsitz & Markowitz, 2013). Interpersonal Psychotherapy for Adolescents (IPT-A) is an adaptation specifically designed for adolescents to improve their understanding of interpersonal relationships, emotions, and communication skills.

IPT-A typically follows a 12- to 16-week treatment model with three phases: an initial phase (assessment and problem identification), a middle phase (targeted interventions in interpersonal problem areas such as role transitions, grief and loss, interpersonal conflict, and social isolation), and a termination phase (reinforcement of coping strategies and maintenance of progress). This structured approach helps adolescents develop adaptive interpersonal skills and improve their social functioning.Numerous studies support the effectiveness of IPT-A. Meta-analyses indicate that IPT-A significantly reduces depressive symptoms and increases remission rates in adolescents (Pu et al., 2017). Additionally, it has been shown to improve social functioning by reducing attachment-related anxiety and avoidance. It also has demonstrated potential in preventing suicidal behaviors, making it a crucial intervention for at-risk adolescents (Adini-Spigelman et al., 2024; Haruvi Catalan et al., 2020).

By employing a holistic assessment model that considers biological, psychological, social, cultural, and spiritual factors, IPT-A tailors interventions to each youth's unique needs. IPT-A enhances social competence and emotional well-being through interpersonal investigation, identification of problem areas, and targeted communication strategies. As an evidence-based treatment, IPT-A offers a valuable and effective approach to addressing adolescent depression and related psychological disorders, promoting long-term mental health and resilience.

Keywords: IPT, adolescent, therapy

REFERENCES

1 Adini-Spigelman, E., Gvion, Y., Haruvi Catalan, L., Barzilay, S., Apter, A., & Brunstein Klomek, A. (2024). Comparative Effectiveness of Ultra-Brief, IPT-A Based Crisis Intervention for Suicidal Children and Adolescents. Arch Suicide Res, 28(4), 1249-1262. https://doi.org/10.1080/13811118.2023.2298499

2. Cornes, C. (1993). Interpersonal Psychotherapy of Depression. In R. A. Wells & V. J. Giannetti (Eds.), Casebook of the Brief Psychotherapies (pp. 53-64). Springer US. https://doi.org/10.1007/978-1-4615-2880-7_4

3. Haruvi Catalan, L., Levis Frenk, M., Adini Spigelman, E., Engelberg, Y., Barzilay, S., Mufson, L., Apter, A., Benaroya Milshtein, N., Fennig, S., & Klomek, A. B. (2020). Ultra-Brief Crisis IPT-A Based Intervention for Suicidal Children and Adolescents (IPT-A-SCI) Pilot Study RESULTS: Front Psychiatry, 11, 553422. https://doi.org/10.3389/fpsyt.2020.553422

4. Lipsitz, J. D., & Markowitz, J. C. (2013). Mechanisms of change in interpersonal therapy (IPT). Clin Psychol Rev, 33(8), 1134-1147. https://doi.org/10.1016/j.cpr.2013.09.002

5. Pu, J., Zhou, X., Liu, L., Zhang, Y., Yang, L., Yuan, S., Zhang, H., Han, Y., Zou, D., & Xie, P. (2017). Efficacy and acceptability of interpersonal psychotherapy for depression in adolescents: A meta-analysis of randomized controlled trials. Psychiatry Res, 253, 226-232. https://doi.org/10.1016/j.psychres.2017.03.023

[Abstract:0569]

Mental Health Issues in Children and Adolescents with Asperger Syndrome

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Asperger syndrome (AS) is classified as a pervasive developmental disorder, distinguished by social dysfunction and unique interests, all while maintaining normal intelligence levels [1]. In 1994, the American Psychiatry Association initially established AS as a diagnosis in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) and differentiated it from autistic disorder by the absence of substantial delays in language and overall cognition. However, in 2013, the association eliminated AS from the DSM and addressed it as a component of autism spectrum disorder, which was recognized as a novel diagnostic category in the DSM-V: *"Individuals with a well-established DSM-IV diagnosis of autistic disorder, Asperger's disorder, or pervasive developmental disorder not otherwise specified should be given the diagnosis of autism spectrum disorder"* [2].

The literature review underscores a significant correlation between AS and various mental health conditions. For instance, depressive disorder is a prevalent comorbidity among adolescents with AS, as they may gain enhanced insight into their differences during adolescence. Nevertheless, individuals diagnosed with AS may exhibit difficulties in articulating their feelings and emotions, making it challenging to recognize and acknowledge any additional psychiatric conditions, such as depression, that may be masked by AS symptoms [3]. Anxiety disorders, including social anxiety disorder and generalized anxiety disorder, are also prevalent among individuals diagnosed with AS [4]. Furthermore, externalizing disorders such as attention deficit hyperactivity disorder (ADHD) may be observed in individuals diagnosed with Asperger syndrome [5]. Notably, the DSM-V allows for the comorbidity between autism spectrum disorder and ADHD, unlike the DSM-IV.

This presentation aims to address the mental health challenges observed in individuals diagnosed with AS, as informed by contemporary literature.

Keywords: Adolescent, anxiety, Asperger syndrome, children, depression, mental health

AuthorToEditor: [1]. Ghaziuddin M. Asperger syndrome: Associated psychiatric and medical conditions. Focus on Autism and Other Developmental Disabilities 2002;17(3):138-144. [2]. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed. Washington, DC: American Psychiatric Association; 2013. [3]. Mazzone L, Ruta L, Reale L. Psychiatric comorbidities in Asperger syndrome and high functioning autism: diagnostic challenges. Annals of General Psychiatry 2012;11:16. [4]. Russell E, Sofronoff K, Russell E, Sofronoff K. Anxiety and social worries in children with Asperger syndrome. Australian & New Zealand Journal of Psychiatry 2005;39(7):633-638. [5]. Ghaziuddin M, Weidmer-Mikhail E, Ghaziuddin N. Comorbidity of Asperger syndrome: A preliminary report. Journal of Intellectual Disability Research 1998;42(4):279-283.

[Abstract:0570]

Early Intervention and Treatment Approaches in the Light of Neuroscience

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Psychotic-like experiences (PLEs) in adolescents are early indicators of potential mental health disorders, necessitating timely intervention. Current research highlights a range of treatment approaches, including psychological therapies, early intervention programs, and pharmacological strategies.

Psychological interventions remain a cornerstone of treatment for adolescents with psychotic-like experiences. Cognitive Behavioral Therapy (CBT) is one of the most well-researched interventions, showing efficacy in reducing distress and improving functional outcomes. Mindfulness and Acceptance-Based Therapies (MAC-P) have also demonstrated effectiveness, particularly in enhancing resilience and reducing emotional distress.

In addition, early intervention services tailored for adolescents, such as those examined by Thomson et al. (2018), show significant reductions in both positive and negative symptoms when intervention is provided promptly.

While psychological interventions play a critical role, pharmacological treatment remains an essential option for some adolescents with severe symptoms. Second-generation antipsychotics (SGAs) such as aripiprazole, risperidone, and olanzapine are commonly used.

Early psychosis intervention programs have demonstrated better symptom remission, lower relapse rates, and improved quality of life compared to standard care. The research underscores the importance of reducing the duration of untreated psychosis (DUP) to improve long-term outcomes.

Additionally, cannabis use has been strongly linked to psychotic symptoms, and digital interventions such as the Keep It Real program have shown promise in reducing both substance use and psychotic experiences.

Despite advances, the optimal duration of antipsychotic treatment in adolescents remains unclear. More studies are needed to determine who benefits most from medication versus therapy and to refine treatment algorithms that integrate pharmacological, psychological, and digital interventions.

The treatment of psychotic-like experiences in adolescents requires a multimodal approach. While psychological interventions like CBT and early intervention services are highly effective, antipsychotic medications remain an option for more severe cases. However, side effects must be carefully managed, and a personalized approach is crucial. Future research should focus on integrating digital health tools and optimizing pharmacological strategies to improve long-term adolescent mental health outcomes.

Keywords: Psychotic-like experiences, intervention, adolescents

[Abstract:0571]

Sleep and Cognition in Bipolar Disorder

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BACKGROUND: People with bipolar disorder (BD) may experience impairing cognitive deficits, even in remission. Electroencephalographic (EEG) measures can depict neurophysiological activity with high temporal resolution. They could therefore be an adequate method to pinpoint the cognitive impairments in BD, facilitating understanding of when exactly the cognitive processing is disrupted and what neurophysiological systems are involved. In the absence of a previous literature examination, we conducted a systematic review aiming to synthesize the evidence of associations between wake EEG and cognitive measures to identify electrophysiological markers of cognitive performance in BD, but did not identify any robust EEG markers: A total of 16 articles describing 15 studies were included. Six studies identified significant correlations. Most of the identified significant correlations were conflicting within (different measures or mood states) and across studies with no consistent significant correlation across studies. The majority of identified correlations were non-significant. Sleep EEG might be a good alternative to wake EEG markers for cognition in BD, as previous research has shown an association between cognition and sleep parameters, especially sleep spindles, in different populations (1,2). Thus, we are now aiming to assess the association between cognitive measures and sleep spindles in a sample of euthymic BD patients. *METHODS:* This project will be a cross-sectional analysis of sleep and cognitive data of euthymic patients with BD who are taking part in the Cognitive Remediation in Bipolar Disorder (CRiB2) trial (3). We are aiming to collect mobile sleep-EEG data of 36 CRiB2 participants. Participants will sleep with a mobile EEG device for three consecutive nights and perform several cognitive tests as part of their CRiB2 baseline visit. *RESULTS:* We are aiming to perform various correlational analyses between sleep spindle characteristics (e.g., density, frequency) and cognitive measures (e.g., working memory measured with the Digit Span Test). As our main objective, we hypothesize that there will be a positive association between fast sleep spindle density and cognition (global cognition composite score and individual cognitive domain scores (processing speed and attention, working memory, verbal learning, phonetic and verbal fluency, memory, executive function)) in euthymic adult participants with BD. *CONCLUSIONS:* This talk will give an overview of the results of our systematic review on EEG markers of cognitive performance in BD. We will also present the protocol and experiences of our ongoing project on the association between mobile sleep EEG data and cognition in a euthymic BD sample.

Keywords: Bipolar disorder, cognition, sleep, EEG

REFERENCES

1. Fernandez, L. M. J., & Lüthi, A. (2020). Sleep Spindles: Mechanisms and Functions. Physiological reviews, 100(2), 805–868. https://doi.org/10.1152/physrev.00042.2018
2. Au, C. H., & Harvey, C. J. (2020). Systematic review: the relationship between sleep spindle activity with cognitive functions, positive and negative symptoms in psychosis. Sleep medicine: X, 2, 100025. https://doi.org/10.1016/j.sleepx.2020.100025
3. Tsapekos, D., Strawbridge, R., Cella, M. et al. Cognitive Remediation in Bipolar (CRiB2): study protocol for a randomised controlled trial assessing efficacy and mechanisms of cognitive remediation therapy compared to treatment as usual. BMC Psychiatry 23, 842 (2023). https://doi.org/10.1186/s12888-023-05327-1

[Abstract:0572]

Asperger Syndrome From The Past to The Present

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Asperger Syndrome (AS) was first described in 1944 by Austrian pediatrician Hans Asperger. While working at the University of Vienna, Asperger noticed that some children had difficulties with social interaction, showed intense but limited interest in specific subjects, and exhibited significant clumsiness in motor skills. He called this condition "autistic psychopathy" [1]. However, due to the impact of World War II, his research was largely overlooked and did not receive much attention in academic circles at the time.

Meanwhile, Austrian-born American psychiatrist Leo Kanner introduced the concept of "early childhood autism" in the United States. The autism that Kanner described encompassed more severe impairments in social and language development. On the other hand, the children Asperger described generally had speech abilities but struggled with social interaction and focused intensely on specific areas of interest. Nevertheless, Asperger‘s work remained in the shadow of Kanner‘s definition of autism for many years [2].

In 1981, British psychologist Lorna Wing revisited Asperger‘s studies and emphasized that autism existed on a broad spectrum. Wing suggested that the children Asperger described represented a milder form of autism. This perspective became officially recognized in 1994 when the American Psychiatric Association (APA) included Asperger Syndrome as a distinct diagnostic category in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV).

However, in 2013, with the publication of the DSM-5, Asperger Syndrome was removed as a separate diagnosis and incorporated into Autism Spectrum Disorder (ASD). Some experts and individuals who had previously been diagnosed with Asperger Syndrome criticized this change. Opponents argued that maintaining Asperger Syndrome as an independent diagnosis was critical to ensuring that affected individuals could access appropriate support and resources.

Although it is no longer included in the DSM-5, the term Asperger Syndrome is still used in medical and psychological literature today. In Europe, the International Classification of Diseases (ICD-10 and ICD-11) previously included Asperger Syndrome as a subcategory. However, influenced by the DSM-5, it is now generally considered part of the autism spectrum.

The inclusion of Asperger Syndrome within ASD may be beneficial for research and clinical practice. On the other hand, this change has raised concerns regarding diagnostic processes, the risk of stigma, and access to special education and therapy services [3].

Keywords: Asperger, American Psychiatric Association, Autism Spectrum Disorder, Historical Perspective

AuthorToEditor: 1. Asperger, H. (1944). Die "Autistischen Psychopathen" im Kindesalter. Archiv für Psychiatrie und Nervenkrankheiten, 117(1), 76-136. 2. Frith, U. (1991). Autism and Asperger Syndrome. Cambridge: Cambridge University Press. 3. Happé, F., & Frith, U. (2020). Autism: Beyond ―theory of mind”. Annual Review of Psychology, 71, 21-46.

[Abstract:0573]

Asperger Syndrome and Theory of Mind

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The term "Theory of Mind" (ToM) is defined as the ability to comprehend humans as mental beings with beliefs, desires, intentions, and emotions and to explain and interpret their behaviors and interactions based on these mental states. This ability enables individuals to recognize that others possess minds different from their own, infer what others know and think in a given situation, predict their possible actions, understand irony and jokes, and interpret and utilize emotions, gestures, and facial expressions. The term "Theory of Mind" was first introduced in 1978 by primatologist and psychologist Premack and Woodruff in a paper discussing chimpanzees' ability to understand the mental states of conspecifics. In 1978, based on Dennett‘s hypothesis regarding children‘s ability to refer to mental states, Wimmer and Perner (1983) evaluated children's false belief attribution skills using the "Maxi Task" and found that by the age of four, children were able to predict others' mental states. Children diagnosed with Autism Spectrum Disorder (ASD) struggle with social-emotional reciprocity, unlike their peers, and have difficulty understanding that others may hold beliefs, desires, and intentions different from their own. Deficits in this ability contribute to impairments in social interaction, communication difficulties, and restricted and repetitive behaviors [1]. To assess ToM abilities, the Sally-Anne test, which measures social-cognitive skills in attributing false beliefs to others, has been widely used. While most typically developing children over the age of 5 (85%) successfully pass this test, the majority of children with ASD fail to do so. Based on these findings, a deficit in ToM has been proposed in autism. However, Bowler opposed the ToM developmental delay theory in autism and demonstrated in his study that 73% of adults with Asperger syndrome successfully passed second-order false belief tasks. In light of these findings, some researchers have suggested that performance on false belief tasks in autism is related to verbal, mental age, with individuals possessing a verbal, mental age of over 12 years being able to pass these tests. This supports the hypothesis of a developmental delay in ToM abilities in children with autism. A study comparing 21 children and adolescents with Asperger syndrome to 20 typically developing children examined their performance on advanced ToM tests. The findings revealed that individuals with Asperger syndrome exhibited lower performance on all three tests, suggesting that these tasks rely on different cognitive abilities and share distinct information-processing demands. Boucher (1989) argued that individuals with autism have a diminished ability to attribute mental states to others due to impairments in higher-order representational capacity [2]. He also suggested that deficits in spontaneous pretend play among autistic children stem from a lack of motivation. Baron-Cohen (1989) modified the hypothesis that individuals with autism fail ToM tests, proposing that the issue is not a fundamental deficit but rather a developmental delay [3].

Keywords: Theory of mind, Asperger, autism, children

AuthorToEditor: [1]. Association AP. Diagnostic and statistical manual of mental disorders: DSM-5: American Psychiatric Association; 2013. [2]. Boucher J. The theory of mind hypothesis of autism: Explanation, evidence and assessment. British Journal of Disorders of Communication 1989;24(2):181-98. [3]. Baron-Cohen S. The autistic child's theory of mind: A case of specific developmental delay. Journal of Child Psychology and Psychiatry 1989;30(2):285-97.

[Abstract:0574]

Sensory Integration For Children and Adolescents With Asperger Syndrome

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Asperger Syndrome was first included as a diagnosis in Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) in 1994. Then, in 2013, with the publication of the DSM-5, Asperger Syndrome was removed as a separate diagnosis and incorporated into a broader category in Autism Spectrum Disorder (ASD). Children with Asperger Syndrome often have less eye-contact, show intense but limited interest in specific subjects, have difficulty in social interaction and following the social rules of society such as taking turns during a conversation with someone. Sudden shifts and changes in their daily routine may be hard for them to handle. In addition, children with Asperger Syndrome have also been reported to have being clumsy, having poor posture, low muscle tone and body awareness and poor handwriting that indicated as impaired gross and fine motor skills.

Individuals with ASD may have difficulty tolerating bright lights, certain clothes and foods, certain sounds, and touching. Hypersensitivity, the inability to filter incoming information, may cause difficulty in participating in education, while hyposensitivity may cause a delay in visual and auditory processing and the absence of an appropriate response. Abnormal sensory processing may cause difficulties in daily activities, such as sleeping, eating and some troubles in daily routines, including bath time and bedtime. Because of the effects of abnormalities in sensory processing, interventions have been created that address these difficulties and improve performance. Interventions used to address sensory characteristics are divided into two main sections as Ayres sensory integration and sensory-based interventions. Sensory-based interventions can be applied in the child's home, school, or community environment under the supervision of a therapist or an adult. Sensory integration therapy is an intervention method that integrate play activities and sensory-enhanced interactions to elicit the child's adaptive responses. The therapist arranges some playful activities that provide the child's active participation and challenge the child's sensory processing and motor planning skills by various methods.

It is speculated that sensory integration therapy helps the nervous system‘s ability to change (neuroplasticity), and that provide certain forms of sensory stimulation in appropriate dosages can improve the nervous system‘s ability to process sensory stimuli. After all, improvements in nervous system may then result in more efficient learning and reduce problematic behaviors. Sensory integration therapy intervention activities usually performed in a large therapy room. In this room, there are equipments such as innertubes, ball pool, trampolines, foam blocks, some kind of swings and a climbing wall that all playful and goal-directed activities can provide vestibular and proprioceptive challenges. The therapist also helps caregivers for developing some beneficial approaches to accommodate the child‘s needs with explaining the possible links between challenging behaviors and sensory processing. In addition, the therapist recommends strategies that targetting the child‘s hypo- or hyperreactivity such as some modifications to the child‘s environments or daily routines.

Keywords: Asperger syndrome, autism spectrum disorder, sensory integration therapy

AuthorToEditor: [1] Lang R, O‘Reilly M, Healy O, et al. Sensory integration therapy for autism spectrum disorders: A systematic review. Research in Autism Spectrum Disorders 2012;6(3):1004-1018. [2] Case-Smith J, Weaver LL, Fristad MA. A systematic review of sensory processing interventions for children with autism spectrum disorders. Autism 2015;19(2):133-148. [3] Camino-Alarcón J, Robles-Bello MA, Valencia-Naranjo N, Sarhani-Robles A. A Systematic Review of Treatment for Children with Autism Spectrum Disorder: The Sensory Processing and Sensory Integration Approach. Children, 2024;11(10):1222.

[Abstract:0575]

Could NREM Be A Biomarker for Parasomnias?

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Non-REM (NREM) sleep disorders are characterized by abnormal behaviors or physiological events that occur during sleep and are often not recalled upon awakening. Understanding the underlying biological mechanisms of these disorders is crucial for improving diagnostic and therapeutic approaches. In recent years, the identification of biomarkers has played a significant role in elucidating the pathophysiology of NREM sleep disorders and advancing clinical applications.

NREM sleep disorders include sleepwalking (somnambulism), night terrors, and confusional arousals. While the exact pathophysiology of these disorders remains unclear, various biomarkers are believed to contribute to their manifestation. A family history is a significant risk factor for the development of NREM parasomnias. In particular, associations between specific human leukocyte antigen (HLA) genotypes and certain NREM sleep disorders have been reported. These genetic markers may increase an individual's susceptibility to such conditions. Moreover, imbalances in neurotransmitters such as gamma-aminobutyric acid (GABA) and serotonin have been implicated in the pathogenesis of NREM sleep disorders. A reduction in the inhibitory effects of GABA, for instance, may lead to uncontrolled motor activity during sleep. Polysomnography remains the gold standard for assessing sleep disorders, and individuals with NREM parasomnias have been found to exhibit increased micro-arousals and abnormalities in sleep spindles, indicating disruptions in sleep depth and continuity.

Alterations in autonomic nervous system activity may also occur during NREM sleep disorders. For instance, significant increases in heart rate and respiration have been observed during night terror episodes, suggesting that autonomic physiological changes may serve as potential biomarkers. Furthermore, neuroimaging techniques such as functional magnetic resonance imaging (fMRI) and positron emission tomography (PET) have revealed abnormalities in brain activity in individuals with NREM parasomnias. Notably, hypometabolism and abnormal activity patterns have been reported in the frontal and parietal lobes.

The identification of biomarkers provides several advantages in the diagnosis and treatment of NREM sleep disorders. The presence of specific biomarkers may facilitate the early detection of these conditions, while continuous monitoring of biomarkers enables an objective assessment of treatment responses. Additionally, personalized therapeutic approaches can be developed based on individual biomarker profiles. A comprehensive understanding of the biological mechanisms underlying NREM sleep disorders and the identification of relevant biomarkers are essential for advancing the management of these conditions. Future research will further clarify the clinical utility of these biomarkers and contribute to the development of novel strategies aimed at improving patient outcomes and overall quality of life.

Keywords: Non-REM (NREM) sleep disorders, Biomarkers, Sleepwalking (somnambulism), Night terrors, Confusional arousals

[Abstract:0577]

Management of Antidepressant Therapy in Liver and Kidney Disease

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The prevalence of major depression in stage 5 chronic kidney disease (CKD) varies between 14 and 30%. Patients with CKD who are depressed have a worse quality of life, are hospitalized more often and die sooner than those who are not depressed. Dose reduction in CKD3-5 is necessary for selegiline, amitriptylinoxide, venlafaxine, desvenlafaxine, milnacipran, bupropion, reboxetine and tianeptine. Other antidepressants being investigated in studies suggest use for treating depression in kidney disease. Side-effects were common, but mild in most patients (1,2).

Patients with chronic liver disease (CLD) may have comorbid psychiatric illnesses; the pharmacokinetic concerns arising out of hepatic dysfunction which affects pharmacotherapy for depression and vice versa. Orthotopic liver transplantation (OLT) patients with depression have higher mortality rates than nondepressed patients; appropriate antidepressant use reverses this effect. Selective serotonin reuptake inhibitors (SSRIs) and selective noradrenaline reuptake inhibitors (SNRIs) are effective and generally safe in both CLD and OLT patients. Antidepressants are effective in both CLD and post-OLT, although lower doses or a reduced dosing frequency may be required to minimise side effects, e.g. exacerbation of hepatic encephalopathy (3,4).

Keywords: Antidepressant, kidney disease, liver disease

AuthorToEditor: References 1. Nagler EV, Webster AC, Vanholder R, Zoccali C. Antidepressants for depression in stage 3-5 chronic kidney disease: a systematic review of pharmacokinetics, efficacy and safety with recommendations by European Renal Best Practice (ERBP). Nephrol Dial Transplant 2012 Oct; 27(10): 3736-45. 2. Levassort H, Boucquemont J, Lambert O, Liabeuf S et al. Urea Level and Depression in Patients with Chronic Kidney Disease. Toxins (Basel) 2024 Jul 22; 16(7): 326. 3. Mullish BH, Kabir MS, Thursz MR, Dhar A. Review article: depression and the use of antidepressants in patients with chronic liver disease or liver transplantation. Aliment Pharmacol Ther 2014 Oct;40(8):880-92. 4. Sahoo S, Mishra E, Premkumar M. Antidepressants in People With Chronic Liver Disease and Depression: When Are They Warranted and How to Choose the Suitable One? J Clin Exp Hepatol 2024 Jul-Aug; 14(4): 101390.

[Abstract:0578]

Transdermal Scopolamine In The Treatment of Resistant Depression

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INTRODUCTION: Treatment-resistant depression (TRD) is a clinical condition defined as major depressive disorder (MDD) that does not respond to at least two different antidepressant agents at adequate doses and duration. TRD significantly impairs patients' quality of life and poses a major public health concern by increasing the risk of suicide. Traditional treatment approaches include pharmacotherapy, psychotherapy, electroconvulsive therapy (ECT), repetitive transcranial magnetic stimulation (rTMS), and ketamine infusions. However, the need for new and fast-acting agents in the treatment of TRD is growing. In recent years, transdermal scopolamine has been investigated as a potential treatment option in this context.

Mechanism of Action and Antidepressant Effects of Scopolamine

Scopolamine (hyoscine) is a tropane alkaloid derived from the Solanaceae (nightshade) family of plants and acts as a non-selective antagonist of muscarinic acetylcholine receptors (mAChRs). Preclinical and clinical studies have reported its rapid antidepressant effects. However, scopolamine has not yet been approved by the FDA for the treatment of depression.

The antidepressant effect of scopolamine is thought to occur through the rapid release of glutamate from presynaptic glutamatergic neurons in the medial prefrontal cortex (mPFC). This effect arises due to the blockade of muscarinic receptors in GABAergic interneurons, leading to glutamate release. Glutamate then binds to AMPA receptors, facilitating calcium influx into postsynaptic glutamatergic neurons through voltage-dependent calcium channels (VDCCs). This calcium influx stimulates the release of brain-derived neurotrophic factor (BDNF). BDNF then binds to Trk-B receptors, activating the mammalian target of rapamycin complex 1 (mTORC1) signaling pathway, which promotes neurogenesis and synaptogenesis. This increase in neuroplasticity contributes to the improvement of depressive symptoms.

Advantages of Transdermal Scopolamine

Sustained and stable plasma levels: Compared to IV infusions, transdermal applications can provide more stable and prolonged effects. Lower risk of side effects: The acute anticholinergic side effects (such as nausea, vomiting, dizziness, dry mouth) seen with oral or IV scopolamine may be less pronounced with transdermal administration.

Improved patient compliance: Transdermal formulations that can be changed daily or weekly may offer a more comfortable option for patients.

Clinical Findings and Existing Evidence

Current clinical studies have shown that IV scopolamine rapidly reduces depressive symptoms. In particular, IV scopolamine has been reported to provide significant improvement within 24-48 hours after the first dose. However, there are still a limited number of studies on transdermal scopolamine. One clinical study suggested that transdermal scopolamine provided a rapid response in TRD patients, reducing symptoms within a few days. However, larger-scale randomized controlled trials are needed.

Side Effects and Limitations

Anticholinergic side effects: Dry mouth, blurred vision, cognitive slowing, confusion, tachycardia, and similar effects may be observed.

Lack of long-term safety data: The long-term efficacy and safety of transdermal scopolamine have not yet been fully established. Potential cognitive effects and anticholinergic burden associated with chronic use require further investigation.

Keywords: Scopolamine, Treatment-resistant depression, Antidepressant

[Abstract:0581]

New Hope in Schizophrenia Treatment 'KarXT'

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KarXT represents a promising advancement in schizophrenia treatment by offering a mechanism distinct from traditional antipsychotics, which primarily target dopamine D2 receptors. While conventional antipsychotics effectively reduce positive symptoms, they often fail to address negative symptoms and cognitive impairments while causing significant side effects, including extrapyramidal symptoms, metabolic disturbances, sedation, and cognitive dysfunction [1]. KarXT, a combination of xanomeline, a muscarinic receptor M1/M4 agonist, and trospium, a peripherally restricted muscarinic antagonist, aims to overcome these limitations [2]. Xanomeline crosses the blood-brain barrier (BBB) and stimulates M1 and M4 receptors, modulating dopamine release and reducing both positive and negative symptoms, while potentially enhancing cognitive function [3]. M4 receptor activation is particularly important in regulating dopamine transmission, offering an alternative to traditional dopamine blockade, which can lead to tolerance and worsening psychosis [4]. Additionally, M1 receptor activation enhances synaptic plasticity and cognition, addressing key deficits in schizophrenia [5]. However, xanomeline has been associated with peripheral cholinergic side effects, including gastrointestinal discomfort, excessive salivation, sweating, and cardiovascular disturbances [1]. To counteract these effects, KarXT incorporates trospium, which does not cross the BBB but selectively blocks muscarinic receptors in peripheral tissues, reducing systemic side effects while preserving xanomeline's central benefits [2]. Clinical trials, including the phase 3 EMERGENT-2 study, have demonstrated KarXT's efficacy in reducing schizophrenia symptoms, showing a 9.6-point greater improvement in Positive and Negative Syndrome Scale (PANSS) scores compared to placebo, with significant effects on positive, negative, and general psychopathology subscales [3]. Importantly, KarXT was generally well tolerated, with nausea, vomiting, constipation, and transient hypertension as the most common side effects, which were mild, transient, and occurred early in treatment [4]. Unlike traditional antipsychotics, KarXT did not lead to significant weight gain, metabolic dysfunction, sedation, or extrapyramidal symptoms, which are major contributors to poor adherence and reduced quality of life in schizophrenia patients [5]. Additionally, findings from phase 2 trials (EMERGENT-1) suggest KarXT may improve cognitive function, particularly in patients with baseline cognitive impairment, further distinguishing it from existing treatments [3]. A notable advantage of KarXT is its rapid onset of action, with significant symptom improvements observed as early as two weeks into treatment, compared to the delayed effects of many current antipsychotics [2]. Its dopamine-independent mechanism also makes it a promising candidate for treatment-resistant schizophrenia (TRS), which affects up to 30% of patients and is often unresponsive to standard treatments, including clozapine [1]. Given the increasing recognition of muscarinic receptor dysfunction in schizophrenia, KarXT represents a paradigm shift in antipsychotic treatment by providing comprehensive symptom relief while minimizing adverse effects [5]. However, long-term studies are necessary to confirm its durability and safety profile in real-world clinical settings, particularly regarding patient adherence and potential drug interactions [4]. This could be a critical turning point for a long-awaited innovation in schizophrenia to be brought into clinical practice. KarXT, a new hope for schizophrenia treatment, has great potential for both symptom improvement and minimization of side effects.

Keywords: Muscarinic receptor, schizophrenia, trospium, xanomeline

[Abstract:0583] [Davetli Konuşma] [Çocuk Psikiyatri » Diğer]

Deep Learning Research in Psychiatry: New Horizons in Diagnosis

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ABSTRACT: Deep Learning (DL), a subfield of Machine Learning and can process unstructured data, such as text and images, in their raw form and automatically identify sets of distinguishing features. This capacity saves substantial labor, particularly with large datasets, while boosting model accuracy and offering a more intuitive approach. Numerous studies in the literature have examined diverse DL techniques, including Convolutional Neural Networks (CNN), Deep Belief Networks (DBN), Autoencoders (AE), and Recurrent Neural Networks (RNN), which are widely employed in healthcare. Although these findings demonstrate the promising accuracy and applicability of DL models, the need for extensive datasets remains a key challenge.

Evidence shows that brain imaging data can facilitate automatic detection of schizophrenia with higher accuracy than traditional machine learning approaches. Similarly, large-scale data analyses have yielded insightful findings on the identification of PTSD, depression, anxiety, and suicidal tendencies. Investigations into vocal features (rhythm, tone, pitch) extracted from clinical interviews have shown success in uncovering mental health-related patterns, indicating significant potential for assisting clinicians. Furthermore, research on non-invasive camera-based detection of individuals with ASD underscores shows promise of DL applications in enhancing early diagnosis and intervention.

Overall, these examples illustrate the broad possibilities of DL in diagnosing mental health disorders. However, ensuring high-quality data, model explainability, and adherence to ethical principles remains vital for real-world use. Addressing these factors may enable future researchers to achieve more precise results and improve diagnostic workflows, thus making substantial contributions to scientific progress.

Keywords: Deep Learning, Mental Health Research, Mental Health Diagnosis, Artificial Intelligence.

[Abstract:0585]

Psychotic Disorders and Neuroinflammation

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Psychotic disorders are severe mental illnesses that lead to disruptions in thought, perception, and emotional functioning. Psychotic disorders such as schizophrenia, bipolar disorder, and schizoaffective disorder result from a combination of genetic, environmental, and neurobiological factors. In recent years, strong evidence has emerged indicating that neuroinflammation plays a significant role in the development of these disorders. Neuroinflammation is characterized by the activation of immune cells (particularly microglia and astrocytes) in the central nervous system (CNS) and the release of pro-inflammatory cytokines (IL-1β, IL-6, TNF-α).

Studies on the effects of neuroinflammation in schizophrenia have shown that prenatal infections, maternal immune activation, and childhood trauma can trigger inflammatory processes. These processes may lead to structural and functional changes in dopaminergic and glutamatergic pathways in the brain, facilitating the emergence of psychotic symptoms. For example, studies on first-episode psychosis patients have reported higher neutrophil-to-lymphocyte ratios (NLR) and other inflammatory markers compared to control groups. Furthermore, brain imaging studies have confirmed increased microglial activity and elevated levels of inflammatory cytokines.

Immune system dysfunction may partially result from prenatal exposure to agents such as Toxoplasma gondii, Cytomegalovirus, Chlamydia, and influenza, which can trigger immune responses and cause brain damage. More recent developmental studies using tissues from schizophrenia patients have demonstrated that it is not the pathogen itself but the inflammatory response that modifies the developmental trajectory of neurons. Immune-related genes have also been linked to abnormal immune signaling in schizophrenia.

Microglia, acting as cytokine sensors, serve as key regulatory cells of the immune system in the CNS. Structural, molecular, and functional alterations in microglia have been recorded in postmortem studies of schizophrenia patients who died by suicide.

Molecular imaging techniques that examine glial cells as markers of neuroinflammation may provide insights into the pathogenesis of schizophrenia. Structural imaging studies using magnetic resonance imaging (MRI) have shown reduced CNS brain volume in schizophrenia. Chronic disease progression is also associated with a progressive reduction in brain volume, which correlates with more severe clinical symptoms.

Meta-analyses and review studies examining the relationship between inflammation and psychosis have shown that inflammation is not only implicated in schizophrenia but also in other psychiatric disorders such as bipolar disorder and major depressive disorder. Chronic immune overactivation and inflammatory processes can disrupt synaptic plasticity, leading to cognitive decline and mood disturbances. Specifically, a direct relationship between inflammatory cytokines and manic and depressive cycles in bipolar disorder has been established.

Therapeutic approaches aimed at reducing the effects of neuroinflammation in psychotic disorders are also being investigated. Preliminary evidence suggests that non-steroidal anti-inflammatory drugs (NSAIDs), antibiotics such as minocycline, and immune-modulating agents may reduce the severity of psychotic symptoms. Additionally, antioxidant therapies and dietary supplements such as omega-3 fatty acids have been reported to suppress inflammatory responses and alleviate symptoms.

In conclusion, the critical role of neuroinflammation in the development and course of psychotic disorders presents new targets for psychiatric treatment approaches. In the future, personalized treatment strategies based on neuroinflammation are expected to improve symptom management and treatment outcomes in psychotic disorders.

Keywords: Psychosis, schizophrenia, neuroinflammation, inflammatory cytokines, microglial activation, immune modulation

[Abstract:0586]

The Psychodynamic Aspect of The Incel Concept

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The incel phenomenon refers to individuals, primarily young men, who perceive themselves as involuntarily excluded from romantic and sexual relationships. While some incels express their frustration passively, others develop resentment, sometimes escalating to radicalization and violence. A psychodynamic approach provides insight into the unconscious conflicts, childhood experiences, and identity distortions that contribute to this phenomenon.

Psychodynamic theorists like Bowlby and Kohut argue that early relational experiences significantly shape an individual's emotional regulation in adulthood. Many incels report neglect, bullying, or inconsistent caregiving, leading to difficulties in forming secure attachments. Those who experience inconsistent parental affection may develop anxious or avoidant attachment styles, which contribute to social isolation. Experiences of parental rejection or criticism may result in low self-worth and a fear of further rejection, reinforcing feelings of inadequacy. Furthermore, a lack of strong male role models often exacerbates reliance on rigid gender roles and toxic masculinity, fostering a belief that they are genetically or socially doomed to be undesirable.

From a Freudian perspective, incel frustration and aggression can be explained through defense mechanisms. Many incels project their fears of inadequacy onto women and socially successful men, externalizing their distress. They displace their personal failures into hostility toward these groups rather than addressing their own vulnerabilities. To cope with rejection, they develop rationalizations that justify their assumption that women are biologically programmed to reject them. Some incels also exhibit reaction formation, where extreme misogyny masks an unconscious desire for connection and acceptance. Research by Scaptura and Boyle (2019) demonstrates that masculinity threat and rejection sensitivity correlate with violent fantasies, supporting Freud‘s frustration-aggression hypothesis.

Kernberg‘s Object Relations Theory further explains the distorted interpersonal relationships of incels. Many engage in splitting, seeing women as either unattainable ideals or manipulative enemies, leaving no room for nuanced relationships. Narcissistic wounds, often rooted in early humiliation or social exclusion, lead to revenge fantasies and malignant aggression. Economic and social shifts, such as female autonomy and hypergyny, intensify resentment among lower-status men, exacerbating feelings of powerlessness and injustice (Blake & Brooks, 2023).

A Lacanian perspective further illuminates incel frustration, particularly their failure to integrate into the Symbolic Order, where societal norms and structures regulate identity and relationships. Many incels reject mainstream social structures, instead clinging to a rigid binary worldview of ―Chadvs. incel.” They define their self-worth through women‘s validation, yet believe they are permanently excluded from romantic and sexual relationships, creating a cycle of resentment and frustration.

This panel discussed the psychodynamic aspects of the incel phenomenon, analyzing its theoretical foundations and implications.

Keywords: Attachment, defense mechanisms, involuntary celibate, psychodynamic, psychopathology

AuthorToEditor: Blake, R., & Brooks, T. (2023). Masculinity, hypergyny, and economic shifts: Understanding incel aggression. Social & Psychological Review, 45(2), 213-234. Scaptura, M. N., & Boyle, K. M. (2019). Masculinity threat, incel traits, and violent fantasies among heterosexual men in the United States. Feminist Criminology, 14(5), 721-744. https://doi.org/10.1177/1557085119881517

[Abstract:0587]

The Violent Dimension and Judicial Aspect of The Incel Concept

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The incel phenomenon originated in 1997 when a woman in Canada created an online community for lonely individuals. Academically, it was first studied by Donnelly et al. (2001) to describe individuals willing to engage in sexual relationships but unable to find a partner for at least six months.

Initially focused on loneliness and independence in romantic relationships, the incel movement later became associated with misogyny and violence. Incels attribute their failures in relationships to women, successful men, or broader societal groups, fostering hostility and, at times, leading to violent actions. The recent rise in gender-based violence has drawn attention to this community, making its radicalization process, individual psychopathology, and social interactions' impact on violence an important forensic psychiatry issue.

Incels believe that feminism has given women control over their bodies and partner choices, leading them to prefer wealthy, attractive, and successful men. Feeling excluded, they develop anger, which manifests online through threats, harassment, and hate speech. Some incel groups even glorify sexual violence and weapons use against women, sharing violent fantasies. These ideologies sometimes result in real-world crimes such as rape, assault, murder, and mass killings. Alarmingly, incels view widespread media attention on these crimes as a means of gaining recognition and hero status within their communities.

In the United States, incel-related violence is increasingly classified as domestic terrorism or a hate crime. Law enforcement is tightening control over radicalized online forums and social media platforms where these ideologies spread. In Turkey, the regulation of criminal online activities falls under Law No. 5651, which was amended in 2020 to enforce stricter provisions and severe sanctions on social media platforms. This law enables Turkish authorities to remove hate speech and extremist content more efficiently than in the U.S.

Given the impact of online radicalization on crime, monitoring and preventing hate speech in digital spaces is crucial. Strict enforcement of laws, along with research into violence prevention, early intervention strategies, and additional legal regulations, is essential for ensuring public safety and mitigating the risks associated with this growing threat.

Keywords: Crime, incel, internet, violence

AuthorToEditor: Temelli, E. (2022). ―İncel" Örneği Üzerinden Çevrim içi Mizojinist Gruplar ve Şiddet Eylemleri. International Journal of Social and Humanities Sciences (IJSHS), 6(1), 11-30 Ünal C. (2024), Sosyal Medyada Örgütlenen İncel Toplulukları ve Şiddet Eylemleri: ABD ve Türkiye Deneyimi Arasındaki Farklar ve Benzerlikler, turk-internet.com

[Abstract:0588]

The Future of AI Reseach in Psychiatry: From Challanges to Solutions

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The advancement of artificial intelligence (AI) technologies has increased their use in mental health research. However, the heterogeneous nature of mental disorders, the abstract quality of symptoms, and the frequent non-parametric features of mental health data can pose challenges for integrating AI-based applications into this field. Still, when combined with appropriate methods and strategies, the application of AI in mental health can provide significant benefits for both AI research and clinical practice. In particular, AI‘s rapid data processing capabilities facilitate the production of new insights, and the process of addressing the associated challenges simultaneously contributes to further refinement of AI algorithms.

One of the main shortcomings in current studies is limited data availability. Mental disorders often show comorbidity and exhibit spectrum characteristics, making it difficult to build sufficiently large and representative datasets for training models. When models are trained on small or unrepresentative datasets, generalization becomes problematic, limiting the reliability of AI applications in clinical settings. Additionally, clinicians‘ skepticism toward AI technologies, patients‘ privacy concerns regarding data sharing, and uncertainties related to regulatory and ethical frameworks further complicate the integration of these technologies into clinical practice. Moreover, the lack of transparency concerning how data are collected, how missing values are handled, or how these values are incorporated into models undermines trust in AI systems. ―Black box” aspects of deep learning models, which make them appear less explainable, also present a significant concern for clinicians.

Proposed solutions include shifting from disease-based approaches to symptom-focused AI models, establishing large-scale and multi-center data networks for more robust and inclusive training, and creating user-friendly interfaces that facilitate seamless integration into clinical workflows. Such an approach would position AI systems not as direct decision-makers but as ―physician assistants” or supportive expert systems, thereby enhancing user acceptance and clinical adoption.

In conclusion, although the future of AI in psychiatry appears promising, building this future requires multi-stakeholder collaboration. Researchers, clinicians, software developers, ethics experts, and policymakers must work together to develop reliable, effective, and equitable AI solutions. Involving patients and the broader community in these processes can expedite technology adoption and help steer its progress in the right direction. As a result, we may envision a future AI-supported psychiatric practice where mental health problems can be predicted before they fully manifest, individualized therapy plans are updated in real time, and everyone has access to adequate treatment. While much work remains to reach these goals, current findings suggest that the responsible and informed integration of AI in psychiatry can open new frontiers, benefiting both patients and healthcare professionals.

Keywords: AI research in Psychiatry, Mental Health, Explainable AI, Ethical Issues

AuthorToEditor: 1. Lee, Ellen E et al. ―Artificial Intelligence for Mental Health Care: Clinical Applications, Barriers, Facilitators, and Artificial Wisdom.” Biological psychiatry. Cognitive neuroscience and neuroimaging vol. 6,9 (2021): 856-864. doi:10.1016/j.bpsc.2021.02.001 2. Yan, Wen-Jing et al. ―Challenges for Artificial Intelligence in Recognizing Mental Disorders.” Diagnostics (Basel, Switzerland) vol. 13,1-2 20 Dec. 2022, doi:10.3390/diagnostics13010002 3. Baydili, İ., et al. Artificial Intelligence in Psychiatry: A Review of Biological and Behavioral Data Analyses. Diagnostics 2025; 15(4): 434. 4. Carrasco, M.M., et al. Challenges for Artificial Intelligence in Recognizing Mental Disorders. Comput Math Methods Med 2022;2022:4282401. 5. Tavory, A., et al. The application of artificial intelligence in the field of mental health: a systematic review. BMC Psychiatry 2025; 25:523.

[Abstract:0589]

Accessing Knowledge: Literature Review and AI Research Insights

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The integration of artificial intelligence (AI) into psychiatry is a rapidly evolving field that offers significant potential to improve diagnostic accuracy, treatment personalization, and overall mental health care efficiency. In this presentation, we will synthesize information from recent research on AI applications in psychiatry, highlighting areas for improvement, challenges and future directions, highlighting the main mistakes and shortcomings in AI research, discussing issues to be considered when reading the literature, systematic reviews and examples of research design that can be done.

Machine learning and natural language processing (NLP) are being used in psychiatry to improve diagnostic tools and symptom monitoring. These technologies can help extract symptoms, classify severity of illness, and extract psychopathological data from various data sources such as medical records and social media. AI can also help in early detection of psychiatric disorders and understanding the progression of the disease. This is crucial for timely intervention.
AI can enable personalization of treatment plans by predicting responses to specific therapies and suggesting the most appropriate treatment approaches. These include the use of data from mobile devices, neuroimaging and data informed by electronic health records. It can offer the opportunity to inform treatment choice and explore new treatment options.

One of the key challenges in applying AI in psychiatry is ensuring patient privacy and addressing data biases. The ethical implications of AI, such as protecting privacy and avoiding biased results, building trust in AI systems are critical issues that need to be addressed.

Despite the potential of AI, there are significant methodological shortcomings, such as small sample sizes and lack of real-world interaction in algorithm development. These issues hinder the large-scale success of AI and decision support systems in psychiatry. In addition, the complexity of AI technologies requires careful consideration to ensure effective integration into clinical practice.

Future research should focus on increasing the transparency of AI methods, using experimental designs and ensuring clinical relevance. Involving users and patients in the design phase can increase the applicability and acceptance of AI tools in psychiatry.

There are numerous opportunities for using AI in psychiatric research, such as biomarker discovery, patient stratification and personalized medicine approaches. Knowledge graphs, for example, offer the potential to explain the complex biology of psychiatric disorders and develop innovative interventions. It also makes systematic reviews very easy.

In conclusion, while AI offers a tremendous opportunity to transform psychiatry, addressing ethical concerns and methodological challenges is vital for its successful implementation. Continued research and development is needed to fully utilize AI's potential to improve mental health care.

In the light of the current literature, AI applications, opportunities and limitations in the field of mental health will be discussed, gaps in the literature, things to be considered while reading the literature, systematic review,and possible research design suggestions will be presented.

Keywords: Research insights, AI, Systematic review, Natural language processing, Machine learning, Mental health

[Abstract:0590]

Integration of Artificial Intelligence into Psychiatric Research: A Roadmap for Innovation

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The integration of artificial intelligence (AI) into psychiatry research is poised to revolutionize mental health care by increasing diagnostic accuracy, personalizing treatment and improving clinical workflows. This presentation will attempt to provide a roadmap by focusing on current applications, challenges and future directions of AI in psychiatry.

AI is being used to facilitate early detection and diagnosis of psychiatric disorders such as depression, schizophrenia, autism spectrum disorder and Alzheimer's disease. Techniques include the use of electronic health records, brain imaging data and social media platforms to predict and classify mental health conditions with high accuracy.

AI-enabled approaches can advance personalized psychiatry by integrating genetic, environmental and phenotypic data to tailor treatments to individual patients. This could use network science to understand complex biological interactions and pinpoint predictive markers for clinical use.

The rise of digital health technologies such as smartphone apps, virtual reality and chatbots can offer scalable interventions that complement traditional care. These technologies enable digital phenotyping and remote interventions and hold promise in the long-term management of psychiatric disorders.

Key challenges include ensuring data privacy and reducing biases in AI models. Ethical considerations are crucial to prevent misuse and ensure that AI tools enhance, rather than replace, clinical judgment.

Bridging the gap between AI research and clinical practice requires rigorous validation of AI models and the development of clear regulatory frameworks. This is crucial to ensure responsible and effective implementation of AI in mental health care.

Future research should focus on integrating AI with clinical workflows to enhance decision-making processes. The continuous development of AI methodologies, including machine learning and natural language processing, will further enhance the capabilities of AI in psychiatric research. This includes improving the accuracy of diagnostic tools and personalizing treatment plans.

It will be critical to establish robust regulatory and ethical frameworks to address privacy concerns, model biases and the protection of the human element in therapy. This will ensure that AI technologies are used responsibly and effectively in mental health care.

In conclusion, AI has transformative potential for psychiatric research and practice. Its successful integration into the psychiatric clinic requires addressing existing challenges and ethical considerations. By fostering collaboration and developing clear frameworks, AI can significantly improve the accessibility, effectiveness and ethicality of mental health services.

This presentation will discuss the current applications, challenges and future directions of AI in psychiatry and provide a roadmap.

Keywords: Systematic review, Machine learning, Mental health, Artificial Intelligence, Psychiatric Research, Roadmap

[Abstract:0591]

Current Pharmacological Treatments For Anorexia Nervosa

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Anorexia Nervosa (AN) is a false belief and eating behavior disorder that aims to reduce one's body weight excessively (1). Individuals avoid gaining weight. It is one of the most common types of eating disorders and is usually seen in adolescents and young adults between the ages of 12-25 (2). It is 10 times more common in women than in men. However, in recent years, there has been an increasing prevalence in men. The frequency of anorexia nervosa in society varies between approximately 0.5-1%. A number of biological, psychological and environmental factors play a role in the development of anorexia nervosa. The main clinical findings of anorexia nervosa are; Extreme thinness, disturbance in body shape and weight perception, avoidance of eating, increased frequency and amount of exercise, and physical symptoms such as dry skin, cold intolerance, hair loss, menstrual irregularities, and heart problems. Anorexia nervosa is often seen together with other psychiatric diseases. The most common of these are: depression, anxiety disorders, obsessive-compulsive disorder (OCD) and substance use disorder. The presence of additional comorbidities can make the treatment and course of anorexia more complicated. The treatment of anorexia nervosa requires a multidisciplinary approach using pharmacotherapy and psychotherapy together (3). The main pharmacological agents used are antidepressants and antipsychotics. The search for new treatments has increased recently.

Orexin Agonists: Orexin is a neuropeptide that plays a role in the regulation of wakefulness and appetite. Orexin can help increase appetite and improve eating habits in anorexia nervosa. Studies show that orexin agonists have the potential to alleviate symptoms associated with loss of appetite and weight loss.

Drugs that Regulate Glutamate Levels: Glutamate is an important neurotransmitter in the brain and abnormal glutamate activity is thought to play a role in anorexia nervosa. In this context, research continues on drugs that regulate the glutamate system.

Drugs for Cannabinoid System Modulation: In recent years, the effects of the cannabinoid system on eating behaviors have been investigated. Drugs containing synthetic THC (tetrahydrocannabinol), such as dronabinol, have been suggested to offer potential benefits in the treatment of anorexia nervosa. These drugs can be used to increase appetite and promote weight gain. However, the long-term effectiveness and safety of these treatments are still under investigation.

Naltrexone: Eating disorders are often linked to impaired functioning of the brain's reward system and impulse control. Naltrexone can help regulate eating behaviors by affecting this reward system. Some studies have shown that naltrexone may be helpful in reducing impulsivity and overeating behaviors. It is also thought that naltrexone has the potential to prevent excessive reward seeking by affecting the dopamine and opioid systems, but more research is needed on the effectiveness and safety of this treatment method.

Drug treatment for anorexia nervosa is usually used in conjunction with psychotherapy and nutritional support. New drug therapies and approaches have the potential to help treat this disorder. Research into the treatment of anorexia nervosa is ongoing, and more effective and targeted treatment options may emerge in the coming years.

Keywords: Anorexia nervosa, treatment, naltrexone, antidepressant, orexin

AuthorToEditor: 1. Varga S, Steglich-Petersen AJM, Language. On the roles of false belief and recalcitrant fear in anorexia nervosa. 2023;38(5):1296-1313. 2. Nicula M, Pellegrini D, Grennan L, Bhatnagar N, McVey G, Couturier JJJoED. Help-seeking attitudes and behaviours among youth with eating disorders: a scoping review. 2022;10(1):21. 3. Brown L. The multidisciplinary approach in the treatment of eating disorders. 2020.

[Abstract:0592]

Management of Sexual Side Effects Related to Antipsychotics

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Antipsychotic drugs are widely used in the treatment of psychiatric diseases such as psychosis, schizophrenia, and bipolar disorder. However, these drugs can have some undesirable effects on sexual health. Sexual side effects can significantly affect the quality of life of individuals receiving treatment and make it difficult to comply with treatment (1). These side effects are usually caused by the effects of the drugs on neurotransmitters such as dopamine, serotonin, and norepinephrine (2). These effects can affect various sexual functions such as sexual desire, sexual function, and orgasm. The following are prominent among the sexual side effects of antipsychotics:

Loss of Sexual Desire: Antipsychotics, especially drugs that affect the dopamine system, can have negative effects on sexual desire and desire. Dopamine is associated with sexual arousal and motivation, so suppressing dopamine can reduce sexual interest.

Erectile Dysfunction: Antipsychotics can cause erection problems in men. Especially increased prolactin levels can negatively affect sexual functions. High prolactin levels can cause erection problems by blocking blood flow to the penis.

Orgasm Problems: Antipsychotic medications can make orgasm difficult or prevent it, especially in women. This can significantly reduce the sexual satisfaction of those receiving treatment.

Management of Sexual Side Effects

The sexual side effects of antipsychotics can be a significant problem during the treatment process. However, there are several strategies for managing these side effects:

Dose Adjustment: Adjusting the dose of antipsychotics can be an important method for reducing sexual side effects. Lower doses can reduce the severity of the effects. However, this approach can increase disease symptoms.

Alternative Medication Options: Sexual side effects can vary depending on the type of antipsychotic drug used. Some antipsychotics cause fewer sexual side effects than others (3). For example, atypical antipsychotics may cause fewer sexual side effects than traditional antipsychotics. For this reason, the doctor may recommend alternative medications. Partial agonist antipsychotics, such as aripiprazole, may be preferred.

Psychotherapy and Counseling: Sexual side effects can be based not only on biological but also psychological factors. Psychotherapy and counseling can be useful in dealing with sexual dysfunction. In addition, sexual therapy can help individuals overcome psychological barriers.

Information About Side Effects of Medications: Being informed about sexual side effects allows patients to feel more comfortable during the treatment process. Doctors can encourage their patients to seek solutions early by informing them about possible side effects before starting treatment.

CONCLUSION: Antipsychotic drugs play an important role in the treatment of psychiatric disorders, but it is possible for these drugs to have negative effects on sexual function. Sexual side effects can be a significant problem during the treatment process, but these side effects can be managed with methods such as appropriate dosage adjustments, alternative medications, and psychotherapy. By considering the special needs of each individual during the treatment process, sexual dysfunctions can be minimized and quality of life can be improved.

Keywords: Antipsychotic, sexual dysfunction, erectile dysfunction, management strategies, treatment

AuthorToEditor: 1. Iversen TSJ, Steen NE, Dieset I, Hope S, Mørch R, Gardsjord ES, et al. Side effect burden of antipsychotic drugs in real life–Impact of gender and polypharmacy. 2018; 82: 263-271. 2. Shelton RCJAFBAtNMoA. Serotonin and norepinephrine reuptake inhibitors. 2019: 145-180. 3. Baldwin D, Mayers AJAiPT. Sexual side-effects of antidepressant and antipsychotic drugs. 2003; 9(3): 202-210.

[Abstract:0593]

Special Conditions and Antidepressant Use Strategies in Geriatric Population

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The prevalence of psychiatric disorders such as depression, anxiety, and sleep disorders in the geriatric population is significantly high and should not be ignored. Depression, in particular, is a significant cause of morbidity and mortality among elderly patients. However, depression remains inadequately treated.

Antidepressants are effectively used in the treatment of depression and anxiety in the elderly. Drug metabolism, potential drug interactions, preservation of walking, movement, and balance functions, as well as patient compliance, play a crucial role in drug selection. The pharmacokinetic and pharmacodynamic properties of drugs differ significantly between elderly patients and young adults. The decline in renal and hepatic function with age may slow the excretion of drugs from the body and increase the risk of side effects. In addition, polypharmacy is common in elderly individuals due to the presence of multiple diseases. This may make drug interactions and adverse events more frequent.

Selective serotonin reuptake inhibitors (SSRIs) are commonly preferred in the geriatric population due to their favorable side effect profile. Sertraline is generally the first choice. Paroxetine's anticholinergic effects should be taken into account. Citalopram should be used with caution in patients with a history of cardiac disease. The most common side effects of SSRIs are nausea, insomnia, and headache. Among the SNRIs, venlafaxine and duloxetine are the drugs of first choice. It should be taken into consideration that venlafaxine and duloxetine may increase blood pressure. Tricyclic antidepressants (TCAs) are often less preferred in elderly patients. TCAs may impair cognitive capacity due to their anticholinergic side effects and may cause postural hypotension and cardiovascular side effects. In addition, drug interaction risks are quite high. Vortioxetine may be preferred in the elderly due to its favorable effects on cognitive functions. Increased bleeding risk and hyponatremia that occur with antidepressant use in the elderly are among the important issues.

In antidepressant treatment for the elderly, initiating therapy with a low dose and gradually titrating to an effective level is essential. The response time is prolonged in elderly patients. A waiting period of 6-11 weeks is recommended before determining treatment non-response. Maintenance treatment is recommended for at least 12 months after remission. Regular assessment of treatment efficacy, adverse effects, and potential drug interactions is crucial for optimal recovery.

Keywords: Geriatrics, antidepressants, drug side effects, depression

[Abstract:0594]

Other Psychiatric Disorders and Neuroinflammation

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For many years, depression and anxiety disorders were primarily explained through neurotransmitter imbalances. However, recent studies have demonstrated that neuroinflammation plays a critical role in the etiopathogenesis of these disorders. Neuroinflammation is believed to contribute to the development of depression and anxiety by affecting both neurotransmitter metabolism and brain plasticity through pro-inflammatory cytokines. Neuroinflammation is an inflammatory response of the central nervous system (CNS) resulting from the activation of microglia and astrocytes. Under normal conditions, these cells play a role in maintaining homeostatic balance, but in chronic inflammation, they become overactive and secrete pro-inflammatory cytokines such as IL-1β, IL-6, and TNF-α. These cytokines exert various effects on the CNS. Pro-inflammatory cytokines lead to neurotransmitter dysregulation. TNF-α and IL-6 activate the enzyme indoleamine 2,3-dioxygenase (IDO) through the tryptophan-catabolic pathway, directing tryptophan, a precursor of serotonin, towards the kynurenine pathway. Consequently, serotonin synthesis decreases, while the accumulation of neurotoxic metabolites such as quinolinic acid and kynurenic acid enhances glutamatergic excitotoxicity, potentially triggering depressive symptoms. Chronic inflammation leads to hyperactivation of the hypothalamic-pituitary-adrenal (HPA) axis. Pro-inflammatory cytokines increase corticotropin-releasing hormone (CRH) expression in the hypothalamus, stimulating the secretion of adrenocorticotropic hormone (ACTH) and subsequently elevating cortisol levels. Elevated cortisol levels induce apoptosis in hippocampal neurons, contributing to cognitive dysfunction and anhedonia, which are hallmark symptoms of depression. Cytokines such as IL-1β and TNF-α have been shown to reduce the expression of brain-derived neurotrophic factor (BDNF), which supports synaptic plasticity. Decreased BDNF levels may lead to neuronal atrophy, particularly in the hippocampus and prefrontal cortex, which are crucial regions for mood regulation.

Studies conducted on patients with depression and anxiety disorders have revealed significant increases in peripheral inflammatory markers. Serum C-reactive protein (CRP) levels have been found to correlate positively with depression severity. Elevated levels of IL-6 and TNF-α have been detected in depressive individuals, with more pronounced increases observed in patients who do not respond to treatment. Preclinical and clinical studies suggest that anti-inflammatory treatments, such as COX-2 inhibitors and TNF-α antagonists, may exert antidepressant effects. Given the role of neuroinflammation in the pathophysiology of depression and anxiety, neuroimmunological targets should be considered in treatment approaches. Some studies in this direction include investigations into the potential effects of COX-2 inhibitors (e.g., celecoxib), TNF-α antagonists (e.g., infliximab), and IL-6 antagonists in the treatment of depression. The gut microbiota has been shown to have a direct influence on neuroinflammation. Probiotic and prebiotic supplementation may modulate inflammatory responses by supporting HPA axis regulation. Diets rich in anti-inflammatory agents, such as omega-3 fatty acids, polyphenols, and vitamin D, have been reported to alleviate depression symptoms.

Additionally, regular exercise and maintaining a healthy sleep schedule can increase BDNF expression, thereby reducing neuroinflammation. In conclusion, the association between depression, anxiety disorders, and neuroinflammation is increasingly recognized. The detrimental effects of pro-inflammatory cytokines on neurotransmitter metabolism, synaptic plasticity, and the HPA axis play a central role in the pathophysiology of these disorders. Future therapeutic approaches targeting neuroimmunological mechanisms are expected to contribute to more effective management of psychiatric disorders.

Keywords: Anxiety, depression, neuroinflammation

[Abstract:0595]

Circadian Rhythm and Attention Deficit and Hyperactivity Disorder

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Circadian Rhythm and Attention Deficit Hyperactivity Disorder (ADHD) is a neuropsychiatric disorder characterized by decreased attention, increased hyperactivity, or impulsivity, affecting preschool and school-age children, adolescents, and adults worldwide. The prevalence of ADHD in childhood is between 5-12% globally, and its prevalence in the general population is between 2.5-4.4%, with insufficient recognition in adulthood. The circadian rhythm is an essential biological rhythm for the interaction of all living organisms with their environment, involving approximately 24-hour behavioral and physiological changes generated by endogenous biological clocks (pacemaker, oscillator). Environmental external regulators affecting endogenous rhythms are called 'zeitgebers.' Natural daylight is considered the strongest zeitgeber for the circadian clock. Disruptions in the circadian rhythm have been shown to play a role in the development of many neuropsychiatric disorders, including ADHD. Polymorphism in biological clock genes regulating the circadian rhythm is suggested to be associated with evening chronotype and sleep disorders in ADHD. Additionally, neurotransmitter dysregulation and dopaminergic dysfunction observed in ADHD can also affect the circadian rhythm. A comprehensive study conducted with individuals with ADHD reported that 80% of these individuals experience sleep disorders, regardless of gender and ADHD subtypes. These individuals have difficulty falling asleep, poor sleep quality, difficulty maintaining sleep, and daytime sleepiness. The frequent occurrence of sleep problems in ADHD is attributed to neurotransmitter dysregulation, increased internal arousal as a result of hyperactivity, poor sleep habits, comorbid psychiatric disorders, or side effects of medications used, along with a delayed circadian rhythm characterized by later onset of melatonin production. Circadian Rhythm Genes and ADHD The fundamental molecular mechanisms in the regulation of the circadian rhythm are through clock genes. These genes consist of two transcription factors (CLOCK and BMAL1) and their targets, Period genes (Per1, 2,) and Cryptochrome (Cry 1 and Cry 2) genes. Dopamine, a neurotransmitter regulating movement, reward, and learning, and dopamine receptor activity are known to directly and indirectly affect clock genes and proteins, leading to circadian disruptions in ADHD. The CLOCK gene, part of the circadian rhythm gene family, has a significant function in dopaminergic regulation and neurocognitive functions. ADHD and Chronotype An interesting point for examining genetic factors linking ADHD and circadian rhythm is chronotype. Chronotypes are a different expression of circadian typology, indicating the period during which a person is physically and cognitively active, considering the 24-hour day. There are three chronotypes with different biological rhythms: morning, evening, and intermediate types. Morning type individuals prefer morning hours for physical and mental activities, go to bed earlier, and wake up earlier, while evening types prefer afternoon or evening hours for activities, sleep later, and wake up later. Intermediate types exhibit characteristics of both morning and evening chronotypes. Approximately 60% of adults have an intermediate chronotype, while the remaining 40% have either a morning or evening chronotype. Individuals with ADHD have significantly higher levels of eveningness and a greater proportion of evening chronotype compared to healthy controls. It is hypothesized that there is a bidirectional relationship between circadian rhythm disorders and increased evening chronotype in ADHD

Keywords: ADHD, Circadian Rhythm, CHRONOTYPE

AuthorToEditor: 1. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. American Psychiatric Association; 2013. 2. Simon V, Czobor P, Balint S ve ark. (2009) Prevalence and correlates of adult attention-deficit hyperactivity disorder: metaanalysis. Br J Psychiatry 194:204-211. 2009;204–11. 3. Kessler RC, Adler L, Barkley R, Biederman J, Conners CK, Demler O, et al. Kessler RC, Adler L, Barkley R ve ark.The prevalence and correlates of adult ADHD in the United States: results from the National Comorbidity Survey Replication. Am J Psychiatry 2006; 163(4): 716-723. 2010;163(4):716–23. 4. Fisher BC, Garges DM, Yoon SYR, Maguire K, Zipay D, Gambino M. Sex Differences and the Interaction of Age and Sleep Issues in Neuropsychological Testing Performance across the Lifespan in an Add/Adhd Sample from the Years 1989 to 2009. Psychol Rep. 2014;114(2):404–438E.

[Abstract:0596]

New Treatment Approaches in Acute Psychotic Crisis in Schizophrenia

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Schizophrenia is a chronic mental disorder characterized by positive symptoms such as hallucinations, delusions, and negative symptoms including avolition, anhedonia, and alogia, leading to functional impairment. One of the most challenging aspects of schizophrenia is the management of acute psychotic episodes. These episodes can significantly impact the patient's social and occupational functioning and may pose important risks to the well-being and safety of both the patients and their environment. Treatment typically involves antipsychotic medications along with psychosocial interventions. However, existing treatments are often insufficient for various reasons. Current antipsychotics generally target positive symptoms but are not sufficiently effective against negative and cognitive symptoms. Furthermore, approximately one-third of patients are resistant to antipsychotic treatment, and most experience at least one relapse within five years of starting treatment. Lastly, current antipsychotics can lead to extrapyramidal side effects, as well as metabolic side effects such as weight gain, hyperlipidemia, and type 2 diabetes, thereby diminishing quality of life.

Personalizing antipsychotic drug therapy in both the acute and maintenance phases of schizophrenia is crucial. The effectiveness of treatment and the tolerability of side effects influence patient adherence to treatment, and consequently, determine the treatment response and risk of relapse. There is a pressing need for new treatment options that are better tolerated, highly effective, and beneficial for both negative and cognitive symptoms.

In recent years, the development of newer-generation antipsychotic drugs has significantly contributed to the treatment process of schizophrenia. These newer drugs typically have better side effect profiles, facilitating improved patient adherence. These medications not only target dopamine D2 receptors but also serotonin 5-HT and other neurotransmitter systems, providing a more comprehensive effect. As a result, they may be clinically effective for both positive and negative symptoms. Among the newer-generation antipsychotics, cariprazine, brexpiprazole, and brilaroxazine are partial dopamine agonists effective in acute relapses. Lumateperone, pimavanserin, roluperidone, ulotaront, and xanomeline do not directly affect the D2 receptor. Lumateperone, pimavanserin, and roluperidone exhibit high-affinity serotonin 5-HT2A antagonism. Ulotaront is a novel compound that acts as an agonist on the TAAR1 (Trace Amine-Associated Receptor 1) with antipsychotic effects. Xanomeline is a muscarinic agonist with selectivity for M1 and M4 receptor subtypes.

Early studies have shown that lumateperone, pimavanserin, and roluperidone are effective not only in positive symptoms but also in negative symptoms. Ulotaront and xanomeline have demonstrated benefits for both positive and negative symptoms of schizophrenia in phase II trials. Recent developments in the management of acute agitation associated with psychosis also include investigational drug formulations such as dexmedetomidine and intranasal olanzapine.

In conclusion, the acute-phase treatment of schizophrenia presents a multifaceted challenge that involves innovative psychopharmacological approaches alongside psychosocial interventions. Despite these challenges, newer-generation antipsychotic medications are promising, particularly in the management of acute psychotic episodes and treatment-resistant schizophrenia cases.

Keywords: Antipsychotics, novel treatment, schizophrenia

[Abstract:0597]

Assessment of Cognitive Processes Using ERP: Attention, Memory, and Language Development

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Event-Related Potentials (ERP) are time-locked brain responses to specific sensory, cognitive, or motor events, measured using electroencephalography (EEG). ERP components reflect distinct neural processes and are widely used in cognitive neuroscience to investigate attention, language development, and memory functions in both healthy individuals and clinical populations. ERP is a valuable tool for evaluating attentional processes. Components such as P1 and N1 reflect early sensory attention, while P3b is associated with selective attention and resource allocation. The N2pc component indicates shifts in visual attention, and Contingent Negative Variation (CNV) reflects expectation and preparation mechanisms. ERP studies have been used to examine attentional deficits, such as in Attention-Deficit/Hyperactivity Disorder (ADHD), by identifying altered neural responses to stimuli. Studies have shown that children with ADHD exhibit reduced P3b amplitudes, altered N2 components, and impaired ERP responses related to attentional control. These findings provide insight into the neural mechanisms underlying attention deficits and aid in early diagnosis and intervention. ERP is also widely employed to study language acquisition and processing. The Mismatch Negativity (MMN) component is crucial for phonological discrimination, while N400 reflects semantic processing and word meaning integration [1]. Additionally, P600 is linked to grammatical processing and syntactic violations. ERP studies help track language development in infants and detect impairments in conditions such as autism spectrum disorder (ASD) and dyslexia by identifying differences in neural responses to linguistic stimuli. Furthermore, ERP provides insights into memory encoding, recognition, and retrieval processes. The P300 (P3b) component is associated with stimulus recognition and updating, while FN400 reflects familiarity-based memory processes [2]. The Late Positive Component (LPC) is linked to conscious recollection, and N400 plays a role in semantic memory retrieval. Additionally, Slow Wave (SW) activity is involved in long-term memory consolidation. ERP studies have been used to investigate memory impairments in neurodegenerative disorders such as Alzheimer‘s disease, enabling early detection of cognitive decline. In memory processes, children with learning disabilities, post-traumatic stress disorder (PTSD), and early-life stress display alterations in P300 and LPC components, reflecting difficulties in encoding and retrieval [3]. These populations often exhibit altered P300 and LPC responses, reflecting difficulties in memory encoding and retrieval, which can impact cognitive and academic performance.Overall, ERP provides a non-invasive and highly sensitive method for studying cognitive functions in both typical and clinical populations. Its application in attention, language development, and memory research has contributed to early diagnosis and the development of targeted interventions for neurodevelopmental and psychiatric disorders in children.

Keywords: Attention, Cognition, ERP, Language, Memory

REFERENCES

[1] Robson, H., Pilkington, E., Evans, L., DeLuca, V., & Keidel, J. L. (2017). Phonological and semantic processing during comprehension in Wernicke's aphasia: An N400 and Phonological Mapping Negativity Study. Neuropsychologia, 100, 144–154. https://doi.org/10.1016/j.neuropsychologia.2017.04.012

[2] Polich J. (2007). Updating P300: an integrative theory of P3a and P3b. Clinical neurophysiology: official journal of the International Federation of Clinical Neurophysiology, 118(10), 2128–2148. https://doi.org/10.1016/j.clinph.2007.04.019

[3] Wessa, M., Jatzko, A., & Flor, H. (2006). Retrieval and emotional processing of traumatic memories in posttraumatic stress disorder: peripheral and central correlates. Neuropsychologia, 44(10), 1683–1696. https://doi.org/10.1016/j.neuropsychologia.2006.03.024

[Abstract:0598]

Digitalization in Psychiatric Practices: Ethical and Legal Aspects of Artifical Intelligence and Digital Technologies

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Artificial intelligence and digital technologies are leading to radical changes in psychiatric practice. The integration of these technologies into healthcare, especially in psychiatry, a complex and human-centered discipline, has the potential to significantly transform diagnosis, treatment, and patient monitoring processes. Artificial intelligence offers innovations over traditional methods by analyzing patients‘ mental states and developing personalized treatment plans through advanced algorithms such as machine learning and deep learning. However, the use of these technologies in psychiatry also brings with it various ethical and legal concerns. In particular, the collection, storage, and processing of patient data by digital health applications and AI-based systems raise major privacy concerns. Psychiatry involves highly sensitive emotional and mental health information, and any breach of confidentiality or unauthorized sharing of this data can lead to serious consequences. Ensuring confidentiality is as important as adhering to ethical guidelines and patient rights. Moreover, the use of AI in decision-making processes carries the risk of reinforcing biases and errors inherent in algorithms. If AI systems misinterpret data (such as genetic, cultural, or demographic factors), this could lead to incorrect diagnoses and treatment plans, posing a greater threat to marginalized groups such as ethnicity or socioeconomic status. Additionally, the ethical and legal responsibilities of AI in psychiatric applications need to be clarified. Who will be held accountable if an AI system makes a misdiagnosis? The psychiatrist using the system or the company developing the AI? Answering this question is critical to the safe and responsible use of AI in clinical practice. Additionally, psychiatrists‘ ethical obligations to their patients are evolving with the introduction of AI-based solutions. In order to maintain patient trust, transparency and clarity must be provided about how these technologies are used in their treatments. Another important issue is the impact of digital technologies on accessibility in psychiatry. AI and digital health applications can increase access to mental health services, especially in rural or underserved areas where psychiatric professionals are in short supply. For example, teletherapy services allow patients to receive therapy without having to physically visit a healthcare facility. This has been particularly useful during the COVID-19 pandemic. However, digital inequalities and lack of technological literacy may prevent certain groups from accessing these solutions. In conclusion, AI and digital technologies offer great potential in psychiatry, but their ethical and legal implications must be clearly defined. Ensuring patient confidentiality, transparency, fairness, and accountability will be crucial to improving the quality of mental health care while protecting patients‘ rights. In order for these tools to be used responsibly, ethical frameworks and regulations must be continuously developed to adapt to the evolving technological landscape.

Keywords: Artificial intelligence, ethical, legal, digital technologies

AuthorToEditor: 1. Noropsikiyatri Arşivi. (2024). Yapay Zeka ve Dijital Psikiyatri Uygulamaları. Noropsikiyatri Arşivi. 2. Bilim Genç. (2023). Yapay Zeka ve Etik Sorunlar: İnsanlık Teknolojisinin Kontrolünü Kaybediyor Mu? Bilim Genç. 3. Türk Psikiyatri Derneği. (2024). Dijitalleşme ve Psikiyatri. Türk Psikiyatri Dergisi. 4. Psikiyatrik ve nörolojik bilimler açısından yeni teknolojiler ve biyoetik sorunlar, Dijital Psikiyatri (2022) Türkiye Klinikleri. 5. Önder O. Yapay Zekâ ve Piyasa: Sağlıkta Dijitalleşme ve Etik Sorunlar Özelinde Bir Değerlendirme. Yapay Zeka Etiği: Disiplinlerarası Bir Yaklaşım (2022).

[Abstract:0600]

Treatment Resistance in Psychiatry: State of The Art

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Since 2000, there has been an exponential increase in the number of articles on treatment-resistant psychiatric disorders. The emphasis is on three basic components required to determine treatment resistance: correct diagnosis, adequate treatment, and inadequate symptomatic response.

When can we talk about treatment resistance? The answer to this question varies among psychiatric disorders, and sometimes even within the same psychiatric diagnosis. The lack of clear criteria for defining treatment resistance can lead to heterogeneity in the patients included in studies and make comparisons difficult. When defining treatment-resistant schizophrenia, only pharmacotherapy is considered, whereas when defining treatment-resistant anxiety disorders, both pharmacotherapy and psychotherapy are considered. It is also noteworthy that psychotherapy or neuromodulation (except electroconvulsive therapy) are often not considered in treatment-resistant depression.

In depression, anxiety disorders, and schizophrenia, the standard definition is ―inadequate response to at least two different medications (appropriate dose and lasting at least six weeks).” In conditions where psychopharmacology is not the main treatment option, such as eating disorders and personality disorders, treatment resistance is poorly defined. Response to treatment can be determined by a decrease in symptom severity. In major depression and generalized anxiety disorder, response is usually defined as a 50% decrease in symptom severity, in obsessive-compulsive disorder it is usually defined as a 35% decrease in symptom severity, and in schizophrenia it is usually defined as a 30% decrease in symptom severity. "Response" defined as a percentage improvement in a rating scale score may not represent clinical reality. Functioning can often be overlooked when defining inadequate response. Failure to objectively measure symptom severity increases the risk of inter-clinician variability. This situation highlights the need for greater consistency in definitions of treatment resistance and the assessment of functionality. It is understandable that classification attempts are now moving from a binary categorical (non-resistant or resistant) grading to "levels of resistance" approaches. One study suggested that the term "treatment resistance" "lacks empathy". He stated that the concept of "treatment resistance" originated from an acute disease model where remission or recovery is the goal, and unfortunately, it is unlikely to achieve the symptom-free goal in psychiatric disorders. Therefore, he suggested using the definition of "difficult to treat".

Treatment response should be measured using validated clinical rating scales that facilitate objective and accurate longitudinal assessment of treatment response, including duration and severity of symptoms, associated distress and level of functioning. A comprehensive drug history should be taken to ensure that previous psychiatric drug trials were adequate, and the dose and duration and associated response should be documented. Finally, current treatment should be described and plasma levels measured if possible.

Given that the prevalence of treatment resistance in psychiatric disorders is 20% to 60% and is associated with a high healthcare burden, there is a need for more research on psychiatric treatment resistance.

Keywords: Inadequate, psychiatry, resistance, response, treatment

AuthorToEditor: References: 1. Howes OD, Thase ME, Pillinger T. Treatment resistance in psychiatry: state of the art and new directions. Molecular Psychiatry, 2022, 27(1): 58-72. 2. Demyttenaere K. What is treatment resistance in psychiatry? A ―difficult to treat” concept. World Psychiatry, 2019, 18(3): 354. 3. Macher JP, Crocq MA. Treatment goals: response and nonresponse. Dialogues in clinical neuroscience, 2004, 6(1): 83-91.

[Abstract:0601]

Forensic Psychiatric Expert Witnessing Process in A University Hospital

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Forensic psychiatry is a field where the disciplines of law and psychiatry intersect and covers the legal evaluation of the mental state of individuals. Forensic psychiatric expertise is an evaluation process that includes expert opinion requested by courts or other legal authorities. University hospitals play an important role in forensic psychiatric evaluations due to their multidisciplinary structures and academic infrastructure.

The stages in the expert witness process start with the evaluation of the request. Official letters sent by judicial authorities are examined and the relevant legal framework is determined. The clinical history, psychiatric history, current symptoms and treatment process of the individual are examined in detail. The mental state of the individual is evaluated using clinical examination and psychiatric interview methods. If deemed necessary, objective tests such as Psychometric Tests and Auxiliary Assessment Tools are applied to collect additional data on the individual's psychopathology and cognitive status. If necessary, the scope is determined by taking the opinions of experts from related fields with a multidisciplinary approach. The data obtained are reported in accordance with scientific and legal criteria and submitted to the relevant judicial authorities.

In the process of expertise, evaluations in the relationship between psychiatric diseases and crime, evaluations related to the restriction of freedom for the purpose of protection in psychiatric diseases, evaluations related to psychiatric diseases and marriage law, guardianship and psychiatric evaluation within the scope of civil law, drug analysis in forensic process, simulation in forensic psychiatry cases, tort liability of persons deprived of the power of discernment, evaluations in the context of disability and disability in psychiatric diseases are frequently made.

Some difficulties may be encountered in the forensic psychiatric assessment process. These include factors such as the complexity of the cases, the tendency of patients to hide or exaggerate their true condition, and the incompatibility of legal expectations with clinical opinion. Forensic psychiatric expertise in a university hospital is a critical process that must be carried out in line with scientific and ethical principles. A multidisciplinary approach should be adopted both to contribute to the provision of justice and to ensure the most objective evaluation of the mental state of the patients. Implementation of standardised procedures and increased cooperation between experts in the field will allow this process to be carried out more efficiently and reliably.

Keywords: Forensic Psychiatry, University Hospital, Expert Witnessing

AuthorToEditor: References: Balcioglu, Y. H., Oncu, F., & Kennedy, H. G. (2024). Forensic psychiatry in Turkiye. International Review of Psychiatry, 36(7), 739-755. Ersolak, C., Ceyhun, H. A., & Aydin, E. F. (2023). Forensic psychiatry evaluation of criminal law cases at a university hospital in Eastern Turkey. The Journal of Forensic Psychiatry & Psychology, 34(5-6), 434-455.

[Abstract:0603]

Mood Disorders and Inflammation

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The role of inflammation and immune system disorders in the pathogenesis of mood disorders has been studied for several decades. As a result, numerous clinical findings have confirmed the connection between neuroinflammation and the development of depression. Additionally, patients with depression have been found to have high concentrations of interleukin-6 (IL) and the C-reactive protein (CRP), to show signs of microglial activation and increased levels of kynurenine associated with the effect of the neuroinflammation on serotonin synthesis. It has also been shown that the pro-inflammatory cytokine interferon (IFN) α induces depression as a side effect. Moreover, patients who received higher doses of IFNα for 24 weeks showed more severe depressive symptoms. In contrast, it appears that some drugs with anti-inflammatory activity may also have antidepressant effects. The antidepressant effect has also been studied in nonsteroidal anti-inflammatory drugs, cytokine inhibitors, statins, polyunsaturated fatty acids, and corticosteroids, but the results have been contradictory (1).

Patients with mood disorders have immune cells with more activated sensors to PAMPs or DAMPs. BD subjects have been shown to have an expansion of some Toll-like receptors (TLRs) in peripheral monocytes and lymphocytes, as well as increased TLR-mediated intracellular signaling.Also, the intracellular innate sensor Nod-like receptor 3 (NLRP3) inflammasome and caspase-1 have been found to be increased in blood cells and associated with high serum levels of interleukin (IL)-1β and IL-18 in MDD patients. Furthermore, increased NLRP3 levels were found in the frontal cortex of patients with BD, and associated with increased levels of the cytokines tumor necrosis factor (TNF)-α, IL-1β, IL-6, and IL-10. Inflammasomes are intracellular protein complexes that form in response to pathogens and sterile stressors, including DAMPs. Furthermore, aging also involves systemic low-grade inflammation (“inflammaging”), which is associated with increased age-related morbidities and mortality.Of note, mice deficient in NLRP3 have reduced systemic inflammation, improved cognitive function and neuroinflammation, better glycemic control, attenuated bone loss, and reduced functional decline during aging.Therefore, in addition to their key role in triggering peripheral inflammatory responses, sensors of the innate immune system are involved with neuroinflammation and pathological aging (2).

In conclusion, studies of immunological markers in peripheral blood in BD and MDD have revealed disruptions in immune response regulation. It is suggested that these markers could be used to improve the accuracy of the differential diagnosis of BD and MDD.

Keywords: Bipolar Disorder, Depressive Disorder, Inflammation, Neuroinflammation

REFERENCES

1. Gopalakrishnan R, Wang Y, Kapczinski F, Frey BN, Wollenhaupt-Aguiar B. Peripheral protein inflammatory biomarkers in bipolar disorder and major depressive disorder: A systematic review and meta-analysis. J Affect Disord. 2025 May 1;376:149-168
2. Bauer, M. E., & Teixeira, A. L. (2019). Inflammation in psychiatric disorders: what comes first?. Annals of the New York Academy of Sciences, 1437(1), 57-67.

[Abstract:0604]

Abnormal Myelination in Autism and ADHD and its Clinical Implications

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Autism Spectrum Disorder (ASD) and Attention-Deficit/Hyperactivity Disorder (ADHD) are two common neurodevelopmental disorders that emerge in early childhood and affect brain maturation processes. Recent neuroimaging and neuropathological studies suggest that abnormal myelination may play a significant role in the pathophysiology of both conditions. Myelin is critical for accelerating neuronal conduction and facilitating the regulation of cognitive and behavioral functions. Diffusion tensor imaging (DTI) studies in ASD have revealed microstructural abnormalities in white matter tracts, particularly those connecting the frontal, temporal, and parietal regions. These disruptions are associated with core clinical features such as impairments in social communication, language development, and sensory processing. Hypomyelination observed in ASD is thought to contribute to delayed inter-axonal communication and disorganized neural network development during early brain maturation. In ADHD, similar alterations in white matter patterns have been reported, particularly between the prefrontal cortex—responsible for attention and executive functions—and subcortical structures. DTI findings suggest that deficits in action potential conduction and synaptic integration may underlie impairments in attention regulation and impulsivity. Furthermore, the myelination process appears to be delayed or atypically regulated in individuals with ADHD. Myelin abnormalities in both disorders are believed to result from a complex interplay of genetic, environmental, and immunological factors. Disruptions in oligodendrocyte function, neuroinflammation, and early-life infections may contribute to these atypical myelination processes. These findings support connectivity-based models of both ASD and ADHD and highlight the potential of abnormal myelination as a neurobiological biomarker for early diagnosis and targeted intervention. In the future, treatment strategies aimed at enhancing myelin plasticity may offer promising avenues for the management of these neurodevelopmental disorders.

Keywords: Myelination, autism, adhd, abnormal white matter

[Abstract:0605]

Artificial Intelligence and Treatment and Course of Psychiatric Diseases

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Artificial intelligence includes software that can perform functions such as data analysis, decision making and learning Artificial intelligence finds use in many spheres of healthcare, including analysis of patient data, early diagnosis, treatment planning and enhancement of healthcare services. While simultaneously providing the possibility to improve treatment efficacy, artificial intelligence-supported apps allow the construction of tailored treatment methods by analyzes of patient data.

In the discipline of psychiatry, artificial intelligence technologies are growingly relevant. Artificial intelligence applications in health services significantly affect psychiatric evaluation and treatment processes by offering innovative solutions, especially in the management of mental health problems. Artificial intelligence can be used in many areas such as monitoring patients, treatment planning and improving psychotherapy processes.

Artificial intelligence significantly contributes to both the diagnosis procedure and the formulation of therapy methods. The treatment of mental maladies is discovered, assessed, and optimized by prominent AI applications through the use of methods such as machine learning and natural language processing. Algorithms based on machine learning enhance the precision and speed of classifying mental disorders, such as depression and bipolar disorder. Furthermore, AI-supported applications increase the effectiveness of remote healthcare services such as tele-psychiatry services. E-mental health applications help to monitor patients' conditions and facilitate their treatment processes. For example, digital calendars and reminders enable patients to follow their treatment programmes. Moreover, the integration of artificial intelligence systems with specialized specialists facilitates the development of more precise and effective treatment programs tailored to patients' requirements. The adoption of AI applications is in high demand among patients; studies show that individuals are willing to monitor and manage their mental health with mobile applications. Nonetheless, it is acknowledged that several psychiatrists struggle to adjust to these novel methodologies, maintaining that in-person encounters remain essential. In particular, chatbots and virtual therapists add a new dimension to psychiatric care. For example, automated conversational agents provide support and alleviate symptoms of anxiety and depression by applying cognitive behavioural therapy techniques to individuals.

A significant benefit of artificial intelligence applications in psychiatry is the capacity for continuous monitoring of patient data and the provision of cost-effective solutions in practice. Numerous AI-driven apps seek to enhance healthcare service accessibility for those living in low-income areas. However, the integration of AI also brings along some ethical concerns; especially transparency and security concerns over patients' data are often expressed. The reliability and security of artificial intelligence systems may cause negative attitudes in users.

In conclusion, artificial intelligence appears as a technology with significant potential in the field of psychiatry. While applications in this field can increase predisposition and ensure continuity of treatment, ethical and safety concerns should also be considered. Artificial intelligence's ability to provide treatment paths suited to personal requirements will help to revolutionize the field of psychiatry going forward.

Keywords: Artificial intelligence, Psychiatry, Psychotherapy

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AuthorToEditor: References Janardan, V., Kumar, M., & Singh, P. (2024). The Transformative Role of Artificial Intelligence in Psychiatry: Enhancing Diagnosis and Treatment. The Archives of Psychiatry, 2(1), 20-22. Monteith, S., Glenn, T., Geddes, J., Whybrow, P., Achtyes, E., & Bauer, M. (2024). Implications of online self-diagnosis in psychiatry. Pharmacopsychiatry, 57(02), 45-52. https://doi.org/10.1055/a-2268-5441 Rudd, I. (2022). Leveraging Artificial Intelligence and Robotics to Improve Mental Health. Intellect. Arch., 11, 3.

[Abstract:0606]

Sleep Problems in Children as a Reflection of Synaptic Pruning and Treatment Approaches

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Sleep plays a crucial role in neurodevelopment, with disruptions potentially reflecting underlying synaptic pruning processes. Synaptic pruning refines neural networks by eliminating redundant synapses while strengthening essential connections, a process closely linked to both non-rapid eye movement (NREM) and rapid eye movement (REM) sleep. Slow-wave activity (SWA) during NREM sleep facilitates synaptic downscaling, while REM sleep supports selective strengthening and elimination of synapses critical for learning and memory. Disruptions in these processes have been associated with pediatric sleep disturbances, including insomnia, parasomnias, and fragmented sleep.

Abnormal synaptic pruning has been implicated in neurodevelopmental disorders such as autism spectrum disorder (ASD) and attention-deficit/hyperactivity disorder (ADHD) conditions frequently co-occurring with sleep disturbances. Reduced SWA and altered REM sleep architecture may indicate impaired synaptic refinement, contributing to cognitive, emotional, and behavioral difficulties. Given the reciprocal relationship between sleep and synaptic plasticity, sleep disruptions not only reflect neurodevelopmental abnormalities but may also exacerbate them.

Effective treatment approaches must consider sleep‘s role in synaptic remodeling. Non-pharmacological interventions, such as sleep hygiene education, and behavioral therapies, have demonstrated efficacy. Given the dynamic nature of synaptic pruning, treatments should be tailored to developmental stage and specific sleep pathology.

Further research integrating neuroimaging, polysomnography, and molecular studies is needed to elucidate the interplay between synaptic pruning abnormalities and pediatric sleep disorders. Understanding sleep disturbances within the framework of synaptic plasticity may lead to more precise interventions, ultimately improving both sleep quality and neurodevelopmental outcomes in affected children.

Keywords: Neuroplasticity, NREM sleep, REM sleep, sleep disturbances, synaptic pruning, treatment approaches

[Abstract:0607]

Understanding Sleep and Sleep Disorders

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Sleep is a repetitive and reversible behavior of the brain. It is a type of perceptual disengagement and unresponsiveness to the environment. During wakefulness, adenosine is accumulated in the brain and this promotes sleep. Sleep is initiated by ventrolateral preoptic nucleus in the anterior hypothalamus. A sleep cycle is consisted of NREM and REM periods. NREM is consisted of light sleep and deep slow wave sleep. First half of the night is rich by deep slow wave sleep whereas the second half is rich by REM sleep. According to the International Classification of Sleep Disorders, sleep disorders can be classified as insomnia, sleep related breathing disorders, central disorders of hypersomnolence, circadian rhythm sleep-wake disorders, parasomnia, sleep related movement disorders and other sleep disorders. Circadian rhythm sleep disorders can be defined as trouble falling asleep or staying awake at desired or socially acceptable times. Either the outer clock does not match the inner clock (shift work, jet lag) or the inner clock does not match the outer clock (delayed or advanced sleep phase disorders). Our inner clock is the suprachiasmatic nucleus located in the hypothalamus. Sleep is determined by two major processes. Homeostatic process (Process S) determines the sleep load whereas the circadian process (Process C) promotes alertness. While evaluating the circadian rhythm, it is questioned if the patient experiences a phase of major sleep and a phase of wakefulness in a regular rhythm approximately every 24 hours. If this is the case, they are expected to be in accordance with social and environmental conditions. The 'outer day' is 24 hours but our 'inner day' is 24.2 hours. Every day the inner day needs to be adjusted according to the outer day. This is done by daylight, melatonin, physical activity, meals and social factors. In the treatment of circadian rhythm sleep disorders, light and melatonin is used. These two have opposite effects. On the other hand bright light and sleep restriction can be considered as alternative antidepressants. Putting the circadian rhythm in order may protect the patient from a new depressive episode. According to DSM-5, circadian rhythm sleep-wake disorders are classified as delayed sleep phase type, advanced sleep phase type, irregular sleep-wake type, non-24-hour sleep-wake type, shift work type and unspecified type. If a circadian rhythm sleep-wake disorder lasts 1-3 months, it is called episodic. 3 months or longer refers to persistent. 2 or more episodes within a year is called recurrent. According to ICSD-3-TR, jet lag is also considered as a circadian rhythm sleep-wake disorder. Delayed sleep phase type refers to a delayed sleep period in relation to the desired sleep and wake-up time. Advanced sleep phase type indicates an advanced sleep period in relation to the desired sleep and wake up time. Some causes of circadian rhythm sleep disorders are SSRIs, haloperidol and mild head injury.

Keywords: Sleep, sleep disorders, circadian rhythm sleep disorders

AuthorToEditor: Sleep Disorders Diagnosis and Treatment Book (2nd ed.), Psychiatric Association of Turkey (2021) Sleep Medicine Textbook (2nd ed.), European Sleep Research Society (2021) American Academy of Sleep Medicine (AASM) (2023) International classification of sleep disorders 3rd edition Text Revision (ICSD-3-TR) American Psychiatric Association (2013) Diagnostic and statistical manual of mental disorders (5th ed)

[Abstract:0608]

What is Recovery and How is it Evaluated?

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The World Health Organization (WHO) defines recovery in its mental health action plan as gaining and maintaining hope, understanding one‘s abilities and limitations, engaging in an active life, achieving personal autonomy, establishing a social identity, and developing a positive sense of self. In the literature, recovery is generally discussed in two key concepts: clinical recovery and personal recovery. Clinical recovery refers to the reduction or cessation of symptoms and the restoration of social functioning, whereas personal recovery is a subjective process involving personal growth, transformation, and self-determination.

The concept of recovery is perceived differently by individuals. Studies show that people diagnosed with psychiatric disorders interpret recovery in various ways. Some view it as the complete disappearance of the illness, while others describe it as a process with progress and setbacks. Therefore, having measurable indicators of recovery is essential for both patients and clinicians to assess treatment progress.

In addition to medical approaches, personal development, social support systems, environmental factors, and lifestyle changes significantly contribute to the recovery process. Support from family, friends, and the community can facilitate recovery, while environmental factors can influence its course positively or negatively. However, recovery is not always a linear process; individuals may experience setbacks, or it may involve learning to live a fulfilling life despite ongoing mental health challenges. Thus, for treatment to be effective, individuals must be approached holistically, considering their mental, physical, social, and emotional well-being, while clinical progress should be closely monitored.

Various assessment tools have been developed to evaluate mental health recovery. The Outcome Questionnaire (OQ-45.2), developed by Lambert and colleagues, is a self-report scale assessing social roles, symptomatic functioning, and interpersonal relationships. However, it has been criticized for its length and complex scoring system. The Outcome Rating Scale (ORS) was developed as an alternative to OQ-45, measuring well-being, individual functioning, interpersonal relationships, and social functioning. However, its lack of detail regarding symptom severity limits its usefulness. The Brief Psychological Adjustment Scale (BASE-6) was designed to provide more clinical insight than ORS while addressing OQ-45‘s length issues. However, its limited adaptation to different languages and cultures restricts its widespread use.

Although these tools are valid and reliable, they pose challenges in clinical practice due to their inability to evaluate treatment holistically, administration time, methodological complexity, and cost. Consequently, there is an increasing need for multidimensional and easy-to-administer assessment tools.

To address this need, we developed a new monitoring scale in our clinic: the Moodist Outcome Inventory (MOI). This four-item, clinician-rated scale evaluates individuals in four key areas: well-being, mental state, relationships, and participation in life. Statistical analyses confirm that MOI is a valid and reliable tool for assessing treatment progress. Its ability to evaluate both well-being and symptoms provides a more holistic perspective, and its concise and practical format makes it highly applicable in clinical practice.

Keywords: Recovery, scale, measure, outcome, well-being, evaluate

AuthorToEditor: Tonkuş, M. B., Karataş, S., Yılmaz, S., & Kutlu, Y. (2022). Ruhsal Bozukluğu Olan Bireylerde İyileşme ve İyileşme Modelleri. Yeni Yüzyıl Journal of Medical Sciences, 3(3), 135-143. Doğan, R., Mercan, N., & Yüksel, Ç. (2020). Ruhsal hastalıklarda iyileşme: kavram analizi. Psikiyatride Güncel Yaklaşımlar, 12(1), 91-99 Beckstead, D. J., Hatch, A. L., Lambert, M. J., Eggett, D. L., Goates, M. K., & Vermeersch, D. A. (2003). Clinical significance of the Outcome Questionnaire (OQ-45.2).The Behavior Analyst Today, 4(1), 86–97. Miller SD, Duncan BL, Brown J, Sparks JA, Claud DA. The outcome rating scale: A preliminary study of the reliability, validity, and feasibility of a brief visual analog measure. Journal of Brief Therapy. 2003;2(2):91-100. Cruz RA, Peterson AP, Fagan C, Black W, Cooper L. Evaluation of the Brief Adjustment Scale–6 (BASE-6): A measure of general psychological adjustment formeasurement-based care. Psychol Serv. 2020;17(3):332-342.

[Abstract:0610]

How Do Traumatic Experiences Affect Myelination and Synaptic Pruning? What Are the Clinical Implications?

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Traumatic experiences, particularly during sensitive periods of neurodevelopment, have profound effects on the structure and function of the brain. Among the most critical neurobiological processes influenced by trauma are myelination and synaptic pruning two key mechanisms that shape neural circuitry and cognitive-emotional functioning throughout childhood and adolescence.This review aims to synthesize current evidence on how early-life stress and trauma impact these processes, and to explore the resulting clinical implications.

Myelination, the process by which oligodendrocytes form insulating myelin sheaths around axons, is essential for the rapid transmission of neural signals. Disruptions in this process can lead to impairments in cognitive performance, emotional regulation, and executive functioning.Emerging research demonstrates that exposure to chronic stress or traumatic events, especially during early developmental windows,can delay or alter myelination trajectories in regions such as the prefrontal cortex, corpus callosum, and limbic structures (1). These alterations are thought to result from stress-induced dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis, increased glucocorticoid levels, and inflammatory responses that impair oligodendrocyte maturation.

Similarly, synaptic pruning—the activity-dependent elimination of redundant or weak synaptic connections—is essential for refining neural networks and enhancing processing efficiency. Aberrant pruning, whether excessive or insufficient, has been associated with various neuropsychiatric conditions, including schizophrenia, autism spectrum disorders, and mood disorders.Traumatic experiences appear to accelerate or dysregulate pruning processes, particularly in the prefrontal cortex and hippocampus (2), potentially contributing to cognitive and emotional difficulties observed in trauma-exposed individuals. Neuroimaging and postmortem studies suggest altered dendritic spine density and synaptic marker expression in individuals with histories of severe adversity.

The clinical implications of these neurodevelopmental alterations are considerable. Disrupted myelination and synaptic pruning are linked to heightened vulnerability to a range of psychiatric disorders, including depression, anxiety, PTSD, and attentional disorders (3). Furthermore, these neural changes may underlie the cognitive inflexibility, emotional dysregulation, and impaired social cognition frequently observed in individuals with complex trauma histories. Importantly, recent findings underscore the potential for neuroplasticity and recovery, particularly when trauma-informed interventions are implemented during critical developmental periods. Therapeutic approaches such as trauma-focused cognitive behavioral therapy (TF-CBT), mindfulness-based interventions, and enriched environmental exposure have shown promise in mitigating neurodevelopmental consequences by promoting adaptive neural remodeling.

In conclusion, traumatic experiences can significantly disrupt normative myelination and synaptic pruning, leading to long-term alterations in brain structure and function.Understanding these mechanisms provides crucial insight into the neurobiological underpinnings of trauma-related psychopathology and highlights the importance of early detection and intervention. By integrating neuroscience with clinical practice, we can move toward more effective, personalized strategies to support resilience and recovery in trauma-affected populations.

Keywords: Early-life trauma, Myelination, Synaptic pruning, Neurodevelopment, Stress-related neuroplasticity, Psychiatric vulnerability

REFERENCES

1. Teicher MH, Anderson CM, Ohashi K, Polcari A. Childhood maltreatment: Altered network centrality of cingulate, precuneus, temporal pole and insula. Biol Psychiatry. 2016;76(4):297–305.
2. Callaghan BL, Tottenham N. The neuro-environmental loop of plasticity: A cross-species analysis of parental effects on emotion circuitry development following typical and adverse caregiving. Neuropsychopharmacology. 2016;41(1):163–176.
3. McCrory EJ, Gerin MI, Viding E. Annual Research Review: Childhood maltreatment, latent vulnerability and the shift to preventative psychiatry – the contribution of functional brain imaging. J Child Psychol Psychiatry. 2017;58(4):338–357.

[Abstract:0611]

Sharenting

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The concept of ―sharenting" is formed by the combination of the words ―sharing" and ―parenting." It refers to the increasing habit of parents, caregivers, or relatives sharing photos, videos, and other identifiable information about minors on their personal social media accounts. A recent study conducted in Europe found that parents post an average of 300 photos and sensitive data about their children on online platforms each year.

The consequences of sharenting are inherently varied and can often be more complex than imagined. The risks brought about by these consequences include the protection of the child's image, privacy of personal data, and legal issues related to digital security (Ferrara 2023).

Parents are considered the 'guardians' or 'owners' of their children's personal data, and this includes the use of such data. A recent study showed that parents under the age of 35 feel the need to prove they are 'good parents' and aim to announce their new parenting status to the public, at a time when our lives are deeply influenced by technology and real identities overlap with digital identities. This need may be met by sharing their children's lives and habits on social networks, and thus, true social satisfaction may be derived from virtual social platforms (Conti 2024).

Children born in the 21st century are raised in an environment where social media has become a routine part of their families' lives. While social media can have both positive and negative effects on our lives, access to the digital world and the harms arising from it are not evenly distributed among children. One possible harm is child neglect and abuse that does not occur in isolation. Children are often neglected or abused by others, including their parents, and the same situation applies to the sharenting syndrome, where parents' online shares put their children at risk of abuse and neglect (Doğan Keskin 2023).

The practice of parents publishing sensitive content about their children on online platforms is increasing. To protect children's privacy, it may be beneficial to promote strategies such as photo editing and self-censorship among families. Additionally, balancing their natural tendency to take pride in their children's progress with the need to educate themselves about the risks associated with this practice should become a significant focus.

Keywords: Sharenting, social media, parents

REFERENCES

Conti MG, Del Parco F, Pulcinelli FM, Mancino E, Petrarca L, Nenna R, Di Mattia G, Matera L, La Regina DP, Bonci E, Caruso C, Midulla F. Sharenting: characteristics and awareness of parents publishing sensitive content of their children on online platforms. Ital J Pediatr. 2024 Jul 30;50(1):135. doi: 10.1186/s13052-024-01704-y. PMID: 39080796; PMCID: PMC11290302.

Doğan Keskin A, Kaytez N, Damar M, Elibol F, Aral N. Sharenting Syndrome: An Appropriate Use of Social Media? Healthcare (Basel). 2023 May 9;11(10):1359. doi: 10.3390/healthcare11101359. PMID: 37239645; PMCID: PMC10218097.

Ferrara P, Cammisa I, Corsello G, Giardino I, Vural M, Pop TL, Pettoello-Mantovani C, Indrio F, Pettoello-Mantovani M. Online "Sharenting": The Dangers of Posting Sensitive Information About Children on Social Media. J Pediatr. 2023 Jun;257:113322. doi: 10.1016/j.jpeds.2023.01.002.Epub 2023 Jan18. PMID: 36669588.

[Abstract:0612]

Technology Addiction

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The excessive and uncontrolled use of the internet and digital devices is defined as technology addiction, which is a behavioral disorder that can lead to physical, mental, and social problems. Technology addiction can be described as the excessive use of the internet and/or technological devices, neglecting other activities as a result, damaging social relationships, using technology to avoid negative emotions and life stress, failure to reduce usage, feeling tense and irritable when unable to use it, and lying about the time spent and amount of usage. Problematic internet use refers to a situation where the internet causes issues in a person‘s life, but does not reach the level of addiction. Internet addiction is a condition where the use of the internet negatively affects other areas of life, occurring compulsively and uncontrollably, and becoming the center of daily life. Technology addiction includes internet addiction, smartphone addiction, social media addiction, and digital gaming addiction. Internet addiction has not yet been classified as a formal diagnosis in DSM-5, but "internet gaming disorder" has been identified as an area requiring further study. Individuals with digital addiction show various functional changes in brain regions related to the reward system and executive functions, similar to other types of addiction1. Internet addiction is characterized by a deficiency in reward, which is associated with a decrease in dopaminergic activity, similar to substance addiction. Family communication problems, lack of social support, male gender, and social skill deficiencies are risk factors for technology addiction. The differences between digital addiction and traditional addictions include the fact that the harm caused by digital addiction is not easily noticeable in the short term, the low cost of most digital products facilitates the addiction process, and the interactive and reciprocal nature of the internet increases the popularity of social media and games. A recent meta-analysis study reported the estimated global prevalence of internet addiction in children as 13.82% 2. Studies have linked digital addiction to psychological problems such as depression, anxiety, and low self-esteem. Technology addiction can lead to delays in cognitive, language, social, emotional, and motor development in children, as well as physiological, academic, and legal issues. It has been shown that adolescents with depressive disorders are at a higher risk of technology addiction, while adolescents with technology addiction are at a higher risk of depressive disorders3. Excessive use of video games can lead to attention problems, aggressive behaviors, social isolation, academic failure, sleep disorders, susceptibility to other addictions due to the impact on the reward system, and decreased physical health4. A bidirectional relationship has been reported between internet addiction, self-harming behaviors, and suicidal thoughts. The treatment of technology addiction involves methods such as cognitive behavioral therapy, digital detox, time limitations, and physical activities. A person can set screen time restrictions to limit technology use and focus more on social interactions. Additionally, professional therapy and support groups can be helpful in overcoming addiction. Mindfulness and awareness exercises are also effective methods for maintaining mental balance.

Keywords: Digital gaming addiction, internet addiction, technology addiction

AuthorToEditor: 1- Abuse S. Mental Health Services Administration (US); Office of the Surgeon general (US). Facing addiction in America: The surgeon general‘s report on alcohol, drugs, and health, 2016. 2- Meng SQ, Cheng JL, Li YY, Yang XQ, Zheng JW, Chang XW, et al. Global prevalence of digital addiction in general population: A systematic review and meta-analysis. Clin Psychol Rev. 2022; 92: 102128 3- Ye XL, Zhang W, Zhao FF. Depression and internet addiction among adolescents:A meta- analysis. Psychiatry Res. 2023; 326: 115311. 4- Brand M, Wegmann E, Stark R, Müller A, Wölfling K, Robbins TW, et al. The ınteraction of Person-Affect-Cognition-Execution (ı-PACE) model for addictive behaviors: Update, generalization to addictive behaviors beyond internet-use disorders, and specification of the process character of addictive behaviors. Neurosci Biobehav Rev. 2019; 104:1-10

[Abstract:0613]

Combating Fear of Missing Out (FoMO)

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Fear of Missing Out (FoMO) can be defined as the anxiety that others may be experiencing enjoyable events in one‘s absence, leading individuals to feel compelled to stay constantly engaged with social networks to avoid missing out. This phenomenon has become more pronounced with the widespread use of social media and has been observed to have significant effects on individuals' psychological well-being. FoMO emerges when individuals perceive themselves as being excluded from others daily activities or social interactions, and it is frequently associated with a range of negative life experiences, including sleep deprivation, decreased life satisfaction, emotional distress, anxiety, low self-esteem, and dissatisfaction.

Risk factors associated with FoMO include anxious temperament, loneliness, depression, and low self-efficacy. At its core, FoMO is rooted in the fundamental human need for social connection. From a theoretical perspective, Self-Determination Theory provides a framework for understanding FoMO. According to this theory, individuals have three basic psychological needs: the need for competence, the need for autonomy, and the need for relatedness. Research suggests that individuals who fail to sufficiently fulfill these needs are more likely to experience FoMO.

The psychological and behavioral effects of FoMO have been examined in various studies. Research indicates that FoMO is linked to high stress levels, depression, and anxiety. Furthermore, FoMO can lead to difficulties in maintaining attention, neglect of academic or daily responsibilities, and an overall decline in life satisfaction. From a behavioral perspective, FoMO encourages individuals to spend more time on social media, while simultaneously contributing to reluctance and dissatisfaction in face-to-face interactions.

Strategies for coping with FoMO include digital awareness, mindful social media usage, enhanced self-awareness, and techniques aimed at strengthening psychological resilience:

1. One of the primary triggers of FoMO is social media usage habits. Social media exposes individuals to constant updates about others‘ activities, leading them to compare their own lives with these idealized portrayals. Mindful social media usage entails limiting time spent on social media and managing the content one is exposed to more consciously. Digital detox practices have been shown to enhance individuals psychological well-being.

2. Developing self-awareness enables individuals to recognize their psychological needs and focus on their values, goals, and achievements based on intrinsic motivation.

3. Another crucial aspect is improving individuals stress management skills and psychological resilience. Mindfulness practices and Cognitive Behavioral Therapy (CBT) can help individuals identify and modify negative thought patterns. Mindfulness encourages individuals to remain present in the moment and focus on their own experiences rather than those of others. Lastly, establishing meaningful connections with others and prioritizing face-to-face interactions can fulfill individuals genuine social needs, replacing the superficial connections formed through social media.

In conclusion, FoMO is a prevalent psychological phenomenon in today‘s digital era. Regulating social media usage habits in a mindful manner and enhancing individuals sense of intrinsic satisfaction can effectively mitigate the negative effects of FoMO. In this regard, focusing on making one's life more meaningful and fulfilling constitutes a critical step toward minimizing social media-induced stress and anxiety.

Keywords: Digital awareness, fear of missing out, mindful social media usage, psychological resilience

[Abstract:0614]

Cyber Security and Cyberbullying

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With the increasing use of media and the internet, while many positive contributions have emerged, various psychological and psychiatric issues have also arisen. One such issue is cyberbullying, which refers to a behavior in which an individual is deliberately targeted, harassed, or humiliated through digital platforms. This form of bullying is particularly prevalent among young people and is recognized as a significant risk factor for the development of psychiatric disorders. The persistent stress and trauma caused by cyberbullying weaken an individual‘s psychological resilience and may eventually lead to long-term emotional and cognitive damage.

Research indicates that individuals exposed to cyberbullying are at a higher risk of developing severe psychiatric symptoms such as depression, anxiety, post-traumatic stress disorder, and suicidal ideation. While most studies highlight the internalizing problems caused by cyberbullying, such as anxiety, negative affect, or loneliness, it has also been found that cyberbullying victims are at a greater risk of engaging in non-suicidal self-injury, which can severely impact their overall well-being (Jose & Fu, 2018).

The impact of cyberbullying on psychiatric disorders is not limited to victims alone. Perpetrators of cyberbullying are also at risk of developing psychiatric problems in the long run. Engaging in bullying behaviors may contribute to the development of disorders such as antisocial personality disorder and conduct disorders. Moreover, cyberbullies have been observed to exhibit deficits in empathy, problem-solving, and essential social skills.

To mitigate and prevent the effects of cyberbullying, enhancing media literacy and promoting the safe use of digital platforms is crucial (Akça et al., 2014). At this point, cybersecurity measures also need to be implemented. Using strong passwords, adjusting privacy settings, avoiding sharing personal information, and acting consciously on digital platforms can help protect individuals from cyberbullying and other online threats. Additionally, parents and teachers can raise awareness among young people about cybersecurity, ensuring that they navigate the digital world more safely and responsibly.

Strengthening cybersecurity measures is essential not only at an individual level but also on a societal scale. Digital platform providers and technology companies should establish advanced security protocols, make reporting mechanisms more accessible, and enhance AI-powered monitoring systems to ensure users' online safety. Psychiatrists and other mental health professionals should encourage individuals affected by cyberbullying to seek psychosocial support and provide pharmacological interventions when necessary.

In conclusion, with the rise of internet usage, cyberbullying has become a significant public health concern. The profound effects of cyberbullying on psychiatric disorders highlight the severity of this issue and the urgent need for intervention. At this point, strengthening cybersecurity measures and increasing digital literacy play a crucial role in protecting individuals from online risks. Combating cyberbullying requires the active involvement of all segments of society and the development of effective strategies aimed at safeguarding individuals‘ psychological well-being.

Keywords: Cyberbully, adolescent, psychiatry

REFERENCES

Jose, P.E.; Fu, K.Y.Does receiving malicious texts predict subsequent self-harming behavior among adolescents? Comput.Hum.Behav. 2018, 89, 328-334.

E. B. Akca,İ. Sayımer, J. B. Salı, and B. E. Başak, ―Okulda Siber Zorbalığın Nedenleri, Türleri ve Medya Okuryazarlığı Eğitiminin Önleyici Çalışmalardaki Yeri", Elektronik Mesleki Gelişim Ve Araştırmalar Dergisi, vol. 2, no. 2, pp. 17-30, 2014.

[Abstract:0615]

The Relationship Between Mood Disorders and Abnormal Myelination and Synaptic Pruning: The Role of Circadian Rhythm

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This presentation explores the intricate relationship between mood disorders and aberrant neurodevelopmental processes, specifically abnormal myelination and synaptic pruning, while emphasizing the critical role of circadian rhythms. Emerging research indicates that disruptions in circadian regulation may significantly impact the maturation of neural circuits by influencing oligodendrocyte function and synaptic refinement, thereby contributing to the pathophysiology of mood disorders such as depression and bipolar disorder.

Through an interdisciplinary approach that integrates neuroimaging findings, molecular genetics, and chronobiology, the talk will highlight recent advances in understanding how circadian dysregulation affects neural connectivity and brain homeostasis. Moreover, the presentation will discuss novel chronotherapeutic strategies aimed at realigning circadian rhythms to potentially restore normal myelination and synaptic pruning processes.

Ultimately, this discussion seeks to bridge the gap between neurodevelopmental biology and circadian science, offering new insights into targeted treatment strategies and future research directions in the field of psychopharmacology and psychotherapy.

Keywords: Mood Disorders, Abnormal Myelination, Synaptic Pruning, Circadian Rhythm

[Abstract:0616]

What is The Concept of Incel? Yesterday and Today

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Involuntary celibacy (often abbreviated as incel) refers to a situation in which a person desires but is unable to engage in romantic or sexual relationships despite their efforts. The term is especially associated with online communities, particularly among men who feel unsuccessful in dating or relationships. Actually, "Involuntary Celibate" (Incel) originally emerged as a gender-neutral group. It was created in 1997 by a Canadian university student named Alana. This website, which Alana called "Alana‘s Involuntary Celibacy Project," aimed to provide an outlet for individuals to express their frustrations regarding sexuality and dating, as well as to offer support and rehabilitation for those who felt romantically alienated. Initially conceived as an inclusive and supportive community open to everyone, this project gradually changed over time. From the early 2000s, two of the most popular forum platforms, 4chan and Reddit, encouraged extremist rhetoric to gain more visibility1. The Incel worldview is inevitably based on two intertwined beliefs: the idea that a person‘s place in society is largely determined by a hierarchy based on physical appearance, and the belief that women are primarily responsible for this hierarchy. According to this perspective, at the top of this structure are the idealized men, referred to as "Chads", and the idealized women, known as "Stacys".The so-called "normies" are in the middle, while low-status incels remain at the very bottom, left to decay. In Incel culture, a small number of Chads attract the majority of women, leaving only the less conventionally attractive women for normies, and nothing at all for incels. Incels distinguish themselves from normal people not only through the assumption that their physical appearance is inferior but also through their belief that they possess privileged insights that regular people cannot see: most women are only attracted to Chads, and if someone does not "win" the genetic lottery, they are doomed to mediocrity, social isolation, deep loneliness, and ultimately, misogyny 2.

The concept of the "black pill" is another key idea in Incel ideology. This ideology is a derivative of the "blue pill/red pill" dichotomy, adapted from the 1999 science fiction film The Matrix. The story describes how those who take the blue pill live in a world of illusion, while those who take the red pill go through an awakening process, discovering fundamental and key truths about the world. According to incels, a person who takes the red pill will finally see how vile women's true nature is and how they manipulate the world and men. For incels, this crucial epiphany is called "taking the black pill." The black pill is entirely nihilistic; taking it means accepting an even harsher reality than what the red pill reveals. It signifies the belief that women and society are inherently biased against men who lack certain physical traits, leaving them with no hope of being attractive to women or gaining acceptance in society. As a result, incels see themselves as doomed to be ignored or rejected by women 3.

Keywords: Black pill, Chads, Incel, Involuntary celibacy, Stacys

AuthorToEditor: References 1. Jim Taylor, ―The Woman Who Founded the ‗Incel‘ Movement,‖ BBC, August 30, 2018, https://www.bbc.com/news/world-us-canada-45284455. 2. Hoffman B, Jacob W, Ezra S. "Assessing the threat of incel violence." Studies in Conflict & Terrorism 43.7 (2020): 565-587. 3. Debbie Ging, ―Alphas, Betas, and Incels: Theorizing the Masculinities of the Manosphere,‖ Men and Masculinities 22, no. 4 (2019): 640, https://journals.sagepub.com/doi/10.1177/1097184X17706401.

[Abstract:0617]

Digital Health Applications: The Role of Telepyschiatry and Digital Therapies in Psychiatric Treatment

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Digital health applications, particularly telepsychiatry and digital therapies, have become increasingly significant in psychiatric treatment in recent years. Telepsychiatry is a telemedicine service that enables the remote delivery of mental health services through digital technologies. It is used for diagnosis, medical treatment, therapy processes, consultation services, and psychiatric education. With technological advancements, telepsychiatry applications have rapidly expanded, especially during the COVID-19 pandemic, making remote mental health services more accessible. Telepsychiatry is widely used in treating psychiatric disorders such as depression and anxiety. A crucial criterion for its effectiveness is whether the patient and therapist have previously met in person. This application enables individuals who cannot attend in-person therapy due to health issues or geographical barriers to receive treatment online. In Turkey, telepsychiatry was first implemented in 2008, and by the end of 2022, 8,900 patients had received 37,254 therapy sessions. During the pandemic, this service reached its peak, with 4,550 patients receiving 20,800 sessions. Telepsychiatry also offers significant advantages for patients with substance use disorders. By facilitating easier access to mental health services, it increases treatment engagement. It enhances psychiatric service efficiency while reducing the time and cost associated with seeking treatment. Patients with substance use disorders often avoid seeking help due to stigma, but telepsychiatry minimizes these concerns, improves access to care, and allows clinicians to provide services to a larger patient population. Additionally, digital technology usage among psychiatric patients is remarkably high. A study found that 96% of psychiatric outpatients owned a smartphone, 94.8% used the internet, and 91% were active on social media. Among those who had never used a health-related application, 78.8% expressed a willingness to do so for scheduling appointments, 67.7% for appointment reminders, 59.7% for medication side effect monitoring, 55.7% for allowing their physician to access their health data, and 54.9% for online psychotherapy services. These findings indicate a significant unmet need for digital health applications among psychiatric patients. In conclusion, digital health applications, especially telepsychiatry and digital therapies, offer significant advantages in psychiatric treatment. These innovations eliminate time and distance barriers, enabling broader patient access to mental health services. However, challenges such as technological infrastructure limitations, regulatory issues, and the lack of reimbursement systems persist. Therefore, optimizing telepsychiatry and digital therapies requires further regulatory advancements and increased awareness among healthcare professionals.

Keywords: Artificial intelligence, telepsychiatry, digital therapies

AuthorToEditor: 1. Türkiye Klinikleri. Psychiatry and telemedicine. (2024) 2.Tarhan N. Telepsikiyatri terapilerde zaman ve mesafe sorununu çözüyor. Nevzat Tarhan. (2023) 3.Progress in Mind Turkey. Telepsikiyatrinin avantajları ve uygulaması ile ilgili zorluklar. (2024) 4.Yıldız M, Yıldız B, Demirci H, Albayrak Y. Psikiyatri hastalarında dijital sağlık uygulamalarının kullanım durumu ve beklentiler. Genel Tıp Dergisi. 5.Taş Bora S. Psikozda dijital ruh sağlığı müdahalelerinin kullanımı: yararlar ve riskler. Akdeniz Hemşirelik Dergisi. (2023)

[Abstract:0618]

The Digital Era in Psychiatry: Diagnosis, Treatment, and Monitoring Methods with Artificial Intelligence

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The digital era has transformed psychiatry with the integration of artificial intelligence (AI), revolutionizing how mental health conditions are diagnosed, treated, and monitored. AI's ability to process vast data, identify patterns, and make predictions addresses the complexities of mental health disorders, offering more accurate and efficient solutions than traditional methods. In diagnosis, AI-powered tools analyze diverse data sources, such as electronic health records, genetic profiles, and social media activity, to detect mental health conditions. Machine learning algorithms identify subtle patterns in behavior, speech, and physiological signals, aiding in the diagnosis of depression, anxiety, and schizophrenia. Natural language processing (NLP) can analyze text or voice inputs to detect psychological distress. Wearable devices and smartphone apps equipped with AI provide real-time monitoring of parameters like heart rate and sleep patterns, enhancing diagnostic precision. AI also transforms treatment methods in psychiatry. Personalized treatment plans, often reliant on trial-and-error approaches, are now optimized with AI algorithms that predict intervention effectiveness based on individual characteristics. By analyzing past treatment outcomes, AI suggests tailored medication regimens or therapeutic techniques, improving efficacy and minimizing side effects. Furthermore, AI-powered chatbots and virtual therapists provide accessible tools for evidence-based interventions like cognitive-behavioral therapy (CBT). These tools broaden access to mental health support and reduce stigma around seeking help.

Monitoring mental health conditions has significantly improved with AI-driven systems. Wearables, apps, and smart technologies enable continuous tracking, allowing early detection of symptom changes and timely interventions. AI can analyze changes in voice tone, activity levels, or social interactions to predict depressive episodes or manic states in bipolar disorder. These systems alert clinicians or caregivers to provide immediate support while empowering patients to manage their mental health.

Despite these advancements, challenges remain in integrating AI into psychiatry. Ethical concerns, including data privacy, algorithmic bias, and the need for rigorous validation of AI tools, must be addressed. Collaboration between psychiatrists, data scientists, and policymakers is essential to ensure AI is implemented responsibly and equitably.

In conclusion, AI is redefining the future of psychiatry by enhancing diagnosis, personalizing treatment, and enabling continuous monitoring. These innovations not only improve outcomes for individuals with mental health conditions but also pave the way for a more effective, accessible, and compassionate approach to mental health care. As technology continues to evolve, its transformative potential in psychiatry will expand, offering new hope for addressing the challenges of mental health.

Keywords: Artificial Intelligence in Psychiatry, Digital Mental Health, AI-Powered Diagnosis, Personalized Treatment Plans, Continuous Monitoring Systems

AuthorToEditor: 1. Topol, E. J. (2019). Deep Medicine: How Artificial Intelligence Can Make Healthcare Human Again. Basic Books. 2. Denecke, K., & Deng, Y. (2021). Artificial Intelligence for Mental Health. Frontiers in Digital Health, 3, 1-14. https://doi.org/10.3389/fdgth.2021.674297 3. Wasil, A. R., Venturo-Conerly, K. E., Shingleton, R. M., & Weisz, J. R. (2020). The Emerging Role of Artificial Intelligence in Mental Health Research and Clinical Practice. Psychological Medicine, 50(4), 705–710. https://doi.org/10.1017/S0033291719003801 4. Torous, J., Bucci, S., Bell, I. H., et al. (2021). The Growing Field of Digital Psychiatry: Current Evidence and the Future of Apps, Social Media, Chatbots, and Wearables. World Psychiatry, 20(3), 318–335. https://doi.org/10.1002/wps.20883 5. Shore, J. H., Yellowlees, P., & Caudill, R. (2018). Telepsychiatry and the Evolution of Digital Mental Health Care. Psychiatric Clinics of North America, 41(4), 595–605. https://doi.org/10.1016/j.psc.2018.07.001

[Abstract:0621]

Cognitive functions in childhood neurodevelopmental disorders: What do neurocognition and social cognition tell us?

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Neurocognition is a field that focuses on understanding and assessing cognitive processes, such as thinking, learning, memory, and problem-solving. It aims to understand individuals' cognitive abilities by examining the relationships between the nervous system and cognitive functions. Cognitive functions encompass various mental processes, such as attention, memory, executive functions, and social cognition.

Autism spectrum disorder (ASD) and attention-deficit hyperactivity disorder (ADHD) are neurodevelopmental disorders with symptoms starting to manifest in early childhood. Deficits in neurocognitive function have been found in both ASD and ADHD, such as executive function and motor function. Moreover, impairments in cognitive flexibility, working memory, ideational fluency, and inhibition were strongly associated with ASD endophenotypes. Numerous studies have reported abnormal brain structure and function in ASD. Attention is the primary neuropsychological domain most strongly associated with ADHD, and for many years, nearly all conceptualizations of ADHD or similar disorders have included attention-related symptoms. Other neurocognitive problems in ADHD may include, in particular, working memory and motor inhibition.

Social cognition involves a complex range of mental skills that are essential for perceiving, processing, interpreting, and reacting to social stimuli. It is a multifaceted construct comprising various overlapping subdomains, such as Theory of Mind/mentalizing, emotion recognition, and social perception, empathy and humour processing. These abilities collectively contribute to the formation of social competence and adaptation. The development of social cognition progresses gradually from infancy into adulthood. Due to the high prevalence of social impairments in neurodevelopmental disorders, social cognition is now considered a fundamental area of functioning that requires clinical focus. In recent years, there has been an abundance of research on social cognition in neurodevelopmental disorders, particularly ASD, and to a lesser degree, ADHD, both of which are marked by social difficulties.

ASD is characterized by the presence of functionally disabling restricted, repetitive behaviors and interests as well as social communication and interaction challenges. It is believed that changes in social cognition contribute to the difficulties in social communication and interaction seen in ASD. Even though ASD has been reliably associated with alterations in social cognition, the etiological pathways constituting the relation remain unclear. Additionally, other neurodevelopmental disorders, like ADHD, have also been linked to difficulties in social interaction. In ADHD, deficits in processing at each stage of the social information-processing model can occur, leading to disruptions in social cognition. Individuals with ADHD often experience various social and interpersonal difficulties. The hyperactive and impulsive behaviors, along with inattention, seen in children with ADHD can contribute to these social challenges. The impairments in social cognition align with fronto-striatal dysfunction in ADHD, although other brain networks seem to be involved as well.

In this panel, neurocognitive and socio-cognitive processes in ADHD and ASD are going to be discussed. Additionally, studies in this field and current data are going to be evaluated regarding the level of evidence.

Keywords: Neurocognition, social cognition, attention-deficit hyperactivity disorder, autism spectrum disorder

[Abstract:0622]

Psychotherapeutic Approaches in Anorexia Nervosa

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Treatment of Anorexia Nervosa (AN) requires a multidisciplinary treatment team due to the frequency of serious medical and psychiatric comorbidities. The ego-congruent nature of AN (i.e., affected individuals may view some of their symptoms as something they want to maintain or as part of themselves) can make the syndrome difficult to treat. Therefore, the primary goal of treatment for the clinician is to establish a positive and supportive relationship with the patient1. The American Psychiatric Association (APA) Practice Guidelines recommend that adults with AN be treated with psychotherapy focused on the eating disorder. This psychotherapy should include normalizing eating and weight control behaviors, restoring weight, and addressing the psychological aspects of the disorder (e.g., fear of gaining weight, body image disturbance). Psychotherapies applied in the treatment of AN include family-based treatments (FBT), cognitive-behavioral therapy (CBT), interpersonal psychotherapy (IPT), dialectical behavioral therapy, focal psychodynamic therapy (FPT), Maudsley Model of Anorexia Nervosa Treatment for Adults (MANTRA), Specialist Supportive Clinical Management (SSCM) and emerging methods targeting neurobiological factors2. Although many psychotherapies are recommended, they do not have a clear superiority over each other. The National Institute for Health and Care Excellence (NICE) guidelines recommend that one of the following modalities be preferred for the treatment of AN in adults: individual eating disorder-focused cognitive behavioral therapy (CBT-ED), MANTRA and SSCM. According to NICE guidelines, if CBT-ED, MANTRA or SSCM are ineffective, one of these 3 treatments that the person has not received before or FPT focusing on eating disorders is recommended3. CBT is the most studied and utilized treatment in AN treatment with its nature of helping the individual change negative behaviors such as eating, exercise and other compulsive behaviors, combating negative thoughts and changing negative core beliefs4. MANTRA is a treatment based on the MANTRA workbook, encouraging the individual to develop a ‗non-anorexic identity', including family members/caregivers in the treatment, and trying to understand the relationship of the individual's condition and problems to the social context. SSCM aims to develop a positive relationship between the individual and the practitioner, monitor physical health and help the individual understand the connection between their symptoms and abnormal eating behaviors. Allow the individual to decide what else to include as part of their therapy. FBT focuses on family involvement to support recovery. Canadian practice guidelines primarily support FBT for the treatment of children and adolescents with eating disorders, where parents are held primarily responsible for the refeeding process. Studies show significant improvements in body weight and eating disorder symptoms with FBT. IPT is frequently used in AN treatment for dysfunctions in interpersonal relationships, social roles, and communication. A controlled study found that psychodynamic focused therapy was similarly beneficial in AN treatment to other treatments. Recently, new approaches that address AN-related neuroplasticity deficits, such as visual rewriting, memory specificity training, and mindfulness-based interventions, have attracted attention. Although psychotherapy approaches hold promise in AN treatment, low remission rates suggest that more research is needed to improve their effectiveness and explore additional treatment modalities.

Keywords: Eating disorders, anorexia nervosa, treatment, psychotherapy, remission

AuthorToEditor: 1. Korkmaz MÇ, Özdel K. Yeme Bozukluğuna Transdiagnostik Bilişsel Davranışçı Terapi Yaklaşımı. Turk Klin Psychiatry - Spec Top. 2023;16(3):36-42. 2. The American Psychiatric Association Practice Guideline for the Treatment of Patients With Eating Disorders | Psychiatry Online. Practice Guidelines. Accessed March 19, 2025. https://psychiatryonline.org/doi/book/10.1176/appi.books.9780890424865 3. Recommendations | Eating disorders: recognition and treatment | Guidance | NICE. May 23, 2017. Accessed March 19, 2025. https://www-nice-org-uk.translate.goog/guidance/ng69/chapter/Recommendations?_x_tr_sl=en&_x_tr_tl=tr&_x_tr_hl=tr&_x_tr_pto=tc#treating-anorexia-nervosa 4. Kaplan & Sadock's Comprehensive Textbook of Psychiatry Cilt: 1 - 2 Türkçesi. NOBEL Kitabevi. Accessed March 19, 2025. https://www.nobelkitabevi.com.tr/psikiyatri/21309-kaplan-sadock-s-comprehensive-textbook-of-psychiatry-cilt-1-2-tuerkcesi-9789752778702.html

Abstract:0623]

Management of Sexual Side Effects Related to Other Psychotropics

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Sexual side effects are a common problem associated with various psychotropic medications. Sexual dysfunction, including decreased libido, erectile dysfunction and orgasm difficulties, is frequently reported as a side effect of psychotropic medications. Despite their significant impact on patient well-being and adherence to treatment, these effects are often underreported and underrecognized in clinical practice[1].

The sexual side effects of psychotropic drugs are primarily due to their effects on neurotransmitter systems, particularly dopamine and serotonin. For example, dopamine enhances sexual behavior, while serotonin generally inhibits it. Psychotropic drugs that block dopamine receptors or stimulate serotonin receptors can lead to sexual dysfunction[2].

Pharmacological interventions are often the first line of treatment for sexual dysfunction caused by psychotropic drugs. These strategies include:

Switching Medication: Switching to medications with fewer sexual side effects, such as aripiprazole, a partial agonist of dopamine receptors that has been shown to cause less sexual dysfunction.

Adjusting Dosages: If clinically appropriate, reducing the dosage of the culprit drug can sometimes alleviate sexual side effects.

Using Antidotes: Certain medications, such as cyproheptadine and yohimbine, have been used to reverse sexual side effects in some cases. Phosphodiesterase Type 5 (PDE-5) Inhibitors: Medications such as sildenafil, tadalafil, and vardenafil are effective in treating erectile dysfunction and may be used as adjuncts in patients with psychotropic-induced sexual dysfunction[3].

Nonpharmacological approaches to managing sexual dysfunction are also important. These include: Lifestyle Changes: Regular exercise, healthy eating, weight management, smoking cessation, and limited alcohol consumption can improve sexual function.

Addressing Psychological Factors: Psychological factors such as anxiety, depression, and stress can contribute to sexual dysfunction. Cognitive-behavioral therapy (CBT) has been shown to be effective in addressing these issues. Partner Involvement: Involving the patient‘s partner in the treatment process can improve communication and relationship satisfaction, which are essential for sexual well-being.

Psychotherapeutic Approaches

Psychotherapy plays an important role in managing sexual dysfunction, especially when psychological factors are involved. Cognitive-behavioral therapy (CBT) has been shown to be effective in treating psychogenic erectile dysfunction and other sexual disorders.

Management of sexual side effects caused by psychotropic medications requires a comprehensive approach that includes pharmacologic, nonpharmacologic, and psychotherapeutic strategies. Clinicians should be proactive in assessing and addressing these issues to improve patient outcomes and quality of life.

Keywords: Psychotropic drugs, sexual side effects, sexual dysfunctions, treatment, management

AuthorToEditor: References: 1. Impact of Psychotropic Medications on Sexual Functioning | SpringerLink. Accessed March 21, 2025. https://link.springer.com/chapter/10.1007/978-3-030-52298-8_24 2. Abassi B, Fekih-Romdhane F, Baccar F, Cheour M, Sana E, Damak R. The Impact of Psychotropics on Sexuality: A Literature Review. Eur Psychiatry. 2024;67(S1):S769-S769. doi:10.1192/j.eurpsy.2024.1600 3. Roy P. Erectile Dysfunction: Way to Overcome. Bangladesh J Med. Published online 2023:144-144. doi:10.3329/bjm.v35i20.73391

[Abstract:0624]

Microbiota-Gut-Brain Axis in Sleep Disorders

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Over the past decade, the gut microbiome has been increasingly recognized as a key regulator of human health, influencing a wide range of physiological processes. Research has highlighted its role in maintaining intestinal homeostasis and regulating the immune, metabolic, and nervous systems. Beyond digestion, it contributes to neurological function and systemic balance, emphasizing its broad impact on overall health and disease development.

Among its many functions, accumulating evidence has highlighted the intricate relationship between gut microbiota composition and sleep regulation. Central to this connection is the microbiota-gut-brain axis (MGBA), a bidirectional communication network linking the gut and central nervous system. This axis may influence sleep through metabolic, immune, and neuronal pathways, potentially regulating neurotransmitter production, circadian rhythms, and neuroimmune interactions. Gut-derived signals such as serotonin, melatonin, gamma-aminobutyric acid (GABA), and short-chain fatty acids (SCFAs) play a crucial role in modulating the sleep-wake cycle via the vagus nerve and systemic circulation. Disruptions in microbial balance, known as dysbiosis, have been linked to insomnia, sleep apnea, and circadian rhythm disturbances, potentially through neuroinflammation and hypothalamic-pituitary-adrenal (HPA) axis dysregulation.

As research continues to unravel these mechanisms, microbiota-targeted interventions, including probiotics, prebiotics, and dietary modifications, are emerging as promising strategies to restore microbial balance and improve sleep regulation. Unlike conventional sleep medications, which often come with adverse effects, these microbiome-based approaches offer a novel, side-effect-free alternative for managing sleep disorders. Understanding the intricate relationship between the gut microbiome and sleep may pave the way for innovative therapeutic strategies that harness the power of microbial interventions to enhance overall health and well-being.

Keywords: Dysbiosis, gut microbiome, microbiota-gut-brain axis, sleep disturbances

[Abstract:0627]

Psychosis-Like Experiences in Adolescents and Clinical Properties

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In recent years, studies have increasingly provided data suggesting that psychotic symptoms such as delusions and hallucinations are commonly observed in the general population. In cases where a disorder does not meet diagnostic criteria, does not lead to a search for treatment, or does not require treatment, the presence of "psychic experiences" or "psychosis-like experiences (PLE)" is referred to. The literature agrees that PLE can be found in non-clinical populations starting from adolescence and occurs more frequently than clinical presentations. When it comes to PLE, the abnormal way in which an individual perceives reality and explains it in an unusual context is considered an abnormal thought pattern for society. From a longitudinal perspective, in line with the psychosis continuum model, PLE can be interpreted as subclinical processes close to temporary transitional states. PLE is an intermediate manifestation that qualitatively resembles psychotic phenomenology but, from a quantitative standpoint, is characterized by lower levels of severity, intensity, continuity, frequency, and distress. Due to the hormonal, maturational, and myelination processes during adolescence, as well as the high dopaminergic discharge observed at the beginning of this period, the frequency of PLE increases during this time. Looking at the social cognitive characteristics of adolescence, it is suggested that the increase in self-focused attention and egocentric period traits, which can be summarized as a state of omnipotence, may lead to an increase in erroneous attributions about the world and others, thereby increasing the frequency of PLE.

According to Nelson and Yung, PLE includes different types that emerge for various reasons and follow different prognoses. In healthy samples and non-psychotic clinical samples, it has been shown that unusual experiences, sensory oddities, and persecutory thoughts are malignant types of PLE. The most important point remains that PLE should be interpreted based on the attributions made by individuals and the significance they assign to them.

Sensations require focused attention and the recognition of stimuli from the environment, either automatically or consciously. After attention and awareness, these sensations are followed by giving them meaning or recognition. All these active processes-sensory processing capacity, also known as bottom-up mechanisms, and the process of meaning-making, known as top-down mechanisms-can result in a distortion of reality. These two components form the basis of both hallucinations and delusions.Their content, the level of belief in the delusions, their alignment with the individual's culture, the structure of the delusions,the anxiety they cause, and their significance in the person's life differ from one individual to another. Hallucinations are considered to arise when a person attributes their experiences and cognitive processes to external sources rather than internal ones. It is believed that the source of hallucinations originates from both complementary theories of bottom-up and top-down mechanisms.

Since there is no opportunity to examine and clarify psychic experiences, in children and adolescents, since insufficient maturity in recognizing cognitive processes and emotions, and consequently, a lack of insight, it is believed to be important, as with any psychiatric disorder, to use both clinician assessments and self-report tools together

Keywords: Psychotic-like experiences, psychosis, adolescents, schizophrenia

[Abstract:0628]

Predictors and Prognosis of Psychotic-Like Experiences in Adolescents

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Psychotic-like experiences (PLEs) refer to situations in which an individual undergoes alterations in reality perception without meeting the diagnostic criteria for a psychiatric disorder. PLEs are a widely observed phenomenon in the general population, often emerging during adolescence. While these experiences are transient for most individuals, specific factors may contribute to their persistence, increasing the likelihood of developing psychotic spectrum disorders (PSDs). Research indicates that PLEs are most prevalent between the ages of 15 and 25, with increased dopaminergic activity and neurodevelopmental processes playing a crucial role in their manifestation during adolescence.

PLEs have been suggested as a risk factor for the onset of psychosis, necessitating their evaluation alongside co-occurring psychiatric disorders. The persistence of PLEs is associated with an elevated risk of psychosis development and has been linked to the presence of depression, suicidal ideation, high stress levels, and impaired functionality. Additionally, personality traits significantly influence the persistence of PLEs. Characteristics such as neuroticism, disinhibition, and low social connectedness contribute to the continuation of these experiences. Recent studies further suggest that PLEs are not exclusively linked to psychosis but are also strongly associated with depression, suicidal tendencies, and diminished social functionality.

Yung and colleagues categorized PLEs into three groups based on their potential risk for psychosis. The first group, schizotaxia, represents individuals at the highest psychopathological risk. The second group includes individuals with a moderate likelihood of developing psychosis. The third group, referred to as benign schizotypy, comprises experiences such as lucid dreaming and creative thinking, which do not necessitate clinical intervention. However, there remains a lack of definitive data on which types of PLEs are more likely to progress into clinically significant disorders. Environmental, demographic, and psychosocial factors play a crucial role in the development of PLEs. Low socioeconomic status, parental psychiatric history, exposure to stressful life events, low self-esteem, and inadequate coping mechanisms have been identified as significant correlates of PLEs. Individuals who reported PLEs during childhood have also been found to exhibit delays in speech and motor skills, as well as higher incidences of emotional and behavioral difficulties.

Genetic studies have demonstrated a hereditary component to PLEs. In particular, individuals with relatives diagnosed with schizophrenia spectrum disorders exhibit a higher prevalence of PLEs. Furthermore, neurodevelopmental and neuroanatomical similarities have been observed between PLEs and schizophrenia. Structural abnormalities in gray and white matter, frontotemporal connectivity deficits, and impairments in language and cognitive functions are commonly identified in individuals experiencing PLEs.

In conclusion, while PLEs may serve as predictors of psychotic spectrum disorders, they do not invariably lead to clinical conditions. Identifying individuals at risk of persistent PLEs and subsequent clinical deterioration requires careful evaluation of individual risk factors. Therefore, longitudinal follow-up studies and early intervention strategies are of paramount importance. Ensuring access to psychosocial support mechanisms for high-risk individuals may help mitigate the potential adverse outcomes associated with PLEs.

Keywords: Psychotic-like experiences, Psychosis, Adolescents, Schizophrenia

AuthorToEditor: 1. Verdoux H, Van Os J. Psychotic symptoms in non-clinical populations and the continuum of psychosis. Schizophr Res. 2002; 54(1–2):59–65. 2. Van Os J, Linscott RJ. Introduction: The extended psychosis phenotype - Relationship with schizophrenia and with ultrahigh risk status for psychosis. Schizophr Bull. 2012; 38(2): 227–30. 3.Fonseca-Pedrero E, Lemos-Giráldez S, Paino M, Sierra-Baigrie S. Psychoticlike experiences in nonclinical adolescents. Hallucinations Types, Stages Treat. 2011; (May 2014): 131–46.

[Abstract:0629]

Understanding Digital Addiction: Definitions, Comorbidities, and Diagnostic Challenges

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Digital addiction has emerged as a major concern in the modern era, particularly among young individuals. While the concept 'digital addiction' lacks universal consensus, it is generally defined as a type of behavioral addiction characterized by compulsive, and uncontrollable use of digital devices or media, which negatively impacts daily functioning and psychological well-being. It is an umbrella term that encompasses addiction to the smartphones, video games, internet, social media, and other digital technologies. Although digital addiction does not necessarily require internet use, the presence of the internet can be a trigger and facilitator of addiction [1].

Although the diagnostic criteria for digital addiction remain a topic of debate, health organizations have started to recognize that excessive use of digital devices and technologies may signal an underlying disorder. For instance, the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) includes Internet Gaming Disorder as a condition requiring further study, whereas the World Health Organization has officially classified Gaming Disorder in the International Classification of Diseases 11th Revision (ICD-11) [2].

A significant proportion of individuals with digital addiction also exhibit comorbid psychiatric disorders. Although establishing a direct causal relationship between digital addiction and these comorbid conditions is challenging, they are considered important risk factors that require evaluation. In children and adolescents, the most common psychiatric comorbidities associated with digital addiction include depressive disorders, attention deficit hyperactivity disorder, autism spectrum disorder, impulse control problems, anxiety disorders, sleep disorders, eating disorders, suicidal thoughts and behaviors, alcohol and substance use disorders, and other behavioral addictions. The bidirectional nature of these relationships suggests that digital addiction may serve as both a coping mechanism and an exacerbating factor for underlying vulnerabilities. However, current data remain insufficient to determine the exact nature of these relationships, highlighting the need for further research in this area [2, 3].
One of the greatest challenges in diagnosing digital addiction is the unavoidable presence of digital tools in daily life and their role in facilitating everyday tasks. This is especially true for children and adolescents born into the digital age, for whom removing digital devices from daily routines is nearly impossible. In this context, the boundary between adaptive digital engagement and pathological dependence is often blurred by the increasing integration of technology into education and social interactions. Therefore, during the diagnostic process, the amount of time spent on a device or activity alone is not sufficient; what truly matters is how that time is spent and whether it interferes with functioning [2, 4]. In the diagnosis or treatment process of digital addiction, a complex concept, in children and adolescents, the use of validated and reliable scales in Turkish, such as the Digital Addiction Scale for Children (DASC) and the Digital Addiction Scale for Teenagers (DAST), can facilitate the process. This presentation will provide a comprehensive overview of digital addiction by examining its key features, diagnostic complexities, and psychiatric comorbidities, while also addressing the challenge of distinguishing pathological from normative digital use in children and adolescents.
Keywords: Adolescents, behavioral addictions, children, digital addiction, psychiatric comorbidities, technological addictions
AuthorToEditor: REFERENCES: 1. Karakose T, Tülübaş T, Papadakis S. Revealing the intellectual structure and evolution of digital addiction research: An integrated bibliometric and science mapping approach. International Journal of Environmental Research and Public Health. 2022;19(22), 14883. 2. Cemiloglu D, Almourad MB, McAlaney J, Ali R. Combatting digital addiction: Current approaches and future directions. Technology in Society. 2022;68, 101832. 3. Ghali S, Afifi S, Suryadevara V, Habab Y, Hutcheson A, Panjiyar BK, Davydov GG, Nashat H, Nath TS. A systematic review of the association of Internet gaming disorder and excessive social media use with psychiatric comorbidities in children and adolescents: is it a curse or a blessing?. Cureus. 2023;15(8). 4. Christakis DA. The challenges of defining and studying ―digital addiction" in children. Jama. 2019;321(23), 2277-2278.

[Abstract:0630]

Management of Sexual Side Effects Related to Antidepressants

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Sexual dysfunction is a well-documented and clinically significant adverse effect associated with antidepressant pharmacotherapy, particularly in agents that modulate serotonergic neurotransmission. This is most evident in selective serotonin reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs), which are widely used in the treatment of major depressive disorder and related conditions. Prevalence estimates for antidepressant-induced sexual dysfunction range from approximately 30% to over 70%, depending on a variety of contributing factors. These include the pharmacodynamic properties of the specific antidepressant, the dosage prescribed, treatment duration, patient-specific biological and psychological characteristics, and the methods used to assess sexual function—whether through validated rating scales or subjective, spontaneous self-reports (1). The underlying pathophysiology is multifactorial. One of the primary mechanisms involves the serotonergic inhibition of dopaminergic and nitric oxide-mediated pathways, both of which are essential for sexual arousal, genital blood flow, and orgasmic function. As a result, patients may experience a spectrum of dysfunctions, including hypoactive sexual desire disorder, anorgasmia, delayed ejaculation, and erectile dysfunction. These symptoms often manifest early in the treatment process and may persist for as long as the pharmacologic agent is continued. Among SSRIs, paroxetine is frequently cited as having a particularly high incidence of sexual side effects due to its strong serotonergic activity and additional anticholinergic properties. In contrast, antidepressants that exert dopaminergic or noradrenergic effects, such as bupropion, are generally associated with a lower risk of sexual dysfunction. Of growing clinical concern is the phenomenon of persistent post-treatment sexual dysfunction (PSSD), in which symptoms fail to resolve following discontinuation of the antidepressant. Although the precise mechanisms remain uncertain, hypotheses include neuroadaptive changes and possible epigenetic modifications (2). Management of antidepressant-induced sexual dysfunction requires a tailored approach. Strategies may involve reducing the dosage, switching to a medication with a more favorable side effect profile (e.g., vortioxetine or agomelatine), or implementing adjunctive treatments such as phosphodiesterase type 5 inhibitors (e.g., sildenafil) or anxiolytics like buspirone. Non-pharmacological interventions, including psychoeducation and cognitive-behavioral therapy targeting sexual concerns, may also prove beneficial (3). Despite the frequency and clinical impact of these adverse effects, they remain underreported by patients—often due to embarrassment—and underrecognized by clinicians. It is essential that healthcare providers initiate open, informed discussions about sexual side effects during the course of antidepressant treatment. This facilitates more accurate monitoring and allows for timely adjustments in treatment plans to optimize both mental health outcomes and quality of life.

Keywords: Sexual Side Effect, Antidepressant, Drug Side Effect

REFERENCES

1. Serretti A, Chiesa A. Treatment-emergent sexual dysfunction related to antidepressants: a meta-analysis. J Clin Psychopharmacol. 2009; 29(3): 259-266. doi:10.1097/JCP.0b013e3181a5233f
2. Petrova NN. Seksual'nye disfunktsii na fone antidepressivnoi terapii [Sexual dysfunction on the background of antidepressant therapy]. Zh Nevrol Psikhiatr Im S S Korsakova. 2023; 123(11. Vyp. 2): 115-121. doi:10.17116/jnevro2023123112115
3. Lach F, Bottemanne H, Hingray C, Papeta D, Rousseau A, Javelot H. Management strategies for antidepressant-related sexual dysfunction. Encephale. 2024; 50(5): 578-581. doi:10.1016/j.encep.2023.11.025

[Abstract:0631]

Other Treatment Modalities in Anorexia Nervosa

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Recent advances in the management of anorexia nervosa have introduced several adjunctive modalities beyond classical treatments, including bright light therapy (BLT), transcranial magnetic stimulation (TMS), gut–brain axis modulation, and digital interventions such as virtual reality (VR)-based body exposure therapy. In recent studies, BLT, when applied as part of a CBT-based inpatient program, has demonstrated accelerated improvements in body mass index (BMI) in patients with comorbid depressive symptoms, suggesting that modulation of circadian rhythms and mood regulation may contribute to enhanced therapeutic outcomes (1). Meanwhile, TMS, a non-invasive neuromodulation technique, has shown promising potential in modulating dysfunctional neural circuits associated with anorexia nervosa, despite the current evidence yielding mixed results; further large-scale, randomized controlled trials are warranted to fully elucidate its efficacy (2). Concurrently, research into gut, brain interactions has revealed that persistent alterations in the microbiome in AN patients may play a critical role in the disorder's pathophysiology. This finding has spurred investigations into the therapeutic potential of omega-3 polyunsaturated fatty acids and multistrain psychobiotics, which might help restore gut microbiota balance and improve both metabolic and psychological outcomes (3). Moreover, the advent of digital interventions such as VR-based body exposure therapy (4), particularly when combined with attentional bias modification techniques, has opened new avenues for addressing body image disturbances and the pervasive fear of weight gain, both of which are central to the psychopathology of anorexia nervosa. These innovative treatment strategies are increasingly informed by our expanding knowledge of the neurochemical regulation of appetite, which is orchestrated by a complex interplay between orexigenic peptides, such as Neuropeptide Y, Agouti-Related Peptide, orexin A-B, Melanin Concentrating Hormone, and ghrelin and anorexigenic peptides, including leptin, proopiomelanocortin, Cocaine Amphetamine Associated Peptide, cholecystokinin, and glucagon-like peptide-1.

Keywords: Eating Disorders, Anorexia Nervosa, Treatment

REFERENCES

1. Beauchamp MT, Lundgren JD. A Systematic Review of Bright Light Therapy for Eating Disorders. Prim Care Companion CNS Disord. 2016;18(5):10.4088/PCC.16r02008. Published 2016 Oct 27. doi:10.4088/PCC.16r02008
2. Morais J, Esteves P, Fonseca S. Transcranial magnetic stimulation and eating disorders, any efficacy?. Eur Psychiatry. 2021;64(Suppl 1):S357-S358. Published 2021 Aug 13. doi:10.1192/j.eurpsy.2021.958
3. Suárez-Pinilla P, Peña-Pérez C, Arbaizar-Barrenechea B, et al. Inpatient treatment for anorexia nervosa: a systematic review of randomized controlled trials. J Psychiatr Pract. 2015;21(1):49-59. doi:10.1097/01.pra.0000460621.95181.e2
4. Magrini M, Curzio O, Tampucci M, et al. Anorexia Nervosa, Body Image Perception and Virtual Reality Therapeutic Applications: State of the Art and Operational Proposal. Int J Environ Res Public Health. 2022;19(5):2533. Published 2022 Feb 22. doi:10.3390/ijerph19052533

[Abstract:0632]

Epidemiology and Diagnosis of Anorexia Nervosa

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Anorexia Nervosa (AN) is a complex and severe psychiatric disorder characterized primarily by a significant and persistent restriction of energy intake, resulting in substantially low body weight. This condition is accompanied by an intense fear of gaining weight, even when underweight, and persistent behaviors that prevent weight gain. Furthermore, individuals with AN typically exhibit a profound disturbance in the way they perceive their own body weight and shape, often viewing themselves as overweight despite being dangerously underweight. This distorted body image contributes to a chronic cycle of restrictive eating, excessive exercise, or other compensatory behaviors aimed at weight control. Epidemiological studies estimate that the lifetime prevalence of AN among females ranges between approximately 0.5% and 2% (1). Although the disorder is less frequently diagnosed in males, emerging data indicate that the incidence in this population is on the rise. The typical onset of AN occurs during adolescence, a developmental period marked by significant physical, emotional, and cognitive changes. However, clinical reports also document the emergence of the disorder in both childhood and later adulthood, underscoring the need for awareness across the lifespan. Among psychiatric illnesses, AN is recognized for having one of the highest mortality rates, a consequence of both severe medical complications, including electrolyte imbalances, cardiovascular issues, and organ failure and an elevated risk of suicide (2). Accurate diagnosis of AN requires a multifaceted and comprehensive approach. This process includes the clinical evaluation of Body Mass Index (BMI) to assess weight status in the context of age and sex, as well as a thorough investigation of the individual's psychological attitudes and cognitive distortions related to food, weight, and body image. It is also essential to evaluate for commonly co-occurring psychiatric conditions such as major depressive disorder, generalized anxiety disorder, and obsessive-compulsive disorder, all of which can exacerbate the severity and chronicity of AN (3). Effective diagnostic practices involve collaboration among healthcare professionals from various disciplines. A multidisciplinary assessment strategy that incorporates medical examinations, nutritional analysis, and psychological evaluation is crucial for early detection, differential diagnosis, and the formulation of an individualized treatment plan that addresses the full spectrum of biological, psychological, and social dimensions of the disorder.

Keywords: Eating Disorders, Anorexia Nervosa, Epidemiology, Diagnosis

REFERENCES

1. Smink FR, van Hoeken D, Hoek HW. Epidemiology of eating disorders: incidence, prevalence and mortality rates. Curr Psychiatry Rep. 2012; 14(4): 406-414. doi:10.1007/s11920-012-0282-y
2. Arcelus J, Mitchell AJ, Wales J, Nielsen S. Mortality rates in patients with anorexia nervosa and other eating disorders. A meta-analysis of 36 studies. Arch Gen Psychiatry. 2011; 68(7): 724-731. doi: 10.1001/archgenpsychiatry.2011.74
3. Zipfel S, Giel KE, Bulik CM, Hay P, Schmidt U. Anorexia nervosa: aetiology, assessment, and treatment. Lancet Psychiatry. 2015; 2(12): 1099-1111. doi: 10.1016/S2215-0366(15)00356-9

[Abstract:0633]

Diagnosis and Treatment of Complex Post Traumatic Stress Disorder

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Complex Post Traumatic Stress Disorder (CPTSD) has emerged as a distinct clinical entity within the ICD-11 framework, characterized by its development from chronic and repeated exposure to traumatic events—often beginning in childhood. Unlike traditional Post-Traumatic Stress Disorder (PTSD), which typically follows a single or limited traumatic incident, CPTSD is linked to prolonged and multifaceted trauma, particularly within interpersonal relationships. This extended exposure not only predisposes individuals to CPTSD but also results in a broader and more complex symptom profile. In addition to the core PTSD symptoms of re-experiencing, avoidance, and hyperarousal, CPTSD is marked by significant impairments in emotion regulation, negative self-perception, and persistent interpersonal difficulties. Patients frequently report overwhelming feelings of shame or guilt, alongside increased risks for depression, anxiety, personality disorders, and suicide. These additional psychopathological features underscore the clinical severity of CPTSD compared to PTSD. The developmental nature of CPTSD, stemming from early and chronic exposure to trauma, complicates the diagnostic process, particularly given its overlap with other psychiatric disorders such as borderline personality disorder and dissociative identity disorder. The absence of a separate classification in the DSM-5 further hinders the establishment of standardized diagnostic criteria and consistent clinical evaluations, thereby challenging both research efforts and therapeutic interventions. Treatment for CPTSD necessitates an integrated, multi-modal approach. Initial management focuses on establishing stabilization and a secure therapeutic alliance, which is critical for addressing the complex needs of these patients. Once safety and stabilization are achieved, trauma-focused psychotherapeutic interventions become essential. These therapies are tailored to mitigate not only the core symptoms of PTSD but also the broader spectrum of disturbances in emotion regulation, self-esteem, and interpersonal functioning. Pharmacological treatments serve as adjuncts, targeting specific symptom clusters and comorbid conditions to enhance overall therapeutic outcomes. Complementary holistic approaches may also be incorporated to provide a comprehensive treatment strategy that addresses the physical, emotional, and relational dimensions of CPTSD. In summary, CPTSD represents a challenging and multifaceted disorder that significantly differs from classical PTSD in both its etiology and clinical presentation. Improving diagnostic clarity, raising awareness, and refining treatment protocols are imperative to better serve individuals who have experienced prolonged and intense trauma. Continued research into the underlying mechanisms and tailored therapeutic interventions for CPTSD is crucial to enhance patient outcomes and quality of life.

Keywords: Complex Post Traumatic Stress Disorder, PTSD, Diagnosis, Treatment

REFERENCES

Karatzias, T., Hyland, P., Bradley, A., Cloitre, M., Roberts, N. P., Bisson, J. I., & Shevlin, M. (2019). Risk factors and comorbidity of ICD-11 PTSD and complex PTSD: Findings from a trauma-exposed population based sample of adults in the United Kingdom. Depress Anxiety, 36(9), 887-894.

Cloitre, M., Hyland, P., Bisson, J. I., Brewin, C. R., Roberts, N. P., Karatzias, T., & Shevlin, M. (2019). ICD-11 posttraumatic stress disorder and complex posttraumatic stress disorder in the United States: A population-based study. Journal of traumatic stress, 32(6), 833-842.

Gündoğmuş, İ., Ünsal, C., Alma, L., & Par, A. (2023). Psychometric Properties of The Turkish Version of The International Trauma Questionnaire. Journal of Aggression, Maltreatment & Trauma, 1-19.

[Abstract:0634]

Management of Sexual Side Effects Related to Mood Stabilizers

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Bipolar disorder is a severe psychiatric condition characterized by depressive and manic or hypomanic episodes, with inter-episode periods being either completely normal or accompanied by minimal symptoms. It is known to be associated with high mortality, morbidity, and functional impairment across nearly all aspects of life. Effective management of side effects during the treatment process significantly improves treatment adherence, prolongs remission periods, and enhances patients' quality of life.

Most of the data evaluating the relationship between mood stabilizers and sexual dysfunction have been derived from studies on epilepsy patients. This is particularly significant, as epilepsy itself has been associated with sexual dysfunction. Research specifically focusing on patients diagnosed with bipolar disorder remains insufficient.Sexual side effects in patients receiving lithium treatment are rarely reported. Studies suggest that lithium may reduce sexual thoughts and desire, impair erectile function, and decrease sexual satisfaction. The underlying mechanism may involve lithium-induced reductions in testosterone concentration and disruptions in nitric oxide-mediated relaxation of cavernous tissue. The most widely accepted hypothesis is that lithium causes erectile dysfunction by impairing endothelium-mediated relaxation of the corpus cavernosum, and consequently, aspirin treatment has been suggested as a beneficial intervention.Valproic acid is associated with increased testosterone and estrogen levels, which may lead to hirsutism and polycystic ovary syndrome (PCOS) in women and reduced testicular volume in men. In women with bipolar disorder, cases of decreased sexual desire and anorgasmia—presumed to be related to increased serotonergic activity induced by valproic acid—have been reported. Additionally, valproic acid may reduce levels of sex hormone-binding globulin (SHBG), resulting in increased free testosterone levels.Regarding lamotrigine, fewer adverse effects on reproductive hormones have been reported in male epilepsy patients. Studies have suggested that lamotrigine has a positive impact on sexual function, particularly in women. Notably, a case report in the literature describes a patient diagnosed with major depressive disorder (MDD) and post-traumatic stress disorder (PTSD) who developed persistent sexual arousal syndrome (PSAS) following the initiation of lamotrigine treatment.Carbamazepine use has been associated with increased serum levels of sex hormone-binding globulin, leading to reduced circulating androgen and biologically active testosterone levels. One study found that carbamazepine significantly increases the risk of erectile dysfunction (ED).Oxcarbazepine has been reported to cause anorgasmia and retrograde ejaculation, although its precise mechanism remains unclear. However, in a study conducted on male epilepsy patients receiving oxcarbazepine treatment, 79.4% of participants reported improvements in sexual function.The evaluation of sexual side effects in patients using mood stabilizers should be conducted on a case-by-case basis. Since maintaining drug concentrations within the therapeutic range is essential, dose reductions can be considered to some extent in patients experiencing sexual side effects. In treatment-resistant cases, switching medications may be necessary. However, if the current treatment regimen is effective, both the clinician and the patient may be justifiably cautious about transitioning to another drug. In such cases, adding an adjunctive medication to alleviate sexual side effects may be a viable strategy. Based on available evidence, adding bupropion in appropriate patient groups or using phosphodiesterase inhibitors in men may provide beneficial effects.

Keywords: Bipolar disorder, Mood Stabilizers, Sexual Side Effects

[Abstract:0635]

Inpatient Treatment Practices in the Child and Adolescent Unit of Bakırköy Mental Health and Neurological Diseases Hospital

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Around 8% of children and 15% of adolescents globally are affected by mental health disorders, with approximately one in four of these cases considered severe. In situations where outpatient care proves ineffective or impossible, inpatient psychiatric services play a crucial role in ensuring safety and delivering necessary treatment.

Hospitalization is typically considered only after all outpatient treatment options have been tried without success or when there's an immediate risk to the child‘s life or well-being. Some of the most critical reasons for admission include protecting the child or others from harmful behaviors such as suicidal attempts or aggressive outbursts, situations where outpatient therapy has failed or the child refuses medication, and circumstances in which family problems interfere with treatment or where the child needs to be evaluated apart from their family. Additionally, when symptoms are complex and difficult to diagnose or understand in a non-hospital setting, inpatient observation can be essential.

Before deciding on hospital admission, a thorough evaluation of the child‘s condition is necessary. This includes examining how much their symptoms affect their ability to function, determining the level of risk they may pose to themselves or others, and assessing whether continued outpatient care is feasible. If the child can be safely treated outside the hospital, inpatient admission should be avoided. Only if the outpatient response is insufficient should hospitalization be pursued.

Medical conditions that require close monitoring can complicate psychiatric admissions. Psychiatric wards may not always be equipped to handle intensive medical supervision, so in such cases, admission to a pediatric ward with psychiatric consultation is often the safer and more effective route.

A child or adolescent's willingness to participate in treatment is another important factor. Although some psychiatric conditions, like psychosis, may affect insight and motivation, in other situations, assessing and encouraging the patient‘s and family‘s motivation can significantly support the therapeutic process.

The first week of hospitalization is a particularly vulnerable time, especially regarding suicide risk. Creating a safe, stable, and supportive environment early on helps reduce distress and improves cooperation with treatment. Within the first seven days, a comprehensive care plan should be put in place. This plan should also address lifestyle factors like diet, physical activity, and substance use.

Facilities must meet high safety standards, with features like secure entry, unbreakable windows, and restricted access to dangerous items. Depending on supervision needs, units may be categorized as closed, open, or day clinics. If behaviors pose a danger, isolation or restraint may be used, but only as a last resort.

Treatment is managed by a multidisciplinary team that includes psychiatrists, nurses, psychologists, social workers, and educators. Roles are clearly defined, and the psychiatrist leads the team to ensure coordination and quality of care.

Discharge is planned once inpatient care is no longer necessary. Families and patients are prepared in advance, and a detailed follow-up plan is provided, including ongoing psychiatric care for at least one year to support long-term recovery.

Keywords: Adolescent, inpatient, psychiatry

[Abstract:0636]

The Use of ERP for Early Risk Detection in Children: Preventive Interventions and Promising Approaches

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Event-related potentials (ERPs) offer a valuable, non-invasive method for examining the developing brain by capturing time-locked electrical responses to specific cognitive and sensory stimuli. With their high temporal resolution, ERPs have become increasingly utilized in child and adolescent psychiatry for the early identification of neurodevelopmental risks, even before the emergence of overt clinical symptoms.

Research on populations at increased risk for neurodevelopmental disorders—such as Attention-Deficit/Hyperactivity Disorder (ADHD), Autism Spectrum Disorder (ASD), and learning difficulties—has consistently demonstrated abnormalities in ERP components including P3, N2, and error-related negativity (ERN) [1,2]. These components are considered early neurobiological markers, reflecting atypical functioning in attention regulation, executive processes, and social cognition. Importantly, such neurocognitive markers not only facilitate early detection but also contribute to the design of individualized, preventive intervention programs. Moreover, longitudinal changes in ERP responses can serve as objective indicators of intervention efficacy at the neurobiological level [3].

The HEALthy Brain and Cognitive Development (HBCD) study further supports the applicability of ERP in developmental research by demonstrating the feasibility of using paradigms such as mismatch negativity (MMN) in infants and young children within naturalistic settings. Norton et al. (2021) emphasize the importance of standardized, technically adaptable, and culturally sensitive ERP protocols for large-scale longitudinal studies, particularly in diverse populations [4].

In addition, recent advancements in portable EEG technologies and mobile brain/body imaging (MoBI) have enabled ERP recording in real-world environments. A systematic review by Grasso-Cladera et al. (2024) highlights how machine learning algorithms enhance the interpretation of ERP data—particularly the P300 component—under dynamic conditions, such as during movement or natural interactions. These computational approaches help address challenges related to signal noise and variability, allowing for more precise cognitive monitoring in ecological contexts [5]. The integration of such techniques may lead to context-aware, adaptive early interventions in educational and clinical settings. In conclusion, ERPs represent a promising tool for identifying early neurodevelopmental vulnerabilities and informing preventive strategies in children. By combining neurophysiological precision with technological innovation, ERP-based assessments have the potential to advance early detection efforts, guide targeted interventions, and improve long-term developmental outcomes.

Keywords: Event-Related Potentials (ERP), early detection, preventive intervention, cognitive biomarkers, machine learning

AuthorToEditor: References 1. Johnstone SJ, Barry RJ, Clarke AR. Ten years on: A follow-up review of ERP research in attention-deficit/hyperactivity disorder. Clin Neurophysiol. 2013;124(4):644–657. doi:10.1016/j.clinph.2012.09.006 2. van der Meer JMJ, Oerlemans AM, van Steijn DJ, et al. Are ASD and ADHD different manifestations of one overarching disorder? Cognitive and symptomatic evidence from a clinical and population-based sample. J Child Psychol Psychiatry. 2012;53(8):841–850. doi:10.1111/j.1469-7610.2012.02535.x 3. Bosl WJ, Tager-Flusberg H, Nelson CA. EEG analytics for early detection of autism spectrum disorder: A data-driven approach. Sci Rep. 2018;8:6828. doi:10.1038/s41598-018-24318-x 4. Norton ES, Reznick JS, Grant E, et al. EEG and ERP measures in the HEALthy Brain and Cognitive Development (HBCD) study: Promises and challenges. Dev Cogn Neurosci. 2021;52:101030. doi:10.1016/j.dcn.2021.101030 5. Grasso-Cladera A, Bremer M, Ladouce S, Parada F. A systematic review of mobile brain/body imaging studies using the P300 event-related potentials to investigate cognition beyond the laboratory. Cogn Affect Behav Neurosci. 2024;24(4):631–659. doi:10.3758/s13415-024-01190-z

Decoding Prediction Errors in Schizophrenia: Insights Into Cognitive Dysfunctions

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Prediction error (PE) processing—a key mechanism for comparing expected and actual outcomes—is increasingly recognized as fundamental to understanding schizophrenia-related cognitive deficits. In healthy individuals, robust PE signals help guide learning and update beliefs, enabling flexible responses to changing environments. However, mounting evidence indicates that schizophrenia is marked by atypical neural responses to errors, particularly in medial–frontal circuits and their dopaminergic projections. These disrupted signals not only correlate with characteristic symptoms—such as delusions—but also underlie the pervasive cognitive deficits noted in schizophrenia.

Research suggests that diminished PE amplitudes reflect faulty salience attribution and a failure to recalibrate mental models. This aberrant weighting of new information hinders adaptive learning, attentional focus, and problem-solving abilities. Concurrently, structural and functional imaging studies pinpoint dysfunctions in the medial prefrontal cortex and associated networks, revealing that faulty error monitoring is linked to both positive and negative symptom dimensions.

Crucially, emerging data show promise for targeted interventions. For instance, neuromodulation of frontal regions may normalize PE responses, allowing for improved learning rates. Additionally, contextual or emotional cues can sometimes restore cortical PE activity, underscoring the potential of psychosocial and cognitive-behavioral strategies to bolster deficient error signaling. By integrating pharmacological approaches that rebalance neurotransmitters and behavioral therapies that enhance top-down control, clinicians may mitigate cognitive impairments.

Overall, these findings highlight aberrant PE processing as a central mechanism driving cognitive dysfunction in schizophrenia. Future research on interventions aiming to recalibrate these neural error-detection processes may promote better clinical outcomes and shed further light on the neuropathophysiology of schizophrenia.

Embryonically Derived Dorsal Dentate Granule Neurons Regulate BDNF Expression, Adult Hippocampal Neurogenesis, and Anxiety-Like Behaviors

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ABSTRACT: The dentate gyrus (DG) regulates hippocampal information flow and plays key roles in processes such as pattern separation, learning, memory, and mood regulation. Dysfunction of DG neurons is implicated in various neurological and psychiatric disorders, including anxiety, but the underlying mechanisms remain unclear. In this study, we identified a subset of embryonically derived dorsal DG (dDG) neurons expressing osteocalcin (Ocn)-Cre. Using chemogenetic tools and Cre-dependent diphtheria toxin AAV (DTA), we found that these neurons exhibited heightened activity in response to an anxiogenic environment. Activation of Ocn-Cre+ dDG neurons alleviated anxiety-like behaviors and promoted neurogenesis, while ablation or chronic inhibition exacerbated anxiety and impaired neurogenesis. These neurons exhibited lower excitability and fewer presynaptic inputs than Ocn-Cre− or adult-born dDG neurons. RNA sequencing and functional studies revealed that brain-derived neurotrophic factor (BDNF) mediates the anxiolytic and neurogenic effects of Ocn-Cre+ dDG neuron activation. Our findings highlight the critical role of these neurons in regulating anxiety and neurogenesis via the BDNF pathway, suggesting that targeting this pathway may offer a promising therapeutic strategy for anxiety disorders.

Biomarkers to Better Predict Lithium Response in Bipolar I Disorder: The R-Link Initiative

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Lithium is recommended as a first line treatment for bipolar disorders. However, only 30% of patients show an optimal outcome and variability in lithium response and tolerability is poorly understood. It remains difficult for clinicians to reliably predict which patients will benefit without recourse to a lengthy treatment trial. Greater precision

The main objective of the R-LiNK research program is to identify the eligibility criteria for treatment with lithium in BDI in terms of response, safety and tolerability. R-LiNK proposes a pragmatic study of individuals with BDI when lithium treatment is initiated, to identify early biomarkers to stratify individuals with BDI according to their response to lithium assessed prospectively (two years). The detailed baseline assessment before and after lithium initiation includes extensive clinical evaluation with measures of blood —omics", anatomic/structural Magnetic Resonance Imaging (MRI) and 7Li-MRI derived-markers. These markers are tested as predictors of the response status at the endpoint (2 years). Translation is assessed in terms of positive and negative predictive values of markers, the utility of markers when employed alone or in combination (i.e. additivity or redundancy), patient acceptability and cost-effectiveness.

A total of 169 participants have been included, the follow-up of the last included patient ended in June 2024 and the data are currently analyzed. Preliminary results will be presented

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Is it Possible to Access Big Data in Schizophrenia Using AI

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Schizophrenia is a heterogeneous disorder resulting from the complex interplay of genetic, environmental and neurobiological factors. Large-scale data analyses are therefore essential for understanding the biological mechanisms of the disease, categorising its subtypes and developing personalised treatment approaches. While small-scale studies provide limited insight into the causes and course of schizophrenia, large datasets enable the reliable identification of critical factors such as genetic variation, structural brain differences and long-term disease progression. In addition, big data, when integrated with machine learning and artificial intelligence techniques, holds great potential for improving the predictability of the disorder and developing early intervention strategies. Consequently, access to big data represents a breakthrough in understanding the biological basis of schizophrenia, improving clinical management and achieving personalised treatment.

Various international consortia and collaborations are facilitating access to big data in schizophrenia research by promoting large-scale data sharing to better understand the biological underpinnings of the disorder. The Psychiatric Genomics Consortium (PGC) is one of the largest studies investigating the relationship between genetic variation and schizophrenia, with genetic data from hundreds of thousands of people worldwide. The ENIGMA (Enhancing Neuroimaging Genetics through Meta-Analysis) consortium is bringing together structural and functional neuroimaging data to investigate neuroanatomical changes in schizophrenia. In addition, large databases such as the Human Connectome Project (HCP) and UK Biobank are helping to understand connectivity and structural differences between healthy individuals and those with psychiatric disorders. Such large-scale collaborations enable the identification of more reliable biomarkers in schizophrenia research and support the development of personalised treatment strategies.

Understanding and treating a heterogeneous disorder such as schizophrenia requires analyses based on large data sets. Big data allows the integration of genetic, neuroimaging, clinical and environmental factors, facilitating a more comprehensive understanding of individual differences. Through machine learning and artificial intelligence, it will be possible to identify biomarkers, classify disease subtypes and develop personalised treatment approaches for individuals with schizophrenia. Furthermore, when combined with long-term follow-up data, big data analytics can improve the accuracy of predicting disease progression and treatment response. Thus, the use of big data can play a transformative role in understanding the pathophysiology of schizophrenia and improving its clinical management.

ACT Foundations: Connecting with Values for a Meaningful Life

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Acceptance and Commitment Therapy (ACT) is a psychotherapy approach rooted in behavioral therapy traditions and supported by the functional analysis of human language and Relational Frame Theory (RFT). Research on ACT has expanded worldwide. Since 1986, approximately 1,000 randomized controlled trials have demonstrated the effectiveness of ACT-based interventions for various clinical conditions. The ACT model conceptualizes psychopathology as *psychological inflexibility* and defines its functional model as *psychological flexibility*. The six core processes of psychological flexibility are: acceptance, cognitive defusion, contact with the present moment, self-as-context, values, and committed action. The aim of ACT is to enhance an individual's functionality by improving psychological flexibility skills. Rather than focusing solely on symptom reduction, ACT seeks to guide individuals' behaviors in line with their personal values.

The goal of this workshop is to introduce the ACT model and its key concepts. The educational objectives are:

1. To understand the concept of contextual behavioral methodology and ACT.

2. To learn how to formulate ACT-based behavioral analyses and experimentally explore the six core processes of ACT.

3. To practice interventions through experiential exercises and role plays.

Keywords: Acceptance and Commitment Therapy, values, psychological flexibility

REFERENCES

1. Hayes, S. C., Villatte, M., Levin, M., & Hildebrandt, M. (2011). Open, aware, and active: contextual approaches as an emerging trend in the behavioral and cognitive therapies. *Annual Review of Clinical Psychology*, 7, 141-168.

2. Harris, R. *ACT'i Kolay Öğrenmek*. Litera Yayınları.

3. Yavuz, K. F., & Alptekin, F. B. (2017). Davranışın İşlevsel Analizi ve Klinikte Kullanımı.

Challenges and Opportunities of Artificial Intelligence in Attention-Deficit/ Hyperactivity Disorder Assessment & Management

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ABSTRACT: Attention-deficit/hyperactivity disorder (ADHD) is a complex neurodevelopmental disorder characterized by inattention, hyperactivity, and impulsivity. Diagnosis is made through subjective assessments, such as clinical interviews and rating scales. While these methods are clinically valuable, they are also inherently subjective, potentially leading to under- or over-diagnosis, particularly in adults and individuals with comorbidities. The application of artificial intelligence (AI) for the assessment and management of Attention-Deficit/Hyperactivity Disorder (ADHD) offers transformative potential, yet also presents some challenges.

The utilization of AI holds great promise in enhancing objectivity and precision by leveraging machine learning algorithms and natural language processing to analyze multimodal data, including neuroimaging, digital phenotyping, and cognitive performance metrics. This approach presents a significant opportunity to augment psychiatric care by offering more objective, data-driven insights into ADHD assessment and management.

Recent studies demonstrate the efficacy of hybrid AI models that integrate structured clinical data, neuropsychological test results, and behavioral metrics for identifying ADHD with greater reliability than traditional methods alone. The capacity of AI to discern patterns within behavioral and neurobiological data enhances diagnostic precision when compared with conventional diagnostic instruments. Furthermore, advanced approaches, such as "digital phenotyping, smartphone sensors, typing patterns, and social media data" are emerging as tools to detect attention deficits and hyperactivity in real-world contexts. In addition, AI-powered tools have the potential to personalize treatment by predicting medication response and adjusting behavioral interventions based on individual profiles. Predictive modeling can assist psychiatrists in anticipating individual responses to stimulant and non-stimulant medications based on patient history, comorbidities, and biometric data.

However, the deployment of AI in ADHD care is not without challenges. A major concern is the lack of large, diverse, and standardized datasets, which has a restrictive effect on the generalisability of algorithms. Many current models are trained on limited or homogeneous samples, raising concerns about generalizability and algorithmic bias. Furthermore, there are ethical considerations regarding data privacy, transparency of AI decision-making, and potential biases embedded in training data. There is also an educational gap: many practicing psychiatrists have limited exposure to AI concepts, which can create resistance or uncertainty about integrating these tools into practice.

In the future, a hybrid model combining psychiatric expertise with AI-driven decision support is likely to be the most effective approach. Rather than replacing clinical judgment, AI should function as an adjunct, highlighting patterns, flagging anomalies, and offering predictive insights that can be confirmed through clinical evaluation. Despite the technology not yet being sufficiently enough for widespread adoption, it represents a promising frontier. Collaborative efforts across psychiatry, data science, and ethics will be key to developing robust, interpretable, and equitable AI systems. While hurdles remain, AI holds promise to enhance the accuracy, efficiency, and personalization of ADHD assessment and management, eventually leading to better patient outcomes.

Keywords: Attention-Deficit/Hyperactivity Disorder, Artificial Intelligence, Machine Learning

Changes and Development of Symptoms in Autism Spectrum Disorder

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Autism Spectrum Disorder (ASD) is a lifelong neurodevelopmental condition characterized by differences in social interaction, communication, and behavioral patterns. While symptoms vary from person to person, they may evolve at different developmental stages over time. Understanding how ASD symptoms change during childhood, adolescence, and young adulthood, along with the emergence of comorbid conditions, developments in communication skills, and social adaptation challenges, is crucial. This panel will examine the developmental course of ASD, exploring the difficulties encountered at different age stages and possible intervention strategies.

The most pronounced symptoms of ASD typically emerge during childhood, making this period crucial for diagnosis. In this stage, challenges in social interaction become evident, including reluctance to make eye contact, difficulty in understanding facial expressions, and struggles in initiating or maintaining play with peers. Communication difficulties may manifest as delayed language development, limited speech abilities, and echolalia. Behaviorally, repetitive movements, excessive adherence to routines, and sensory sensitivities are commonly observed.

The most frequently seen comorbid conditions in this period include Attention Deficit Hyperactivity Disorder (ADHD), sensory processing disorder, and intellectual disabilities. While some children demonstrate exceptional abilities in certain areas, others may experience significant developmental delays.

Early intervention is essential in fostering communication and social skills. Speech therapy, specialized education programs, and alternative communication methods (such as PECS and sign language) can be effective. Educating and raising awareness among families play a crucial role in enhancing the child‘s social adaptation.

Adolescence is a critical period of biological and psychosocial changes, often presenting additional challenges for individuals with ASD. During this phase, increased social awareness may lead some adolescents to become more conscious of their difficulties in peer relationships. Adherence to routines often persists, and repetitive behaviors may intensify in response to stress. Additionally, difficulties in emotional regulation may become more pronounced, leading to anger outbursts, anxiety disorders, or depression.

Common comorbid conditions in this period include social anxiety disorder, depression, and obsessive-compulsive disorder (OCD). Factors such as bullying and social exclusion can negatively impact the self-esteem of adolescents with ASD.

Social skills training, group therapy, and individual support programs can help adolescents develop better peer relationships. Those with more advanced speech and language skills may benefit from structured programs that support their ability to communicate with peers. Role-playing activities can be used to improve empathy and emotional understanding.

Young adulthood is a period when individuals strive for greater independence in their professional, educational, and social lives. For individuals with ASD, this phase may bring challenges in social interactions, difficulties in adapting to work life, and deficits in daily living skills. University environments, job interviews, and social relationships can be particularly stressful, potentially exacerbating symptoms.

Common comorbid conditions in this stage include social phobia, unemployment and vocational adjustment issues, and sleep disorders. Difficulties in daily life management, time management, and taking responsibility may necessitate additional support.

Regarding communication and social skills, programs that provide independent living support, mentorship systems, and vocational rehabilitation services play a crucial role. Career planning that focuses on the strengths of individuals with ASD can facilitate their adaptation to the workforce. Establishing inclusive support systems in universities or workplaces can effectively enhance social integration.

ASD follows a dynamic trajectory throughout an individual‘s life, with symptom severity and presentation varying at different stages. Understanding the challenges faced in childhood, adolescence, and young adulthood and

implementing appropriate support mechanisms is essential. Early diagnosis and intervention are critical in improving symptom management and enhancing the quality of life for individuals with ASD at all developmental stages.

Changes and Development of Symptoms in Autism Spectrum Disorder

Autism Spectrum Disorder (ASD) is a lifelong neurodevelopmental condition characterized by differences in social interaction, communication, and behavioral patterns. While symptoms vary from person to person, they may evolve at different developmental stages over time. Understanding how ASD symptoms change during childhood, adolescence, and young adulthood, along with the emergence of comorbid conditions, developments in communication skills, and social adaptation challenges, is crucial. This panel will examine the developmental course of ASD, exploring the difficulties encountered at different age stages and possible intervention strategies.

Childhood: Diagnosis Process, Initial Symptoms, and Intervention Approaches

The most pronounced symptoms of ASD typically emerge during childhood, making this period crucial for diagnosis. In this stage, challenges in social interaction become evident, including reluctance to make eye contact, difficulty in understanding facial expressions, and struggles in initiating or maintaining play with peers. Communication difficulties may manifest as delayed language development, limited speech abilities, and echolalia. Behaviorally, repetitive movements, excessive adherence to routines, and sensory sensitivities are commonly observed.

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Adolescence: Social Awareness, Emotional Regulation, and Increased Stress

Adolescence is a critical period of biological and psychosocial changes, often presenting additional challenges for individuals with ASD. During this phase, increased social awareness may lead some adolescents to become more conscious of their difficulties in peer relationships. Adherence to routines often persists, and repetitive behaviors may intensify in response to stress. Additionally, difficulties in emotional regulation may become more pronounced, leading to anger outbursts, anxiety disorders, or depression.

Common comorbid conditions in this period include social anxiety disorder, depression, and obsessive-compulsive disorder (OCD). Factors such as bullying and social exclusion can negatively impact the self-esteem of adolescents with ASD.

Social skills training, group therapy, and individual support programs can help adolescents develop better peer relationships. Those with more advanced speech and language skills may benefit from structured programs that support their ability to communicate with peers. Role-playing activities can be used to improve empathy and emotional understanding.

Young Adulthood: Independent Living, Employment, and Social Relationships

Young adulthood is a period when individuals strive for greater independence in their professional, educational, and social lives. For individuals with ASD, this phase may bring challenges in social interactions, difficulties in adapting to work life, and deficits in daily living skills. University environments, job interviews, and social relationships can be particularly stressful, potentially exacerbating symptoms.

Common comorbid conditions in this stage include social phobia, unemployment and vocational adjustment issues, and sleep disorders. Difficulties in daily life management, time management, and taking responsibility may necessitate additional support.

Regarding communication and social skills, programs that provide independent living support, mentorship systems, and vocational rehabilitation services play a crucial role. Career planning that focuses on the strengths of

individuals with ASD can facilitate their adaptation to the workforce. Establishing inclusive support systems in universities or workplaces can effectively enhance social integration.

Conclusion and Recommendations

ASD follows a dynamic trajectory throughout an individual‘s life, with symptom severity and presentation varying at different stages. Understanding the challenges faced in childhood, adolescence, and young adulthood and implementing appropriate support mechanisms is essential. Early diagnosis and intervention are critical in improving symptom management and enhancing the quality of life for individuals with ASD at all developmental stages.

This panel will explore how ASD symptoms evolve across different age groups, offering recommendations for families, educators, and healthcare professionals. The primary objectives include identifying suitable intervention methods to improve social adaptation in individuals with ASD, raising awareness in society, and developing tailored support systems to meet individual needs.

Changes and Evolution of Symptoms in Autism Spectrum Disorder

Autism Spectrum Disorder (ASD) is a lifelong neurodevelopmental condition characterized by persistent differences in social communication, interaction, and restrictive, repetitive patterns of behavior, interests, or activities. Although ASD manifests early in life, the presentation and severity of symptoms often evolve across developmental stages. Understanding the progression of ASD symptoms from childhood through adolescence and into young adulthood is vital for developing timely and appropriate intervention strategies.

In early childhood, the most recognizable ASD symptoms typically emerge. These include difficulties in social reciprocity such as avoiding eye contact, limited facial expression, and challenges in initiating or maintaining interactions with peers. Communication impairments may involve delayed language development, limited speech output, and echolalia. Behavioral symptoms often include repetitive motor movements, rigid adherence to routines, and heightened sensitivity to sensory stimuli. During this period, comorbid conditions such as Attention Deficit Hyperactivity Disorder (ADHD), intellectual disabilities, and sensory processing disorders are frequently observed. While some children display exceptional abilities in specific domains, others exhibit pronounced developmental delays. Early intervention is critical for promoting communication and social functioning. Speech and language therapy, structured educational programs, and augmentative and alternative communication systems (e.g., PECS, sign language) have shown beneficial outcomes. Parental education and support also significantly enhance social adaptation and functional development.

Adolescence presents new challenges due to rapid biological and psychosocial changes. Individuals with ASD may experience increased self-awareness, leading to heightened recognition of social difficulties and peer rejection. Rigid behaviors often persist, and emotional dysregulation may intensify under stress, manifesting as anger outbursts, anxiety, or depressive symptoms. Common comorbid conditions during adolescence include social anxiety disorder, depression, and obsessive-compulsive disorder (OCD). Environmental stressors such as bullying and exclusion may negatively affect self-esteem. Tailored interventions, including social skills training, group therapy, and cognitive-behavioral approaches, can foster peer relationships and emotional resilience. For individuals with adequate verbal abilities, role-playing and structured programs may enhance empathy, perspective-taking, and adaptive communication.

In young adulthood, individuals with ASD often face increased demands for independence in academic, vocational, and interpersonal domains. This period is marked by challenges in sustaining employment, managing daily routines, and establishing meaningful social relationships. Transitions such as entering university, engaging in job interviews, or navigating romantic relationships may exacerbate symptoms. Frequently observed comorbidities in this stage include social phobia, sleep disorders, and difficulties with vocational adjustment. Supportive services such as independent living programs, mentorship, and vocational rehabilitation are essential for fostering autonomy and community integration. Career planning that emphasizes individual strengths and structured support systems within academic or workplace environments can significantly improve outcomes.

In conclusion, ASD symptoms and associated challenges exhibit dynamic patterns throughout the lifespan. A developmental approach that considers stage-specific needs and comorbidities is crucial for effective intervention.

Early diagnosis and ongoing support across life stages significantly improve functioning and overall quality of life for individuals with ASD.

Keywords: Autism Spectrum Disorder, Developmental Stages, Adolescence, Comorbidities, Early Intervention, Social Skills

REFERENCES

1. Lord, C., Elsabbagh, M., Baird, G., & Veenstra-Vander Weele, J. (2018). Autism spectrum disorder. *The Lancet*, 392(10146), 508–520.
2. Seltzer, M. M., Shattuck, P., Abbeduto, L., & Greenberg, J. S. (2004). Trajectory of development in adolescents and adults with autism. *Mental Retardation and Developmental Disabilities Research Reviews*, 10(4), 234–247.
3. Lai, M. C., Lombardo, M. V., & Baron-Cohen, S. (2014). Autism. *The Lancet*, 383(9920), 896–910.

Psychiatric Disorders and Current Treatment Approaches in Chronic Pain Cases

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Chronic pain is defined as pain that does not respond to treatment methods, requires long-term treatment, and is constant throughout an individual's life. The prevalence of chronic pain in the world is approximately 40% (Dydyk & Conermann, 2024).

Chronic pain, which affects millions of people every year, is the most common cause of disability and the most important reason for impairing quality of life. Risk factors for chronic pain include age, gender, education level, obesity, smoking, sedentary lifestyle, genetic predispositions, and possible psychiatric disorders (Hebert et al., 2024).

According to DSM-5 tr, chronic pain is addressed under the cluster of somatic symptom disorders and related disorders. We can provide support to patients with chronic pain in roughly three stages. These can be evaluated under the names of psychoeducation, spiritual and social support. In the psychoeducation process, it is important to listen to the patient's current complaints, learn about their psychological and social needs, and detail the medications the patient is using. On the other hand, it is very valuable to investigate the possible underlying causes of the symptoms and provide information about the medications they are using and their side effects (Jochum et al., 2015). Enriching the person's strategies for coping with hopelessness about the future, providing information about psychological needs, and supporting them to increase their social relationships will contribute to the patient's mentalization skills. Such patients will also benefit from psychotherapy. By developing emotional regulation with the cognitive behavioral therapy school, maladaptive behaviors will be transformed into adaptive behaviors, contributing to the person's functionality (Vitolu, 2018).

In conclusion, chronic pain is a multidisciplinary field. Within the scope of consultation and liaison psychiatry, it is extremely valuable to ensure awareness of psychosocial burdens, provide support and interventions, increase compliance with treatment, and reduce negative effects.

The Relationship Between Psychosis Risk Syndromes and Psychotic-Like Experiences in Adolescents

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The notion that psychosis follows a progressive trajectory has been widely discussed in psychiatric literature, with increasing emphasis on early detection and intervention efforts. During the onset of psychotic disorders, individuals may experience subthreshold psychotic symptoms that do not carry clear clinical significance but may pose a risk for psychosis development due to genetic predisposition and environmental influences. These symptoms, referred to as psychotic-like experiences (PLEs), commonly emerge during adolescence. While PLEs are typically transient and tend to decline in adulthood, certain environmental factors may contribute to their persistence and potential transition into psychosis spectrum disorders (PSDs).

Recent studies indicate that psychotic-like experiences are far more prevalent in the general population than previously assumed, with an estimated prevalence of 5-8%. Hallucinations and delusions, which are traditionally associated with schizophrenia and other psychotic disorders, have also been observed in non-clinical individuals. However, these experiences often do not require clinical intervention. In psychiatric research, the concept of a psychosis risk syndrome refers to subclinical psychotic symptoms that meet specific criteria in terms of severity and frequency. However, defining and addressing psychosis risk syndrome remains a topic of debate, as it raises questions about the necessity and potential risks of intervention.

Nevertheless, early intervention strategies aim to identify high-risk individuals before the onset of psychosis, with the goal of preventing illness progression or mitigating its severity. Current research suggests that PLEs may serve as risk factors not only for psychosis but also for other psychiatric disorders. Accurately measuring PLEs may contribute to identifying at-risk individuals in the general population and enhancing early detection strategies within the framework of the psychosis continuum hypothesis. Furthermore, studies indicate that timely preventive interventions can reduce the likelihood of psychosis development while preserving the overall functionality of individuals.

Keywords: Psychotic-like experiences, psychosis risk syndrome, adolescence

The Relationship Between Complex PTSD and Borderline Personality Disorder /

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Complex Traumatic Stress Disorder (CTSD) has emerged as a prominent term in the field of mental health in recent years, defined as a distinct clinical phenomenon separate from Post-Traumatic Stress Disorder (PTSD). CTSD typically arises as a result of chronic and ongoing traumatic experiences, often associated with traumatic experiences beginning in childhood and persisting over time. In this context, it is anticipated that exposure to various and continuous traumatic events throughout one‘s life increases the risk of CTSD more than the risk of PTSD. Additionally, CTSD has been associated with additional psychopathological symptoms such as depression, anxiety, personality disorders, addictions, and risk of suicide. However, a significant distinction exists in that while CTSD is included in the ICD-11 diagnostic framework, it is not recognized in the DSM-5.

Distinct features of CTSD that differentiate it from PTSD notably include the observation of prolonged and chronic trauma exposure within interpersonal relationships. Furthermore, the symptomatology of CTSD extends beyond the symptoms observed in PTSD, encompassing a complex structure; in addition to core PTSD symptoms such as re-experiencing, avoidance, and hyperarousal, CTSD may also present with additional symptoms such as impaired self-esteem, emotion dysregulation, interpersonal relationship problems, and an intense sense of shame or guilt. However, the absence of a separate classification for CTSD in the DSM-5 complicates the diagnostic process.

Borderline Personality Disorder (BPD) is a syndrome that begins in young adulthood and is characterized by extreme impulsivity, instability in mood and interpersonal relationships, a sense of inadequacy in self-perception, and extreme sensitivity to abandonment (APA, 2013; Sargın & Sargın, 2015). Although there is a subgroup of individuals diagnosed with BPD who do not have a history of childhood maltreatment or other traumatic exposure, a larger subgroup of individuals with BPD have traumatic histories that begin in childhood and continue with re-victimization during adolescence and adulthood. BPD and Complex Trauma Stress Disorder (CTSD) are similar in that they are both etiologically related to chronic and repetitive trauma. The purpose of this discussion is to examine the relationship between BPD and CTSD in terms of clinical, etiological, and epidemiological similarities and differences.

REFERENCES

1. Karatzias, T., Hyland, P., Bradley, A., Cloitre, M., Roberts, N. P., Bisson, J. I., & Shevlin, M. (2019). Risk factors and comorbidity of ICD-11 PTSD and complex PTSD: Findings from a trauma-exposed population based sample of adults in the United Kingdom. Depress Anxiety, 36(9), 887-894.
2. Cloitre, M., Hyland, P., Bisson, J. I., Brewin, C. R., Roberts, N. P., Karatzias, T., & Shevlin, M. (2019). ICD-11 posttraumatic stress disorder and complex posttraumatic stress disorder in the United States: A population-based study. J Trauma Stress, 32(6), 833-842.

Applying Digital Technology to Implement and Evaluate Mental Health Literacy Interventions to Improve Child and Adolescent Mental Health

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Mental health literacy (MHL) refers to the knowledge about mental health and mental disorders, the capacity to promote mental health, the reduction of stigma surrounding mental disorders, and the ability to seek help effectively when necessary. MHL interventions have been successfully implemented across various educational settings, ranging from elementary to secondary and post-secondary institutions. However, despite the widespread application of traditional face-to-face delivery methods for MHL interventions in many countries, a significant gap remains in reaching vulnerable groups who face barriers to access due to geographical, financial, or human resource constraints. Digital interventions present a promising solution to address these challenges because of their inherent flexibility and accessibility. This essay explores how digital MHL interventions are implemented in diverse educational settings, considering the developmental characteristics of the target groups.

One example of an MHL intervention for children is the Elementary Mental Health Literacy Resource (EMHLR). This resource, designed for use by teachers in Grades 4 to 6 classrooms, employs a hybrid model that combines in-classroom and online delivery methods (https://mhlcurriculum.org/emhlr/). EMHLR consists of six modules, each incorporating activities that can be delivered face-to-face, online, or through a blended approach. Feedback surveys and qualitative interviews with teachers who have implemented the EMHLR indicate that they value the flexibility offered by the online delivery format, which facilitates integration into the broader curriculum. This adaptability ensures that the resource meets the diverse needs of educators and students alike.

Another notable example is the Transitions program, which was developed to support first-year university students in navigating the challenges of transitioning to post-secondary life. The program blends life skills education with mental health topics in a manner that reduces stigma (https://mentalhealthliteracy.org/product/transitions/). Transitions is presented as an electronic booklet that can be easily adapted into an interactive online learning experience, tailored to cultural contexts. For example, in Finland, the program was redesigned as a digital elective course at a post-secondary institution, while in Canada, it was utilized as a peer-led self-study resource. Both delivery methods have demonstrated strong evidence of effectiveness in improving youth mental health outcomes, highlighting the versatility and impact of digital MHL interventions.

Digital MHL interventions offer valuable insights into the future development, implementation, and dissemination of MHL strategies. The integration of advanced technologies, such as virtual reality, holds the potential to further enhance the learning process and improve the uptake of MHL interventions in both educational and health settings. By leveraging these innovations, digital MHL programs can reach a broader audience and better address the mental health needs of diverse populations.

Chatbots as Therapeutic Aides: AI-Powered Conversational Agents in Mental Health

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As global demand for mental health care continues to exceed clinical capacity, artificial intelligence (AI)-powered chatbots are being explored as scalable tools to provide support beyond traditional therapeutic settings. This presentation focuses on the development, functionality, and clinical potential of conversational agents designed to deliver evidence-based interventions such as cognitive behavioral therapy (CBT), psychoeducation, and mood tracking.

Examples from existing tools will be used to illustrate the core components of these systems, including natural language understanding, dialogue management, and safety mechanisms such as crisis detection and escalation protocols. Clinical validation studies, including randomized controlled trials demonstrating reductions in depressive symptoms, will be reviewed. Ethical and practical considerations will also be addressed, with attention given to user privacy, cultural sensitivity, and the limitations of AI in conveying empathy. Exploratory findings from online emotional support conversations will be shared to illustrate how patterns of engagement and satisfaction can guide more effective chatbot design.

Rather than serving as replacements for clinicians, these systems are positioned as accessible adjuncts capable of reinforcing care between sessions, supporting underserved populations, and contributing to early intervention efforts. The presentation will explain how therapeutic chatbots function, identify appropriate use cases, and outline key considerations for their safe and ethical integration into mental health care.

Keywords: Artificial Intelligence, Telemedicine, Mental Health Services, Psychiatry, Information Storage and Retrieval, Cognitive Behavioral Therapy.

Imaging Brain Lithium: Insights From Novel Technologies

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Lithium is an effective treatment for bipolar disorder and recurrent depression, having good evidence for the prevention of relapses and the reduction of suicidal behaviour and all cause mortality. It is usually prescribed as lithium carbonate, with the dose individually titrated to attain the desired therapeutic concentration in the blood whilst avoiding potentially toxic levels. Not everyone benefits from lithium, and some tolerate it poorly, so characterising ‗excellent responders' and identifying robust predictors of response is a research priority in this field.

Lithium is a unique medication, being an element with magnetic resonance visibility. Recent advances in multinuclear magnetic resonance have enabled the transition from spectroscopic detection to true 3D imaging of lithium, permitting the direct measurement of its distribution in the brain in a clinically viable scan time. This presentation will describe the acquisition and analysis techniques currently in development as well as the application in various studies of bipolar disorder. Early cross-sectional human studies (BLISS; Bipolar Lithium Imaging Structure and Spectroscopy) have demonstrated that lithium is not uniformly distributed in the brain, consistent with preclinical findings, and longitudinal data (R-LiNK; https://rlink.eu.com/) are currently in analysis to determine if brain lithium distribution is a predictor of response. Results from a comparison of brain and blood lithium levels in once and twice daily dosing will be presented, raising discussion about optimal regimens and the importance of future mechanistic studies in circadian disciplines. The challenges and opportunities afforded through the detection of low doses of lithium will be explored.

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Investigation of Emotional and Social Cognition with ERP: Evaluation of Empathy, Face Recognition, and Social Cues in Children and Adolescents

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Understanding the neurocognitive mechanisms underlying emotional and social cognition is essential for improving diagnostic accuracy and guiding early interventions in child and adolescent psychiatry. Event-related potentials (ERP), with their excellent temporal resolution, offer a valuable tool for examining the timing and dynamics of brain responses associated with empathy, face recognition, and the interpretation of social cues in young populations. This presentation highlights recent ERP-based findings that enhance our understanding of how children and adolescents process socially relevant stimuli and how these neural markers can inform the identification of atypical social-emotional development.

Empathy—the ability to recognize and respond to others‘ emotions—is central to healthy social functioning. ERP studies have identified several components that index empathic processing, including early anterior negativity (EAC), P2, and late positive potential (LPP). Sahni et al. (2024) found that children with higher dispositional empathy for nature showed greater frontal activation and enhanced EAC and LPP responses to distressing environmental stimuli, reflecting age-related differentiation in both affective and cognitive aspects of empathy. Complementing this, Huo et al. (2025) observed heightened P2 amplitudes in individuals with autistic traits and children with autism spectrum disorder (ASD) when responding to dynamically changing emotional voices—suggesting impaired emotional flexibility and social-cognitive processing. These findings underscore the utility of ERP markers in detecting deviations from typical empathic development.

Face recognition is another fundamental domain of social cognition. ERP components such as P1, N170, P2, and LPP have been widely used to examine the temporal stages of face processing. Pei et al. (2023) reported that adolescents with social anxiety disorder (SAD) showed delayed and amplified N170 responses, particularly to threatening faces, linked to self-referential processing and heightened sensitivity to social evaluation. These results support the view that atypical ERP responses across early (P1), mid-latency (P2), and late (LPP) stages may reflect attentional biases in SAD and serve as biomarkers for social-cognitive vulnerability.

Additionally, the processing of subtle social cues—such as gaze direction, facial expressions, and vocal prosody—has been extensively examined using ERP techniques. Recent findings by Hoyniak et al. (2019) demonstrated that children with elevated callous-unemotional (CU) traits exhibit reduced P300 amplitudes in response to fearful facial expressions, suggesting diminished attentional engagement with emotionally salient, distress-related cues. These results, in line with converging evidence on early emotion-processing deficits in CU populations, highlight the potential utility of ERP markers like the P300 for the early identification of children at heightened risk for conduct problems and affective dysregulation.

In summary, ERP provides a powerful, non-invasive method for elucidating the neural architecture of social cognition across typical and atypical development. Incorporating ERP measures into clinical and developmental research can improve early detection of psychiatric vulnerabilities and inform the design of targeted, developmentally sensitive interventions. Future research should emphasize longitudinal and multimodal approaches—integrating ERP with behavioral and neuroimaging data—to deepen our understanding of individual differences in social-emotional processing.

REFERENCES

Sahni, P. S., Rajyaguru, C., Narain, K., Miedenbauer, K. L., Kumar, J., & Schonert-Reichl, K. A. (2024). Neural dynamics of development of nature empathy in children: An EEG/ERP study. Current Research in Ecological and Social Psychology, 7, 100210. https://doi.org/10.1016/j.cresp.2024.100210

Huo, C., Meng, C., Qian, H., Li, W., Shao, M., Huang, Y., & Meng, J. (2025). Altered processing of consecutive changeable emotional voices in individuals with autistic traits: behavioral and ERP studies. BMC psychology, 13(1), 261. https://doi.org/10.1186/s40359-025-02452-2

Pei, G., Xiao, Q., Pan, Y., Li, T., & Jin, J. (2023). Neural evidence of face processing in social anxiety disorder: A systematic review with meta-analysis. Neuroscience and biobehavioral reviews, 152, 105283. https://doi.org/10.1016/j.neubiorev.2023.105283

Hoyniak, C. P., Bates, J. E., Petersen, I. T., Yang, C. L., Darcy, I., & Fontaine, N. M. G. (2019). Diminished Neural Responses to Emotionally Valenced Facial Stimuli: A Potential Biomarker for Unemotional Traits in Early Childhood. Child psychiatry and human development, 50(1), 72–82. https://doi.org/10.1007/s10578-018-0821-9

Psychiatry in The Age of Environmental Responsibility: Reducing Our Carbon Footprint Through Innovation

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A carbon footprint can be defined as the best estimate of the impact of something on climate change. A carbon footprint is the sum of the direct and indirect greenhouse gas emissions of a process, product or organization and is calculated as carbon dioxide equivalent (CO2e) (2).

Healthcare systems are responsible for about 4-5% of global greenhouse gas emissions. Healthcare systems have a responsibility to tackle climate change, not only to reduce their own carbon footprint, but also to reduce the health impact of healthcare and act as a role model for society (2,3).

Telepsychiatry is proving to be a particularly promising solution in this context, as it offers a way to reduce the carbon footprint associated with traditional mental health care. By reducing the need for in-person consultations and transportation of patients, telepsychiatry can significantly reduce the carbon emissions associated with travel. The environmental benefits of telemedicine go beyond improving patient access to care; they also reflect a commitment to sustainability in healthcare (4).

Long-acting injectable antipsychotics (LAIs) play a critical role in modern psychiatric treatment and offer notable environmental sustainability benefits. By improving treatment adherence and reducing the frequency of patient visits, LAIs inherently contribute to a reduction in the environmental footprint of healthcare. Research shows that LAI antipsychotics can effectively reduce the risk of relapse and re-hospitalization, which is critical to overall treatment effectiveness (5). For example, a meta-analysis shows that LAIs significantly reduce rehospitalization rates compared to oral antipsychotics, thereby minimizing the environmental impact of emergency department visits and the need for transportation during frequent outpatient visits (6).

From a psychiatric perspective, another measure that can be taken as part of environmental stewardship is the use of artificial intelligence (AI). AI technologies can streamline clinical workflows, optimize resource allocation and improve decision-making. AI can significantly increase the efficiency of medical workflows by analyzing large data sets to identify effective treatment protocols and resource utilization strategies. This optimization leads to a reduction in unnecessary procedures and visits and minimizes carbon emissions associated with patient transportation and healthcare (7).

In the age of environmental responsibility, the actions that psychiatry can take to reduce our carbon footprint through innovation can be summarized as follows: use of AI for sustainable mental health, expansion of telepsychiatry to minimize environmental impact, use of LAIs for sustainable treatment approaches. By prioritizing these sustainable practices, psychiatry can not only strengthen its commitment to fighting climate change, but also inspire other areas of healthcare to follow suit and ultimately promote a healthier planet and population.

Keywords: Telepsychiatry, artificial intelligence, long-acting injectable antipsychotics, carbon footprint

REFERENCES

1. Spruell, T., Webb, H., Steley, Z., Chan, J., & Robertson, A. (2021). Environmentally sustainable emergency medicine. Emergency Medicine Journal, 38(4), 315-318.
2. Pichler, P. P., Jaccard, I. S., Weisz, U., & Weisz, H. (2019). International comparison of health care carbon footprints. Environmental research letters, 14(6), 064004.
3. Holmner, Å., Ebi, K. L., Lazuardi, L., & Nilsson, M. (2014). Carbon footprint of telemedicine solutions-unexplored opportunity for reducing carbon emissions in the health sector. PloS one, 9(9), e105040.
4. Park, S. C., Choi, M. Y., Choi, J., Park, E., Tchoe, H. J., Suh, J. K., ... & Lee, S. H. (2018). Comparative efficacy and safety of long-acting injectable and oral second-generation antipsychotics for the treatment of schizophrenia: a systematic review and meta-analysis. Clinical Psychopharmacology and Neuroscience, 16(4), 361.
5. Pinho-Gomes, A. C., Yoo, S. H., Allen, A., Maiden, H., Shah, K., & Toolan, M. (2022). Incorporating environmental and sustainability considerations into health technology assessment and clinical and public health guidelines: a scoping review. International journal of technology assessment in health care, 38(1), e84.

A New Hope in the Treatment of Delirium in Terminally Ill Patients: Transdermal Blonanserin Patch

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BACKGROUND: Delirium is a frequent neuropsychiatric complication in terminally ill patients, marked by acute disturbances in attention, awareness, and cognition. Its prevalence reaches up to 88% near the end of life and is linked to significant distress for patients and caregivers. Standard management often includes antipsychotics such as haloperidol or risperidone. However, oral or parenteral administration may be difficult in severely ill or agitated patients (1).

Neurobiology of Delirium

Delirium results from neurotransmitter imbalances—primarily dopaminergic excess and cholinergic deficiency—combined with systemic inflammation and metabolic factors. These changes disrupt cortical function and lead to confusion, hallucinations, and agitation. Dopamine receptor antagonists remain a cornerstone of symptom management, highlighting the central role of dopaminergic pathways (2).

Blonanserin and the Transdermal Approach

Blonanserin is an atypical antipsychotic that blocks dopamine D2/D3 and serotonin 5-HT2A receptors. It has low affinity for histamine and muscarinic receptors, which minimizes sedation and anticholinergic effects (3). A novel transdermal patch formulation has been introduced in Japan, offering continuous non-invasive delivery. This route is especially advantageous in palliative care, where oral intake is often compromised. The patch ensures steady plasma levels, avoiding the fluctuations seen with oral dosing (1).

Clinical Efficacy and Case Evidence

Initial reports support the transdermal blonanserin patch as a practical and effective option for terminal delirium. In a terminal cancer case, blonanserin led to resolution of hallucinations within 24 hours and improved agitation by day 3, without notable side effects (1). A retrospective study on patients with end-stage respiratory disease showed a reduction in delirium prevalence from 70.4% to 16.3% after starting the patch (2). Its efficacy was comparable to haloperidol, and it was also helpful in relieving refractory dyspnea.

Tolerability and Clinical Implications

Blonanserin‘s receptor profile makes it suitable for use in fragile, end-of-life populations. Its low risk of extrapyramidal symptoms and sedation is a significant advantage. Transdermal delivery also simplifies care, reducing caregiver burden and improving medication adherence. Current evidence suggests the patch improves symptom control and patient comfort without adding clinical complexity (3).

CONCLUSION: While larger controlled studies are needed, the transdermal blonanserin patch shows strong potential as a therapeutic tool for delirium in terminally ill patients. Its efficacy, safety, and ease of use support its integration into palliative care protocols aimed at preserving patient dignity and reducing neuropsychiatric distress.

Keywords: Delirium, palliative care, blonanserin, transdermal patch, terminal illness

REFERENCES

1. Nishiofuku H, et al. (2024). *Successful management of terminal delirium with transdermal blonanserin patch in a terminally ill cancer patient.* Journal of Palliative Medicine, 27(8), 1097–1101.
2. Ando K, Suzuki A, Yoshida H. (2023). *Efficacy of blonanserin transdermal patch on terminal delirium in patients with respiratory diseases.* Respiratory Investigation, 61(2), 240–246.
3. Tenjin T, et al. (2013). *Profile of blonanserin for the treatment of schizophrenia.* Neuropsychiatric Disease and Treatment, 9, 1359–1370.

Time and Mind: The Effect of Biological Rhythm on Mental Health

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CIRCADIAN RHYTHM AND DEMENTIA: The circadian rhythm is a sophisticated mechanism regulated by the biological clocks of organisms, occurring in approximately 24-hour cycles to coordinate essential biological processes for adaptation to environmental factors. This rhythm enables organisms to adjust to environmental changes by orchestrating a series of biological processes at genetic, molecular, cellular, organ, and organismal levels. It has been established that the active state of the circadian clock plays a crucial role in determining the intensity of cellular responses to DNA damage, which include processes such as repair, checkpoint activation, and apoptosis. Recent studies have highlighted the fundamental role of circadian clocks in the precise sequencing of daily cellular metabolic cycles. The discovery that circadian mechanisms are active in specific brain regions suggests that these mechanisms may influence physiological and pathological factors that promote neurodegenerative aggregation. The molecular foundation of the circadian rhythm facilitates the organism's adaptation to environmental changes through a complex network of genetic and protein interactions. The core functioning of this rhythm begins with the mutual interaction of transcription factors known as CLOCK. These proteins initiate the expression of specific circadian genes, promoting the production of genes regulating the negative feedback loop, such as PER and CRY. The accumulation of PER and CRY proteins within the cell inhibits the activity of CLOCK and BMAL1. Diseases such as PH and AH are characterized by abnormal protein folding and accelerated aggregate formation, and these processes are closely linked to circadian rhythm disruptions. AH, a neurodegenerative disorder characterized by the accumulation of amyloid-beta (Aβ) peptide in the brain, has been associated with prolonged wakefulness and disruptions in sleep patterns. Circadian dysfunction promotes the formation and transportation of misfolded protein clusters, whereas a stable sleep pattern facilitates the elimination of these protein aggregates, thereby contributing to the clearance of impaired proteins from the body. Improving sleep quality and continuity has been shown to reduce the risk of cognitive decline and neurofibrillary tangle (NFT) formation, particularly in individuals carrying the APOE (Apolipoprotein E) ε4 allele. This suggests that optimizing sleep patterns may serve as an early intervention strategy to lower the risk of AH. The production of melatonin and the secretion of corticosteroids are directly or indirectly controlled by the suprachiasmatic nucleus (SCN), and these processes can be used as indicators reflecting the endogenous rhythm of the central clock. Increasing evidence suggests that disruptions in melatonin secretion rhythms—including changes in amplitude, peak phase, and total secretion—are linked to patients with dementia, AH, and mild cognitive impairment. Circadian dysfunction has emerged as a significant risk factor contributing to the development of neurodegenerative diseases. In this context, restoring regular circadian rhythms is considered a testable hypothesis for preventing disease progression and alleviating symptoms. Understanding the mechanisms underlying the relationship between circadian rhythm and neurodegeneration will help elucidate causal links and identify potential therapeutic targets. The efficacy of circadian interventions for neurodegenerative diseases should be investigated on a broader scale, and personalized treatment strategies should be developed by considering individual differences.

Keywords: Circadian rhythm, neurodegenerative diseases, Alzheimer disease, neuroinflammation

REFERENCES

Zhang, R., Lahens, N. F., Ballance, H. I., Hughes, M. E., & Hogenesch, J. B. (2014). A circadian gene expression atlas in mammals: implications for biology and medicine. Proceedings of the National Academy of Sciences, 111(45), 16219-16224.

Sancar, A., Lindsey-Boltz, L. A., Kang, T. H., Reardon, J. T., Lee, J. H., & Ozturk, N. (2010). Circadian clock control of the cellular response to DNA damage. FEBS letters, 584(12), 2618-2625.

Mishima, K., Tozawa, T., Satoh, K., Matsumoto, Y., Hishikawa, Y., & Okawa, M. (1999). Melatonin secretion rhythm disorders in patients with senile dementia of Alzheimer‘s type with disturbed sleep–waking. Biological psychiatry, 45(4), 417-421.

The Relationship Between Type D Personality Features and Social Anxiety Among Individuals With Alcohol and Substance Use Didorders

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INTRODUCTION: Type D personality is characterised by the presence of social inhibition (SI) and negative affectivity (NA). Individuals high in SI often experience feelings of discomfort, anxiety, stress, and lack of confidence. In contrast, individuals high in NA tend to experience unpleasant feelings. The aim of the present study was to determine the relationship between type D personality traits and social anxiety in individuals with alcohol and drug use disorders.

METHODS: A cross-sectional was conducted with 140 individuals who were admitted to the Health Sciences University Van Training and Research Hospital at the unit of Alcohol-Drug Addiction Research Treatment and Training Centres (AMATEM) between July and September in 2023. The Type D personality (DS-14) and Liebowitz Social Anxiety Scale (LSAS) were applied to participants. A linear regression model is used to test the predictive effect of D Type Personality on social anxiety.

RESULTS: It was found that there was a positive and significant relationship between social anxiety and social inhibition among the participants. Similarly, a positive and significant relationship was found between social anxiety and NA. The linear regression model revealed that SI was a significant predictor of social anxiety, but NA was not found to be a predictor of this relationship.

CONCLUSIONS: In summary, the relationship between Type D personality traits and social anxiety in individuals with alcohol and substance use disorders is a complex and multifaceted problem influenced by various psychological, emotional, and personal factors.

Keywords: Type D personality, social anxiety, alcohol, substance.

Integrating Artificial Intelligence (AI) to Anxiety Disorders: Current Status

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The integration of artificial intelligence (AI) into mental health, particularly anxiety disorders, is an emerging and promising area of research and practice. Anxiety disorders represent one of the most prevalent mental disorders globally, posing significant challenges to healthcare systems and individual quality of life. AI technologies offer potential solutions to enhance diagnostic precision, therapeutic intervention, and personalized treatment pathways.

Recent literature emphasizes the role of AI-driven algorithms in improving the early detection and diagnosis of anxiety disorders. For instance, computational approaches utilizing natural language processing (NLP) have demonstrated efficacy in analyzing linguistic patterns indicative of anxiety (Rosenstein et al., 2020). Similarly, machine learning models applied to physiological data indicate promise in identifying physiological correlates of anxiety symptoms, thus aiding clinicians in objective assessment procedures (Jacobson & Chung, 2021).

In therapeutic contexts, AI-powered interventions have emerged as significant innovations. AI-driven chatbots provide scalable CBT solutions, demonstrating effectiveness in symptom reduction and increased accessibility for underserved populations (Fitzpatrick, Darcy, & Vierhile, 2017).

Personalized treatment optimization through AI predictive analytics represents another transformative frontier. AI systems can integrate large-scale patient data, genetic information, and behavioral patterns to predict individual treatment responses, enabling tailored therapeutic strategies and optimized outcomes (Chekroud et al., 2018). Such predictive frameworks promise not only to enhance efficacy but also to reduce treatment resistance and improve patient adherence.

In conclusion, integrating AI into anxiety disorders offers substantial potential benefits in diagnosis, therapy, and personalized medicine. However, continued interdisciplinary research, rigorous validation studies, and careful consideration of ethical implications are essential to ensure responsible and effective utilization of AI technologies in clinical practice.

REFERENCES

Chekroud, A. M., Zotti, R. J., Shehzad, Z., Gueorguieva, R., Johnson, M. K., Trivedi, M. H., ... & Krystal, J. H. (2018). Cross-trial prediction of treatment outcome in depression: A machine learning approach. *The Lancet Psychiatry, 3*(3), 243–250. https://doi.org/10.1016/S2215-0366(15)00471-X

Fitzpatrick, K. K., Darcy, A., & Vierhile, M. (2017). Delivering cognitive behavior therapy to young adults with symptoms of depression and anxiety using a fully automated conversational agent (Woebot): A randomized controlled trial. *JMIR Mental Health, 4*(2), e19. https://doi.org/10.2196/mental.7785

Jacobson, N. C., & Chung, Y. J. (2021). Passive sensing of prediction of anxiety and depression in college students using smartphones. *Journal of Medical Internet Research, 23*(6), e24140. https://doi.org/10.2196/24140

Rosenstein, M., Stark, L., & Arora, P. (2020). Natural language processing in mental health applications using non-clinical texts. *AI in Healthcare, 2*, 23–34.

Artificial Intelligence Ethics and Judicial Processes

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ABSTRACT: The integration of artificial intelligence (AI) into medical practice has led to transformative changes in healthcare delivery, especially in diagnosis, treatment planning, clinical monitoring, and operational efficiency. Technologies such as AI-powered decision support systems, medical image analysis, and predictive algorithms are becoming increasingly prevalent. While these tools provide significant benefits in terms of accuracy and speed, they also introduce complex ethical and legal challenges that demand careful regulation and oversight.

The ethical challenges of AI in healthcare primarily include: informed consent for AI-based interventions, system safety and transparency, algorithmic fairness and bias, and data privacy. Many AI systems are designed as ~~"~~black boxes," where the logic behind the decision-making is not clearly understandable to clinicians or patients. This lack of explainability reduces the ability to obtain meaningful consent and may erode trust in healthcare services. Moreover, if the training data is not diverse and representative, AI may unintentionally reinforce existing disparities in healthcare outcomes.

Unauthorized data collection constitutes a major concern among data privacy and security risks.

The legal challenges of AI in medicine include: ensuring safety and efficacy, determining liability in cases of harm, data protection and privacy, cybersecurity threats, and intellectual property rights. Current legal frameworks in many countries, including Turkey, are not fully adapted to autonomous, continuously learning systems. Scholars and regulators are actively debating the implementation of strict liability or risk-based models for healthcare professionals and AI developers to ensure legal accountability.

Turkey has made notable progress in AI and healthcare integration through national strategies and institutional initiatives, such as the Turkish Institute for Health Data and Artificial Intelligence. Several collaborations between government bodies and universities have supported the development of AI tools, particularly in radiological diagnostics and remote patient monitoring. Nevertheless, these advancements must be matched with robust ethical governance and legal reform.

According to UNESCO, artificial intelligence is a globally impactful technology, and therefore, ethical frameworks must account for cultural diversity. UNESCO emphasizes that global organizations should establish guiding structures, and its AI ethics section highlights respect for human rights, human dignity, and environmental sustainability.

To ensure that AI technologies are ethically and legally implemented in medicine, a multi-stakeholder approach is essential. Healthcare professionals, developers, ethicists, and legal experts must cooperate to establish frameworks that uphold human dignity, safety, and justice in medical decision-making.

In conclusion, artificial intelligence in healthcare holds great promise but must be guided by human-centered values and clear legal norms. Ethical oversight, technical reliability, and regulatory compliance will be vital in ensuring that AI serves the public good without compromising patients' rights and well-being.

Keywords: Artificial intelligence, medical ethics, legal responsibility

REFERENCES

1. Gerke S., Minssen T., Cohen G. Ethical and Legal Challenges of Artificial İntelligence-Driven Healthcare, Artificial Intelligence in Healthcare, DOI: https://doi.org/10.1016/B978-0-12-818438-7.00012-5
2. Akbulut B. Yapay Zeka ve Ceza Hukuku Sorumluluğu ,Ankara Hacı Bayram Veli Üniversitesi Hukuk Fakültesi Dergisi C. XXVII, Y. 2023
3. GDPR.EU General Data Protection Regulation 2016,https://gdpr-info.eu/Accessed: 10.03.2025

Medical and Legal Problems in Restricting Freedom for Protection Purposes

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ABSTRACT: Restricting individual freedom for protective purposes represents a highly sensitive issue at the intersection of medicine, law, and ethics. In Turkey, this practice is governed by Article 432 of the Turkish Civil Code (TMK), which authorizes involuntary hospitalization in specific cases such as mental illness, intellectual disability, substance addiction, contagious diseases, or behaviors that severely disturb public order. However, such restrictions are permitted only if the individual poses a significant threat to public safety and if no less restrictive alternative can ensure protection. This provision reflects the principle of ultima ratio, meaning it should be used only as a last resort, and requires both medical justification and judicial oversight.

Internationally, Article 5(e) of the European Convention on Human Rights allows the deprivation of liberty for public health reasons under strict conditions. For such measures to be ethically and legally legitimate, they must comply with principles of proportionality, necessity, and human dignity, and be subject to transparent legal procedures and safeguards.

Under Turkish law, involuntary commitment must be supported by medical evaluations, including psychiatric diagnoses and a health board report, except in cases such as vagrancy, where judicial discretion applies. Furthermore, the individual must be discharged as soon as the medical or legal grounds for commitment no longer exist. In 2023, the Turkish Constitutional Court annulled a provision (TMK 436/6) that permitted up to 20 days of involuntary hospitalization based on a single physician‘s report. The Court emphasized the lack of an appeal mechanism and deemed the provision inconsistent with the Constitution‘s protections of personal liberty and legal recourse.

From a clinical perspective, psychiatric conditions most often associated with involuntary hospitalization include schizophrenia, bipolar disorder, and substance use disorders. These cases often involve acute episodes that pose a risk of harm to the individual or others. Ethically, such interventions must align with the principles of autonomy, beneficence, non-maleficence, and justice. Especially when applied without informed consent, the practice raises complex questions regarding human rights and professional responsibility.

Empirical studies from Turkish psychiatric hospitals reveal that involuntary admissions represent a significant proportion of inpatient care, sometimes exceeding 20%. Male patients are more frequently subjected to compulsory hospitalization, and average hospital stays range from 16 to 38 days. These findings underline the necessity for consistent legal review and multidisciplinary collaboration.

In conclusion, restricting an individual‘s liberty for protective purposes should remain an exceptional, carefully regulated, and legally supervised intervention. To ensure ethical and rights-based implementation, sustained cooperation between psychiatrists, legal scholars, ethics boards, and patient advocates is essential. Only through such collaboration can the principles of human dignity, justice, and proportionality be upheld in compulsory medical interventions.

Keywords: Compulsory hospitalization, human rights, judicial oversight

REFERENCES

1. Turkish Civil Code. www.mevzuat.gov.tr. Accessed: 10.03.2025.
2. European Convention on Human Rights, Article 5(e).
3. Turkish Constitutional Court, Decision E.2020/30, K.2023/38.

Changes and Development of Symptoms in Autism Spectrum Disorder

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Autism Spectrum Disorder (ASD) is a lifelong neurodevelopmental condition characterized by differences in social interaction, communication, and behavioral patterns. While symptoms vary from person to person, they may evolve at different developmental stages over time. Understanding how ASD symptoms change during childhood, adolescence, and young adulthood, along with the emergence of comorbid conditions, developments in communication skills, and social adaptation challenges, is crucial. This panel will examine the developmental course of ASD, exploring the difficulties encountered at different age stages and possible intervention strategies.

The most pronounced symptoms of ASD typically emerge during childhood, making this period crucial for diagnosis. In this stage, challenges in social interaction become evident, including reluctance to make eye contact, difficulty in understanding facial expressions, and struggles in initiating or maintaining play with peers. Communication difficulties may manifest as delayed language development, limited speech abilities, and echolalia. Behaviorally, repetitive movements, excessive adherence to routines, and sensory sensitivities are commonly observed.

The most frequently seen comorbid conditions in this period include Attention Deficit Hyperactivity Disorder (ADHD), sensory processing disorder, and intellectual disabilities. While some children demonstrate exceptional abilities in certain areas, others may experience significant developmental delays.

Early intervention is essential in fostering communication and social skills. Speech therapy, specialized education programs, and alternative communication methods (such as PECS and sign language) can be effective. Educating and raising awareness among families play a crucial role in enhancing the child's social adaptation.

Adolescence is a critical period of biological and psychosocial changes, often presenting additional challenges for individuals with ASD. During this phase, increased social awareness may lead some adolescents to become more conscious of their difficulties in peer relationships. Adherence to routines often persists, and repetitive behaviors may intensify in response to stress. Additionally, difficulties in emotional regulation may become more pronounced, leading to anger outbursts, anxiety disorders, or depression.

Common comorbid conditions in this period include social anxiety disorder, depression, and obsessive-compulsive disorder (OCD). Factors such as bullying and social exclusion can negatively impact the self-esteem of adolescents with ASD.

Social skills training, group therapy, and individual support programs can help adolescents develop better peer relationships. Those with more advanced speech and language skills may benefit from structured programs that support their ability to communicate with peers. Role-playing activities can be used to improve empathy and emotional understanding.

Young adulthood is a period when individuals strive for greater independence in their professional, educational, and social lives. For individuals with ASD, this phase may bring challenges in social interactions, difficulties in adapting to work life, and deficits in daily living skills. University environments, job interviews, and social relationships can be particularly stressful, potentially exacerbating symptoms.

Common comorbid conditions in this stage include social phobia, unemployment and vocational adjustment issues, and sleep disorders. Difficulties in daily life management, time management, and taking responsibility may necessitate additional support.

Regarding communication and social skills, programs that provide independent living support, mentorship systems, and vocational rehabilitation services play a crucial role. Career planning that focuses on the strengths of individuals with ASD can facilitate their adaptation to the workforce. Establishing inclusive support systems in universities or workplaces can effectively enhance social integration.

ASD follows a dynamic trajectory throughout an individual's life, with symptom severity and presentation varying at different stages. Understanding the challenges faced in childhood, adolescence, and young adulthood and implementing appropriate support mechanisms is essential. Early diagnosis and intervention are critical in improving symptom management and enhancing the quality of life for individuals with ASD at all developmental stages.

Changes and Evolution of Symptoms in Autism Spectrum Disorder

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Autism Spectrum Disorder (ASD) is a lifelong neurodevelopmental condition characterized by persistent differences in social communication, interaction, and restrictive, repetitive patterns of behavior, interests, or activities. Although ASD manifests early in life, the presentation and severity of symptoms often evolve across developmental stages. Understanding the progression of ASD symptoms from childhood through adolescence and into young adulthood is vital for developing timely and appropriate intervention strategies.

In early childhood, the most recognizable ASD symptoms typically emerge. These include difficulties in social reciprocity such as avoiding eye contact, limited facial expression, and challenges in initiating or maintaining interactions with peers. Communication impairments may involve delayed language development, limited speech output, and echolalia. Behavioral symptoms often include repetitive motor movements, rigid adherence to routines, and heightened sensitivity to sensory stimuli. During this period, comorbid conditions such as Attention Deficit Hyperactivity Disorder (ADHD), intellectual disabilities, and sensory processing disorders are frequently observed. While some children display exceptional abilities in specific domains, others exhibit pronounced developmental delays. Early intervention is critical for promoting communication and social functioning. Speech and language therapy, structured educational programs, and augmentative and alternative communication systems (e.g., PECS, sign language) have shown beneficial outcomes. Parental education and support also significantly enhance social adaptation and functional development.

Adolescence presents new challenges due to rapid biological and psychosocial changes. Individuals with ASD may experience increased self-awareness, leading to heightened recognition of social difficulties and peer rejection. Rigid behaviors often persist, and emotional dysregulation may intensify under stress, manifesting as anger outbursts, anxiety, or depressive symptoms. Common comorbid conditions during adolescence include social anxiety disorder, depression, and obsessive-compulsive disorder (OCD). Environmental stressors such as bullying and exclusion may negatively affect self-esteem. Tailored interventions, including social skills training, group therapy, and cognitive-behavioral approaches, can foster peer relationships and emotional resilience. For individuals with adequate verbal abilities, role-playing and structured programs may enhance empathy, perspective-taking, and adaptive communication.

In young adulthood, individuals with ASD often face increased demands for independence in academic, vocational, and interpersonal domains. This period is marked by challenges in sustaining employment, managing daily routines, and establishing meaningful social relationships. Transitions such as entering university, engaging in job interviews, or navigating romantic relationships may exacerbate symptoms. Frequently observed comorbidities in this stage include social phobia, sleep disorders, and difficulties with vocational adjustment. Supportive services such as independent living programs, mentorship, and vocational rehabilitation are essential for fostering autonomy and community integration. Career planning that emphasizes individual strengths and structured support systems within academic or workplace environments can significantly improve outcomes.

In conclusion, ASD symptoms and associated challenges exhibit dynamic patterns throughout the lifespan. A developmental approach that considers stage-specific needs and comorbidities is crucial for effective intervention. Early diagnosis and ongoing support across life stages significantly improve functioning and overall quality of life for individuals with ASD.

Keywords: Autism Spectrum Disorder, Developmental Stages, Adolescence, Comorbidities, Early Intervention, Social Skills

References:

1.Lord, C., Elsabbagh, M., Baird, G., & Veenstra-VanderWeele, J. (2018). Autism spectrum disorder. The Lancet, 392(10146), 508–520.

2.Seltzer, M. M., Shattuck, P., Abbeduto, L., & Greenberg, J. S. (2004). Trajectory of development in adolescents and adults with autism. Mental Retardation and Developmental Disabilities Research Reviews, 10(4), 234–247.

3.Lai, M. C., Lombardo, M. V., & Baron-Cohen, S. (2014). Autism. The Lancet, 383(9920), 896–910.

Author Index

A

A. Şabani 473
A. Tirpanci 475
Abdullah Bozkurt 111
Abdülbaki Akyıldız 314, 316
Adnan Gülaçtı 336
Ahmet Kırmacı 424
Ahmet Özaslan 336
Ahmet Özercan 555
Ahmet Sefa Gümüşsoy 168
Ahmet Torun 86, 364, 421
Ai Min Bao 499
Akın Tahıllıoğlu 285
Aleyna Güleryüz 312
Ali Baran Tanrıkulu 262
Ali Saffet Gönül 472, 483, 564
Ali Tarık Altunç 86, 254, 354, 364, 421
Ali Taşdemir 311, 580
Alican Güler 57
Allan Young 495, 598
Alper Alnak 651
Alper Güçlü 429
Alperen Bıkmazer 57, 351, 467
Anil Thapliyal 501
Anna Valerie Tröger 598
Arif Önder 285, 387, 599
Arzu Doğan 36
Aslı Ceren Hınç 307, 449, 656
Aslı Enzel Koç 642
Aslı Kazgan Kılıçaslan 151
Aslı Nagihan Kesgin 252
Aslı Sürer Adanır 387
Aslıhan Senarya 179
Asude Zülal Çetin 543
Atakan Demirbağ 518, 524, 529, 536
Aybala Nur Balık 57
Aybüke Nihal Dik 104, 400
Ayça Köknaroğlu 402
Aygül Tikit 425
Aykut Karahan 154, 261
Ayla Uzun Cicek 285
Aylin Esen 171
Ayse Dondu 70, 327
Ayse Gulden Kaya 522
Ayse Nur İnci Kenar 238
Ayşe Egüner Aral 59
Ayşe Eylül Özel Gümüş 412
Ayşe Gizem Çelik 454
Ayşe Göksu Ses 455
Ayşe Köksal 32
Ayşe Selma Yenen Menderes 619
Ayşe Sena Yaşar Yılmaz 353
Ayşe Sena Yüksel Anık 554
Ayşegül Demir Çevirici 283
Ayşegül Tonyalı 410
Ayşegül Tuğba Hıra Selen 419, 532
Azad Asaf 202, 465, 610
Azad Asafov 317, 505
Azad Salman Ali Tarakcı 324, 676

B

B. Bağçovan 471, 473, 474 475
B.G. Akkoç 473, 474
Bahadır Demir 276, 379
Bahar Uslu Terzioğlu 271
Bahri Erdi Tanış 407
Banu Baş 273
Barbara Franke 489
Baris Guller 285
Batuhan Er 397
Bedirhan Şenol 52, 343, 358
Begüm Kırmızı 576, 579
Beliz Özen 603
Bengi Gedik Topcu 70, 327
Bengisu Çatlı 131
Benson S Ku 98
Berfu Ünal Nural 470
Berhan Akdağ 596
Berrin Bilgiç 444
Betül Damla Demirel Demirbaş 644
Betül Nas 430
Beyza Bilgen 371
Beyza Nur Top 469
Beyzanur Altındaş 401
Bilge Didem Tunalı 638
Binay Kayan Ocakoğlu 144
Bora Baskak 36
Bora Sarıoğlu 421
Burak Demirci 217
Burak Okumus 274
Burcu Ersöz Alan 592
Burcu Yatkın 343
Burcu Yıldırım Budak 57, 217
Burç Çağrı Poyraz 86, 242, 421
Burçin Özlem Ateş 395, 550, 593
Büşra Başer Özkoç 607
Büşra Ertaş 199
Büşra Uçar Bostan 242, 254

C

Cana Aksoy Poyraz 242
Canan Çalkar Özhan 336
Canan Eroğlu Güneş 185
Canem Kavurma 285
Caner Yeşiloğlu 251
Cansel Azizağaoğlu 340, 416, 434, 527
Cansın Kardelen Akyol 285
Cansu Adiguzel 423
Cansu Ünsal 265
Cansun Şahin Çam 556
Celal Yeşilkaya 570
Cemile Hürrem Ayhan 324, 676
Ceylin Köksal 386
Chenyu Pei 507
Chris Aiken 487
Cicek Hocaoglu 456

Ç

Çağla Boztepe 281, 620
Çağla Develi Tekbıyık 156, 182, 518, 524, 529, 536

Çetin Turan 228
Çiçek Hocaoğlu 402
Çiğdem Yılmaz 292, 298
Çilem Bilginer 285

D

Damla Isman Haznedaroglu 94, 266
Damla Kasap Üstündağ 437, 440, 586
David Cousins 668
David Osser 490
Deniz Demir Koç 448
Di Zhang 498
Dicle Coşkun 348
Didem Behice Oztop 127
Didem Sule Erdem 116
Dila Çelik 457
Dila Elif Sema Mert Kılıç 334
Dilan Karaçam 451
Dilara Dervişoğlu 367
Dilek Örüm 250
Dimosthenis Tsapekos 598
Doğancan Sönmez 605
Döne Kübra Yılmaz 189
Duygu Bilgili Can 597
Duygu Zirekli Erdem 551
Dünya Gözde Çapar 346, 359

E

E. Güvenilir 475
Ebru Çiftçi 604
Ebru Işık 306
Ebru Turan 269, 560
Ece Akgün 436
Ece Erkal 617
Ece Ilgın 663
Ece Naz Başarır 426
Ecem Özer Çakır 664
Ecren Parlak Kuvvet 57
Eda Aslan 658
Eda Esra Esen 222
Eda Ferahkaya 516
Eda Nur Küçük 331
Eda Öztürk 398
Eda Uçar 665
Elif Akçay 283, 368, 396, 412, 425, 480
Elif Beyzanur Polat 199
Elif Burcu Ersungur Çelik 242, 254
Elif Burcu Şimşek 446
Elif Didinmez Taşkırdı 367
Elif Merve Kurt Tunagur 48
Elif Nur Donbaloğlu 123, 304
Elif Tatlıdil Yaylacı 131
Emek Esra Şahinbaş 393, 394
Emel Gül Açıkgöz 450
Emine Büşra Doğu 467
Emine Esra Varkal Toprak 285, 634
Emrah Emiral 314
Enes Buğra Demir 460
Enver Denizhan Ramakan 271
Erdoğdu Akça 432, 448, 454, 539
Eren Aytac 41
Erencan Oral 120
Erhan Nalçacı 278
Erman Altunışık 250
Erol Göka 131, 219, 333, 343, 345, 369, 371, 388, 398, 426, 433
Ersel Bulu 254

Ertan Yılmaz 565
Esad Tezcan 624
Esen Yıldırım Demirdöğen 111
Eslem Öztürk Gül 57
Esra Akman Ayidağa 321
Esra Aslan 276, 379

Esra Çöp 283, 353, 358, 368, 396, 397, 423, 425, 469, 480
Esra Demirci 270, 411, 420, 424
Esra Doğan Elmas 340, 416, 434, 520
Esra Kabadayı Şahin 372, 398, 400, 455
Esra Pamukçu 202, 317, 465
Esra Rabia Taspolat 403
Esra Yalım 265, 526, 548
Esra Yürümez 127, 321
Eyüp Sabri Ercan 285, 320, 438, 441, 460
Ezgi Cellat 602
Ezgi Mutlu Akar 387, 631
Ezgi Sıla Ahi Üstün 272

F

F. Özlem Çiftçi 416
Fadime Şimşek 262
Fang Liu 595
Fatih Ekici 629
Fatma Bilge Kılıç Özihtiyar 91, 365
Fatma Büşra Parlakkaya Yıldız 378, 385, 590
Fatma Coşkun 303, 544
Fatma Erdoğan 444
Fatma Gül Helvacı Çelik 240
Fatma Kiras 202, 465
Fatma Naz Akarca 358
Fatma Özlem Çiftçi 340, 434
Fei Wang 241
Fethiye Kılıçaslan 285
Fevzi Tuna Ocakoglu 320, 438, 441, 460
Fevziye Toros 247
Feyza Dönmez 179, 308
Filiz Civil Arslan 154
Fiona Gaughran 52
Floor Van Der Does 503
Frank Bellivier 504, 655
Fulya Bakır 267, 351
Fulya Şimşek 316
Furkan Doğan 420
Furkan Mavi 434
Furkan Toksoy 354, 421
Furkan Yazıcı 574

G

G. Ünal 471, 473, 474, 475
Gamze Zengin İspir 253
Gang Chen 493
Gizem Buket Yayla Coşgun 108
Gizem Gerdan 59
Gizem Karakoyun 414
Gizem Kuru 535
Gokhan Duruksu 82
Gonca Özyurt 108, 367

Gorkem Tutal Gursoy 359
Gozde Colak 472, 483
Gökçe Kavak Sinanoğlu 260
Gökçe Kırlı Öcal 632
Gökçen İlçioğlu Ekici 348, 386, 392, 397, 423
Gökhan Ünal 222
Gözde Durmuş Hazır 305
Gözde Karabulut 278
Gözde Ulaş 367
Gözde Yazkan Akgül 156, 182
Gulsen Celebi 82
Gulser Dinc 407
Gultakïn Huseynli 411
Gül Karaçetin 144, 166, 410
Gül Ünsel Bolat 285
Gülcan Akyol Tekfiliz 144
Gülfer Akça 450
Güliz Şenormancı 228, 375, 391
Gülser Şenses Dinç 283
Gülsüm Emiral 314
Gülsüm Yılmaz 331
Gülsüm Zuhal Kamış 104, 372, 376, 398, 400, 455

H

Haiyan Xie 507
Hakan Balibey 202, 317, 465, 611, 612
Hakan Kayış 356, 417
Hakan Mehmet Aydınlıoğlu 367
Halenur Teke 247, 547
Halil Kara 285
Halil Özcan 123, 230
Hamdi Yılmaz 313
Hamza Ayaydın 285
Hande Kirisman Keles 246
Hande Sirin 578
Hande Turan 380
Hanım Hülya Alınay 409
Hanife Parlak Aslan 91, 361, 362, 365
Hanim Hulya Alinay 403
Hao Yang 326
Harun Yetkin 675
Hasan Ali Güler 292, 298, 626
Hasan Belli 380, 453
Hasan Çalışkan 278
Hasan Esin 451
Hasan Gökçay 249, 380, 453
Hasan Kandemir 285
Hasan Kaya 131, 345, 369
Hasan Mervan Aytac 41
Hasan Turan Karatepe 378, 394, 657
Hasan Ünver 287, 390, 406, 613, 614
Hasibe Ağır 303, 542
Hasibe Özlem Pekmez 443, 637
Hatice Cimbar 409, 413
Hatice Güler 222
Hatice Kübra Elçioğlu 199
Hatice Kübra Mete 453
Hatice Solak 185
Hatice Yuksel 376
Hazal Berfin Acim 369
Hazal Demirer 540
Hazal Selin Soyugür 514
Hicran Doğru 173, 189, 190
Hilal Büşra Keskin 430
Hilal Fındık 302
Hilal Hacıoğlu 159
Hilal Tüter 434
Hilal Yazıcı Kopuz 600
Hilmi Ertuğ Baki 338
Hongbo He 494
Huriye Berna Devecioğlu 573
Hurşit Ferahkaya 303, 515
Hülya Alkan 565
Hümeysa Kiyak-Kırmacı 199
Hüseyin Uçar 650

I

Ibrahim Sungur 266, 564
Ipek Aksakal 438
Ipek Percinel Yazici 285
Ipek Suzer Gamli 361, 362, 365, 443, 446
Işık Batuhan Çakmak 36, 131, 608, 609

İ

İbrahim Adak 91, 275, 361, 362, 365, 427, 443, 446
İbrahim Gündoğmuş 405, 406, 648, 649
İbrahim Halil Akbaş 674
İbrahim Kılınc 136
İbrahim Sungur 94
İkra Nur Sezer 456
İlke Artun Bingöl 345
İlknur Gündoğdu 301
İlknur Kiraz Avcı 618
İlknur Ucuz 285
İpek Aksakal 441
İpek Süzer Gamlı 91, 427
İrem Alkan Tekeş 272
İrem Büşra Yılmaz 432
İrem Cihanyurdu Erdem 531
İrem Damla Çimen 45, 159, 168, 302, 337
İrem Hacısalihoğlu Aydın 242
İzzet Çağrı Metin 154

J

Jiejie Wang 507
Jiming Kong 506
Joachim Gross 598
Johanna Seitz-Holland 98

K

Kaan Keskin 653
Kader Semra Karataş 179, 308, 457, 568, 569
Kamil Mert Angın 256
Kardelen Akbal Bağcı 305, 306, 323
Kemal Utku Yazıcı 285
Kevser Nursaçan 156, 182
Koray Hamza Cihan 278
Koray Kara 173, 189
Kübra Kılınç 292, 298
Kübra Özcan Çetin 390, 405, 640, 641
Kübra Sezer Katar 253

L

Lala Mammadlı 385
Lauren J. O'Donnell 98
Leo R. Zekelman 98
Lisa Burback 502

M

M. Bozkurt 471, 473
M. Murat Kirpinar 354
Mahmut Zabit Kara 173, 189
Makbule Esen Öksüzoğlu 274, 669
Marek Kubicki 98, 491
Maria Antonietta Nettis 52
Martha E. Shenton 98
Masanori Nagamine 503
Masato Kitano 503
Mehmet Akif Akıncı 111
Mehmet Ali Donbaloğlu 111
Mehmet Baltacioğlu 252
Mehmet Bozkurt 222
Mehmet Cihad Aktas 324, 676
Mehmet Emin Erdal 238
Mehmet Emrah Karadere 384, 385, 393, 414
Mehmet Hakan Bilgin 309
Mehmet Hamdi Örüm 250
Mehmet Murat Kırpınar 242, 254
Mehmet Öz 136
Mehmet Rıdvan Varlı 382, 406, 646, 647
Mehmet Sezgin 57
Mehri Durak 395
Mehtap Eroğlu 549, 557, 608, 609
Melike Kevser Gül 270, 411, 420, 424
Melis Çelebi Erkılıç 396
Meltem Puşuroğlu 240, 252
Meram Can Saka 272
Mert Kaya 628
Mert Şenel 283
Merve Akçay 591
Merve Akkuş 179, 185, 308, 622, 625
Merve Berker 315
Merve Ceylan Çörek 230
Merve Cıkılı-Uytun 127
Merve Çavdar Toraman 374
Merve Gül Açıkgöz 96, 380, 476, 479
Merve Gül Ertekin 409, 413
Merve Kaynak 480
Merve Maraşoglu 444
Merve Mergen 438, 441
Merve Okuyucu 585
Merve Onat 305, 306, 334, 353, 407, 469
Merve Özyıldırım 378, 384
Merve Sema Arslan 163
Merve Setenay Gürbüz 67
Merve Yazıcı 252
Merve Zeynep Doğaner 456
Meryem Nur Gençtürk 518, 524, 529, 536, 538
Meryem Ozlem Kutuk 285
Metin Aslan 91
Metin Caliskan 70, 327
Mine Şahingöz 136
Muhammad U. Faruque 486
Muhammed Furkan Tanır 168
Muhammed Talha Güçlü 368
Munevver Tunckal Munise Aksoy 233, 403, 409, 413
Mustafa Akhoroz 392
Mustafa Batuhan Kurtoğlu 120
Mustafa Danışman 253
Mustafa Dinçer 444
Mustafa Kaan Keleş 359
Mustafa Karaağaç Mustafa Kurt 341, 311, 510
Mustafa Pehlivan Mustafa Solmaz 41, 249, 453
Mustafa Tolga Tunagur 78
Mustafa Uğurlu 372, 398, 400, 455
Müberra Kulu 558
Müge Mutlu 533, 588

N

N.M. Bozkurt 474
Nagehan Çöteli 202, 317, 465
Nagihan Özer 652
Naheeda Mohamed Arslan 606
Naile Yaldız Kökbudak Nan Zhang 136, 506
Nazife Gamze Usta Sağlam 364
Nazlı Merve Korkmaz 572
Necmi Kılınç 316
Nehir Mutlusoy Eraslan 430
Neriman Aras 301
Nesibe Boyraz 421
Neslihan Yildiz-Ozhan 98
Neslişah Gür Kurçaloğlu 450, 459, 639
Neşe Burcu Bal 36
Nevin Kılınç 416
Nımtac Abdullayeva Nihal 57
Olgaç Dündar 367
Nihal Yurteri 349, 401, 463
Nisa Didem Zengin Numan Konuk 127, 381, 451
Nuran Gözpınar Bademci 217, 267
Nurten Selin Sobay Nusret Soylu 285, 436

O

Oğuz Bilal Karakuş 275, 281
Okan Çalıyurt 517
Okan Deniz 271
Okan İmre 341
Olcay Şenay 582
Omca Güney 525
Omer Faruk Akça 419
Omer Faruk Demirel Onat Yılmaz 354, 677
Onur Gökçen 179, 308
Orgül Yıldız Özşan 176, 404
Orhan Kocaman 163, 171, 176, 404
Ozan Doğaç Keleş 433
Ozan Emre Aslan 45, 337

Ö

Ömer Faruk Demirel 242, 254
Ömer Şenormancı 228, 375, 391
Ömer Varış 627
Ömer Yanartaş 571
Öykü Zaimoğulları 104, 376
Özalp Ekinci 281
Özge Bebek İrem 511
Özge Gizli Çoban 387, 601
Özge Parlak Gözükara 643
Özge Yılmaz 104
Özkan Şen 427
Özlem Akçay Ciner 462, 464
Özlem Çıtak Ekici 359, 433
Özlem Dalçiçek 228, 375, 391
Özlem Doğan 243, 332
Öznur Adıgüzel Akman 264, 279, 356
Öznur Bilaç 285
Öznur Demirel 254

P

Pelin Taş 290, 621
Philipp Ritter 598
Pınar Algedik 659
Pınar Aydoğan Avşar 163, 171, 176, 404
Pınar Dumancı 369
Pınar Ertunç 430
Pınar Güzel Özdemir 309, 528
Pietro Carmellini 598

Q

Qiang Yu 506

R

Rabia Nazik Ekinci 219, 388
Rabia Rakan 154
Rahime Duygu Temeltürk 127, 381
Rahime Kaya 349, 401, 463
Ramazan Kocabas 292, 298
Rana Selin Küçükardalı 552
Raviye Özen Koca 185
Rebecca Strawbridge 495, 598
Rıdvan Karaali 242
Rifat Serav İlhan 272
Rukiye Çolak Sivri 273
Rukiye Tekdemir 635
Rümeysa Yeni Elbay 594
Ryan Zurrin 98

S

Sacide Pehlivan 41
Safiye Zeynep Tatlı 405
Sakine Aktaş 309, 324, 671, 676
Salih Güneş 270
Saliha Baykal 245
Saliha Özsoy 116
Samin Soudkhah 308
Sandra Kooij 492
Sarp Yoldaş 86, 364
Seda Aybüke Sarı 285, 561
Seda Bozduman Çelebi 413, 513
Seda Kiraz 333, 369, 371, 426, 608, 609, 636
Seda Koçak 278
Seda Orenay Boyacıoglu 70, 327
Selçuk Özkan 349, 401, 463
Selçuk Teke 247
Selin Balki Tekin 238, 509
Selma Özdemir Yılmaz 313
Sema Çağal 537
Sema Nur Keskin 312, 325, 657
Sema Öznur Çeltik 633
Semil Selcen Gocmez 82
Sena Akpolat 104, 372
Sena Karaca 136
Sena Küçükhazar 562
Sena Necla Cetin 667
Serap Sarı 304
Sercan Karabulut 623
Serdar Karatoprak 314, 315, 316
Serdar Süleyman Can 104
Serhat Türkoğlu 292, 298
Serkan Şahin 104
Serra Nur Erdem 333
Serra Sarı 261
Sevay Alşen Güney 193, 294
Sevgi Özmen 270, 363, 411
Sevinç Ulusoy 312
Sevler Yıldız 151
Shengjiao Zhao 507
Sıla İnel 219, 388
Sibel Fatma Durak 285
Sibel Yaci 308
Sibelnur Avcil 444
Stanley Kutcher 488
Suheyla Cetin-Karayumak 98
Suna Büşra Esmeray 349
Süheyla Aliustaoğlu 679, 680
Sümeyye Bayrak Yüksel 217
Sümeyye Sarıbaş Akmehmet 518, 524, 529, 536

Ş

Şahin Bodur 340, 416, 434, 512
Şahin Gürkan 131, 608, 609
Şenol Turan 364
Şermin Yalın Sapmaz 285
Şeyma Demirkıran 429
Şeyma Karatekin 450
Şeyma Sehlikoğlu 297
Şeyma Uygun 345, 426
Şükrü Alperen Korkmaz 346
Şükrücan Kocabaş 275, 581

T

Taku Saito 503
Talat Demirsöz 338
Talha Ağaç 96, 249, 429, 453, 476, 479
Tayfun Kara 171, 176, 404
Tayfun Öz 382
Tayfun Özbek 104, 400
Teng Guan 506
Tevfik Çevirici 283

Tijen Utkan 82
Toultse Gioventikli 308
Tuba Karakuş 45, 337
Tuğba Menteşe Babayiğit 269
Tuğçe Turan 193, 294, 587
Tuncay Sandıkçı 91

U

Ubeyd Turgut Demirel 615
Uğur Karabağ 166, 410
Ulaş Korkmaz 567
Ummuhan Ozkal 452

Ü

Ümit Işık 285
Ümmü Nur Kaya Tan 616
Ümmügülsüm Gündoğdu 518, 524, 529, 536
Ümmühan Abdulrezzak 116
Ümmühan Büyükkal 127, 381
Ünsal Aydınoğlu 233

V

Vahdet Gormez 57
Vahdettin Görmez 217
Veysel Doğan 260

W

Wen-Cheng Xiong 322, 654
Wenli He 507

X

Xıaojun Huang 496
Xiangyao Li 507
Xiaohua Ma 326
Xingshun Xu 326
Xinmin Li 507

Y

Yagmur Harputlu Yamak 573
Yağmur Darben Azarsız 272
Yağmur Ersoy 173
Yağmur Harputlu Yamak 584
Yao Xiao 241
Yaren Eren Aydoğmuş 283
Yasemin Oyaci 41
Yasin Hazer 279
Yasir Şafak 382, 390
Yaşar Kapıcı 250
Yavuz Meral 246, 267
Yeşim Savaşcı 363, 546
Yifeng Wei 666
Yiğit Özaydın 460
Yingbo Rao 507
Yinuo He 507
Yogesh Rathi 98
Yong Yang 326
Yunrong Lu 507
Yunus Akkeçeli 73
Yunus Akkeçili 139, 481
Yunus Emre Dönmez 314, 315, 316
Yuping Ning 500
Yusuf Çiçek 86, 364
Yusuf Çokünlü 262
Yusuf Selman Çelik 461, 573, 589
Yusufhan Yazır 82
Yüksel Sümeyra Naralan 285

Z

Z. Işık Solak Görmüş 185
Zafer Bağcı 316
Zehra Kabakçı 228, 375, 391
Zehra Uçar Hasanlı 253
Zeynep Gültekin Taş 166, 410, 545, 559
Zeynep Hilal Hayit 454
Zeynep Irem Erbasan 320
Zeynep Kahveci 354
Zeynep Kübra Kurt 461, 573, 645
Zhigang Miao 326
Zhijun Zhang 497
Zuhal Koç Apaydın 299
Zülal Çelik 271, 312, 430, 657