



## Symposium Oral Presentations

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## 10th International Congress on Psychopharmacology & 6th International Symposium on Child and Adolescent Psychopharmacology

[Abstract:0112][Stress and related situations]

### Normalization of abnormality; Looking to adverse childhood experiences from a developmental perspective

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#### ABSTRACT

*Objective:* It has been proposed that anything does not kill you make you stronger. Although it might be true in adult cases, children whose psychological life begin in the parental mind and shaped by the experiences during the early period of life are not as strong as adult against adverse effects of stressful events. Internalization of objects and emerging of internally working models, concept of normality and abnormality that will be the main ground for the understanding of the world in later life are emerged during childhood. That is why anything does not kill a child will shape its mind that might have everlasting effects on child.

#### KEYWORDS

Adverse; childhood trauma; development; mind

[Abstract:0224][Autism]

### The clinical characteristics and pharmacological treatment process of a 10-year-old boy with Autism Spectrum Disorder who had drug refractory self-injurious behaviour

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#### ABSTRACT

*Objective:* Irritability is the most common co-occurring symptom and common target of pharmacotherapy in children with Autism Spectrum Disorders (ASD) [1–3]. FDA-approved agents risperidone and aripiprazole are commonly used in irritability and became the first-line treatment, but the growing evidence has shown that a group of children with ASD comorbid, especially with intellectual disability, do not respond to the treatment [1,3]. In a recent research, drug refractory behaviours in children with ASD defined as aggression, self-injury, and tantrums requiring medication adjustment despite trials of risperidone and aripiprazole or three or more psychotropic drugs targeting irritability [1]. In this presentation, it is aimed to review current literature with the case report of a child with ASD who had drug refractory self-injurious behaviour.

*Case presentation:* Ten-year-old boy, who diagnosed with ASD and attention-deficit/hyperactivity disorder (ADHD) and intellectual disability, has been followed in our outpatient clinic since he was 3 years old. He had been prescribed risperidone up to 2 mg/day for irritability and hyperactivity between 3 and 9 years old, and had responded well to the treatment. At age 10, his family described the increase in irritability, aggression, tantrums, and severe self-injurious behaviour with his ongoing treatment. His Clinic Global Impression (CGI)-Severity score was 7/7, Aberrant Behaviour Checklist (ABC)-Irritability score was 41/45 and ABC-Hyperactivity score was 40/48. Neurological and medical comorbidities were not detected in the examination. There was limited or no response to the treatment with various trials of risperidone, aripiprazole, haloperidol, zuclopenthixol, benzodiazepines, methylphenidate, atomoxetine, valproate, and

#### KEYWORDS

Autistic disorder; child; irritable mood; drug therapy; drug resistance

naltrexone. After the combined treatment of risperidone 2 mg/day with clonidine 0.3 mg/day, well and sustainable treatment response of irritability and self-injurious behaviour had been achieved (CGI-Severity: 2/7, CGI-Improvement: 2/7, ABC-Irritability: 6/45, ABC-Hyperactivity 10/48).

**Conclusions:** Irritability and aggressive behaviour in children with ASD who do not respond to the treatment is a significant concern for clinicians. Despite growing research on this subpopulation of individuals with ASD, to date there are no guidelines for the treatment [2,3]. Further research should be done to reveal treatment options in this group.

[Abstract:0308][Autism]

## Clinical genetic evaluation to identify the aetiology of Autism Spectrum Disorder

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### ABSTRACT

In the aetiology of Autism Spectrum Disorder (ASD), heritability estimates have ranged from 37% to higher than 90%, based on twin concordance rates. Currently, as many as 15% of cases of ASD appear to be associated with a known genetic mutation, with different *de novo* copy number variants or *de novo* mutations in specific genes associated with the disorder in different families. The development of whole-genome screening methodologies for the detection of copy number variations (CNVs), such as array-based comparative genomic hybridization, provides a much higher resolution than karyotyping leading to the identification of novel microdeletion and microduplication syndromes often associated with an ASD phenotype. We aimed to identify CNVs of our patients with ASD, followed in our department, by using array-based comparative genomic hybridization. The results of our study support the literature knowledge, where copy number variations that cannot be detected with conventional cytogenetics methods in terms of size may happen in patients with ASD. In this session, clinic genetic evaluation in ASD will be discussed and reviewed with the results of our study.

### KEYWORDS

Autistic disorder; genetics; DNA copy number variations; child psychiatry; genetic association studies

[Abstract:0504][Mood disorders]

## Suicide, self-harm behaviour and neurohormones

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### ABSTRACT

The worldwide completed suicide rate for children under 14 years old is reported as 0.6 in 100,000 and 7.4 in 100,000 in the 15–19 age range. It has been reported that the life-long suicidal ideation rate changed between 12.1% and 29.9% during puberty. Completed suicide rates in adolescents have increased from the 1970s to the late 1990s in the United States suggesting that the frequency of depression has increased in this age group. Many studies have investigated the association of various biomarkers with suicide. It has been shown that 5-hydroxyindoleacetic acid and homovanillic acid levels are lower in cerebrospinal fluid of the suicide committers. In addition, 3H-imipramine binding and serotonin uptake in platelets were found to be lower in suicide attempters than healthy controls. These findings suggest that presynaptic serotonergic mechanisms may be associated with hypofunction in suicidal behaviour. It is also reported that many biological markers such as cholesterol level, BDNF, neurotrophins may be associated with suicide. Also, various studies indicate that some neurohormones may be related to suicide and self-harm. Older studies show that dexamethasone resistance predicts the risk of future suicide in mood disorders implicating the HPA axis in suicide attempt behaviour. Additionally, saliva cortisol levels are reported to be lower in suicide attempters relative to non-attempters, and interestingly, also in

### KEYWORDS

Child; adolescent; suicide; self-harm; neurohormones

non-attempters with suicide-related behaviours. However, cerebrospinal fluid and plasma cortisol levels appeared higher in suicide attempters relative to healthy controls. This discrepancy may be related to study sample (psychiatric disorder vs. non-diagnosed groups or treated vs. non-treated groups). In another study, offspring of parents with mood disorders found that familial transmission of suicide attempt behaviour was associated with blunted salivary cortisol levels. Also, some genes –which are related to glucocorticoid receptor gene – are associated with suicide attempts in depression. In this symposium, the relationship among suicide, self-mutilation, and neurohormones will be discussed in the light of the recent literature.

[Abstract:0527][Autism]

## Looking to complementary therapies in ADHD and Autism Spectrum Disorder (ASD) through the evidence-based medicine perspective

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### ABSTRACT

Complementary and alternative medicine (CAM) therapies are a group of diverse medical practices and products that are not generally considered to be part of conventional medicine. In child and adolescent psychiatry clinics in Turkey, there are many families who use CAM therapies in their children diagnosed with ADHD and ASD. In ASD, symptoms may improve with behavioural and educational interventions, and in ADHD, symptoms usually improve by medications with or without behavioural interventions but some families choose CAM for different reasons. These are to have a total cure, out of concerns about side effects of medications or just to do everything to their special needed child. Many of them talk about only if the clinicians ask about their using of CAM therapies. CAM therapies include interventions about; abnormalities of microflora, special diets, autoimmunity, inflammation, heavy metal toxicity, metabolic problems, food sensitivities in ASD. In ADHD, most of CAM therapies include elimination diets, addition of essential fatty acids, physical activity, and mindfulness. There is a lack of evidence for controlled clinical trials in most of the CAM therapies and only a few of CAM therapies have adequate effectiveness or safety information and placebo effect must be also taken into account. Making a recommendation for therapies with children with ASD and ADHD requires to consider the best evidence for efficacy, family preferences, and clinical expertise. Clinicians can be helpful for families who choose CAM therapies by reviewing the treatment goals, efficacy, potential benefits, financial resource of family, potential harms, side effects, acceptance of illness and also clinicians must encourage families to continue evidence-based interventions while using CAM therapies. In this presentation, CAM therapies in ADHD and ASD will be discussed and reviewed through the evidence-based medicine perspective. Clinician role as a supervisor for families who want to choose CAM therapies for their children will also be discussed with the participants.

### KEYWORDS

ADHD; autistic disorder; alternative; complementary; therapy; treatment

[Abstract:0575][ADHD]

## An update on aetiology of ADHD

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### ABSTRACT

Attention-deficit hyperactivity disorder (ADHD) is one of the most common psychiatric disorders with pervasive effects. Epidemiological data represent a prevalence rate of 4% in adults 6–8% in children. ADHD arises on a polygenetic base with multiple heterogeneous factors. Genetic factors: ADHD is one of the most heritable disorders with a mean of 0.76 heritability surpassing schizophrenia and bipolar disorder. ADHD is a familial disorder with a relative risk of about 5–9 in first-degree relatives of individuals with ADHD. Various different

### KEYWORDS

ADHD; aetiology; prenatal factors; nutritional factors; toxins; perinatal factors

genomic variants have been associated with ADHD risk. These variants include common DNA sequence variants – single nucleotide polymorphisms (SNPs). Although many studies have been conducted, there is no precise single-nucleotide polymorphism mainly associated with ADHD, rather a composite risk based upon these nucleotide polymorphisms could be discussed. Whole-genome investigations represent specific single dopaminergic, serotonergic, and noradrenergic candidate genes. Each of these genes was assumed to be associated with ADHD. However, according to current knowledge, variants in single genes associated with ADHD should be investigated with caution as some of these variants reveal false-positive results. Various nutritional factors, toxins, dietary factors, and exposures to stressful life events in childhood and poor attachment with parents, are also blamed for the development of ADHD. Low birthweight and maternal smoking during pregnancy are the two major prenatal factors in pathogenesis of ADHD. In utero exposure to maternal stress, cigarette smoking, alcohol, prescribed drugs (e.g. paracetamol), and illicit substances are also other factors. Environmental toxins, especially in utero exposure to lead, organophosphate pesticides, and polychlorinated biphenyls, are other factors for ADHD. Nutritional deficiencies (e.g. zinc, magnesium, and polyunsaturated fatty acids) could not be shown systematically to cause ADHD evidence based. Sugars and artificial food additives and food colourings were also blamed and discussed further Feingold Diet with restriction of sugar and artificial additives and food colourings yielded negative results. Psychosocial risk factors, low socio-economic status, and parental conflict have been found not casual rather correlated with ADHD. Studies regarding mother–child relation and attachment showed that the problems regarding child and parent relation is not a cause rather a result of ADHD. Whereas early parental and social deprivation have been shown for a causal relationship with ADHD. Animal studies also interestingly showed that some environmental factors could interact with genetic material and even change the genetics through methylation of DNA–epigenetic factors. These show that there is complex and intricate environmental and genetic factors which interact each other at each level.

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[Abstract:0587][Mood disorders]

## Audio-visual analysis of affective states, traits and disorders: expectations, challenges and trends

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### ABSTRACT

Affective computing is a recently popular inter-disciplinary study of affect, which involves psychology, psychiatry, linguistics and engineering (e.g. computer, electronics) sciences. The field is rapidly developing, thanks to interest from a large variety of disciplines, sharing of resources, and the potential to produce manifold applications. The first part of the talk aims to provide an overview of the state of the art in multimodal affective computing, particularly for the analysis of affective states (e.g. emotion, mood) and traits (e.g. gender, impressions of Big-Five personality traits) from basic concepts to advanced solutions developed to handle realistic conditions. More specifically, this part introduces the processing pipeline for audio- and video-based affective computing, available affective corpora and public tools used in the processing pipeline. Next, the talk connects the methodological advancement in the analysis of affect to identification of affective disorders such as depression, bipolar disorder, and autism. The talk next elaborates on the expectations of the clinicians from an automated system and the challenges/limitations of the state of the art in signal processing and machine learning. The talk concludes with current trends to overcome the dilemma between expectations of a small set of descriptive, predictive features and high predictive accuracy.

### KEYWORDS

Affective computing; automatic affect classification; computer-aided diagnosis; mood disorders; audio-visual signal processing; machine learning



[Abstract:0589][Mood disorders]

## Suicide, non-suicidal self-injury and immunology in children and adolescents

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### ABSTRACT

Suicide is one of the leading causes of death among young people. It is seen as a serious public health problem worldwide, especially for adolescence and young adulthood. It is known that self-harm behaviours with the intention of suicide are largely related to risk factors similar to those of non-suicidal self-injurious behaviours. Although major depressive disorder (MDD) is an important risk factor for suicide in adolescence, suicidal behaviour in the majority of adolescents with a diagnosis of depression is not seen. In addition, some studies suggest that suicidal behaviour is related to genetic predisposition, independently psychiatric disorders. Therefore, there is a need for biologic research to improve the assessment of specific risk factors for suicide and non-suicidal self-injury. Abnormalities related to the immunological system have been reported for many years in psychiatric disorders, especially mood disorders. The effect of cytokines, which mediate key steps in cellular and humoral immunity and cross the blood-brain barrier and affect complex brain functions, has often been the subject of research. Clinical case reports have reported depressive symptoms and increased suicidal behaviour in patients treated with cytokines. In addition, elevated plasma levels of cytokines, including IFN- $\gamma$ , TNF- $\alpha$ , IL-6, and IL-1 $\beta$ , have been reported in adult MDD trials. Studies in adolescents have reported that plasma TNF- $\alpha$  level is low in suicide attempts. In adolescents with MDD, increase in the level of IFN- $\gamma$  and in the ratio of IFN- $\gamma$ /IL-4 have been observed according to controls, suggesting the role of a proinflammatory/anti-inflammatory imbalance in the regulation of the immune system. In a recent case-control study, suicidal adolescents were reported to have significantly higher levels of IL-1 $\beta$ , IL-6, and TNF- $\alpha$  in the specific brain area (Brodmann area 10). There is a need for studies to illuminate the immunological aetiology of suicide and self-harm behaviour in children and adolescents. Identifying biological markers in this topic may provide a better assessment of risk factors and earlier recognition of children and adolescents at risk.

### KEYWORDS

Biological marker; cytokine; immunology; non-suicidal self-injury; suicide

[Abstract:0593][Other]

## Machine learning applications in high-risk groups: Are we able to predict who will develop schizophrenia?

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### ABSTRACT

The early prediction and prevention of psychosis are among the most important challenges of psychiatry and have received increasing attention for the past years. Several operational criteria have been defined in order to identify people who carry a higher risk for psychosis than the general population does. These criteria are highly useful to rule out the ones who do not have increased risk (i.e. they are highly sensitive) [1]; however, they are not very helpful to determine who will develop psychosis as long-term follow-up studies have found that only one-third of patients who have clinical high risk would eventually convert psychosis [2]. Although there are attempts to find out predictors of psychosis among high-risk groups, there is no concrete implication for clinical practice. Artificial intelligence, specifically machine learning, has become very popular in medicine, particularly by addressing diagnostic and prognostic problems. It enables one to work with a big amount of data to make individual-level predictions [3]. Here in this talk, we aim to discuss the use of machine learning methods for prediction of psychosis onset.

### KEYWORDS

Machine learning; high risk for psychosis; schizophrenia; prediction; prodrome; artificial intelligence

## References

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[Abstract:0616][Autism]

## Neurobiological basis of Autism Spectrum Disorder

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### ABSTRACT

Autism Spectrum Disorder (ASD) is an early onset neurodevelopmental disorder marked by impairments in reciprocal social interaction and communication, and the presence of repetitive or restricted interests and behaviours. ASD had great phenotypic heterogeneity and aetiologic diversity. This presentation focuses on understanding the proposed aetiologies in ASD by reviewing the conceptual background and highlighting some recent advances. Autism is thought as the most heritable disorder in psychiatric diseases. Genetic studies have revealed that the risk to siblings of children with autism is approximately 3–6%, which is about 50–100 times greater than the risk appearing in the population at large. Although twin studies support a strong genetic contribution to the aetiology of ASD, the estimates of heritability varieties such as susceptibility genes. GWAS studies found that rare genetic variants are more likely to cause most cases of ASD than common variants. Rare single gene disorders such as fragile X, tuberous sclerosis, neurofibromatosis, and certain chromosomal abnormalities are important examples of rare genetic variants associated with ASD. Copy number variants (CNVs) are another important example of genetic variants. Although each CNV was <1% in ASD, cumulatively it may account for 15–20% of ASD. A large number of ASD-linked genes are also associated with broad processes such as metabolism, chromatin remodelling, mRNA regulation, protein synthesis, and synaptic function. Moreover, ASD-related brain pathologies indicate that abnormal acceleration of brain growth in early childhood accompanied by impaired neuron morphological development and brain cytoarchitecture are common features in ASDs. Impairments in synapse formation and synaptic plasticity ultimately lead to functional and cognitive impairments in ASD. In addition to the genetic component, impairment of the neurotransmitter system (serotonin, GABA, glutamate, dopamine, etc.) was also suggested in the underlying mechanism of ASD. Oxytocin also plays a key role in social reward systems and might modulate the dopamine reward pathway during social interaction. Dysfunction in brain systems subserving social perception was focused on autism research. The social motivation hypothesis builds upon this framework and suggests that reduced social drive leads to inattention to people and consequent failure of developmental specialization in experience-expectant brain systems, such as the face perception system. Interconnectivity theories of ASD, in contrast to social information processing theories, have been put forward as an alternative account for the clinical impairments observed in ASD. Complex and distributed information processing is impaired in ASD due to poor long-range connectivity, while simple, low-information processing demands are intact. Several studies have demonstrated atypical patterns of connective tissue in ASD via direct imaging of white matter tracts connecting different brain regions. Despite inconsistent trends across studies, including underconnectivity, overconnectivity, and typical patterns of connectivity, there is a debate on the role connectivity plays in ASD. Heterogeneity in brain function and the behavioural phenotype in ASD is the rule rather than the exception. Integrated research approach will extend the strengths of each investigative method to enable profiling of function across levels and at individual stages of processing to inform the development of specific treatment modalities.

### KEYWORDS

Autism; neurobiology;  
aetiology; connectivity;  
genetic



[Abstract:0621][Perinatal psychiatry]

## Maternal brain

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### ABSTRACT

Motherhood is a unique experience for every woman, and it becomes to be a metamorphosis affecting biologically and psychologically the mother and also the further generations. The majority of research on maternal effects in mammals has focused on how alterations in the postnatal mother–infant relationship can modify offspring behaviour and development [1]. Women who experienced a secure attachment to their mother are more likely to have a secure relationship with their own child, and similarly, those women who had an insecure relationship with their mother are more likely to have an insecure relationship with their own child [2]. Intergenerational transmission of maternal behaviour is seen in rodents, primates and humans, and may underlie adaptive changes in the HPA axis. The neural basis of this inheritance pattern appears to reside in the central oxytocin system which determines features of maternal behaviour. Studies show that a high level of maternal licking/grooming and arched-back nursing correlate with reduced CRH mRNA expression and enhanced glucocorticoid negative feedback, and lower stress responses in the adult. This behaviour is stably transmitted between generations and cross-fostering studies show that the offspring inherit the behaviour from the nursing mother and not the biological mother [3]. Maternal abuse of offspring in macaque monkeys shares some similarities with child maltreatment in humans, including its transmission across generations. Both rhesus monkey and macaque mothers are more likely to abuse or reject their offsprings if they themselves were abused or rejected by foster mothers, demonstrating that the rearing environment is critical for the inheritance of this maternal behaviour [4]. Also, the nursing period is focused on to understand the psychological traits. Lactating females of most mammalian species actively protect their offspring when they are young and defenceless. In most rodent species, the maternal aggression is facilitated by oestradiol, progesterone, and prolactin released during pregnancy and lactation. This protective behaviour is termed maternal defence or maternal aggression and in some species, the females actively attract when given threat to their young. When they are rearing and protecting pups, lactating rodents fiercely attack intruders [5]. Understanding the background of motherhood behaviours would make it easier for professionals to assess the possible risks and make psychiatric interventions during the perinatal period.

### KEYWORDS

Motherhood; maternal aggression; maternal behaviour; perinatal psychiatry; pregnancy; lactation

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[Abstract:0626][Addiction]

## Neurobiology of drug addiction

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### ABSTRACT

Addiction constitutes of one of the most serious public health problems worldwide. Loss of control over drug/alcohol use, and the compulsive seeking and taking of a drug without

### KEYWORDS

Neurobiology; addiction; drug; alcohol; reward circuit

considering possible negative consequences are widely accepted components of addiction. Yet current treatment strategies are only partially effective. Therefore, there is a grave need to better understand the neurobiology and pathophysiology of addiction in order to take the first step of finding more effective treatments [1]. Various brain pathways were demonstrated to be involved in addictive pathologies. Midbrain structures, particularly dopaminergic signals from ventral tegmental area and nucleus accumbens, are the key elements of reward pathways, which control a person's responses to environmental and internal reward-related stimuli [2]. Alcohol and drugs activate these circuits, much stronger and more persistent than natural stimuli, which in turn decreases the person's ability to activate it with natural stimuli and causes loss of motivation and hedonic experiences. Other structures associated with these pathways include hippocampus, hypothalamus, amygdala, and prefrontal cortex [3]. This talk aims to provide an overview of neurobiology of addiction and how it affects memory, motivation, hedonics, and decision-making processes.

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[Abstract:0631][Other]

## Suicide, deliberate self-harm and neuropeptides

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### ABSTRACT

Suicide is one of the leading reasons of death among youth, and suicidal behaviours and deliberate self-harm are relatively common in general populations. The aetiology of suicidal behaviours involves complex interactions of psychosocial factors and biological systems, but the precise mechanisms underlying the problem are currently unknown. Neuropeptides play key roles in neuronal survival, neurogenesis, synaptic connectivity, and in the regulation of brain plasticity. In the last decade, the role of neuropeptides in the predisposition to suicide and deliberate self-harm has attracted remarkable attention. For instance, ample evidence suggests the involvement of neurotrophic factors including brain-derived neurotrophic factor neurotrophin 3 and nerve growth factor in suicidal behaviour. In this presentation, data regarding the association between neuropeptides and sleep problems and the management of these problems will be discussed.

### KEYWORDS

Deliberate self-harm; aetiology; neuropeptides; neurotrophins; suicide

[Abstract:0639][Other]

## Audio-visual features in bipolar disorder

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### ABSTRACT

Emotional regulation relies on association between brain stem, limbic, and cortical structure that produce affect and this emotional experience is controlled via the inhibition of subcortical and cortical emotion processing centre by synergism between prefrontal and cingulate cortex. Bipolar disorder is compatible with emotional dysregulation and

### KEYWORDS

Audio-visual features; bipolar mania; machine learning; treatment response; video recognition

neuropsychological dysfunction due to structural and functional brain anomalies [1]. Emotional changes that affect voice and image give an opportunity to recognize bipolar disorder from healthy controls. Challenges for depression recognition based on databases such as AVEC and INTERSPEECH have contributed to the classification of minimally and moderately depressed individuals. Emotional information expressed in speech can be classified according to arousal, valence, dominance values. Visual descriptors and their different alignments provide emotion recognition from video and combining different modalities will increase the accuracy of prediction [2]. Depression recognition databases are more prevalent than mania databases. The PRIORI database collected from the bipolar disorder smartphone combines both depression and mania. These pilot study results give us preliminary proof of the concept that we can detect mood states in regular phone calls by analysing broad features and properties of speech [3]. Our new database collected on bipolar mania – their follow-up period and healthy control results give us an opportunity for recognition of bipolar subtype, healthy, simulation differentiation, and treatment response.

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[Abstract:0647][Addiction]

## The neurobiology of cognitive behavioural therapy in addiction therapy

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### ABSTRACT

Addiction is a chronic, relapsing disorder in which individuals typically cycle between periods of sustained, compulsive drug use, and abstinent periods of varying durations. Therefore, addiction is appropriately considered a neurobehavioural disorder of maladaptive learning that results from chronic drug use. In recent years, interdisciplinary research in the field of neuroscience has expanded our knowledge about neurobiological correlates of mental processes and changes occurring in the brain due to therapeutic interventions. It is accepted that cognitive and behaviour theories are important approaches in psychological treatment of addiction. Cognitive behaviour therapy stressed that addiction can be changed and learned behaviour. The goal of cognitive approach is to change maladaptive thinking and addicted individuals' behaviours. Commonly, this approach is an essential treatment for relapse prevention and motivation. Cognitive-behavioural therapies (CBT) which are short-term, collaborative, problem focused on therapeutic methods aimed at reducing symptoms and improving the quality of life of people. CBT has been refined, elaborated, and evaluated in numerous empirical studies. CBT has brought key mechanisms of addiction into much sharper focus. This has allowed for the development of more precise therapeutic interventions that target aspects of the dynamic interaction between person, situation, and appetitive impulse. Cognitive-behavioural therapies combine two different theoretical and therapeutic approaches resulting from two different paradigms of human nature and psychopathology. First one is the behavioural paradigm which is based on the learning theory and models of experimental psychology. Its basic idea is that every behaviour, either adaptive or maladaptive, has been learned. The other one is the cognitive paradigm which claims that mental disorders arise from altered cognitive processes. The goal of cognitive behaviour therapy is to prevent the consumption of detrimental substance for patients and to provide them with new life abilities. CBT contributes clients to gain self-sufficiency and helps decrease their life stress. Thus, the goal of CBT is a curial method for decreasing occurring addiction problem and preventing relapse in their future life. The neuroscientific investigations of basic CBT hypotheses have shown that (i) functional and non-functional behaviours and experiences may be learned through lifelong learning due to brain

### KEYWORDS

Brain; therapy; cognitive behaviour therapy; neurobiology of psychotherapy; substance-related disorders

neuroplasticity that continues across the entire lifespan; (ii) cognitive activity contributes to dysfunctional behaviour and emotional experience through focusing, selective perception, memory and recall, and characteristic cognitive distortion; on a neurobiological level, there is a relationship between top-down and bottom-up regulation of unpleasant emotional states; and (iii) cognitive activity may be changed, as shown by therapeutic success achieved by metacognitive and mindfulness techniques, which also have their neurobiological correlates in the changes occurring in the cortical and subcortical structures and endocrine and immune systems.

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[Abstract:0653][Addiction]

## Neurobiology of mindfulness therapy

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### ABSTRACT

Addiction has generally been characterized as a chronic relapsing condition. Across numerous investigations of relapse precipitants in both animal and human models, two factors have emerged as the most commonly endorsed relapse risk factors: craving and negative affect. Mindfulness-based relapse prevention (MBRP) was designed to target experiences of craving and negative affect and their roles in the relapse process. A developing research area that is promising for addiction treatment is that of mindfulness-based therapies. Findings and the theoretical framework obtained from studies, together with anecdotes from clinical applications, support the efficiency of this innovative treatment for substance abuse disorders in general. MBRP offers skills in cognitive-behavioural relapse prevention integrated with mindfulness meditation. The mindfulness practices in MBRP are intended to increase discriminative awareness, with a specific focus on the acceptance of uncomfortable states or challenging situations without reacting “automatically.” Neurobiological findings support the efficiency of awareness education in identifying triggers of strong desire and developing alternatives for compulsive behaviours done unawares. Recent neurobiological, cognitive, and behavioural data support two specific components of mindfulness, attention and acceptance, that may target the common intermediary phenotypes of rumination and stress directly, highlighting their potential utility in the treatment of substance use disorders. A recent efficacy trial found that those randomized to MBRP, as compared with those in a control group, demonstrated significantly lower rates of substance use and greater decreases in craving following treatment. Furthermore, individuals in MBRP did not report increased craving or substance use in response to negative affect. It is important to note, areas of the brain that have been associated with craving, negative affect, and relapse have also been shown to be affected by mindfulness training. In this section of the panel, recent studies on the neurobiological mechanisms and efficiency of mindfulness-based approaches in addiction treatment will be conveyed.

### KEYWORDS

Substance-use disorders; neurobiology; mindfulness; craving; relapse

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[Abstract:0658][Addiction]

## Effects of parents' addiction on children: Is it more related to neurobiology or learning?

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### ABSTRACT

Children of addicted parents are a group with a great deal of addiction risk. There are researches that these children have similar neurobiological and genetic characteristics to their parents. Children of addicted parents have some common characteristics, it is important to recognize them. Research shows that adult children of addicts, or rather children who grew up in the home where at least one of parents uses substance, share similar personality traits in adult life. Therefore, knowing these features is important in working with this group. Points to consider when approaching the children of addicted parents.

### KEYWORDS

Addiction; children; parent; neurobiology; learning

[Abstract:0662][Other]

## Suicide, self-harm behaviour, and genetics

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### ABSTRACT

Suicidal behaviours, which range from suicidal ideation to suicide attempts and completed suicide, represent a fatal dimension of mental ill-health. Suicide represents the second leading cause of mortality in the 14–24 age groups. Suicide constitutes a multifactorial public health issue that involves numerous biological, psychological, cultural, social, and family determinants. Support for the implication of genetic risk factors in suicidal behaviour is provided by studies of families, twins, and adoption cases. Studies of adoption have also shown that there is a higher risk of suicide for the individuals who are biologically related to suicidal probands, but not for non-biologically related members of adoptive families. The recent findings of a large body of studies suggest significant heritability of completed suicide, with an aggregate estimate of heritability = 45%. The heritability appears to depend in part on psychiatric disorders such as mood disorders and substance abuse, with ~90% of suicide attempters having a psychiatric disorder, and, importantly, to also be partly independent of them. The independent factor has been hypothesized to influence impulsive aggression, with individuals who have both these personality traits and a major mental disorder having the greatest risk of suicidal behaviours. Understanding of the precise genetic system that causes vulnerability to suicidal tendencies is largely incomplete, and efforts to identify the precise molecular mechanisms that are involved have been hampered by the large heterogeneity that is found within groups of suicidal behaviours. The generally accepted and regarded model for the genetic determinism of the suicidal behaviour is a polygenic model that involves a large number of genetic variants, each of which contributes a small modulation of risk. Over the last decade, many teams from around the world have attempted to identify associations between genetic markers and suicidal behaviours. It is recognized by all that single genes might not explain the full risk of developing suicidal behaviours. In summary, we have identified several studies that have shown an association of genetic polymorphisms with suicidal behaviours, in line with previous reviews. The strongest results from meta-analyses support the combination of suicidal behaviours with variants in TPH1-rs1800532, SLC6A4-5-HTTLPR, COMT-rs4680 or BDNF-rs6265. Results to date from Genome-Wide Association Study are unsatisfactory, with most studies showing no evidence of association at a genome-wide significant level or only marginally. Studies that did show an association failed to replicate the results.

### KEYWORDS

Self-harm behaviour; genetics; heritability; 14–25 age group; suicide

[Abstract:0663][ADHD]

## Attention-deficit/hyperactivity disorder (ADHD) and work

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### ABSTRACT

One of the areas in which people with ADHD are affected is work. Workplace is a social construct other than performance and includes many relationships. Because of low performance and losing jobs of people with ADHD, they might be a big burden to the economy [4]. In a study of World Health Organization, which has been conducted in 10 countries, it was shown that 3.5% of workers have ADHD and they caused decreased workforce due to they not showing up for work and low performance [3]. The percentage of leaving school, frequently changing jobs and being unhappy in their work life is higher in people with ADHD when compared to others. Problems of people with ADHD start when applying for a job. Due to their attention deficits, they have problems filling out their forms and cooperation problems with the interviewers. The problems continue in job interviews. If the workplace is not suitable for them such as a creative job or a job with mobility, problems increase. Usually, changing jobs often without thinking through, incomplete projects due to time management issues or skipped meetings, lost paperwork due to organizational issues, cause the person's capacity to work efficiently to decrease. Also, the conflicts with the other employees due to being easily triggered cause problems for the workplace [1]. Symptoms, such as not being able to manage time, being distracted easily, not being able to listen through meetings caused by not being able to stay still, being late, not being able to get organized and regulate feelings, interfering people's words before they finish what they have to say shows these are not character but ADHD. Because they cannot control this situation, people with ADHD have to work harder and spend more time than others. Their bright ideas and creativity could be pushed aside due to their time management issues, being easily distracted or organizational difficulties. When anger and not being able to postpone desires add to all of this, problems grow bigger. Also, substance abuse, anxiety, depression, low self-esteem added to ADHD might make the process even harder [4]. The diagnosis and treatment of ADHD during childhood will recover functionality. The continuity of treatment in adulthood, use of medication, psychological and work support is important [2]. Before solving the problem, it should be assessed if the person's job is appropriate. The chosen job should be where passions can be addressed and the qualities which are problems can be controlled. People with ADHD can work very hard, especially when motivated. Because of this, the employer and the employee should use positive aspects of ADHD when choosing and delegating jobs to prevent burnout [1]. Besides these fundamental symptoms, forgetting, time management issues, postponing, getting bored quickly, relationships with people should also be managed. Taking notes to control, keeping records, setting alarms for time, setting alarms to remind meetings, taking small breaks between jobs, making daily plans, and trying to stay on it, dividing jobs which are long and hard to track to pieces, getting help for the organization of the paperwork and making systems get the jobs easier. Setting deadlines on jobs or getting help from a person who is good at time management might solve postponing issues. If relationships with people cannot be managed, not only working alone can help but trying to learn to assess people's feelings and behaviours might also help to work together [5]. ADHD might cause problems in the workplace. But, if the solutions are searched with both employer and employee, it would help an employee to be gained who can manage very efficient and creative work.

### KEYWORDS

ADHD; employment; work; workplace; therapy

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[Abstract:0666][Psychotherapies]

## Introduction to psychodrama group therapy with children

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### ABSTRACT

Psychodrama is a therapy technique which is based on theories of spontaneity, creativity, and action. Psychodrama was developed in the mid-1930s by Jacob Levi Moreno (1889–1974). Moreno described psychodrama as “the scientific exploration of truth through dramatic method.” Using creativity combined with group dynamics and role theory, its aim is to help persons gain a new perspective through a better understanding of their own roles in life [1]. Psychodrama sessions usually consist of three phases, a warm-up activity, an action phase, and then a time for sharing. The warm-up activities build group rapport and coherence [2]. For example, the group leader may introduce the purpose of the role-plays and then interview each group member about potential scenarios that they may wish to explore through a theatrical experience. The goal is to foster spontaneity and a willingness to try new behaviours and a sense of playfulness. The action is the part where the protagonist and/or the other participants get to face their lives. And in the sharing part, group members should discuss how the enactment affected them while avoiding analysing the protagonist or offering advice. Sharing with the group leads to bonding and a sense that one is not alone [1]. Terms such as the “stage,” “protagonist,” and “auxiliary egos” are a must to understand when discussing the psychodrama therapy technique. The area where the enactment takes place is called the stage. The protagonist is the main character of the drama and is the person whose life is brought up onto the stage. The auxiliary egos are those from the group who act out certain people, concepts, and emotions [2]. Children express their problems through play and action, and their nature is spontaneous. Their tendency to learn through actions and creativity makes them suitable for psychodrama practices. Psychodrama groups allow the child to observe different behavioural patterns and to try out different ways of acting without fear of judgement, thus allowing for them to adopt different behavioural patterns [3]. During this workshop, a basic idea of the theory and the practical approach of psychodrama with children will be given.

### KEYWORDS

Child; adolescent; group; therapy; psychodrama

### References

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[Abstract:0667][Perinatal psychiatry]

## Mother–Toddler Interaction-Multiaxial Assessment (MTI-MAXA) (ABEÇED)

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### ABSTRACT

Mother–Toddler Interaction-Multiaxial Assessment (MTI-MAXA) was developed to assess and quantify the quality of interaction between the mother and 1–2-year-old toddler in a laboratory setting. Its reliability and validity findings [1] support the usage of this instrument in clinical and community settings. The MTI-MAXA procedure is formed of a structured videotaping and a 10-item scale scoring. The videotaping includes five Sections (Free Play, Tidy up, Questionnaire, Structured Play, and Separation-Reunion). This is a procedure to be easily applied and videotaped by non-professionals and examined and scored by the trained professionals. The procedure takes 45–60 minutes in total. The recommended examination milieu is a 10–20 m<sup>2</sup> room, which is designed to observe the parent–toddler interaction via

### KEYWORDS

Infant; toddler; interaction; relation; assessment; maternal

a one-sided mirror and a video-recorder. There should be no chair or any furniture, and the parent-toddler couple is asked to sit and play on a carpet on the floor. There should be a toy box, a desk to write on, and several toys (esp. cars, dolls, balls, toy animals, lego, kitchen goods, toys that generate musical sound, a piece of paper and a pencil, etc.). Both the mother and the toddler are scored on 10 items on five-grade (1: very bad to 5: obviously sufficient) Likert-type scale in MTI-MAXA by professional assessors (preferably at least two blinded assessors). Ten items are physical involvement, affective expressiveness, pleasure, responsiveness, reciprocity, joint attention, non-intrusiveness, adaptive flexibility, support, and acceptance. In the reliability and validity study, the interrater reliability of the MTI-MAXA scores was good to excellent [1]. MTI-MAXA-maternal scores were significantly correlated with Bayley mental and motor scores, and inversely correlated with Brief-Infant & Toddler Social-Emotional Assessment Scale (BITSEA)-problem scores of the children. In addition, MTI-MAXA-toddler scores were significantly correlated with BITSEA-competence and Bayley-mental scores of the children. Further studies that will use MTI-MAXA to assess the mother-toddler interaction in different clinical settings and ages (e.g. 2–4-year-old) may accumulate the findings on MTI-MAXA in terms of reliability, validity, and utility.

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[Abstract:0668][Other]

## Treatment-resistant compulsive touching behaviour and sensory hypersensitivity in a case with Hamamy Syndrome

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### ABSTRACT

**Objective:** To present a 14-year-old male with Hamamy Syndrome presented with treatment-resistant compulsive touching behaviour and sensory hypersensitivity. Hamamy Syndrome is a very rare genetic disorder, is originally described recently by Hamamy et al. in 2007 [1]. This syndrome is characterized by craniofacial dysmorphisms, including midface prominence, sparse lateral eyebrows, severe telecanthus, lacrimal-salivary apparatus agenesis, fronto-nasal abnormalities, thin upper vermillion border, protruding ears, myopia, mental retardation, sensorineural hearing impairment, congenital heart anomalies with intraventricular conduction delay, hypochromic microcytic anaemia, and skeletal abnormalities of the long bones with recurrent fractures [2]. Mutations in a single gene, IRX5 homeobox cause a recessive congenital disorder affecting face, brain, blood, heart, bone, and gonad development which suggests that IRX proteins may be crucial for the ontogeny and function of many organs in human.

**Case presentation:** A 14-year-old male patient diagnosed with Hamamy Syndrome will be presented. He has been followed by our child psychiatry department since 2016. His primary complaints are his touching behaviour to objects multiple times, counting, checking, hygiene and symmetry. His mother reports that patient spends almost the entire day with activities regarding his obsessions and compulsions. He constantly touches mother and sister's hair and wants to touch inappropriate areas. He has sensational issues with taste, smell and touch. He also does not talk in public, is more comfortable speaking with his family at home. His main medical problems are lacrimal agenesis, hearing loss, feeding problems (only eats liquid or pureed foods), and bone fractures (a total of 58 fractures and 14 operations regarding the fractures). History of psychiatric illness in the family was positive with his sister with Obsessive Compulsive Disorder. His mother and father are cousins. Similar touching behaviour and sensational problems appear in the first-degree relative members.

The patient is diagnosed with Obsessive Compulsive Disorder after our psychiatric examination with a total score of 34 in Yale-Brown scale. He also has Social Anxiety Disorder, Selective Mutism, and Enuresis Nocturna. We evaluated hypersensitivity levels to touch, smell, sound, and tactile stimulation and he had high score compared to his age group in Dunn Sensory Profile. His IQ total score is 41 (considered as an underachievement and did not reflect his actual performance). We started Fluoxetine 20 mg per day and increase the dose to 40 mg day. He became irritable and had sleep problems with this treatment. Then we started

### KEYWORDS

Genetic syndrome; sensory; compulsive; psychopharmacology; treatment

Sertraline 100 mg day which is also caused irritability. Then we switched to Clomipramine 75 mg per day and we increase dose up to 200 mg, but it did not help. Then we added Risperidone 1 mg day. Risperidone caused severe sedation, so we stopped it and we added Haloperidol 15 mg day. This treatment did not change symptoms. We also referred him to sensory integration therapy which also did not work.

*Discussion:* We will discuss psychopharmacological management of this case with its neuropsychiatric and neurobiological aspects.

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[Abstract:0669][Other]

## Transformative effect of neuroscience on psychotherapies

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### ABSTRACT

We can use the applicable neuroscience knowledge to help individuals to understand and cope with depression and anxiety. Twenty-first-century therapies can remove the mask from secret and private knowledge, and form a sounder alliance by sharing the relevant knowledge with the client. Many of the recent developments in neuroscience are very closely related to psychotherapy. The most exciting aspect of neuroscience is brain's potential to generate new cells. Discovery of neurogenesis (Cell Birth) reversed everything we thought we knew until the 1980s. We used to assume that all the brain cells we would possess throughout our life were there from the moment we were born. However, now we are aware of the possibility of generating new neurons in certain parts of our brain during our lifetime. Factors, which may cause neurogenesis to decrease, are ageing and high level of cortisol induced by chronic stress or recurring depression. It is not a coincidence that a theory attributes depression to the suppression of neurogenesis. Serious impacts, such as radiation and traumatic brain damage, suffered by brain cells, are other factors causing neurogenesis to decrease. The relevant process, which is known as neuroplasticity, shows that the brain does not function in a manner, which cannot be modified after birth, and that it is instead re-programmable through experiences.

Since neurons are social beings, there are in average 10,000 connections between them. As it may be understood from its name, neuroplasticity explains that neurons are soft and easily mouldable, just like plastic; in other words, they may be modified through what is learned from experiences. As for learning, it both establishes and strengthens synaptic relations. Neurochemical activity between synapses increases the firing power of neurons, which, in turn, is called action potential. Two main neurotransmitters in the brain are glutamate and GABA. While glutamate initiates neuron activity, GABA inhibits, or in other words, restricts it. The emergence of the neuroplasticity concept goes back to one of the founders of the field, Donald O. Hebb (1904–1985). Hebb proved that mental stimuli caused actual structural changes in the brain. Hebb, who brought lab mice home for his children to play, found out that mice, upon their return to the laboratory environment, had become faster learners, when compared to mice, which never left their cages in the laboratory. It was observed that the former's brains were bigger and heavier. Hebb's following words became some kind of a mantra: "Neurons that fire together, wire together." In other words, when you fire neurons together to support a new behaviour and to display the relevant behaviour again and again, the neurons in questions will wire together to make a permanent habit of the behaviour. Patients/clients should be informed of the necessity to feel some discomfort, in order to understand how they can be assured of the restructurability potential of their brain. At the relevant stage, it may be useful to use an old vinyl record metaphor. During the vinyl's rotation, the stylus used to find the microscopic changes on groove traces. If the vinyl was damaged, the stylus gets caught up in the same groove, and the vinyl kept playing the same short section of the same song over and over again. In order to remove the stylus from the deep groove it was caught in, the listener had to leave his seat. The situation is similar in anxiety and depression. In order for individuals to make a new behaviour

### KEYWORDS

Transformative; effect; neuroscience; psychotherapies; experience

permanent, they have to display it, even if they do not feel comfortable. The possibility of restructurability depends on the clients' understanding of the necessity to leave their comfort zone, just like removing a phonography stylus caught in the groove. The relevant process requires intense and recurring behaviour change. Neuroplasticity covers many changes in the brain, arising from learning; these may be summarized as follows: establishment of new synaptic connections, strengthening of connections through LTP (long-term potentiation), dendritogenesis (formation of new dendrites, neurogenesis – birth of new neurons – Buonomano and Merzenich, 1998). Our goal in therapies is to achieve long-term potentiation (LTP) in neural circuits relevant to anxiety and depression. To explain LTN, we can state that neurons, which are not fired simultaneously, lose their connections. When teaching your clients how practising is the main thing that matters, give them impressive examples with regard to neuroplasticity. The purpose of giving this example is to show that, when any part of the brain gets used to the “use it or lose it” approach, the relevant part will further grow due to neuroplasticity.

[Abstract:0670][Autism]

## Theory of mind: division of the internal and external world

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### ABSTRACT

I know I am conscious: I am seeing, hearing, feeling something here, inside my own head. But is consciousness-subjective experience also there, not only in other people's heads, but also in the head of animals? [1] American physicist, Michio Kaku, has quantified consciousness with a theory that there are three levels of consciousness. He suggests that consciousness is the number of feedback loops required to create a model of your position in space, with relation to other organisms and time. Integrated information theory (IIT) suggests five phenomenological axioms: intrinsic existence, composition, information, integration, and exclusion [1]. From these, it derives five postulates about the properties required of physical mechanisms to support consciousness. A healthy and awake person usually perceives the external world as a seamless whole. Our perception of the external world depends on the integration of information from different senses [2]. The human brain, which integrates these information, cannot be considered a passive, stimulus-driven device or a passive transformer, but rather as an extraordinary integrative organ, which not only perceives but also creates new realities [2]. On the other hand, we strongly believe that we have a mind as Rene Descartes stated “cogito ergo sum.” The mind that can be assumed as the gatekeeper of inner world (the human body) is the interface between internal and external worlds. One fascinating characteristic of human nature is our ability to consciously use our imagination to simulate reality as well as fictional worlds. We could assume that thought, language, memory, decision making, emotions, self-awareness, and comportment are formed by the coincidental processing of inputs driven from environmental context (social or external facts, necessities, etc.) and demands of internal milieu (personal urges, desires, values, targets, memory, etc.). Identical stimulus can trigger vastly different responses depending on situational context, past experience, and present needs. Since consolidation of the imaginative representations of “self” concept or emotions (e.g. autism) or the differentiation of the source of information and/or stimulus either from internal milieu or from external may never develop enough (e.g. ASD) or it becomes significantly disturbed (e.g. schizophrenia) and cognition, consciousness, and self-awareness are all formed by integrative functions of brain (especially association areas), we may assume that several integrative functions are not sufficiently developed in particular psychiatric disorders. Specifically, the inferior parietal lobule are responsible for representing one's own mental states, superior temporal sulcus is specialized in the representation of the mental states of others [3]. The structures including amygdala, the anterior cingulate gyrus, ventral and dorsal medial prefrontal cortex are involved in both [3]. The goal of this presentation is to review particular areas in brain that have role in differentiation of the source of information and/or stimulus either from internal milieu or from external.

### KEYWORDS

Autism; integrative processing; mentalizing; theory of mind; consciousness

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[Abstract:0673][Other]

## Electroconvulsive therapy (ECT) application in children and adolescents electroconvulsive therapy

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### ABSTRACT

Electroconvulsive therapy (ECT) may be an effective treatment for adolescents with psychiatric disorders when conservative treatments have not been successful. The literature on ECT in adolescents includes studies and case reports. So we have very little knowledge on this subject. In this case presentation, the treatment process with ECT after the suicide attempt of a 15-year-old male psychotic depression patient will be discussed.

### KEYWORDS

Child; adolescent; ECT; psychotic depression; bipolar disorder

[Abstract:0674][ADHD]

## What does current Literature tells us for the aetiology of ADHD?

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### ABSTRACT

Attention-deficit hyperactivity disorder (ADHD) is one the most common psychiatric disorder with pervasive effects. Epidemiological data represent a prevalence rate of % 4 in adults %6–8 in children. ADHD arises on a polygenetic base with multiple heterogenous factors. Genetic Factors: ADHD is one of the most heritable disorder wit a mean 0.76 heritability surpassing schizophrenia and bipolar disorder. ADHD is a familial disorder with a relative risk risk about 5–9 in first-degree relatives of individulas with ADHD. Various different genomic variants have been associated with ADHD risk These variants include common DNA sequence variants - single nucleotide polymorphisms (SNPs)- Although many studies have been conducted, there is no precise single nucleotide polymorphism mainly associated with ADHD rather a a composite risk based upon these nucleotide polymorphisms could be discussed. Whole-genome investigations represent specific single dopaminergic, serotonergic, and noradrenergic candidate genes. Each of these genes were assumed to be associated with ADHD. However according to current knowledge, variants in single genes associated with ADHD should be investigated with caution as some of these variants reveale false positive results. Various nutritional factors, toxins, diateary factors and exposures to stressful life events in childhood and poor attachment with parents are also blamed for development of ADHD Low birth weight and maternal smoking during prgenancy are two major prenatal factors in pathogenesis of ADHD. in-utero exposure to maternal stress, cigarette smoking, alcohol, prescribed drugs (eg, paracetamol), illicit substances are also other factors. Environmental toxins, especially in-utero exposure to lead, organophosphate pesticides, and polychlorinated biphenyls, are other factors for ADHD. Nutritional deficiencies (eg, zinc, magnesium, and polyunsaturated fatty acids) could not be shown systematically to cause ADHD evidence based. Sugars and artificial food additives and food colourings were also balmed and discussed further Feingold Diet with restriction of sugar and artificial additives and food colourings yielded negative results. Psychosocial risks factors low socio-economic status, parental conflict have been found not casual rather correlated with ADHD. Studies regarding mother-child relation and attachment showed that the problems regarding child and parent relation is not a cause rather a result of ADHD. Whereas early parental and social depriavtion has been shown for a casual relationship with ADHD. Animal studies also interestingly showed that some environmental factors could inetract with genetic material an deven change the genetic through methylation of DNA –epigenetic factors. These show that there is complex and intericate environmental and genetic factors which inetract each other in each level.

### KEYWORDS

ADHD; etiology; prenatal factors; nutritional factors; toxins; perinatal factors



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[Abstract:0675][Psychopharmacology]

## Anticholinergic medications used in clinical practice

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### ABSTRACT

Anticholinergic drugs are known as muscarinic receptor antagonists, parasympatholytics, and cholinolytics. They inhibit the effect of acetylcholine on the parasympathetic nervous system (more on M1, M2, and M3 receptors, less on nicotinic receptors). They block transmission by inhibiting postganglionic nerves. They are divided into two groups as natural (atropine, scopolamine) and synthetic/semisynthetic (tolterodine, amitriptyline).

*Antidepressants:* Amitriptyline is not preferred in the elderly due to its strong sedative properties with hypotension and arrhythmia potential. Paroxetine is the most effective anticholinergic SSRI, and the risk of hyponatremia in the elderly is high. Venlafaxine is low in anticholinergic activity, but increases hypertension and predisposition to hyponatremia and is required dose adjustment in renal failure. The sedative effect of trazodone is high, may be preferred in sleep disorders with low dosage (25–150 mg) due to effects on H1 receptors. Clinical trials on the effects of fluvoxamine, bupropion, imipramine, desipramine, and cholimipramine (high anticholinergic effect and hypotension) in elderly are limited.

As an alternative to these drugs, sertraline and citalopram may be preferred in the treatment of depression. Non-pharmacological approaches can be applied in the treatment of insomnia, and trazodone can be given if necessary. Gabapentin may be appropriate for neuropathic pain and depression.

*Benzodiazepines:* Alprazolam should be used for a limited period of time, which can cause rebound anxiety and withdrawal syndrome. Diazepam is not preferred due to its long half-life. Alternatively, psychotherapy, exercise, yoga, aromatherapy, music, etc. are recommended. SSRIs and lorazepam are more suitable for medical treatment.

*Antipsychotics:* They are mostly prescribed for behavioural disorders in the treatment of delirium and dementia. Their long-term use is risky. They cause increases in falls, fractures, confusion, somnolence, extrapyramidal side effects, and mortality. Success rate in the treatment of agitation is close to 20%.

Alternatively, citalopram or trazodone may be used as an antidepressant in dementia behaviour disorder. In the treatment of delirium, non-pharmacological treatment should be considered firstly, and haloperidol should be added when necessary.

*Antiepileptics:* Carbamazepine and oxcarbazepine are the most risky drugs in terms of anticholinergic load. Alternatively, levetiracetam and lamotrigine may be preferred. Gabapentin or levetiracetam may be considered in neuropathic pain.

*Anti-spasmodic:* The anticholinergic activities of drugs used in the treatment of urinary incontinence (tolterodine, trospium, solifenacin, propiverine, oxybutynin, fesoterodine, darifenacin, and flavoxate) are very high.

Alternatively, the patient may be given frequent WC visits (at least 2 h intervals), pelvic muscle strengthening exercises (Kegel), fluid restriction in the evening, and cloth diaper.

*Antihistamines:* Chlorpheniramine, diphenhydramine, doxylamine, clemastine, hydroxyzine, and meclizine have high anticholinergic activity in these groups of drugs. Cetirizine, loratadine, desloratadine, and levosetirizine should be preferred because they are low anticholinergic drugs. It is not recommended to use in the treatment of insomnia and trazodone is more suitable in this case.

*Other medicines:* Antihypertensive drugs including captopril, atenolol, metoprolol, chlorthalidone, triamterene, furosemide, and nifedipine, anti-coagulants warfarin and dipyridamole, antiarrhythmic digoxin, steroid prednisolone, H2 receptor blocker ranitidine, methylxanthine theophylline used in the treatment of COPD, antidiarrheal loperamide, antianginal isosorbide and, anti-inflammatory colchicine are low anticholinergic drugs. Antiemetic dimenhydrat, opioid analgesics meperidine, and urinary and gastrointestinal system antispasmodics scopolamine are high anticholinergic effective drugs.

### KEYWORDS

Drugs; anticholinergics; elderly; antidepressants; benzodiazepines; antipsychotics



[Abstract:0676][Psychopharmacology]

## Clinical importance of anticholinergic adverse effects in elderly

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### ABSTRACT

The use of anticholinergic drugs in the elderly is around 50%. Among users, the rate of those with severe anticholinergic burden (total score  $\geq 3$ ) is as high as 30%. Side effects of anticholinergics are classified as slight, moderate, and severe as follows:

Slight side effects include diminished perspiration, mild dilation in pupils, difficulty in urination, tiredness, somnolence and dizziness, mild memory problems, and concentration difficulty.

Moderate side effects include tachycardia/ palpitations, mydriasis/vision disorders, blurred vision, constipation, restlessness, confusion, and memory disorders.

Severe side effects include difficulties in chewing, swallowing and speaking, malnutrition, respiratory tract infections, paralytic ileus/faecal impact, urinary retention/urinary infections, tachyarrhythmia, congestive heart failure, agitation, disorientation, hallucinations, ataxia, hyperreflexia, and seizures.

Side effects can lead to adverse outcomes associated with ageing. These include cognitive impairment, delirium, functional impairment, falls, and mortality.

*Cognitive impairment:* Cognitive impairment and dementia due to anticholinergics are more likely to occur in patients over 80 years of age, with multiple comorbidities ( $>2$ ) and psychiatric illness. A possible reduction in the effect of cholinesterase inhibitors used in patients with dementia using anticholinergics may be seen. In addition, anticholinergics in Alzheimer patients also trigger the onset of psychosis.

In elderly individuals and dementia patients, anticholinergic burden should be kept at minimum or eliminated. Alternative applications and drugs (especially those not crossing the blood–brain barrier) should be tried instead of anticholinergics.

*Delirium:* As known, delirium is a syndrome that is often overlooked in the elderly, untreated, and has high morbidity and mortality risk. Drugs are the cause of 12–39% of delirium cases in the elderly. Anticholinergics-induced delirium may be present as a hypoactive or hyperactive type. In studies investigating the relation between anticholinergics and delirium in the elderly, the results are inconsistent due to existing many confounding factors and different measurement methods.

*Falls:* Due to carelessness of the individual, it is called “falling” in order to become immobile below the level that you are in. Fall is a common condition in old age. Anticholinergics are preparing for falling due to weakness, fatigue, confusion, blurred vision, and cognitive impairment, incontinence and functional impairment, which are side effects specific to ageing. It has been reported that the use of anticholinergics increases the risk of falling in community dwelling and hospitalized elderly.

*Physical performance and functionality:* Advanced age and decrease in acetylcholine levels are the main reasons for negatively affecting function. Anticholinergics disturb functionalism (basic and instrumental activities) in the elderly by central and peripheral side effects such as confusion, dyskinesia, lethargy, insomnia, dizziness, headache, nausea, vomiting, diplopia, mydriasis, and cycloplegia. This situation is even more serious if there are polypharmacy and high anticholinergic burden.

*Mortality:* There are no randomized controlled trials that could provide risky populations as well as observational studies on the effects of anticholinergics on mortality in the elderly. The results of the studies so far vary, but it is thought that the risk of mortality may be increased in patients on anticholinergics, particularly those with advanced age, frailty, cardiovascular diseases.

*Conclusions:* Side effects of anticholinergics are more frequent and more serious in the elderly. Anticholinergics may increase functional and cognitive impairment, morbidity and mortality in the elderly. The relationship seems likely to be based on the pharmacologic properties of the drugs.

### KEYWORDS

Drugs; anticholinergics; elderly; cognitive impairment; functionality; mortality

[Abstract:0677][Other]

## Approach to the military personnel with psychiatric issues

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**ABSTRACT**

*Objective:* In recent years, it has been observed that there are a number of problems in the practice of mental health and illnesses of soldiers regarding the regulations made in the health system, and that physicians have faced various difficulties in solving these problems. We aimed to pass on our knowledge in this regard by giving various information about solving the problems experienced and handling the facts.

*Subjects of course:*

1. General information on military service and medical examinations
  - (a) Military definitions
  - (b) Classification of military personnel
  - (c) Medical examinations during the military service
  - (d) Common phenomena and principles of approaches
  - (e) Medical examination procedures for military personnel (military students, soldiers, etc.)
2. Turkish Armed Forces, Gendarmerie General Command and Coast Guard Command Staff Health Inspection Directive
  - (a) Definition of instruction
  - (b) Psychiatry related matters, diagnosis and coding system, decision-making
  - (c) Actions to be carried out for carrying/using weapons according to the health status of the military personnel
  - (d) Interpretation of charts on diagnosis and decision
3. Approaches to health problems of officers, non-commissioned officers and specialist staffs
  - (a) Routine examinations and information on the documents required during the examination (referral document, continental questionnaire form, military functional evaluation and continental questionnaire)
  - (b) Special examinations (periodic examinations, foreign temporary duty examinations, primary assignment reports, etc.)
  - (c) Specialist examinations (health reports of SWAT team members, divers, parachute jumpers, SAT, SAS, Special Forces, etc.)
  - (d) Approach to long-term follow-up and/or chronic illness
    - (1) Adaptive Disorder
    - (2) Neurotic Disorders (Anxiety and Depressive Disorders)
    - (3) Psychotic Disorders (Bipolar and Psychotic Disorder)
4. Approach to soldiers' health problems:
  - (a) Approach to the staff with a psychiatric problem in military troops: Introduction of guidance and counselling centres
  - (b) Information related to the documents required during examination (referral document, continental questionnaire form, military functional evaluation and continental questionnaire form)
  - (c) Common psychiatric problems in ranker and privates:
    - (1) Adaptation problems with military, Adaptive Disorder
    - (2) Antisocial Personality Pattern, Antisocial Personality Disorder and Criminal Antisocial
    - (3) Substance Abuse
    - (4) Neurotic Disorders (Anxiety, Depression, Conversion Disorder, Simulation)
    - (5) Psychotic Disorders (Psychotic Disorders, Bipolar Disorder)
5. Discussion and Conclusion: Questions that are mindful

**KEYWORDS**

Adaptive disorder; antisocial; anxiety; depression; military personnel

[Abstract:0679][Eating disorders]

## Orthorexia nervosa: diagnosis and treatment approaches

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**ABSTRACT**

Orthorexia nervosa describes a pathological obsession with proper nutrition that is characterized by a restrictive diet, ritualized patterns of eating, and rigid avoidance of foods believed to be unhealthy or impure. Orthorexia nervosa (Greek: ortho–correct, right; orexis–appetite, desire) is a term introduced in 1997 by Steven Bratman and is defined as a pathological fixation with righteous and healthy eating. Orthorexia nervosa, literally meaning “proper appetite,” is a pathological fixation with healthy food that has aptly been described

**KEYWORDS**

Diagnosis; eating disorders; orthorexia nervosa; unhealthy eating; treatment

as “a disease disguised as a virtue.” Although prompted by a desire to achieve optimum health, orthorexia may lead to nutritional deficiencies, medical complications, and poor quality of life. Despite its being a distinct behavioural pattern that is frequently observed by clinicians, orthorexia has received very little empirical attention and is not yet formally recognized as a psychiatric disorder. An examination of diagnostic boundaries reveals important points of symptom overlap between orthorexia and anorexia nervosa, obsessive-compulsive disorder (OCD), obsessive-compulsive personality disorder (OCPD), somatic symptom disorder, illness anxiety disorder, and psychotic spectrum disorders. Neuropsychological data suggest that orthorexic symptoms are independently associated with key facets of executive dysfunction for which some of these conditions already overlap. Discussion of cognitive weaknesses in set-shifting, external attention, and working memory highlights the value of continued research to identify intermediate, transdiagnostic endophenotypes for insight into the neuropathogenesis of orthorexia. An evaluation of current orthorexia measures indicates a need for further psychometric development to ensure that subsequent research has access to reliable and valid assessment tools. Optimized assessment will not only permit a clearer understanding of prevalence rates, psychosocial risk factors, and comorbid psychopathology but will also be needed to index intervention effectiveness. Though the field lacks data on therapeutic outcomes, current best practices suggest that orthorexia can successfully be treated with a combination of cognitive-behavioural therapy, psychoeducation, and medication. Although not yet officially recognized as a psychiatric diagnosis, orthorexia is often associated with significant impairment, as what starts as an attempt to attain optimum health through attention to diet may lead to malnourishment, loss of relationships, and poor quality of life. Relative to other styles of unhealthy eating, orthorexia has been largely neglected by the scientific community even though its behavioural pattern is frequently observed by eating disorder specialists. In this presentation, I describe what is known about the symptoms, epidemiology, and assessment of orthorexia, including a discussion of its diagnostic boundaries and neuropsychological profile.

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[Abstract:0680][Non-biological treatments]

## Applications of repetitive transcranial magnetic stimulation in psychiatry

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### ABSTRACT

Repetitive transcranial magnetic stimulation (rTMS) is a novel approved stimulation method in the treatment of medication-resistant depression. Recent studies have shown promising results in alleviating different aspects of psychiatric symptoms involved in different psychopathologies such as cognitive impairments, anxiety spectrum disorders, addiction, and auditory hallucinations. In addition to its treatment roles, TMS has been used as a diagnostic tool in several neuropsychiatric conditions. In considering its favourable side effects profile, and regarded as an easily applicable method, rTMS has been one of the most preferred treatment options in neurology and psychiatry. Although studies compared the rTMS and electroconvulsive therapy (ECT), which is the most famous stimulation method in psychiatry, in terms of impact on depression showed the superiority of ECT, rTMS has some advantages involving an application without anaesthesia and an inpatient treatment procedure as well as with regard to cost effectiveness. Additionally, rTMS is considered to have an obvious advantage in terms of safety and tolerability than ECT. Furthermore, rTMS has been reported to have no cognitive side effects but has been associated with improvements in cognitive

### KEYWORDS

TMS; depression; mechanism; application; parameters

functions. The principle behind TMS includes the stimulation of the regional cortical neurons by a magnetic field generated by direct electric current through a circulatory coil placed over the scalp. This magnetic stimulation generates an electric current in the cortical neurons, which affects the cortical neuronal transmembrane potential and leads to depolarization or hyperpolarization in the stimulation area and the interconnected regions. The frequency of the stimulus is fundamental as a high-frequency (HF) (>1 Hz) stimulus induces cortical excitability and has an activating/depolarizing effect, while a low-frequency (LF) (1 Hz or less) stimulus inhibits transmembrane potential and has an inhibitory/hyperpolarizing effect. Both HF-rTMS applied to the left dorsolateral prefrontal cortex (DLPFC) and LF-rTMS applied to the right DLPFC have been reported to be efficacious in the treatment of depression as rTMS has been thought to address the possible contrasting roles of the left and right hemispheres in treating that disease. rTMS, which is the most widely used form of TMS in psychiatry, yields long-lasting effects in cortical neuronal activity in long-term potentiation (LTP) and long-term depression (LTD). Although the underlying mechanism of TMS is not yet well elucidated, modulation of neuronal activity by increasing or decreasing cortical excitability, neuroplasticity, modulation in the secretion of endogenous dopamine, and some neurotrophic factors, like brain-derived neurotrophic factor (BDNF), and alteration of serotonergic and dopaminergic receptor levels are the main components that are possibly involved in the mechanisms of action. Studies that have emphasized alterations in cortical excitability and dopaminergic pathways by TMS have recommended that additional studies be conducted to assess the efficacy of rTMS in psychiatric disorders related to altered cortical activity and dopaminergic dysfunction. In this course, we will discuss the theoretical and practical aspects of the rTMS applications involved in the current treatment protocols conducted in psychiatric conditions, as well as review the suggested mechanisms of action for rTMS presented in the literature and will highlight the advantages of this novel promising therapeutic stimulation method.

[Abstract:0681][Schizophrenia and other psychotic disorders]

## A new model for assessment of cognitive functions in patients with schizophrenia (BDG-TR): theoretical background

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### ABSTRACT

Nearly three-fourth of all schizophrenia patients is affected by cognitive impairment (O'Carroll, 2000). Cognitive symptoms are associated with loss of function in patients' daily lives (Green et al., 2000). Cognitive improvement is found to be related with improvement in clinical symptoms and functioning (Pandina, 2013). Current batteries of neuropsychological testing are generally not easily accessible, expensive, and time-consuming. There is a necessity for a more practical tool. How patients' cognitive deficits reflect on their daily functionality also needs to be known. Given this necessity, in 2008 Ventura et al. developed the Cognitive Assessment Interview (CAI). CAI is a 10-item scale completed by the examiner during interviews with the patients and their relatives (informants), where each question is given a score on a Likert scale ranging from 1 to 7. Patient's, relative's, and the interviewer's assessment are scored separately. Six cognitive domains assessed by CAI: verbal learning, working memory, reasoning and problem solving, speed of processing, attention/vigilance, and social cognition. Turkish version CAI is also a practical test that can be used to measure cognitive functions of patients with schizophrenia. It has a short administration time. For the patient interview, it takes 18.7 minutes; for the informant interview, it takes 18 minutes.

### KEYWORDS

Cognitive assessment;  
cognitive functioning;  
schizophrenia; CAI; BDG

[Abstract:0683][Schizophrenia and other psychotic disorders]

## Biomarkers in schizophrenia: recent updates

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**ABSTRACT**

Schizophrenia is a chronic illness that affects 1% of the population, leading to a significant loss of functioning. The disease is seen with positive and negative signs throughout the course. It is a disease that starts at an early age and is a long-lasting and important public health issue with the loss of power it creates. For this reason, many new researches and data on treatment and follow-up are mentioned. When we look at the aetiology of schizophrenia, genetic factors play an important role. But, other factors such as inflammation, environmental factors, neuromediators and neurodegenerative processes, and chemicals are also involved in aetiology.

In recent years, the prevalence of biomarkers has increased steadily in the diagnosis and follow-up of schizophrenia. Biomarkers are isolated and workable data for that disease. Identification and evaluation of biomarkers is very important. Today, however, there are many limitations. In studies conducted for biomarkers, the data are not always consistent and there are no significant differences between groups in all studies. But, in today's literature, biomarkers are becoming increasingly important.

There are many neurotransmitters in the pathophysiology of schizophrenia. Over the years, however, these studies and hypotheses have mostly focused on dopamine. Dopamine imbalance is the main cause of schizophrenia. However, dopamine dysfunction alone is not enough to explain the pathophysiology of schizophrenia. Many recent surveys have shown that they are involved in this process in different neuromediators. For this reason, the search for new mediators has increased due to the fact that other neuromediators other than the dopamine process may also be present.

Early diagnosis and treatment are very important because of the illness of the patient and the loss of power. A biomarker that has validity in diagnostic tools today is completely absent. However, work is increasing. It is important to investigate biomarkers for diagnosis and follow-up.

**KEYWORDS**

Schizophrenia; biomarker; neuromediator; antibodies; periferic cells

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[Abstract:0684][Stress and related situations]

**Biological aspects of resilience beyond genetics**

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**ABSTRACT**

It is known that only 20–25% of people, who have been exposed to major adverse life events, develop symptoms of major depressive episode (MDE) and although almost 70% of the population are exposed to traumatic life events, 5–10% of them are diagnosed with posttraumatic stress disorder (PTSD). MDE and PTSD are mainly investigated to understand the underlying neurobiology; however, biological aspects of health and resilience are mostly ignored. In addition, studies about stress mainly focus on MDE and PTSD, but resilience for stress-related somatic disorders and other psychiatric disorders. In addition to these gaps, resilience is a broad term, which has various definitions by different authors, as they suggest that mechanisms of resilience may be dysfunction specific, general or global. Genetic predisposition is one of the most investigated global resilience mechanisms and investigation of genetic polymorphisms shows many pathways related to resilience; however, studies on systems neuroscience and molecular neuroscience also produce a lot of information about dysfunction specific and general biology of resilience. Regulation of the hypothalamus–pituitary–adrenal axis at the optimum level, stress-related release ratios of

**KEYWORDS**

Stress; resilience; cognitive reappraisal; hippocampus; social support

dehydroepiandrosterone to cortisol and neuropeptide Y to noradrenaline levels, levels of brain-derived neurotrophic factor and other neurotrophic factors such as galanin, the ability to restore hippocampus and ventromedial prefrontal cortex volume, level of inflammatory factors as IL-6 and IL-1 released in response to stress and testosterone levels are one of the most replicated findings. On the other hand, people who have good emotional regulation capability, good coping skills, and high social support are among the most resilient individuals. Current studies support this fact by showing that brain networks related to cognitive flexibility, cognitive reappraisal, and emotional regulation are important modulators of resilience. The way social support affects neurobiology as increasing oxytocin levels and changing amygdala activation also guides the pathways for resilience. The role of microbiota in resilience is also being investigated lately with promising findings.

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[Abstract:0685][Eating disorders]

## Pica/rumination disorder: diagnosis and treatment approaches

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### ABSTRACT

Pica is called the constant eating of non-nutritive substances. This should continue for at least one month. The eating of non-food items should not be appropriate to the level of development. This eating behaviour should not be part of a culturally approved practice. Typically, small children can eat paint, plaster, yarn, hair, and fabric parts; older children may eat soil, animal faeces, stone, eraser, and paper. Specific behaviour of the pica is seen in children aged 12–24 months. Biological, psychological, and socio-cultural factors are involved in the appearance of the pica. For this reason, iron deficiency and anaemia tests should be requested in all cases. In some pica cases, parental neglect or abuse has been reported. In differential diagnosis, developmental retardation, autism spectrum disorder, and schizophrenia should be considered. The most serious medical complications are lead poisoning, intestinal obstruction, intestinal parasitosis, and severe iron deficiency. Psychoeducation is important in therapy. Techniques such as positive reinforcements, role modelling, and over-correction can be applied in behavioural approaches. Increasing the amount of mother–child interaction and stimuli can give positive results. There are studies suggesting that pica should be included in obsessive-compulsive disorder and that SSRI use is effective in treatment. Rumination disorder is the repetitive and voluntary ingestion of food that has been swallowed for at least 1 month after a period of normal functioning. After the food is brought back into the mouth, it is swallowed or thrown out. This behaviour cannot be better explained by gastrointestinal disease, psychiatric, or medical conditions. Often seen in infants 3–12 months old. The frequency of male infants is higher. It is known that the negative psychosocial environment plays a major role in the development of the rumination disorder. Central nervous system lesions, gastrointestinal system diseases and infections that cause vomiting should be excluded. Malnutrition may develop due to regurgitation despite adequate intake of food. Medical complications include dental caries, esophagitis, dehydration and weight loss. The primary goal in the treatment of rumination disorders is to maximize mother–baby interaction. Behavioural approaches are also important for rumination syndrome. Habit reversal using relaxation and diaphragmatic breathing are the behavioural approaches used.

### KEYWORDS

Diagnosis; eating disorder; pica; rumination disorder; treatment



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[Abstract:0686][Autism]

## Atypical olfaction pattern in autism: a possible first clue in early diagnosis

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### ABSTRACT

Olfaction behaviour is important in living beings to communicate and bond with the mother. In humans, it can be said that infants get attached to the mother to the extent that they perceive the clues of mother's scent and the function of scent can be said to have a significant role in mother–infant bonding. It has been determined that autistic children can recognize people frequently by smelling the clothes or body odours of family members repetitively and that this situation has a significant effect in autistic individuals' bonding with primary care-givers. In autistic individuals, extraordinary responses in sensory input such as auditory, visual perception, and increased olfactory sensitivity have frequently been defined. It has been thought that these different sensory perception symptoms including olfaction are distinctive, stimulative, and descriptive for autism and they have taken their place in the diagnostic algorithm for autism. In studies about autistic children and adults, different results have been found about olfactory perception threshold, odour discrimination, and olfactory sensitivity. While it has been shown in studies with normal adults and children that anxiety and depression decrease sensory olfactory sensitivity and functionality of odour discrimination, in children with High Functioning Prevalent Developmental Disorder (HFPDD), it has been reported that sensory hypersensitivity is associated with anxiety and depression; however, it has also been reported that sensory hypersensitivity can be the core finding of HFPDD independently. It has also been reported that as a result of olfactory hypersensitivity, autistic children are more disturbed and uneasy about different odours and this situation has been reported to influence the functioning and determination of "odour identification" negatively. On the other hand, it has been predicted that lower olfaction functioning in the form of odour threshold and odour discrimination in autistic children when compared to healthy controls can be explained with relative insufficiency of learning, perception, attention, and focusing levels of these cases in addition to cognitive functions when compared with healthy controls. Interestingly, it has been argued that damaged olfactory detection thresholds in autistic individuals can create insensitivity against some odours and can positively contribute to behaviour and hypersensitivity. Olfactory function is a well-known early biomarker of neuron functioning in neurodevelopmental disorders in young children and neurodegenerative disorders in adults. In neurodevelopmental disorders such as autism, atypical sense, primarily olfactory processing is known to exist in very early periods of life. It has been emphasized that future studies about olfactory processing in autism will be important in terms of finding out significant associations between brain function, clinical behaviour, and treatment; and that, finding out different or atypical olfaction patterns very early will improve and accelerate this process. Most importantly, realizing atypical olfactory behaviour early is very important in terms of early detection of "autism spectrum disorder" and it could make clinical contribution in creating a point of view toward being maybe the "first clue," especially in early diagnosis.

### KEYWORDS

Atipic; autism; early diagnosis; first clue; olfaction

[Abstract:0688][Psychotherapies]

## Introduction to Acceptance and Commitment Therapy (ACT)

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### ABSTRACT

Acceptance and Commitment Therapy (ACT) is a psychotherapy approach that is based on functional contextualism as a philosophy and Relational Frame Theory (RFT) as a theory. ACT has been shown to be effective in a wide variety of clinical problems, including depression, anxiety, posttraumatic stress disorder, substance use, chronic pain, and even psychosis. It does not aim to eliminate symptoms, rather to improve psychological flexibility which is defined as “the ability to contact the present moment more fully as a conscious human being, and to change or persist in behavior when doing so serves valued ends.” Psychological flexibility underlies the ACT approach to psychological health and psychopathology and is established through six core processes that consist of acceptance, defusion, being present, self-as-context, values, and committed action. At this workshop, we aim to introduce general principles of the ACT model based on six core processes using experiential exercises, to teach how to apply basic ACT techniques and to improve clinical skills.

### KEYWORDS

ACT; psychotherapy; psychological flexibility; experiential exercises; clinical skills

[Abstract:0689][Psychotherapies]

## Willingness to accept the value of sadness: ACT interventions for depressive spectrum disorders

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### ABSTRACT

Depression and the depressive spectrum disorders represent one of the most frequent outpatient psychiatric complaints in the world. Current prevalence rates for major depression are twice as high for women (21.3%) as for men (12.7%) and appear to have been increasing steadily over the past half-century. Over this same time span, the median age of onset, now the late teens to the early twenties, has become progressively lower. Although 30% of patients with major depressive disorder have failed response to antidepressant medications or psychotherapy, at least three main psychological approaches to treatment of depression – Cognitive Therapy, Interpersonal Therapy, and Behavioural Activation – have recognized as interventions with “well-established” empirical support for their efficacy based upon favourable research findings comparing them with antidepressant medication. Besides these approaches, mindfulness-based components within cognitive therapy have also enjoyed empirical support in the alleviation of depression and/or prevention of its reoccurrence. One of the prominent forms of the third-wave behavioural therapies, Acceptance and Commitment Therapy (ACT) can be a powerful alternative to the approaches that mentioned above, because of the different handle of psychopathology, especially in the treatment-resistant group. ACT, which aimed at increasing psychological flexibility rather than symptom reduction, suggests that the internal negative experiences such as sadness, worry, or blues are not the parts of human internal life that need to be removed from; on the contrary, these experiences are the valued component of human nature. ACT reveals that the painful parts of human experiences carry the strong meaning for us at the same time. Like the two facets of a medallion; valued sides are always with the painful sides. Because of this reason if you want to release from the negative part of the experience, then the valued part of the experience will be faced with the risk of disappearing. ACT therapists try to clarify the meaning of this unwanted internal experience for the clients live and use some behavioural strategies to the cognitive components of this experience during the sessions.

### KEYWORDS

Acceptance and Commitment Therapy; depression; values; behavioural interventions; third-wave behavioural therapy

[Abstract:0691][Neuroscience: Neuroimaging-Genetics-Biomarkers]

## Leptin, Ghrelin, and attention-deficit/hyperactivity disorder

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Attention-deficit/hyperactivity disorder (ADHD) is a major public health issue. It is one of the most frequent childhood-onset psychiatric conditions, with an estimated prevalence exceeding 5% in school-age children. It is well known that ADHD is often associated with other disorders. Whereas the comorbidity between ADHD and psychiatric disorders has been extensively explored, the association with somatic conditions has received much less attention. Obesity associated with ADHD has been quite overlooked in researches as well as in clinical practice. However, increasing empirically based evidence has suggested a significant association between ADHD and obesity. Although research suggests that there is a possible link between obesity and ADHD, the mechanism of this association remains uncertain. Appetite is controlled by many organs and tissues at the central and peripheral levels and regulated by complex processes, in which various hormones (leptin, ghrelin, adiponectin, insulin, cholecystokinin, etc.) and neuromediators (neuropeptide Y, agouti gene-related peptide, proopiomelanocortin, cocaine-amphetamine-regulated transcript, etc.) play a role. Leptin has a significant role in food consumption and energy balance regulation as it reduces appetite and increases energy consumption. Ghrelin is a potent orexigenic (appetite stimulant) systemically. Ghrelin reduces leptin's effect of reducing food consumption and body weight by modulating the release of several hypothalamic peptides. In this presentation, up-to-date information on the relationship between leptin, ghrelin and ADHD will be reviewed.

**KEYWORDS**

Attention-deficit/hyperactivity disorder; ghrelin; hormones; leptin; obesity

[Abstract:0692][Neuroscience: Neuroimaging-Genetics-Biomarkers]

## Leptin, ghrelin, and other peptide hormones: an overview of their structures and functions

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We know that peptide hormones act as neurotransmitters on neurological systems, as well as neuromodulator effects. Ghrelin and leptin are the best known of these hormones. However, how it effects on the neural system and affects the psychiatric clinic are still open to discussion. Ghrelin started to be released from the placenta in the mother's womb, and also released from thyroid glands, kidney, lung, lymph tissue, as well as many organs including gastric neuroendocrine cells [1]. Ghrelin and leptin not only regulate our hunger-toughness but also help in regulating many hormonal axes such as growth hormone, thyroid hormones, follicle-stimulating hormone, and luteinizing hormone [2]. Several studies have been carried out on Ghrelin about neurodegenerative diseases, addiction, schizophrenia, mood disorders, anxiety disorders, OCD, depression, eating disorders, and insomnia [1,3]. Similarly, it has been emphasized that leptin hormone influences the release of steroid hormones by acting on the pituitary axis. It is mentioned that the leptin level may be a prognostic marker for treatment response in depressed patients [4]. The leptin hormone was found to be related to brain development and neuroplasticity. In our talk, we are planning to make a horizon speech by trying to emphasize the structure, mechanism and functions of these hormones.

**KEYWORDS**

Leptin; ghrelin; peptide hormones; mood disorders; neurodevelopmental process

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[Abstract:0693][Eating disorders]

## Bigorexia: diagnosis and treatment approaches

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### ABSTRACT

Bigorexia is a mental disorder characterized by excessive mental and physical activities that accompany a perception of person's general body structure or a particular region of his body (particularly the arm muscle groups) being not sufficiently built or muscular enough. Muscle dysmorphism, reverse anorexia, Adonis complex, Arnold syndrome are other common names for this phenomenon. Muscle dysmorphism and Bigorexia terms began to be widely used at the end of the 1990s. In contrast to anorexia nervosa, the male-to-female ratio is assumed to be about 1/10, around 100,000 people worldwide are affected by the disease, and a significant portion of them are thought to be professional bodybuilders and other athletes. It is thought that roughly 10% of those who are engaged in bodybuilding sports have muscle dysmorphism. However, epidemiological studies in this area are insufficient. In DSM-5, it is mentioned as a subtype of body dysmorphic disorder in the disorders associated with the obsessive-compulsive disorder section. In those affected by this disorder, there are extreme mental preoccupations as not being muscular enough in an obsessive pattern. As an extension of this, compulsions occur like spending long hours in the gym for more weightlifting, spending excessive money incompatible with economic conditions for sports equipment and protein supplements, abnormal diet patterns, and abuse of anabolic substances. Since the physical health problems generally do not appear at the early stage in bigorexia, the rate of treatment seeking is very low compared to anorexia nervosa. While there is no specific treatment programme currently developed for this disease, good results have been obtained with the combination of fluoxetine and cognitive-behavioural therapy. Often, it is even more beneficial to carry out a multidisciplinary treatment programme with the relevant departments for patients who continue to intensify their training programme, even though they are injured, or for patients who worsen their health by abuse of anabolic or other substances.

### KEYWORDS

Bigorexia; bodybuilding; diagnosis; dysmorphia; treatment

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[Abstract:0695][Perinatal psychiatry]

## Myths and realities in substance dependence during perinatal period

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**ABSTRACT**

Addictions, particularly smoking, alcohol, and substance use, are major health problems both in Turkey and around the world. There is a myth that addictions are not a serious health problem for women and as a truth in global studies, both substance use and addiction is seen less in women when compared to men as a supporting data to this idea. But as a reality women use cigarettes, alcohol and substances (no matter more or less, they actually use) and a key problem identified is that substance use is more prevalent in women of childbearing age. As a second myth, it is accepted that women cut off using cigarette, alcohol, or other addictive substances suddenly when they learn they are pregnant. Actually, studies on pregnant women demonstrate that while the frequency of substance use decreases during other times, but as a truth; it is still an important health problem. Smoking during pregnancy is related to poor birth outcomes as low birthweight, intrauterine growth restriction placental abruption and previa. Using alcohol during pregnancy can have destructive consequences for the developing foetus, including foetal alcohol syndrome and alcohol-related effects. Illicit drug use in pregnancy may have undesirable consequences on the foetus including higher rates of prematurity, intrauterine growth restriction, placental abruption, neonatal withdrawal syndrome, and cognitive impairment.

Despite these harmful effects, use of these substances in pregnancy is escaped from attention by most psychiatrists, gynaecologists, and other physicians. We conducted a study in 2016 at Sakarya, Turkey, and found that the substances most frequently used by pregnant females in their previous pregnancies and current pregnancies were cigarettes/tobacco products. Alcohol and synthetic cannabinoid use during pregnancy was also determined. Daily tobacco smokers continued to smoke during pregnancy, with a rate of 42.5% and 26.8% of them went on to use cigarettes almost every day. These are striking rates that recall the importance of awareness and education substance use disorders during the perinatal period. Treatment approaches are still conducted under the shadow of myths during pregnancy and postpartum period. Women are naturally expected to quit all addictions when they learned that they have a foetus. But indeed addicted women still have a “disorder” despite pregnancy and they need updated treatment approaches during these periods. Current treatment approaches suggest hope for a better management of the period of pregnancy, lactation, and relationship between mother and baby. Talking about contraception with addicted women, encouraging planned pregnancies, also talking about quitting methods for substance use before and during pregnancy, using medications if needed, encouraging lactation at the postpartum period are important headings. Also increasing social support, psychoeducation of the patient and family, psychotherapies as cognitive behavioural therapy, motivational psychotherapy, interpersonal psychotherapy, and others should be provided.

**KEYWORDS**

Addiction; dependence; perinatal; pregnancy; substance; smoking

**References**

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[Abstract:0696][Psychotherapies]

**Psychotherapy approaches in chronic medical diseases**

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**ABSTRACT**

In recent years, chronic medical diseases have been more prevalent since medical problems have been managed more effectively. This increased prevalence is also associated with the combination of harmful behaviours for health and absence of health beneficial behaviours. With the increase in life expectancy comes a set of psychological challenges that face the chronically ill. Chronic diseases are associated with high levels of uncertainty and patients should change their behaviours according to their new life patterns. Some of them have to endure debilitating and demanding treatments. These are some of the factors that cause psychological difficulties in people with chronic medical problems. Approximately one in four patients with chronic medical problems is considered to have psychological problems. Chronic medical problems are often associated with fatigue and mood problems for which

**KEYWORDS**

Chronic; disease; medical; organic; psychotherapy

cognitive therapy has proven efficacy. It aims that one develops the ability to manage himself adapting to the new situation and establishes a better relationship with healthcare professionals. The creation of a new repertoire of skills for the management of psychological problems in cognitive therapy can also be applied in the acquisition of self-management skills in chronic illness. Psychological and behavioural variables play an important role in the cause, course, and prognosis of chronic illness. Factors such as the onset of the disease, coping with the new situation, pre-medical psychiatric status, and current level of social support are some of the determinants of the psychological condition in chronic medical diseases.

[Abstract:0697][Sleep disorders]

## Substance Use Disorder and Sleep

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### ABSTRACT

Substance use and sleep relation appears to be bidirectional, in that substance use may directly cause sleep disturbances, and difficulty sleeping may be a risk factor for relapse to substance use [1]. Substance use and/ or abuse may cause disturbance in sleep stages, circadian rhythms, daytime sleepiness and/ or alertness. It can be seen in practice like as insomnia, hypersomnia, parasomnia, circadian disturbances. Alcohol effects on sleep reduced sleep latency in the first half of the night, but increased them in the second half of the night and cause sleep disruptions like increased night awakenings, due to acute withdrawal effects of substance [1,2]. Insomnia is especially frequent among individuals with alcoholism [3]. The most consistently reported finding in detoxified uncomplicated alcoholism is a reduction in slow wave sleep, defined by the presence of delta EEG activity [4]. Recently studies have shown that presence of delta activity at polysomnography can associated with sleep disturbance such as parasomnia and insomnia [5]. Cannabis may make better subjective sleep complaints particularly when used over short periods of time. However chronic cannabis use is associated with negative subjective effects on sleep that are manifested most prominently during withdrawal such as strange dreams, insomnia, and poor sleep quality [6]. There was credible evidence of a strong relationship between opioids and sleep disordered breathing like hypersomnia. Acute intoxication with heroin, morphine, or methadone resulted in dose-dependent enhancements in arousal during sleep-wake periods. Heroin use demonstrated a stronger effect particularly on reduction of theta waves and REM sleep. Nevertheless, abnormal PSG findings are commonly reported in chronic opioid users despite development of tolerance. These abnormalities include increased sleep latency, increased awakening, decreased total sleep time, and decreased sleep efficiency. Slow-wave sleep time and REM sleep are decreased compared to baseline, while duration of stage 2 sleep is increased similar to acute use [7]. Stimulant-dependent sleep disorder consists of reduction in sleepiness or suppression of sleep by central stimulants such as amphetamine, cocaine, thyroid hormone, and various xanthine derivatives (caffeine, theophylline) with alterations in wakefulness following abstinence [8]. Both recent cocaine administration and acute cocaine withdrawal have been reported to adversely affect objective measures of sleep quality. Both recent cocaine administration and withdrawal prolong sleep onset latency, reduce total sleep time and decrease sleep efficiency [9]. Similarly, both recent methamphetamine administration and withdrawal have also been reported to adversely affect objective measures of sleep quality. Indeed, recent methamphetamine administration has been reported to increase sleep onset latency and markedly decrease total sleep time while acute methamphetamine withdrawal prolongs sleep onset latency, increases night-time and daytime total sleep time, increases awakenings during the night and reduces sleep quality (10). Benzodiazepines (BZDs) are the most commonly prescribed compounds in insomnia. A long term of BZDs use may cause dependence and abuse. The long term use of high doses of BZDs for chronic insomnia induces a marked depression of slow wave activity and of its physiological instability (11). Understanding the sleep problems related to substance use disorders requires characterizing them both subjectively and objectively while considering how sleep responds to periods of use and abstinence.

### KEYWORDS

Substance use; sleep; alcohol; cannabis; stimulants



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[Abstract:0698][Schizophrenia and other psychotic disorders]

## Cognitive assessment interview in schizophrenia patients: practical applications

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### ABSTRACT

Schizophrenia as a chronic psychiatric disorder presented with positive and negative symptoms and cognitive impairment. There are various ways and scales for evaluating positive and negative symptoms but it is hard to evaluate cognitive decline and there is a need for practical tools for such assessments. The present neuropsychiatric test batteries are usually expensive, need long application durations and additionally certified and experienced practitioners for use. It is generally hard to bring all these parameters together so there is a need for a more practical, and applicable way. At 2008 Ventura et al developed a cognitive assessment interview (CAI) for patients with schizophrenia [1,2]. The Turkish validity and reliability of the interview was conducted by Bosgelmez et al. (2015) with the name CAI-TR [3] and showed that the interview is applicable for Turkish patients. The cognitive assessment interview is carried out with the patients with schizophrenia and their caregivers if necessary. It a way of making an expert judgment and evaluation about the patient's cognitive functioning but that is not only based on self-report or the patient's perception of his or her cognitive functioning. During the interview interviewer researches the links between the patient's cognitive functioning and daily living activities such as school performance, success in employment, home making tasks, social interactions and other activity that requires cognition. CAI assessment also includes educating the patient about understanding the link between thinking skills and functioning. If the patient is not currently attending school, working, or socializing; information is provided about the last time thinking skills were required to function and further information about his or her current performance ability. Also the separation of the possible influence of positive and negative symptoms or depression on daily functioning from the effects of poor cognitive functioning is conducted. CAI-TR includes 10 questions, structures an interview with the patient and his/her relative, scores the cognitive impairment of the patient and provides an additional scale for global assessment of cognitive functionality. It takes 10–20 minutes for interview and 30–40 minutes for total assessment. As a conclusion Turkish CAI is a practical test that can be used to measure cognitive functions of patients with schizophrenia with its short administration time, easy application and validity and reliability.

### KEYWORDS

Cognitive; functionality; interview; neuropsychiatry; schizophrenia

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[Abstract:0699][Neuroscience: Neuroimaging-Genetics-Biomarkers]

## Up-to-date commonly used medications in the treatment of epilepsy

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### ABSTRACT

Epilepsy, one of the most frequent neurologic disorders, affects 0.8–1% of the population. It is thought that proportion of patients who are not properly cured or are not cured at all is between 60–90%.

Approach to medication in epilepsy is for control of chronic symptoms with antiepileptic medication and repression of seizures rather than eliminate the actual reason of the epilepsy. This is because there is no specific etiologic approach and the pathophysiologic mechanisms are not understood enough.

While making a choice among current antiepileptics, concerns should be as follows: effect spectrum of the drug, overall or at least life quality enhancing-level of seizure control, side effects in long and short term, ease of use and dose titration, cost, its effects on reproduction cycle, sex and age of the patient. Furthermore, it is crucial to pay attention to seizure type and epilepsy diagnosis is up-to-date. In the use of antiepileptic medication which is base of current epilepsy treatment, there are some principles to take into consideration. In the present presentation antiepileptic medications, their indications and side effects will be explained in the course of epilepsy treatment

### KEYWORDS

Antiepileptic medications; epilepsy treatment; side effect; seizure; epilepsy types

[Abstract:0700][ADHD]

## EEG changes in ADHD and EEG as a diagnostic tool

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### ABSTRACT

Attention-deficit hyperactivity disorder (ADHD) is a common psychiatric disorder affecting children, adolescents, and adults. The prevalence of ADHD in children is around 5% and varies from 3% to 16% in adults depending on the diagnostic criteria. Despite the debate on the significance of EEG on cognitive and behavioural development, it is commonly accepted that EEG discharges have a high incidence in several neurodevelopmental disorders, including ADHD. Although various EEG alterations have been described in patients with ADHD, their pathological significance has not been determined. It has been suggested that there is a close relationship between ADHD and epilepsy. A recent large-scale study revealed that ADHD in children is often accompanied by epilepsy. Based on this background, reappraisal of EEG findings in children with ADHD is important in order to detect indications of potential comorbid epilepsy and to investigate the developmental mechanisms of the neurophysiological manifestations in patients with ADHD. Several studies have estimated increasing and, particularly, high rates of ADHD in childhood in contrast to the constant comorbidity rate of epilepsy in childhood. About 70% of patients with frontal lobe epilepsy (FLE) have ADHD and there is an especially high affinity between ADHD and FLE. Children with childhood absence epilepsy (CAE) are prone to the comorbidity of inattentive-type ADHD. Moreover, it has been reported that symptoms of ADHD have a close relationship with benign epilepsy of childhood with centrotemporal spikes (BECT), rolandic discharges (RD), or Panayiotopoulos syndrome. EEG is a useful noninvasive screening tool for brain

### KEYWORDS

ADHD; EEG abnormalities; epilepsy; comorbidity; diagnosis

function and seizure susceptibility. Several reports showed a high incidence of interictal epileptiform abnormalities in children with ADHD. Frequency of rolandic spike is higher in children with ADHD, and frontal lobe dysfunction is well known to be associated with ADHD. Thus, it is hypothesized that the localization of epileptiform discharges in ADHD might reflect regional neuropathologic mechanism of ADHD. Increased slow wave activity and decreased beta activity, predominantly in posterior regions, have been reported in ADHD.

[Abstract:0701][Anxiety disorders]

## Leptin and Anxiety Disorders

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### ABSTRACT

Anxiety disorders are common disorder during childhood and adolescence and are a group of diseases that negatively affect the social life, school success, and quality of life significantly. The prevalence of anxiety disorders in childhood and adolescence is 6–20% [1]. The most common subtypes are Generalized Anxiety Disorder, Separation Anxiety Disorder, Social Phobia, and Specific Phobia. There are roles of biological and environmental factors in the aetiology of anxiety disorders. Among biological factors, leptin is pointed out in the literature in recent years. Leptin is a hormone with the protein structure. It plays a role in haematopoiesis, immunity, gastrointestinal functions, cardiovascular system, urinary system, and sympathetic activation in food intake and regulation of energy balance and metabolism in obesity, sexual development, and puberty, reproduction, regulation of hypothalamic–pituitary functions [2]. Besides physiological roles of leptin, it is suggested that leptin is related to psychiatric disorders such as depression, anxiety disorders, and attention-deficit/hyperactivity disorder [3]. The knowledge about anxiety disorders and leptin is very limited. For this reason, the relation between them is not clear. In an animal study, leptin deficiency was found to cause anxiety-like behaviours [4]. In another animal study, leptin and leptin receptor expression have been shown to correlate with anxiety and depression-like behaviours [5].

### KEYWORDS

Anxiety disorders; child psychiatry; depression; neuropeptides; leptin

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[Abstract:0702][Addiction]

## Myths and realities in substance withdrawal

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### ABSTRACT

Substance use disorder is a global mental health problem and there is a growing literature about intoxication, withdrawals, and treatment of substance use disorders. Withdrawal syndrome, also known as discontinuation syndrome, occurs in individuals, who used

### KEYWORDS

Cannabis; discontinuation; psychostimulants; synthetic cannabinoids; withdrawal

drugs and alcohol, have developed a physiological dependence on these substances, and who discontinue or reduce the use of it. Alcohol, benzodiazepines, and most of the drugs have well-known withdrawal syndromes. For example, opioid withdrawal is very important and has conspicuous clinical symptoms so clinicians feel obliged to interfere immediately with disturbing symptoms. Also, alcohol discontinuation can cause serious medical and behavioural problems. As a myth, it is expressed that particularly cannabis plants and sometimes psychostimulants do not have withdrawal syndrome and do not cause addiction syndrome. Use of cannabis for medication and relaxing legal enforcements on cannabinoids use is always a part of agenda. Before DSM 5 cannabis considered that can cause only psychological addiction thus DSM has not included cannabis withdrawal syndrome until the 5th version. According to DSM 5, Cannabis Use Disorder and the other cannabis-related disorders include substances derived from the cannabis plant and chemically similar synthetic compounds. Synthetic cannabinoids (SCs) are included in a group of drugs called new psychoactive substances. Effects of SCs on the central nervous system are similar to other cannabinoids with 2–100 times more potent pharmacological effects. There are a growing number of reports about SCs withdrawal symptoms. Thus, addiction and withdrawal symptoms are more severe than natural cannabinoids. These symptoms include agitation, irritability, mood swing, vivid dreams, seizures, tachycardia, tremor, chest pain, cramping palpitations, dyspnoea, cravings, headache, severe anxiety, insomnia, nausea and vomiting, loss of appetite, and diaphoresis. There are many cases in the literature about withdrawal syndrome synthetic cannabinoids including cases of delirium. Some times SCs withdrawal can be severe and cause medical and behavioural problems. Many of substance users apply to the hospital urgently or use the SC again and sometimes this clinical condition confused with intoxication. It is important to get the right treatment approach in such cases.

Another heading that withdrawal syndrome is overlooked is psychostimulants. The dependence potential of psychostimulants is well established. For many years, the dependence was considered to be entirely psychological. According to a common approach, psychostimulants produce insignificant, unimportant symptoms even no discontinuation syndrome. However, the existence of a withdrawal syndrome is now well recognized and includes hypersomnia, increased appetite, severe dysphoria, depressed mood, and craving

As a conclusion, withdrawal syndromes of cannabinoids and psychostimulants need to be discussed and recognized as well as alcohol, heroin, and other substance withdrawals.

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[Abstract:0703][Psychopharmacology]

## Differences in psychopharmacology of peadiatric bipolar disorder and adult bipolar disorder

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### ABSTRACT

Childhood-onset bipolar disorder is more common than thought and in many adult bipolar patients, many researches have been made that the first mood disorder attack is seen during childhood and adolescence [1]. Due to the difficulty of performing placebo-controlled studies in children and adolescents, a small number of controlled trials investigating bipolar disorder treatment are available. Bipolar disorder treatment differs in children and adolescents in terms of pharmacokinetic and pharmacodynamic changes and comorbid situations being different from adults in children and adolescents [2]. One of the reasons behind bipolar disorder becoming symptomatic in early ages may be the increased genetic load [3]. This can lead to closer follow-up and longer treatment medication in our treatment plan. Working with a developing brain can also lead to changing treatment needs in the treatment

### KEYWORDS

Bipolar disorder; child and adolescent psychiatry; psychopharmacology; pharmacokinetic; pharmacodynamic

protocols. It causes us to bring the psychosocial approaches to the forefront. It also forces us to seek new treatments. Up to now, we have applied similar approaches to the treatment of adult bipolar disorder in the treatment of childhood bipolar disorder. In this seminar, we will try to touch on the difference between the two.

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[Abstract:0704][Psychopharmacology]

## Mechanisms of molecular efficacy of psychostimulants in ADHD

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### ABSTRACT

Attention-deficit/hyperactivity disorder (ADHD) is a prevalent childhood-onset neuropsychiatric disorder characterized by inattention, poor impulse control, and hyperactivity. The PFC thoughtfully guides attention, movement, and emotion through extensive connections to the posterior cortices and to sub-cortical structures. The dorsal and lateral surfaces of the PFC use representational knowledge to guide overt responses (movement), as well as covert responses (attention), allowing us to inhibit inappropriate behaviours and to attenuate the processing of irrelevant stimuli. Prefrontal cortex is sensitively modulated by numerous neurotransmitters including catecholamines, and changes in levels of dopamine-1 and norepinephrine  $\alpha$ 2A-adrenoceptor stimulation are associated with prominent effects on prefrontal function. The primate PFC is topographically organized: the dorsolateral PFC (dlPFC) is associated with attention and movement while the ventral/orbital and medial PFC are associated with emotion. The PFC has topographically organized connections to posterior cortical and subcortical structures, including the striatum. Moreover, some PFC-dependent processes are lateralized; for example, the right inferior PFC is specialized for response inhibition. The release of the catecholamines norepinephrine (NE) and dopamine (DA) in the PFC is related to arousal state. Low arousal conditions are associated with very low levels of NE cell firing. In contrast, under conditions of alert interest, there is moderate tonic firing, and increased phasic firing of NE and DA to relevant stimuli. Under stressful conditions, there are high levels of catecholamine release in PFC, which may arise from high, tonic firing of NE neurons, and DA neurons that respond to aversive events. Thus, the level and timing of catecholamine release in PFC can coordinate arousal state and PFC function. The PFC plays a crucial role in regulating attention and behaviour. Differences in prefrontal cortical structure and function, including altered catecholamine transmission, likely contribute to the aetiology of ADHD symptoms. The PFC requires optimal levels of catecholamines for proper function – moderate levels of NE-engaging postsynaptic  $\alpha$ 2A adrenoceptors and DA-stimulating D1 receptors. Effective treatments for ADHD may optimize catecholamine signalling in PFC; both stimulants and atomoxetine have their effects through indirect stimulation of NE  $\alpha$ 2 and D1 receptors, while guanfacine mimics NE actions at postsynaptic  $\alpha$ 2A adrenoceptors in PFC. All of these treatments improve prefrontal cortical regulation of attention and behaviour, thus reducing ADHD symptoms.

### KEYWORDS

ADHD; efficacy; mechanisms; prefrontal cortex; psychostimulants

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[Abstract:0705][PTSD]

## Up-to-date psychopharmacological treatments in post-traumatic stress disorder

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### ABSTRACT

Post-traumatic stress disorder is characterized by a history of exposure to trauma (actual or threatened death, serious injury, or threats to the physical integrity of the self or others) with a response of intense fear, helplessness, or horror; with the later development of intrusive symptoms (such as recollections, flashbacks, or dreams), avoidance symptoms (for example efforts to avoid activities or thoughts associated with the trauma), negative alterations in cognition and mood, and hyper-arousal symptoms (including disturbed sleep, hyper vigilance, and an exaggerated startle response). The disorder can be seen at any age and it is associated with substantial comorbidity, such as depression, anxiety, and substance misuse. Among the current clinical practice guidelines for post-traumatic disorder, Veteran's Affairs/Department of Defense (VA/DoD), American Psychiatric Association (APA), and International Society for Traumatic Stress Studies (ISTSS) guidelines present medications and psychotherapy as equivalent first-line treatments. Conversely, National Institute for Clinical Excellence (NICE), Australian, and World Health Organization assert that trauma-focused psychotherapies are superior to medications. Medication recommendations differ across guidelines as well. VA/DoD experts conclude that all selective serotonin reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs) are roughly equivalent first-line treatments. They advocate the use of prazosin, tricyclic antidepressants (TCAs), monoamine oxidase inhibitors (MAO-I), and nefazodone as second-line interventions. ISTSS experts recommend sertraline, paroxetine, fluoxetine, venlafaxine, mirtazapine, nefazodone, and prazosin for first-line use. They advocate the second-line use of phenelzine, amitriptyline, and bupropion. APA experts conclude SSRIs warrant first-line use, with all other second-generation antidepressants comprising second-line use. NICE experts find paroxetine, sertraline, amitriptyline, and phenelzine superior to other medications for second-line use. Australian guidelines recommend SSRIs, and WHO recommends TCAs and MAO-Is. All recommend against the use of antiepileptics, antipsychotics, and benzodiazepines. The revised British Association for Psychopharmacology guideline (BAP) is the most current guideline. It provides an update on key steps in acute treatment, long-term treatment, combination treatment, and further approaches for patients who have not responded to first-line interventions. BAP experts recommend, after major trauma, providing there are no contraindications, consider preventive treatment with propranolol or sertraline or trauma-focused psychotherapy. In acute treatment of post-traumatic stress disorder considering an SSRI for first-line pharmacological treatment, especially paroxetine, sertraline, and venlafaxine, is recommended. Continuing drug treatment for at least 12 months in patients who have responded to treatment is also recommended. Routinely combining drug and psychological treatment approaches is not recommended for the initial treatment in the absence of consistent evidence for enhanced efficacy over each treatment when given alone. There are some evidence about paroxetine may enhance the effectiveness of exposure therapy. When initial treatments fail considering augmentation of antidepressant with olanzapine, risperidone, and prazosin can be another choice.

### KEYWORDS

Antidepressants;  
antipsychotics;  
pharmacotherapy; post-traumatic stress disorder;  
selective serotonin reuptake inhibitors



[Abstract:0706][PTSD]

## Psychotherapy for post-traumatic stress disorder

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### ABSTRACT

Treatment options for post-traumatic stress disorder (PTSD) include psychological therapies, pharmacotherapy, and experimental and/or innovative interventions. Because the treatment goals, and the techniques used for trauma therapy, differ from each other depending on the time elapsed since the traumatic event, psychotherapeutic interventions might be grouped into two categories, i.e. early interventions and interventions for protracted PTSD symptoms. Psychological interventions administered early for traumatic symptoms consist of stress management techniques and psychological approaches. Historically, psychological debriefing was offered to survivors of traumatic events. However, meta-analyses of studies have shown that debriefing might have harmful effects on the survivors, and also that it is not protective against PTSD. Therefore, psychological debriefing is no longer recommended. Currently, problem-based, supportive techniques are considered to be beneficial in reducing the severity of PTSD symptoms, and they might also help identify the individuals who are in need of a more structured cognitive behavioural therapy (CBT) intervention. Studies have demonstrated that CBT delivered early might be effective in preventing PTSD. For survivors of trauma with protracted symptoms of PTSD, trauma-focused CBT is the best supported psychotherapy approach. CBT essentially focuses on reevaluating the traumatic event, the avoidance patterns, and cognitive distortions of the individual. There are a number of different CBT protocols for PTSD, and these protocols either have a component that involves exposure or not. In CBT protocols which include exposure techniques (e.g. prolonged exposure), the individual is asked to progressively revisit the avoided memories of the traumatic event until the event itself no longer causes the individual to feel distressed, or the need to escape or avoid the triggers of traumatic memories is diminished. This exposure-based approach is undertaken by creating a safe environment, which may be accomplished by relaxation and breathing exercises. Some other techniques used in the CBT protocols (e.g. Cognitive Processing Therapy) involve the restructuring and challenging of trauma-related dysfunctional cognitions. Addressing these kind of beliefs (e.g. the world is dangerous, the future is unpredictable and uncontrollable, the individual is helpless, and guilty because of the traumatic event) is essential, and the revised diagnostic criteria of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition also emphasize these types of cognitions in PTSD. Although exposure-based therapies are the mainstay of treatment for PTSD, some other therapeutic interventions (e.g. Interpersonal Therapy) might also be administered to alleviate traumatic distress symptoms. Current treatment guidelines still conclude that CBT is more efficacious than non-exposure therapies. Yet, recent reviews have also shown that non-exposure therapies might be as effective as exposure therapies. Authors have suggested that the similar effects might be explained by the shared components (e.g. psychoeducation, emotional regulation strategies, cognitive processing of the traumatic incident, searching for a meaning in life after the trauma) between exposure and non-exposure therapies. Some specific components of non-exposure therapies include mindfulness, focusing on conflicts in interpersonal relationship, and role transitions. Non-exposure therapies have also been used in specific symptoms of PTSD (e.g. insomnia, substance use) as an alternative to psychopharmacological options. Additional experimental and/or innovative therapeutic interventions include neurofeedback, augmentation of CBT with D-cycloserine, and metacognitive therapy. Neurofeedback is used to train the survivor to regulate the brain dysfunction via changing brain wave activities, which are shown simultaneously on electroencephalographic displays. D-Cycloserine, a partial agonist of the N-methyl-D-aspartate receptors, has been investigated for its role in enhancing extinction learning. However, studies have shown conflicting results. Metacognitive therapy, which focuses on intrusive memories, threat monitoring, avoidance behaviours, and dysfunctional metacognitive beliefs, has also been suggested as an alternative treatment approach for PTSD. Some studies reporting a poor response to CBT have documented that memory deficits, disrupted neural network connectivity, val66met polymorphism in brain-derived neurotrophic factor, the short allele of the serotonin transporter gene, and lower activity in emotional regulation associated neural circuitry might be predictors for treatment efficacy. Identifying individuals who will respond to specific treatment approaches will also lead to personalized interventions, and clues like these predictors are therefore crucial for treatment providers. It is also of utmost importance to clarify and to take into account the survivor's priorities and goals for treatment while conceptualizing a treatment plan, and ensuring that the individual is actively participating in decisions about treatment strategies. Clinicians should also make sure that evidence-based treatment options are given priority while discussing the available options with the patient. The treatment protocol should incorporate the most distressing symptoms of the patient, and psychopharmacological treatment should be offered whenever it is deemed

### KEYWORDS

Cognitive-behavioural therapy; D-cycloserine; exposure; post-traumatic stress disorder; psychotherapy

necessary or when treatment with psychological interventions have failed to improve the symptoms of PTSD.

[Abstract:0707][Stress and related situations]

## Clinical manifestations of post-traumatic stress disorder

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### ABSTRACT

As a result of the increasing and widespread traumatic events in recent years, posttraumatic stress disorder (PTSD) – a common diagnosis following one of these experiences – is characterized as conferring a large burden for individuals and society. Thus, mental health professionals are increasingly likely to encounter trauma survivors and it is even more important that they recognize and manage PTSD and related conditions. Therefore, it is clear that there is a need for more up-to-date studies, as known the lifetime prevalence of PTSD was reported to be 7.8% in the National Comorbidity Survey study which is one of the most widely cited studies in the literature and the 12-month prevalence was reported from 0.7 to 1.3 in different studies. However, it is absolutely necessary to keep in mind that these rates based on Western countries and it is more likely to be higher in the middle-east countries where the traumatic events are more common and the war is going on since 2003. Also, PTSD rates differ among traumatic event types; it is reported to be higher in human-made traumas (i.e. rape, torture) than natural disasters (i.e. earthquake, flood). Anxiety symptoms such as fear, intrusive thoughts about the event and sleep and appetite disturbance are common in the first days following the traumatic event and expected to decrease day by day. If anxiety symptoms persist for more than one month and cause clinically significant distress or impairment in social, occupational, or other important areas of functioning, it is termed PTSD. PTSD comprise four symptom clusters; intrusive symptoms (i.e. persistent reliving of the event through nightmares or flashbacks, psychological and physiological reactions to reminders of traumatic event), avoidance symptoms (i.e. avoids thoughts, feelings, places, peoples), negative alterations in cognition and mood (i.e. dissociative amnesia, negative alterations in cognitions, feeling blame, or shame), and alterations in arousal and reactivity (i.e. difficulty sleeping or concentrating, exaggerated startle response). As well as the PTSD symptoms are clear in classification systems (i.e. DSM V, ICD 11), in many cases, it is not so simple to diagnose and manage PTSD in clinical practice. Other mental health conditions including depression, anxiety, substance abuse, somatic symptoms, and self-destructive behaviours, and general health conditions including cancer, cardiovascular disease, and gastrointestinal disorder are commonly accompanied to PTSD symptoms. Also, trauma survivors are frequently confronted with domestic, social, economical, occupational, and legal problems. So, it is important to evaluate the person with a trauma history with a broad perspective by the way of paying attention to concurrent conditions as well as traumatic stress symptoms. The aim of this presentation is to share our knowledge about epidemiology, symptomatology, and comorbidity with other mental and general health conditions of PTSD, considering the different traumatic events such as sexual trauma, war, terrorism, and forced migration, in the light of the recent literature.

### KEYWORDS

Post-traumatic stress disorder; epidemiology; symptomatology; comorbidity; traumatic event

[Abstract:0708][Mood disorders]

## Leptin and mood disorders

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### ABSTRACT

Leptin may play a role in mood especially major depression. There are many studies that examine the relationship between leptin and depressive symptoms. Several theories are suggested for explaining this relationship. Inhibiting effect on the hypothalamic-pituitary-adrenal (HPA) axis of leptin may mediate antidepressant-like effects

### KEYWORDS

Depression; leptin; metabolism; mood; obesity

in animal models. The HPA axis is important for the adaptation response to stress. Depression is associated with an over-activation of the HPA axis and antidepressant therapy is often associated with a normalization of the HPA axis [2]. In rats, systemic administration of leptin can reverse depression-like behaviours [7]. Not only the level of leptin decreases in stressed animals, there is also a reduction of the leptin-receptor mRNA in the hypothalamus inversely related to concentrations of corticosterone in the serum of these animals [3]. Specific limbic brain areas, particularly the hippocampus, might be the target site for circulating leptin to exert its mood-promoting actions [8]. Deletion of the leptin-receptors in the adult hippocampus has been demonstrated to induce depression-like behaviour in mice [4]. Additionally, injection of leptin into the hippocampus promotes antidepressant-like behaviours [7]. The association of low leptin levels and developing depression has been proposed in humans (Miller et al., 2003). Although there are inconsistent results regarding leptin measurement in major depression [8,9], there seem to be sex differences in plasma leptin measures between patients and controls [9]. In women, low leptin levels are associated with increased symptoms of depression and there is an inverse relationship between leptin levels and anxiety symptoms independent of body weight [6]. Obese people, who commonly show high levels of leptin, are at increased risk of depression compared to non-obese people [8]. The elevated leptin levels caused by central leptin resistance support the idea of leptin insensitivity contributing to depressive disorders described in obesity [1,5]. The pathophysiology of developing a depressive disorder in the context of leptin and regulation of weight still needs to larger studies. Consequently, leptin is suggested as an indirect biomarker for developing depression [10] and could furthermore be considered as prognostic tool for determination of patients for therapy resistance risk.

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[Abstract:0710][Addiction]

## Approach to the children of addicted parents: from neurobiology to clinical practice

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### ABSTRACT

In the literature, it has been shown by twin and adoption studies to have a hereditary component. Findings from genetic studies showed that one of three people who develops alcohol dependency have alcohol-dependent parents. Children of alcohol dependents also have 4–5 times higher risk for alcohol dependency [2]. In twin studies, it was found that

### KEYWORDS

Children of alcohol dependents; hereditary; multifactorial; multigenetic aetiology; genetic studies

monozygotic concordance is 60% and dizygotic concordance is 39% for alcohol dependency. Additionally, monozygotic concordance is 78% and dizygotic concordance is 64% for substance dependency [1]. Schuckit et al. [3] stated that hereditary factors have a more significant influence on developing alcohol dependency than environmental factors. In adoption studies, it was found that adopted children of alcohol dependents have increased risk for dependency even if there is no history of alcohol dependency in their adoptive families [1]. Dependencies have multifactorial and multigenetic aetiology. However, there is not enough information about genetic factors in the development of abuse and dependency with substances other than alcohol.

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[Abstract:0711][Sleep disorders]

## Substance use disorders in children and adolescents and sleep disturbances

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### ABSTRACT

Substance use is at a high rate in adolescents. It is therefore important to identify the increased risks associated with substance use. One of the common problems of many adolescents who are addicted to the substance and trying to get rid of it is related to sleep. Sleep disorders related to substance use are included in the DSM-5 classification system. Sleep disturbances can occur as a symptom or disorder. For this reason, it is recommended that routine substance screening should be carried out in people who have trouble sleeping. In adolescents with substance abuse, sleep patterns must be investigated. Abusive substances disturb the neurotransmitter systems and affect the sleep–wake cycle. Although substance abuse is harmful to sleep at all ages, studies conducted especially on cannabis adolescents show that sleep disturbances are more common in these age groups. Stimulants shorten the total sleep duration and suppress REM sleep. Cannabis use makes sleeping easier, but at night it often wakes up and sleep quality falls. Opioids facilitate drowsiness but shorten the total duration of sleep. Research has shown that sleep disturbances in early life are effective in improving addiction. There is a bi-directional relationship between substance use and sleep disorders. In a study conducted on young people, sleeping characteristics showed that smoking, alcohol, and cannabis use were determined 2 years later. This two-way relationship leads to changes that affect emotional regulation in adolescents, self-control, and risk-taking behaviour. Studies in young samples have shown that people who use cannabis have a high level of insomnia at a significantly higher rate than those who do not. Future work is needed to understand these bidirectional relationships and the factors that alleviate this relationship. In young people with substance use disorders, the rate of treatment for sleep disorder is still limited. The goal of treatment is to regulate sleep and improve social functioning. Studies have shown that sleep with cognitive behavioural therapies and drug treatments is improved, but there is no positive change in substance use. The priority in treatment should be on substance addiction. Therapies for sleep disorders should be added to this.

### KEYWORDS

Adolescents; children; sleep; sleep disorders; substance use

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[Abstract:0712][Neuroscience: Neuroimaging-Genetics-Biomarkers]

## The impact of mother–child interaction on child’s brain

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### ABSTRACT

The nervous system is immature at birth and postnatal period is characterized by rapid brain development. Specifically, the first two years of life is the period of greatest brain volume growth and a time of rapid cognitive, linguistic, social, emotional, and motor development. Brain plasticity during this period makes the infant brain particularly sensitive to environmental influence, especially the social-affective environment (Schoore 2001). Given the fact that mother–child interaction is the most important social and affective environment for a baby, it is reasonable to say that mothers can shape their baby’s brain. As examples of these claims, animal experiences show that dendritic growth in rat pups is dependent on particular forms of tactile and emotional stimulation during nursing (Greenough and Black 1992). In human infants, interpersonal encounters involving mutual gaze are associated with dramatic metabolic changes in the primary visual cortex and infant’s visual experiences modify synaptic connections in the occipital cortex (Katz 1999). Also, it is suggested that the amount of verbal parent–child interaction affects infant’s superior temporal gyrus, which may be associated with verbal skills (Takeuchi 2015). On the other hand, early brain developments can be distorted when expected experiences do not occur, as in an emotionally deficient caregiving environment and as might occur in maltreatment. Prior reports also suggest that early childhood maltreatment is associated with later fronto-limbic abnormalities (Belsky 2011; Hart 2012), smaller corpus callosum and total brain volumes, and increased ventricular volumes (Teicher et al. 2004). The researchers who investigate the relationship between normative variations in parenting and brain structure in children suggests that higher levels of parental sensitivity in early childhood have been linked with larger total brain and grey matter volumes in children at 8 years (Kok et al. 2015), insecure attachment at 18 months is associated with greater amygdala volumes at 22 years (Moutsiana et al. 2015), and reduced maternal sensitivity is associated with larger hippocampus volumes (Rifkin-Graboi et al. 2015). Consequently, the emotional and social qualities of early experiences between child and mother are crucial. They have permanent effects on the child’s brain.

### KEYWORDS

Mother–infant interaction; maternal care; neurobiology; infant brain; development

[Abstract:0713][Addiction]

## Pharmacotherapy for substance use disorders

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### ABSTRACT

The categories of pharmacological treatments are (1) medications to treat intoxication and withdrawal states, (2) medications to decrease the reinforcing effects of abused substances, (3) agonist maintenance therapies, (4) antagonist therapies, (5) abstinence-promoting and relapse prevention therapies, and (6) medications to treat comorbid psychiatric conditions.

- (A) Nicotine use disorders: There are six medications approved by FDA for nicotine dependence, including five nicotine replacement treatments (NRTs) (patch, gum, spray, lozenge,

### KEYWORDS

Buprenorphine; disulfiram; methadone; naltrexone; substance use disorder



and inhaler) and bupropion. These medications are all equally effective and first-line agents in reducing withdrawal symptoms and smoking. Using a combination of these first-line treatments may also improve outcome.

(B) Alcohol use disorders:

1. Management of intoxication and withdrawal: The acutely intoxicated patient should be monitored in a safe environment. Symptoms of alcohol withdrawal typically begin within 4–12 hours after reduction or cessation of alcohol use, peak in intensity after 24–48 hours of abstinence, and generally resolve within 4 days. The treatment of patients in moderate to severe withdrawal generally requires the use of i.v. fluids and thiamin, benzodiazepines, and, in some cases, anticonvulsants, clonidine, or antipsychotic agents.
2. Maintenance treatments: For maintenance treatment, there are three main options; naltrexone, acamprosate, and disulfiram. Naltrexone may alleviate the reinforcing effects of alcohol. Acamprosate, a  $\gamma$ -aminobutyric acid (GABA) analog that decreases alcohol craving in abstinent individuals, is also an effective adjunctive medication. Disulfiram is an effective adjunct to a comprehensive treatment programme for reliable, motivated patients whose drinking may be triggered by events that suddenly increase alcohol craving. Disulfiram produces physical reactions (e.g. flushing) if alcohol is taken within 24 hours of the medication use and is not generally used as a first-line treatment. Topiramate and gabapentin are also suggested as medications for patients with moderate to severe alcohol use disorder, but typically after trying naltrexone and acamprosate first.

(C) Marijuana use disorders: No specific pharmacotherapies for marijuana withdrawal or dependence can be recommended.

(D) Cocaine use disorders: Pharmacological treatment is not ordinarily indicated as an initial treatment for patients with cocaine dependence.

(E) Opioid use disorders:

1. Management of intoxication and withdrawal: Severe opioid overdose may be fatal and requires treatment in an emergency department. Naloxone will reverse all manifestations of opioid overdose. The treatment of opioid withdrawal is directed at safely alleviating acute symptoms and facilitating the patient's entry into a long-term treatment programme. Strategies found to be effective include substitution of methadone or buprenorphine for the opioid followed by gradual tapering; abrupt discontinuation of opioids, with the use of clonidine to suppress withdrawal symptoms; and clonidine-naltrexone detoxification. Maintenance treatment with methadone or buprenorphine is appropriate for patients with a prolonged history (>1 year) of opioid dependence. The goals of treatment are to achieve a stable maintenance dose of opioid agonist and facilitate engagement in a comprehensive programme of rehabilitation.

[Abstract:0714][Psychopharmacology]

## Differences in psychopharmacology of paediatric schizophrenia and adult schizophrenia

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### ABSTRACT

Schizophrenia is rare in childhood but the incidence of this disease increases in adolescence [1]. Although early-onset schizophrenia has poorer functionality and treatment response than adult-onset schizophrenia, treatment can affect clinical course and consequences of this disease. The most efficacious treatments for schizophrenia are the antipsychotic medications. But the literature regarding the role of antipsychotics in children and adolescents with schizophrenia is already limited. It has been reported that typical antipsychotics are the gold standard of pharmacotherapy of schizophrenia in adults [2]. However, there are few studies that examined the efficacy of antipsychotics in children and adolescents with schizophrenia. Typical antipsychotics are rarely used in clinical practice because of their side effects. Extrapyramidal side effects and sedation have restricted the utility of, and compliance to, these agents. Atypical antipsychotics are the most preferred agents in childhood due to their fewer side effects and effectiveness on both positive and negative symptoms of schizophrenia [3]. On the other hand, atypical antipsychotics have been associated with increased weight gain and glucose intolerance particularly in the young [4].

### KEYWORDS

Adult; atypical antipsychotics; children; typical antipsychotics; schizophrenia



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[Abstract:0715][Mood disorders]

## Treatment of mood disorders in preschool-age children

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### ABSTRACT

Mood disorders are lifelong major psychiatric disorders that frequently manifest first in childhood. They include paediatric bipolar disorder (BD) and paediatric depressive disorder (DD). Psychosocial interventions are recommended for first-line treatment for preschool-age children with BD. Child and Family-Focused Cognitive Behavioral Treatment (CFF-CBT), Family-Focused Therapy (FFT), and Multifamily Education Psychotherapy (MF-PEP) are the most studied psychosocial interventions for children with BD. However, they have not been studied much in preschool-age children. CFF-CBT has been studied and showed it to be effective in children with BD as young as 5 years old. FFT has been studied only in children over 9 years old. MF-PEP is provided groups that meet for eight sessions. This therapy has not yet been studied in preschool-aged children [1]. Also, there is limited empirical evidence addressing the treatment of DD in preschool-age children. Psychosocial treatments have the most evidence supporting their use in young children. But, there is no inclusion of randomized controlled trials, with most studies being open-label trials or case series. Treatments in addition to medication are often necessary to assist children with mood disorders and their families. These interventions may involve:

- Educating the family about the nature of paediatric BD and paediatric DD, and involving the family in the treatment process.
- Ensuring that children receive the special educational services necessary to prevent them from falling behind academically.
- Appropriate classroom accommodations to help them function effectively in the academic environment.
- Family and individual approaches to therapy should be provided as necessary.

If psychosocial interventions are not beneficial in rehabilitating symptoms with BD, and if symptoms are evaluated severe, then pharmacotherapy may need to be considered. The most commonly prescribed medications for children and adolescents suffering from bipolar disorders are lithium, antiepileptic medications, and atypical antipsychotic medications. Few studies that address the efficacy of these medications in preschool children with BD exist. Specifically, studies investigating atypical antipsychotic showed positive results [2]. The most commonly used group of antidepressant medications prescribed for children suffering from depression are the selective serotonin reuptake inhibitors (SSRIs). Falling short of a few case reports, no data are available on the safety or efficacy of such antidepressant medication in any form of preschool psychopathology [3]. If medication is essential due to symptom severity and functional impairment, fluoxetine would be the initial treatment recommendation in this age group [1]. Literature on the treatment of early childhood mood disorders are lacking and few in number, and future studies with larger samples are needed to better understand the treatment of mood disorders in preschool-age children.

### KEYWORDS

Preschool; children; depressive disorders; bipolar disorders; treatment

## References

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[Abstract:0716][Mood disorders]

## Mania induced by antidepressants

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### ABSTRACT

Bipolar disorder is a recurrent, pleomorphic, and often chronic illness usually causing a lifelong burden for affected individuals. Whether or not the illness is progressive and evolves in stages remains uncertain. Antidepressant-associated mania or other forms of mood swings have been noticed since the late 1950s when imipramine was first used. It is still unclear how the affective disorder is related to the antidepressant. The onset of bipolar disorder is seen with the depressive episode for about half of the cases of bipolar disorder. Some of these cases are diagnosed as bipolar disorder only after the use of antidepressants. Mood elevation associated with antidepressant treatment may reveal the efficacy of the treatment, the pharmacologic side effect, bipolar disorder that was misdiagnosed before, or switch from major depression to bipolar disorder. It is also known that antidepressants can cause abnormal mood elevation in susceptible individuals independently of the clinical diagnosis. In this presentation, it is aimed to discuss the aetiology, clinical presentation, and long-term course of manic shifts due to antidepressants according to literature data.

### KEYWORDS

Antidepressant; bipolar disorder; aetiology; manic switch; prognosis

[Abstract:0717][Psychotherapies]

## Psychodynamic psychotherapy in depression treatment within the framework of current developments

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### ABSTRACT

Psychodynamic psychotherapy is based on the idea that childhood experiences and unresolved past conflicts can significantly affect an individual's current state of life. For this reason, it is understood that adulthood relationships may be a consequence of childhood unconscious patterns. Psychodynamic psychotherapy reveals the unconscious patterns of object relations, conflicts, and desires that cause depression. Psychodynamic psychotherapy can be used without medication to treat patients with mild to moderate depression. The appropriateness of psychodynamic therapy should be based on the personality, motivation, social, and occupational functioning of the patient. Clinicians should evaluate patients to determine whether psychodynamic psychotherapy is appropriate or not. The clinician should examine the past and ongoing stress factors and their defence mechanisms, what they mean to the patient, and the behavioural patterns of the patient's relationships to reduce the patient's anxiety and unconscious conflict. General treatment guidelines for psychodynamic psychotherapy can be summarized as follows:

- (1) To ask about stress factors and what they mean to the patient,
- (2) To observe how the patient is related to the clinician and how the clinician has been unconsciously resisting the efforts of the clinician,
- (3) To help the patient to become aware of unconscious feelings, thoughts, and behaviours that cause depression and relationship problems,
- (4) To change the personality traits that make the patient susceptible to depression.

The therapeutic relationship between the patient and the clinician is more important than any technique in producing a positive result. A strong therapeutic alliance is defined by the following: the patient is connected to the clinician, feels that the therapist is aided and cooperates with him. Treatment requires the use of the following interventions: interpretation, observation, confrontation, explanation, encouraging refinement, empathic verification, psychoeducation, suggestion and appreciation. Psychodynamic psychotherapy treats mild-moderate depression effectively. Controlled trials have shown that psychodynamic

### KEYWORDS

Psychodynamic psychotherapy; depression; current; treatment

therapy is superior to control conditions (waiting list or routine treatment) and is comparable to other types of psychotherapy (cognitive behavioural therapy or interpersonal therapy). This presentation evaluates psychodynamic psychotherapy in the treatment of mild to moderate depression in adults in the context of current developments. The diagnosis of depression, prognosis, initial treatment, resistant depression, and treatment of depression in advanced age will be discussed. In this presentation, the results of a completed work carried out at the Istanbul Medeniyet University's Department of Psychiatry Clinic will be presented.

[Abstract:0719][ADHD]

## EEG signatures of attention-deficit/hyperactivity disorder: clinical correlates

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### ABSTRACT

Attention-deficit/hyperactivity disorder (ADHD) affects 5–10% of all school-aged children and the heterogeneity in clinical presentation, treatment response, and outcome requires valid biomarkers that can assist diagnosis, predict developmental outcomes, and monitor treatment response. Neurophysiological measures have been a major focus of research in ADHD. Brain electrical activity can be recorded via electroencephalography (EEG) during rest or while performing a cognitive task. EEG offers a different way of neural assessment from blood flow-dependent measures and it measures neuronal postsynaptic electrical fields. In the ADHD literature, excess theta activity, increased theta/beta ratio (TBR), and reduced amounts of alpha activity are often reported findings and have been interpreted as signs of immature brain activity or hypoarousal, but are insufficient as a diagnostic biomarker. On the other hand, high TBR and excess theta activity are thought to be possible positive prognostic markers and excess beta activity or beta spindles negative prognostic markers for stimulant treatment response. Only a handful of studies investigated the behavioural correlates of proposed EEG markers in ADHD. Positive relation between theta activity and inattention symptoms in adults and children, negative relation between theta activity and hyperactivity/impulsivity symptoms in children and decreased frontal theta and increased frontal beta activity in parent improved ratings of parent reported ADHD symptoms in children using psychostimulants have been reported. Additionally spindling excessive beta activity is specifically associated with impulse control problems. Frontal alpha asymmetry, the difference in alpha-band activity over right vs. left frontal hemispheres, is also proposed to be associated with reduced reward responsiveness, aggression, and difficulties with inhibition. There appears to be increased slow-wave and decreased fast-wave activity in ADHD and other forms of externalizing behaviour. It can be hypothesized that slow waves are associated with subcortical motivational systems and fast waves with cortical cognitive systems. In our current study, 80 right-handed, psychotropic medication naïve, 6–10 years old boys with a total IQ score of 75 or more, newly diagnosed with ADHD according to DSM-5 criteria were recruited. Detailed psychiatric evaluation, clinician- and parent-rated scales, along with WISC-IV and Bruininks-Oseretsky Test of Motor Proficiency, was administered and eyes open and closed resting state Electroencephalography (EEG) recordings were taken. As expected theta activity and TBR were negatively correlated with age but could only reach statistical significance at the temporal lobe. Theta and beta activity were not correlated with parent reported psychiatric symptoms nor cognitive measures but children with ADHD Inattentive Type had significantly higher theta activity at frontal and parietal electrodes. Additionally, left TBR was negatively correlated with clinician rated inattention symptom severity. As for original findings, bilateral coordination and upper limb coordination scores were significantly negatively correlated with theta activity and overall TBR was significantly negatively correlated with total motor proficiency, more significant at the left hemisphere. Fine motor integration, manual dexterity, bilateral coordination, balance and upper limb coordination were significantly negatively correlated with left hemisphere TBR. To the best of our knowledge, this is the first study to demonstrate the association of TBR with motor skills in ADHD.

### KEYWORDS

ADHD; school-age children; quantitative EEG; theta/beta ratio; motor skills

[Abstract:0720][ADHD]

## Quantitative EEG findings in the psychopharmacological treatment of ADHD

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Abdülbaki Artık, MD

Atomoxetine effects on QEEG characteristics in 6–10 years old children with attention-deficit/hyperactivity disorder

Atomoxetine is a selective noradrenergic reuptake inhibitor and a selective inhibitor of the pre-synaptic norepinephrine transporter. Administration of atomoxetine selectively activate the prefrontal catecholamine systems in rats that is responsible for influencing to difficulties in attention and impulse control that are central to the attention-deficit/hyperactivity disorder (ADHD). Treatment-responsive QEEG subtypes have been described in several psychiatric disorders. Previous studies detected that atomoxetine normalizes beta and theta activity in ADHD patients. There are a few studies which have shown that QEEG differs between ADHD responders (R) and non-responders (NR) to stimulant medication with a sensitivity of 68.7–81%. In a research they detected that at baseline responders showed increased frontal/ anterior temporal alpha and elevated frontal/anterior temporal delta and theta in comparison to the normal population. Afterwards, treatment with atomoxetine reduced the frontal QEEG abnormality present in the responders and had no effect upon the QEEG of the non-responders. Atomoxetine decreases absolute theta, and this reduction appears greater in the midline than the hemisphere. Atomoxetine also increases absolute beta (particularly non-centrally, and especially in right and midline anterior regions). In our current study, 80 right-handed, psychotropic medication naïve, 6–10 years old boys with a total IQ score of 75 or more and newly diagnosed with ADHD according to DSM-5 criteria were recruited. After treatment with atomoxetine for 16–20 weeks, we recorded EEG from participants. We detected that the theta/beta ratio decreases especially in the left temporal region. This reduction causes increased beta.

**KEYWORDS**

ADHD; atomoxetine; EEG; theta/beta ratio; methylphenidate

[Abstract:0721][Mood disorders]

## Challenges in Bipolar Depression Treatment

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Bipolar disorder is a psychotic disorder which causes permanent destruction of the ability and is one of the top 10 diseases that cause the destruction of ability in young adults. The prevalence of lifetime prevalence is over 2%. The disease usually starts in the period of adolescence or early adulthood. It is seen with episodes of disease mania, hypomania, depression, and mixed features. Between attacks, some of the patients can gain normal functionality and can resume their lives without major problems. However, it includes similar symptoms that frequently recurrent, major episodes with significant loss of functionality despite being under treatment and major and minor morbid conditions involving rare euthymic periods in the long-term outcome of bipolar disorder. Subsyndromal states in bipolar type I and bipolar type II are more common than in syndromal states. Depressive symptoms are more common than manic/hypomanic symptoms; this rate is 3:1 in bipolar type I and 39:1 in bipolar type II. The question of whether a patient has major depressive disorder or bipolar disorder appears to be an important problem in clinical practice. Various studies have shown that bipolar disorder can be confused not only with personality disorders, substance use, and schizophrenia but also with anxiety and depressive disorders. Certain features are predictors of bipolar disorder. These features are early onset, psychotic disorder starting before the age of 25, recurrent depression, postpartum depression, bipolar family history, psychomotor retardation, hyperthymic temperament, hypomania due to antidepressants, and recurrent loss of antidepressant activity. It should be suspected that bipolar disorder may be present in such clinical situations which are agitation may be associated with depression, periodic

**KEYWORDS**

Bipolar depression; challenges; hypomania; pharmacotherapy; treatment

depression, periodic sleep disorder or combination of these, refractory depression (no benefit from three different antidepressants), depression of someone who is outward-looking profession, intermittent impulsivity (such as gambling, sexual abuse, and travel passion), or intermittent irritability, suicide crises, or both, as well as depression, bipolarity, which may be associated with inconsistent personality disorders. Even if they are not criteria for the bipolar disorder alone, it should be suspected that bipolar disorder may be present in their clinic. Significant problems and treatment resistance are experienced in the treatment of bipolar depression episodes. Drugs that are preferred in bipolar depression treatment; lamotrigine, quetiapine, olanzapine/fluoxetine combination, lurasidone, lithium, carbamazepine, valproate, and in obligatory cases antidepressants. In appropriate cases, ECT should be kept in mind as an effective treatment option. The patient is experiencing problems with the one hand there is the need for effective monotherapy, on the one hand the necessity of drug combinations, on the other hand side effects of the drug/drugs used and the use of uncontrolled antidepressants for do not repeat their depression. Apart from pharmacotherapy, psychosocial therapies, vagal nerve stimulation, transcranial magnetic stimulation, sleep deprivation, and phototherapy can be applied as additional treatment modalities. In our course, general information about bipolar depression disorder will be reviewed first and then the problems and solutions seen during follow-up and treatment of this patient group will be studied interactively.

Some of the major problems experienced in the bipolar depression patient group are;

- Diagnosis and treatment initiation in patients,
- Which medication should be chosen in which patient, what should be the treatment process (??),
- The importance of treatment compliance follow-up,
- The desire be hypomania of the bipolar patient group and uncontrolled attempts to do so,
- Others.

[Abstract:0722][Addiction]

## Up-to-date psychosomatic approaches in substance use disorder treatment

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### ABSTRACT

The most common treatments for substance use disorders (SUDs) are

1. Detoxification treatment,
2. Agonist maintenance (buprenorphine) and antagonist (naloxone) treatment,
3. Therapies: (a) Substance-free treatment in outpatients: It is an appropriate treatment method for individuals who are currently employed or have significant social support. (b) Short-term residential treatment: It is a compact but short treatment model based on a 12-step approach. This model includes participation in extended outpatient therapy and self-help groups such as AA. (c) Long-term residential treatment: Treatment communities that lead 6–12 months, focus on re-socializing the individual.

SUDs are increasing rapidly throughout the world. Treatment rates for these disorders are very low. For this reason, current and new treatment approaches are needed in SUDs.

The only drug licensed in our country for SUDs is buprenorphine and naloxone.

The other main drugs used in the treatment of SUDs in the world are: methadone (opioid agonist), naltrexone (partial opioid antagonist), LAAM (levacetylmethadol) (opioid agonist), gabapentin (calcium channel blocker), and pregabalin (calcium channel blocker).

Other possible agents: Aprepitant: a neurokinin-1 receptor antagonist. It may be used for the treatment of craving and relapse in cocaine use disorders in the future.

N-acetylcysteine: It is being investigated for its use in the prevention of relapse of cocaine use disorder with the assumption that it may increase the level of extracellular glutamate.

Immunotherapies: These are vaccines (active immunization) and monoclonal antibodies (passive immunization). They combine with substance to form large molecules so that they cannot cross the blood–brain barrier. Thus, the effect of the substance on the central nervous system is prevented.

Genetic therapies: Studies on genetic therapies are continuing in substance use disorders as well as in all areas of medicine. Epigenetics and nanotechnology are emphasized in studies. It is thought that transcription factors, especially CREB and delta fosB, are effective in behavioural responses to the substance.

### KEYWORDS

Substance use disorders; deep transcranial magnetic stimulation; craving; treatment; therapy; psychopharmacology

Deep TMS: The hypothalamic pituitary adrenal axis and dopamine have a key role in SUDs. The medial prefrontal cortex was shown to modulate dopaminergic activity and cortisol releasing factor (CRF) release in hypothalamic and extra-hypothalamic systems. The recent advancement in non-invasive neurostimulation technologies has enabled stimulation of deeper brain regions using H-coil transcranial magnetic stimulation (TMS) in humans. Deep TMS is predominantly used in depression and obsessive-compulsive disorders in the world. In recent years, several studies have been done to investigate the effectiveness of deep TMS in SUDs. Recent studies have shown that the treatment of deep TMS reduces craving urges in SUDs. There is also evidence that impulsive behaviours that cause substance use are reduced in the people. SUDs are one of the most important public health problems of our time. The lack of adequate therapeutic agent in this area is a serious problem. For this reason, many studies on substance dependence, drug researches and genetic studies are performed. In current conditions, pharmacotherapy in SUDs is rarely sufficient. Treatment results indicate that the dose-response effect depends on the provided psychosocial treatment services.

[Abstract:0723][Other]

## Biomarkers in mood disorders: recent updates

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### ABSTRACT

The diagnosis of psychiatric disorders is based on self-reports and the doctor's observations, and because they are not supported by biological objective evidence, they can be diagnosed as incomplete or incorrect and the treatment process can be adversely affected. For this reason, researchers are working on biomarkers that can objectively diagnose and monitor the treatment process. In 2001, Biomarkers Definitions Working Group defined biomarker "as a property that can be objectively measured and evaluated, which can be a marker of normal biological processes, pathological processes, or pharmacological responses to a therapeutic treatment." Development of neuropsychiatric biomarkers is difficult due to the main pathophysiological and biological processes in neuropsychiatric diseases are still unclear, complexity of the central nervous system physiology and pathophysiology, difficulty of direct examination and sampling of the target organ, difficulty of obtaining cerebrospinal fluid according to other body fluids, and restricted entry of neuroimaging ligands for research purposes. Biomarker research is technology dependent and with the development of technology, new areas will be explored. Yet, exploratory biomarkers in major mood disorder research have emerged, examples being found in clinical and demographic factors, genetics, cellular and molecular biology, neurophysiology, and neuroimaging. Potential neuropsychiatric biomarkers can be divided into classes such as risk (a measurable feature that allows identification of individuals at risk for developing a neuropsychiatric disorder), diagnostic/trait (ideally a measurable one that reflects the presence of a disease state without causing overlap or confusion among disorders, a measurable feature that reflects the current severity of the disease episode and the severity of the disease process), stage (a measurable characteristic that reflects the disease stage, a measurable characteristic that reflects the current classification of the stage), treatment response (individual therapeutic responses to the patient, the evaluation of the likelihood of a response to treatment given to assist clinicians in selecting a known feature), and prognostic biomarkers (a measurable characteristic that can predict the course of a disease and its outcome). Biomarkers for mood disorders are being investigated, especially in major depression and bipolar disorder. For biomarker researches, many researches have been done on oxidative stress, inflammation, and neurotrophic factors in mood disorders. However, by the using of high-efficiency "multi-omics" (genomic, epigenetic, proteomic, transcriptomic, metabolomic and lipidomic, telomeric); mood disorders can be understood more pathophysiologically and thus valid biomarkers can be determined. So, the need for psychiatric biomarkers to identify is very wide. In this presentation; various biomarkers in mood disorders, validity and reliability studies, new biomarkers, their effects on treatment development processes and their use in therapy monitoring will be discussed in the context of current literature.

### KEYWORDS

Biomarker; bipolar disorder; depression; mood disorders; multi-omics

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[Abstract:0724][Disruptive behavior disorders]

## Quantitative EEG findings in the psychopharmacological treatment of ADHD: study protocol

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### ABSTRACT

EEG provides information about the electrical activity of the brain. The scalp-recorded signal provides a diffuse picture of that underlying activity and that record can provide valuable information on the brain, with high temporal but poor spatial resolution. Recently, a number of studies have examined qEEG differences in children, adolescents, and adults with and without ADHD and a number of researchers have investigated the utility of EEG measures as a biomarker for ADHD. Briefly, a biomarker is an objectively measured index of pharmacological response or biological process that is quantifiable, precise, and reproducible. This biomarker may be used to diagnose or stage a disease process or predict a clinical response to treatment. Preliminary findings of our recently completed research, which was conducted collaboratively at Hacettepe University Child and Adolescent Psychiatry and Biophysics Departments, entitled "Quantitative EEG findings in the psychopharmacological treatment of ADHD: Possible markers and the relations between these markers and motor competence, cognitive skills and treatment response" will be presented along with a literature review within the scope of variables related to psychopharmacological treatment of ADHD. Our research protocol for review is outlined below: Eighty right-handed, psychotropic medication naïve, 6–10 years old children with a total IQ score of 75 or more on Wechsler Intelligence Scale for Children IV (WISC-IV), diagnosed with ADHD according to DSM-5 criteria without comorbid clinical learning disorders, conduct disorder, developmental coordination disorder, tic disorders, autism spectrum disorder, psychotic or affective disorders, anxiety disorders, obsessive-compulsive disorder, head trauma and chronic neurological disorders were enrolled. The control group consisted of 20 right-handed, psychotropic medication naïve, 6–10 years old children with a total IQ score of 75 and above on WISC-IV, who had no psychiatric disorders and neurological or long-term chronic diseases, and no history of head trauma, who were admitted to the General Paediatrics outpatient clinic of Hacettepe University Department of Pediatrics. All the children and their families gave informed consent to participate in the study. The study group was assessed immediately before the onset of psychopharmacological treatment and the control group after the acute complaints had been rectified and their physical health had been achieved. They were evaluated with a semi-structured diagnostic interview and different scales filled by the parents. Additionally, Bruininks-Oseretsky Test of Motor Proficiency (BOT) was administered and eyes open and closed resting state Electroencephalography (EEG) recordings were taken. Children in the study group were put on methylphenidate/atomoxetine treatment and the treatment response was evaluated along with all the other clinical and parent reported scales and eyes open and closed resting state EEG recordings were repeated in the 8–12th weeks of treatment. Patients who did not meet the widely accepted dosing and treatment algorithm of methylphenidate or atomoxetine (AACAP 2007), who did not have treatment compliance, and who did not tolerate treatment due to side effects, switching to/augmented with another psychopharmacological agent were excluded from the study. As a result, approximately 63 patients completed the study.

### KEYWORDS

ADHD; biomarker; electroencephalography; psychopharmacology; methylphenidate; atomoxetine

[Abstract:0725][ADHD]

## Attention-deficit/hyperactivity disorder (ADHD) diagnosis: DIVA and other diagnostic tools

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**ABSTRACT**

Adult attention-deficit/hyperactivity disorder (ADHD) is a relatively common, often unrecognized disorder. It affects 4.4% of adults in United States, but most adults with ADHD live with the symptoms and suffer the devastating effects of ADHD in their lives without identifying the source of their struggles. Instead, their difficulties are attributed to their own shortcomings. Many adults who suffer from untreated ADHD avoid diagnosis or treatment due to the negative stigmatization associated with ADHD. Mental health workers sometimes dismiss ADHD and define it as little more than laziness which is targeted as a marketing opportunity by pharmaceutical companies. However, many years of scientific research confirms adult ADHD does indeed exist, and that ADHD diminishes adults' quality of life. DIVA semi-structured interview allows a thorough evaluation of the diagnostic criteria of DSM-IV-TR for ADHD in adulthood, as well as in childhood. It is divided into two domains, each applicable for childhood (before age 12) and for adulthood: the DSM-IV criteria for inattention, and for hyperactivity/impulsivity. Adult ADHD Self-Report Scale-V1.1 Screener (ASRS-V1.1): The 6-item ASRS-V1.1 designed as a tool to help screen for ADHD in adults (aged 18 years and older). The 6 questions are consistent with the DSM-IV criteria and address the manifestation of ADHD in adults. The paper version requires 1–2 min to complete. Respondents are required to use a 5-item Likert scale to indicate the frequency of occurrence of symptoms (0 = never; 1 = rarely; 2 = sometimes; 3 = often; 5 = very often). According to the convention, if the respondent has 4 or more responses marked in the dark-shaded boxes of the copyrighted paper-version of the Screener (or in Part-A of the ASRS Symptom Checklist), then the current symptom profile of the individual is considered to be highly consistent with ADHD diagnosis in adults. Accurately diagnosing ADHD is critically important, as highlighted by the findings of Barkley and colleagues and Biederman and colleagues. These studies demonstrate that missed diagnosis and the absence of treatment were associated with educational, occupational, and social impairments in adaptive functioning, as well as an increased risk of substance use disorder. Because of the high prevalence rate of ADHD relative to other Axis I psychiatric disorders, clinicians should be aware of the symptoms and adult manifestations of ADHD and include screening in every adult psychiatric evaluation. Rating scales can be helpful in complementing the clinical interview, quantifying target symptoms, and measuring treatment response.

**KEYWORDS**

ADHD; DIVA; ASRS; diagnosis; tools

[Abstract:0726][Neuroscience: Neuroimaging-Genetics-Biomarkers]

## Woman's brain *versus* man's brain: how similar, how different?

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**ABSTRACT**

It is hard to say for men and women brain that there is no difference but it is hard to say there is a difference too. Brain behaves independently from its gender and clinical conditions, at least we accept it in such condition but is it truth? Current morphometric studies showed the brain in a mosaic pattern that has female intensive patterns and male intensive patterns and in unisex patterns. While gross differences in total brain volume are well-established, regional sex-related differences in neuroanatomy have not been well understood and require detailed studies and confirmation. It is that observed males have significantly greater than female variance for several key brain structures, including cerebral white matter and cortex, hippocampus, pallidum, putamen, and cerebellar cortex volumes. Functionality is very important as well as the morphology of brain and FMRI studies provide data about male and female differences in different conditions. Also, there have been differences in the receptor level in various areas of the brain which is related to different hormones, mainly testosterone and progesterone. Hormonal fluctuations were found to be correlated with changes in white matter microstructure. Aging is another parameter related to morphology and functionality of the brain and that may differ according to sex too. Females and males occur into the same uterus but they have been exposed to different hormonal regulation from the initiation and so on. Then environmental and cultural aspects are adding a continuum of interaction with the brain. Evolutional and genetical heritage interact these environmental, cultural and hormonal effects. Can we say the brain is a stable organ and do not differ or is it plastic? Neuroplasticity is described and being investigated for a while but the relationship between gender and neoplasticity is still not clear. Probably, the most important interference to be a women brain is becoming a mother. Adolescence, menopause, menstruation are other parameters that interact with the brain.

**KEYWORDS**

Brain; gender; hormones; morphology; neuroscience; sex

Also, neurocognitive functions differ according to the sex of the brain, emotion recognition, colour perception, visuospatial construction, and others. Another question is effects and interaction of various psychiatric diseases (autism, demans, schizophrenia, depression, etc.) on male and female brain. In this presentation, the similar and different aspects of female and male brain will be discussed in the light of current literature.

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[Abstract:0728][Mood disorders]

## Stigmatization in bipolar disorders

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### ABSTRACT

Stigmatization is to discredit, to look down on an individual in a way that would detach him/her from the others. It is, in a general sense, the defamation of an individual. Stigmatization comprises three components: cognitive problems (stereotype), attitude problems (prejudice), and behaviour problems (discrimination). There are three levels of stigmatization – structural, social, and internalized. Structural stigmatization occurs on a systemic level, social stigmatization occurs on a group level, and internalized stigmatization occurs on an individual level. Internalized stigmatization is the individual's acceptance of the negative stereotypes in the society for him/herself and as a result, withdrawal from the society due to negative emotions such as unworthiness and shame. In these patients, shame, feelings of unworthiness, increase in automatic negative thoughts, avoidance from social relationships, and decreased self-worth are observed. Bipolar mood disorder is a disease frequently observed in the society and has high mortality and morbidity. In 20–46% of the studies on bipolar disorder, internalized stigmatization was detected. Patients with internalized stigmatization have lower functional scores, shorter periods of well-being, and more depressive episodes. Internalized stigmatization is more frequent among seasonal and rapid-cycling patients in the rural areas, who are unemployed, have low socio-economic status, and low educational level. Psychosocial problems frequently observed in these patients are social isolation, problems of social adaptation, decrease in self-esteem, drop in school performance, difficulties in finding a job, deterioration of sociability and marital life. The society's views on bipolar disorder should be challenged and the patients should be treated. In addition to informing the society about the disease, the individuals' stories of recovery should also be shared. Starting from the training in medical faculty, emphasis should be placed on the training of the health personnel.

### KEYWORDS

Bipolar disorders; lower functionality; social isolation; stereotype; stigmatization

[Abstract:0729][ADHD]

## Effects of ADHD regarding self-concept on health-related quality of life in children

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**ABSTRACT**

**Objective:** Attention-deficit/hyperactivity disorder (ADHD) in children is associated with deterioration of health-related quality of life (HRQoL) in several dimensions. Fluctuations of self-concept during the developmental course of illness may have an impact on the clinical presentation of ADHD as well as on HRQoL in children diagnosed with ADHD. The objective of the present study is to evaluate the burden of ADHD on HRQoL with respect to self-concept in children.

**Methods:** Eighty primary school children were diagnosed as ADHD in Marmara University Hospital Child Psychiatry Clinic, who were compared with 74 healthy controls. The children were newly diagnosed ADHD cases based on Kiddie Schedule for Affective Disorders and Schizophrenia for School Aged Children-Present and Lifetime Version. The children completed the Piers-Harris Self Concept Scale (PHSCS) for the evaluation of their self-concept. Mothers completed the Conners Parent Rating Scale-Revised for ADHD and the Child Health Questionnaire-Parent Form 50(CHQ-PF50) for evaluating HRQoL in children. The Child Behavior Checklist and Negative Life Events Scale were also administered.

**Results:** ADHD and the control group did not differ in age (mean age:  $10.4 \pm 2.4$  vs.  $10.7 \pm 2.4$ ) and sex distribution (56 vs. 42 boys). Being female and parental separation is related to lower HRQoL in the ADHD group ( $p < 0.05$  for both). Children with ADHD had worse psychosocial and physical HRQoL than healthy controls ( $p < 0.05$ ). No relationship was found between academic achievement and physical or psychosocial scores of CHQ-PF50. Psychosocial QoL scores were found significantly higher in children with ADHD-hyperactive type ( $p < 0.05$ ). Children with ADHD reported lower self-concept than controls ( $p < 0.01$ ) and the decreasing tendency of self-concept scores in older ages was not observed, which was seen in healthy controls. Positive judgement on Happiness/satisfaction and Behavioural adjustment subscales of PHSCS appeared to affect the HRQoL positively ( $p < 0.01$ ). In contrast, adverse life events had a negative impact on HRQoL measures ( $p < 0.05$ ) in the ADHD group.

**Conclusions:** Low self-esteem in the presence of worse HRQoL measures may create difficulties in the adjustment processes of ADHD children. Families with ADHD children may be more prone to perceive HRQoL much worse when there is a history of adverse life event. Positive self-concept of children with ADHD may affect parents' perception of HRQoL.

**KEYWORDS**

ADHD; health-related quality of life; children; self-concept; adolescent

[Abstract:0730][OCD]

## Where do we stand on the pharmacological treatment of resistant obsessive-compulsive disorder? Novel alternatives

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**ABSTRACT**

Obsessive-compulsive disorder (OCD) is a chronic neuropsychiatric disorder that typically manifests during childhood or adolescence and is resistant to therapeutic intervention. OCD is characterised by the occurrence of either obsessions, compulsive rituals or, most commonly, both. Obsessions are recurrent and persistent thoughts, impulses or images that are experienced in an intrusive and inappropriate way, cause marked anxiety and distress, and persist despite all attempts to try to ignore or suppress them. Compulsions are repetitive behaviours or mental acts that a subject feels driven to perform in response to obsessions and are aimed at preventing or reducing anxiety. The prevalence of OCD is 1–3% [1]. The current Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition classifies OCD under the “obsessive-compulsive and related disorders.” If OCD is not treated properly, chronic illness can occur causing considerable functional impairment and predisposition to various psychiatric comorbidities. Cognitive behavioural therapy (CBT) is recommended as a first line of treatment in children and adolescents with mild to moderate cases of OCD. Numerous studies have consistently shown CBT's acceptability and efficacy. Moderate and severe OCD treatment requires psychopharmacological treatment options in addition to CBT. Regarding psychopharmacological therapy, serotonergic agents, especially selective serotonin re-uptake inhibitors (SSRI), are used as a first-line treatment in children and adolescents. But, between 40% and 60% of OCD patients fail to respond to SSRI treatment and require augmentation therapy. “Treatment resistant OCD” indicates persistent and substantial OCD symptomatology despite adequate treatment, which is known to be effective in childhood OCD. American Academy of Child and Adolescent Psychiatry (AACAP) has identified criteria for “Treatment resistant OCD”: (a) failure of adequate trials of at least two SSRIs or one SSRI and a clomipramine trial, (b) failure of adequately delivered CBT, (c) minimum 10 weeks of therapy of each SSRI or clomipramine at maximum recommended or maximum tolerated doses,

**KEYWORDS**

Adolescents; augmentation; children; psychopharmacology; Treatment-resistant obsessive-compulsive disorder

(d) no dosage change in the last 3 weeks. In treatment-resistant cases, SSRI therapy may be reinforced usually with clomipramine, benzodiazepine (Clonazepam) and typical/atypical antipsychotic agents. In clinical practice, the most common drug augmentation strategy is atypical antipsychotic agents. Despite all these measures, some cases fail to respond and may require alternate treatment options [2]. In recent years, stimulants, gabapentin, lamotrigine, topiramate, duloxetine, venlafaxine, agomelatine, sumatriptan, ondansetron, pindolol, inositol, opiates, donepezil, St. John's wort, and glutamatergic agents (such as *N*-acetyl cysteine, memantine, riluzole, etc.) have been used in the treatment of OCD. But the studies were usually conducted in adult age group and the data regarding the use of these drugs in treatment-refractory OCD is limited. For now, these drugs are not recommended for routine use [2,3]. In this symposium, novel pharmacological options in treatment-resistant OCD will be discussed.

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[Abstract:0731][ADHD]

## Cognitive behavioural therapies for the couples and the families suffering from adult attention deficiency and hyperactivity syndrome

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### ABSTRACT

**Introduction:** Attention-deficit/hyperactivity disorder (ADHD) is a neurodevelopmental disorder and it 70–80% persists in adulthood. The fundamental impairments are related to emotion regulation and executive functions. Family, business and interpersonal relations, budget management, health management, childrearing, driving, educational, legal, and social issues are the most affected areas. Undiagnosed or untreated ADHD is a serious public health problem. ADHD could cause damage to relationships. It is reported that spouses who married to persons diagnosed ADHD experience some serious problems regarding marital adjustment, marital functionality, communication, affectivity, spouse roles, and problem-solving. Spouses with ADHD report occupational and marital problems, spouses report low marital satisfaction. Both spouse try to cope with disappointment, low self-esteem and exhaustion. Medication partially improves occupational, marital and social functioning but mostly the problems turn back after medication is being quitted. Unless a multimodel treatment plan been organised, traditional family therapy techniques could be inadequate to help couples.

**Course content and plan:** This course will be held in two sessions. In the first session, the problematic areas experienced by the couples suffering from ADHD will be described and the solutions for them will be discussed. Following this, the management of the difficulties of couple therapy sessions will be discussed.

In the second session, assessment of the couple, Cognitive Behavioural Therapy (CBT) techniques of ADHD, psychoeducation of the couple, and management of the grief reaction will be addressed. Following this, the steps of CBT sessions of ADHD for couples will be introduced. Cognitive assessment and restructuring, detecting reciprocal triggering schemas and behavioural vicious circles, finding dysfunctional coping strategies and changing them with functional ones, enhancing problem-solving strategies, improving communication strategies, and stimulating positive interactions between the couple will be explained via case examples. At the end of the course interactive, questions and answers part will be held.

### KEYWORDS

Attention-deficit/hyperactivity disorder; ADHD; couple therapy; family therapy; Cognitive Behavioural Therapy

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[Abstract:0732][OCD]

## Novel approaches in neurobiology of obsessive-compulsive disorder: Where is glutamate in the OCD brain?

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### ABSTRACT

Obsessive-compulsive disorder (OCD) is a common, chronic, and treatment-resistant neuropsychiatric disorder that frequently begins during childhood and adolescence. OCD is characterized by obsessions and/or compulsions. Obsessions are recurrent, intrusive, persistent thoughts, impulses, and/or images that often cause anxiety or distress. Compulsions are ritualized and stereotypic behaviours or mental acts that are often performed to relieve anxiety or distress associated with obsessions. In Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), OCD is classified in the group of "Obsessive Compulsive and Related Disorders," which also includes trichotillomania, skin picking disorder, body dysmorphic disorder, and hoarding disorder. The aetiology of paediatric OCD has not been fully known, despite considerable research to date. The standard neurobiological model of OCD is especially focused on the cortico-striato-thalamic-cortical pathway, and neuroimaging studies have implicated this pathway in the pathophysiology of the disorder. It is thought that the imbalances in neuronal metabolite and neurotransmitter within cortico-striato-thalamic-cortical pathway have been shown as the leading reasons for the OCD onset. The most of the OCD-related research has been related to the serotonergic and dopaminergic systems. However, evidence-based pharmacological studies have indicated that serotonergic and dopaminergic agents are not always efficacious in OCD. In recent years, the glutamatergic system has been implicated in the aetiology of obsessive-compulsive spectrum disorders. Several clinical research methods support the role of the glutamatergic system in OCD, and the glutamatergic agents have been increasingly used in the treatment of OCD and disorders within the OCD spectrum [1]. Glutamate is a major excitatory neurotransmitter in the central nervous system. It includes several cognitive functions such as learning, memory, and perception. It is known that glutamate signalling is critical in early brain development through the facilitation of neuronal proliferation, migration, and differentiation. Its dysregulation could lead to psychopathology in youth. A growing body of literature has investigated the role of glutamate in the pathophysiology of psychiatric disorders such as OCD, and increasing evidence has shown that the neurotransmission of glutamate within the cortico-striato-thalamic-cortical pathway may be disrupted in OCD [2,3]. The aim of this seminar is to discuss the existing literature on current evidence with glutamatergic dysfunction in patients with obsessive-compulsive disorder.

### KEYWORDS

Adolescent; child; glutamate; neurobiology; obsessive-compulsive disorder

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[Abstract:0733][Other]

## Psychobiotics and their usage in mental disorders

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**ABSTRACT**

Probiotics are the most popular research topics in recent years. Probiotic microorganisms were first identified by Elie Metchnikoff in 1908 and their positive effects were noted. While oral or rectal intake of a microorganism is provided with probiotic products, it is ensured that an undesired microorganism is left to a desired microorganism with prebiotic products. It is thought that there is a relationship between the intestinal microbiota and many diseases. Gut Brain axis is a hypothesis aimed at revealing this relationship in mental illnesses. These mechanisms of action have been explored in many psychiatric disorders such as depression, anxiety, schizophrenia, autism, and alcohol dependence. The results are mostly related to the HPA axis, the triggering of inflammatory processes, the influence of neurotrophic factors, and serotonin metabolism. Psychobiotics are defined in 2013 as: those who have psychiatric illness when consumed in sufficient quantities are able to produce beneficial health [1]. Among the many probiotics that are found to have positive effects on the host, those who are thought to have psychotropic effects; *Bifidobacterium*, *Lactobacillus*, and *Enterococcus* [2]. Studies conducted in various animal experiments and those with mental illnesses have shown positive results.

**KEYWORDS**

Mental illness; microbiota; probiotic; prebiotic; psychobiotic

**References**

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[Abstract:0734][Mood disorders]

## Determinants of comorbid anxiety disorders in bipolar disorder

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**ABSTRACT**

Prevalence of comorbid anxiety disorder (AD) diagnosis among bipolar disorder (BD) patients is reported significantly higher than general population, and current evidence points out that comorbidity of anxiety disorders with BD significantly affects the outcome of BD patients. Therefore, it is very important to understand specific determinants of this comorbidity. Both BD and AD are composed of heterogeneous patient groups. Supporting this idea, published studies about this comorbidity also show significant heterogeneity. Age of onset, duration since first diagnosis, severity of symptoms, number of manic/depressive episodes, history of suicide attempt, gender, age, marital status, educational level, history of substance use, comorbidity of ADHD, type of BD in the sample, episode of BD in which the patient was assessed for AD might be among the determinants of AD comorbidity in BD. In addition, the determinants for each AD as panic disorder, social anxiety disorder, or generalized anxiety disorder might vary. When these determinants are well defined, it may provide us clues about common aetiologies behind AD and BD and may also lead clinicians to more targeted treatment options. Here, we are going to present the meta-regression findings of the published studies on AD–BD comorbidity.

**KEYWORDS**

Anxiety disorders; bipolar disorder; comorbidity; meta-analysis; meta-regression

**References**

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[Abstract:0735][ADHD]

## The importance of Resting State Quantitative EEG analysis in ADHD

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### ABSTRACT

EEG is defined as the summation of postsynaptic activation of synchronously firing neurons and accepted as a direct measure of neuronal activity. Neuronal oscillations are representations of spontaneous, continuous activity of central nervous system (CNS) and are different from autonomous, continuous typical pacemaker rhythms. Because its frequency is related to membrane potential and interaction among neuronal networks alters intrinsic properties of neurons such that fast rhythmic bursting cortical neurons may behave as fast-spiking neurons as a result of thalamic interactions. Resting state EEG records represents spontaneous activity and changes in response to stimuli. During resting state acquisitions, subjects are asked to stay eyes close/open and not to focus on any thoughts, i.e. wander Random Episodic Spontaneous Thoughts.

It was estimated that 60–80% of the energy is consumed during the resting state activity of the CNS. The additional energy burden related to tasks was expected to be as little as 0.5–1%. It can be seen that the resting state does not mean “inactive” state, in fact it is the dynamic substrate of the “present,” momentary state of the brain, and determines the fate of incoming information. By examining ongoing activity on the basis of dynamical changes and network structures which is called as quantitative EEG analysis, it is possible to get more comprehensive information about the activity of CNS and the shifts from resting state to response and also understanding changes related to different diseases and/or disorders. In recent years, on the basis of the results of quantitative EEG analysis, it was shown that the increases in theta band activity and in theta/beta power ( $\theta/\beta$ ) ratio are two of the most reliable EEG findings in ADHD to date. The increase in theta band activity is concluded as the signatures of underarousal and maturational delay. It was also shown that children with ADHD having higher theta band activity power are more likely to show a positive response to medication.

Results related to  $\theta/\beta$  ratio indicated that it was related to faster reaction times and increased omission errors and concluded by increased impulsivity, i.e. an increase in the speed with a decrease in the performance. As a result, examination of resting state rhythmical activity of CNS provides tools for getting more comprehensive information about CNS activity and finding signatures to identify different diseases/disorders. In the case ADHD, in addition to defining disorder-specific frequency bands, it is important to define topographical and dynamical shifts/changes during resting state.

### KEYWORDS

ADHD; EEG; resting state; quantitative EEG analysis; theta/beta ratio

[Abstract:0736][Mood disorders]

## Management of bipolar disorder and comorbid anxiety

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### ABSTRACT

Anxiety symptoms and disorders are common among patients with bipolar disorder. Nearly over half of all subjects with bipolar disorder type I has a lifetime diagnosis of anxiety disorders. Most studies have shown that comorbidity of anxiety disorders are associated with unfavourable outcomes in people with bipolar disorder, such as a greater number of recurrences, worse treatment response, and higher risk of attempting suicide. With recent progress in psychiatric genetics, it has been shown that there is a substantial degree of aetiological overlap among the major psychiatric phenotypes, in this prospect genetic analyses may provide new insights about the comorbidity of the mood and anxiety disorders in the near future. Generally, it is first recommended to achieve adequate mood stabilization before using antidepressants for the treatment of comorbid anxiety disorders. There is a need for further research to help find relevant treatments for comorbid anxiety syndromes. In this presentation, the impact of anxiety on the presentation, course, and treatment response of patients with bipolar disorder will be discussed.

### KEYWORDS

Bipolar disorder; anxiety; anxiety disorders; mood disorders; comorbidity

[Abstract:0737][Other]

## Depression and anxiety disorders in patients with epilepsy

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### ABSTRACT

In many studies, the connection between epilepsy and depression and anxiety has been demonstrated. Depression is the most common psychiatric disorder comorbid with epilepsy. In a study using population-based data sources, the prevalence of mood disorders with epilepsy was 24–74%, depression 30%, anxiety disorders 10–25% [1]. Drug-refractory epilepsy was also associated with a higher prevalence of depression. The lifetime prevalence of anxiety was also found to be 2.4 times higher in people with epilepsy than in people without epilepsy [2]. Structural abnormalities, monoamine pathways, cerebral glucose metabolism, the hypothalamic–pituitary–adrenal axis, and interleukin-1b play a role in the common pathogenesis of these conditions. The stress of living with a chronic condition can also worsen feelings of depression and anxiety. Epilepsy may be more difficult to manage as depression is sometimes known to make seizures more frequent and can decrease the motivation to manage epilepsy effectively. Recent studies have identified depression and anxiety as risk factors for drug-refractory epilepsy in newly diagnosed epileptic patients. These risk factors have also been associated with worse outcomes of epileptic surgery. In addition, depression and anxiety have been associated with increased adverse events in response to antiepileptic drugs, a greater frequency of perceived stigma, a higher risk of suicidality and decreased the quality of life [3]. Therefore, clinicians should be aware of the importance of early detection and management of depression and anxiety comorbid with epilepsy.

### KEYWORDS

Anxiety; comorbidity; depression; epilepsy; prevalence

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[Abstract:0738][Impulse control disorders]

## Impulsivity during pregnancy and the postpartum period

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### ABSTRACT

Impulsivity is defined as a predisposition towards rapid, unplanned reactions to internal or external stimuli without regard to the negative consequences of these reactions to the impulsive individual or to others. Some researchers separate impulsivity into three components: (1) acting on the spur of the moment (motor activation), (2) not focusing on the task at hand (attention), and (3) not planning and thinking carefully (lack of planning). Impulsivity is an important aspect of several psychiatric disorders such as affective disorders, personality disorders, substance use disorders, eating disorders, attention-deficit hyperactivity disorder, and impulse control disorders. Impulsivity and impulse control disorders may cause high-risk behaviours, problems in interpersonal relationships, social and economic difficulties in pregnancy and postpartum. Impulsivity has been shown to be an important risk factor for unplanned pregnancies. In qualitative interviews, women commonly report increased impulsivity and onset or worsening of explosive anger during the period of pregnancy and the post-partum. Impulsiveness and aggressiveness can be the symptoms of perinatal stress that are overlooked or unrecognized by the patient's family and/or health-care providers.

### KEYWORDS

Impulsivity; impulse control disorders; pregnancy; postpartum; perinatal

Besides the functional impairment experienced by the mother, anger outbursts during pregnancy also affect the health of the foetus. Data show that impulsive, uncontrollable outbursts of temper increase the risk for later cardio-vascular disease for the newborn. There is also a link between anxiety and impulsivity. Given the fact that in the perinatal period women are more vulnerable for mood and anxiety disorders, impulsivity might be a good indicator of a need for an intervention for the well-being of the mother and the baby.

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[Abstract:0739][Other]

## Theory of mind in children and psychopathology

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### ABSTRACT

Theory of Mind (ToM) is a social cognition skill demonstrated its importance in the last 40 years with psychiatric clinical trials. ToM is seen as an effective and necessary skill in the social functioning of human who is a social creature with the ability to recognize the mental states and emotions of others. In the first six years of life, ToM has been associated with many fields. Many tests are used in the evaluation of ToM. First-order false-belief tasks assess the ability of the person to understand what he or she knows, at the simplest level that the other person does not know. Second-order false-belief tasks; the ability of a third person to predict the thoughts of a second person about a thought. The Hinting Task is one of the advanced ToM tasks. It tests the ability to predict the true intention behind the indirectly spoken verbal expressions. Faux Pas and Reading the Mind in the Eyes Tasks are considered to be the most complex ToM skill and these tests are accepted as a sensitive measurement tool of ToM deficits. The first psychopathology studies have been carried out in children with Autism Spectrum Disorders (ASD), and the studies about ToM skills in the diagnosis of neurodevelopmental disorders are becoming more and more interesting. In addition to impulsive control, attention, and other neurocognitive problems in the Attention-deficit/hyperactivity disorder (ADHD), children have emotional problems and interpersonal problems with parents, siblings, peers, and teachers. Social dysfunction is considered one of the most debilitating aspects of ADHD. It was found that 22% of children with ADHD had deficits in social functioning and this was significantly higher than the control group. Social dysfunction is very important for short- and long-term prognosis of children with ADHD. The relationship between ADHD and social cognitive deficits including emotional face recognition and prosodic perception has been clearly demonstrated. It is unclear whether impairment of emotion recognition and ToM deficits in ADHD are comparable to ASD in terms of severity. It is important to investigate whether social cognitive disorders in ADHD are independent abnormalities or secondary to neurocognitive skill abnormalities affecting social cognitive tasks of neuropsychiatric patients. We will present our study of social cognition in children presenting with ADHD, Specific Learning Disorder, and ASD diagnoses.

### KEYWORDS

Theory of mind; neurodevelopmental disorders; psychopathology; tasks; ADHD; ASD

[Abstract:0740][Autism]

## Management of challenging behaviours of a young adult with autism spectrum disorder

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### ABSTRACT

**Objective:** Our aim is to present a young adult with autism spectrum disorder, discuss pharmacological management of aggression, and side-effects of long-acting injectable antipsychotics in patients with autism spectrum disorders.

**Case presentation:** 18-year-old male was admitted with symptoms of aggression, irritability, and depressive symptoms. Aggression was severe when he met an old classmate whom he perceived as a bullying person. He had persistent deficits in social communication and social interaction and restricted, repetitive interests since childhood. Per the clinical evaluation, his IQ was normal, and there were no other medical factors contributing to his aggression. He was diagnosed with autism spectrum disorder without language or intellectual impairment. Fluoxetine was prescribed for depressive symptoms and repetitive behaviour. For irritability and aggression, we initiated risperidone 1 mg per day and gradually increased to 2 mg per day. To keep the blood level stable and to maintain constant symptom control, we switched to long-acting injectable risperidone 25 mg prescribed every two weeks. Because the side effects – decreased sexual desire and erectile dysfunction – were tolerable and the patient responded partially, at the sixth week of treatment, the dose was increased to risperidone 37.5 mg long-acting injection every two weeks. On the day after the first injection, he described a strong urge to cut himself, feeling discomfort, and a burning sensation in the head. Propranolol 40 mg three times per day routinely and alprazolam 1 mg on PRN basis were prescribed. The same pattern of symptoms – always taking two days to remit – reoccurred in the following two injections. Because he benefitted on symptoms of aggression, risperidone 25 mg long-acting every two weeks along with propranolol 120 mg per day were continued. Urge to cut himself resolved, however, not the discomfort and irritability. Clonazepam 2 mg per day – for three days starting from the day of injection – was successful in treating the side-effects.

**Conclusion:** There is very limited evidence for specific treatment approaches in adults with autism spectrum disorder. In this case, we would like to set the ground for a fruitful discussion on state-of-the-art pharmacological management of challenging behaviours in young adults with autism spectrum disorder.

### KEYWORDS

Autism spectrum disorder; Asperger's syndrome; adult; aggression; pharmacological treatment

[Abstract:0741][PTSD]

## Solution zone intertwined with the problem: narrative nature of trauma

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### ABSTRACT

Scientific publications on post-traumatic stress disorder (PTSD) reported to be between 7.8% and 9.8% in lifetime prevalence in epidemiologic studies are possible from the late nineteenth century. PTSD is viewed as a psychological disorder caused by exposure to a traumatic event. The traumatic event must involve actual or threatened death or serious injury to self or others, and it must include a response of intense fear, helplessness, or horror. Some examples of these types of traumas include sexual assault, child physical or sexual abuse, natural disasters, sudden loss of a loved one, firefights during war, being a prisoner of war or experiencing captivity and torture, viewing mutilated bodies or dead bodies and atrocities, motor vehicle accidents, and acts of terrorism. For a diagnosis of PTSD, at least one reexperiencing symptom is required, as well as at least three avoidance symptoms and two hyperarousal symptoms. Rather than the pharmacological treatment, psychotherapies have the main place in the treatment of problems related with traumatic cognitions, emotions and behaviours. Although the paradigm of psychology changes across the time, exposure related interventions, focused on internal

### KEYWORDS

Post-traumatic stress disorder; defusion; mindfulness; Acceptance and Commitment Therapy; behavioural therapy

experiences related to traumatic event, have been the main component of psychotherapy for post-traumatic stress disorder (PTSD). Third wave cognitive-behaviour therapies and especially Acceptance and Commitment Therapy (ACT) use mindfulness exercises for observing negative private experiences without judgement and aim to orient commitment action through valued life direction instead of trying to reduce symptoms, can be effective in the improvement of the treatment of PTSD. In ACT Psychopathological processes are conceptualized as a misapplied control strategies for internal unwanted experiences (Thoughts, emotions and memories...) and ACT offers acceptance to the unwanted emotions and defusion to the cognitive components of problems. Misapplied control as the solution to healing from trauma may, in fact, be part of the problem. Moreover and paradoxically, efforts to control these internal events by avoidance can actually amplify the experience of the event. If we examine the impact of the verbal behaviour (to speak, form thoughts, use our minds) of humans as a whole, we will see how it can come to affect a trauma survivor's life more globally. Our human ability to be verbal can play a critical role in moderating the damage caused directly by a traumatic event. For instance, given the nature of human language, the description and evaluation of the trauma itself can become aversive. Simply telling the story of a trauma can evoke negative emotions and experiences; the actual trauma does not have to be present. ACT tries to alter the functions of those thoughts and internal phenomenologies. At a fundamental level, rather than changing a person's internal experience, ACT loosens the grip such phenomena can have over the person's life, freeing them to live intentionally rather than reactively.

[Abstract:0742][Mood disorders]

## Mania due to the general medical conditions

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### ABSTRACT

Although mania is a characteristic of bipolar disorder, it can occur due to many other general medical conditions, such as infection (i.e. HIV, encephalitis), metabolic diseases, endocrinological disease (i.e. Cushing's disease, thyroid diseases), rheumatological diseases (i.e. SLE, Behcet's disease), various neoplasm (i.e. brain tumours), neurologic disease (i.e. epilepsy, multiple sclerosis, stroke), or traumatic brain injury. Mania due to the general medical conditions is presence of a prominent and persistent period of abnormally elevated, expansive, or irritable mood and abnormally increased activity or energy predominating in the clinical picture that is attributable to another medical condition. In most cases, the manic states appear during the initial presentation of the general medical conditions. The manic states due to the general medical conditions differ from typical mania, and are often difficult to treat because of underlying aetiologic factors. In addition to the treatment of the underlying general medical condition, anti-manic or antipsychotic agents may also be used for the treatment of mania due to the general medical conditions.

### KEYWORDS

Atypical mania; general medical conditions; mania; manic states; treatment

[Abstract:0743][Anxiety disorders]

## Biomarkers in anxiety disorders: recent updates

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### ABSTRACT

Anxiety disorders are most prevalent mental disorders in general population and often cause chronic impairment across the lifespan. Approximately one in four adults in the U.S. population has an anxiety disorder at some point in his or her life according to epidemiological studies. As described in DSM-5, anxiety disorders represent a heterogeneous set of disorders. This probably accounts for the findings of neurotransmitter and

### KEYWORDS

Anxiety disorders; biomarker; genetic; neurochemistry; neuroimaging; neurophysiology



neuropeptide studies implicating abnormalities in noradrenergic, benzodiazepine, corticotrophin-releasing hormone, and other neurotransmitter and neuropeptide systems across different diagnostic conditions.

Biomarkers are defined as anatomical, biochemical or physiological traits that are specific to certain disorders or syndromes. Identifying biomarkers that co-occur with anxiety, as well as those that precede the onset of anxiety, may enhance our understanding of the etiopathogenesis of clinical anxiety and may provide novel targets of treatment for cognitive, behavioural, or pharmacological approaches. Besides, biomarkers can also be used in the treatment response assessment as a biological predictor. Biological predictors of treatment response, which are also defined as “treatment biomarkers” would contribute to the personalized medicine approach, in which biomarkers would guide decision making and help to select the most suitable medication for individual patients [1]. Although, none of the putative biomarkers is sufficient and specific as a “diagnostic tool” or “treatment biomarkers”, researches that improve our understanding of the neurobiological causes of anxiety disorders are on the rise. The objective of this presentation is to summarise the current knowledge of potential biomarkers for anxiety disorders in neurochemistry (neurotransmitters such as serotonin, norepinephrine, dopamine or GABA, neuropeptides such as cholecystikinin, neurokinins, atrial natriuretic peptide, or oxytocin, the HPA axis, neurotrophic factors such as NGF and BDNF, immunology), neurophysiology (EEG, heart rate variability), neurocognition, neuroimaging, including structural brain morphology, functional magnetic resonance imaging and techniques for measuring metabolic changes, and clinical and molecular genetic findings of family, twin, linkage, association and genome-wide association studies [2,3].

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[Abstract:0745][Psychotherapies]

## Cognitive behavioural therapy approaches in substance use disorder treatment

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### ABSTRACT

Substance use disorders (SUD) can be defined as “a cluster of cognitive, behavioral and physiological symptoms indicating that the individual continues using the substance despite significant substance-related problems” (APA, 2013). It can emerge from a dysfunctional pattern of behaviours and emotions related to the consumption of psychoactive substances, such as alcohol, cannabis, cocaine, and opioids (Morin et al., 2017). According to an epidemiological study, about 17–19% of the population suffers from substance misuse (Kessler et al., 1996), which makes it the second most prevalent class of disorders within the Diagnostic and Statistical Manual of Mental Disorders-5 (DSM-5; APA, 2013). In a recent report, the World Health Organization (WHO) stated that problematic substance use was on the rise, afflicting more than 5% of the world population, and representing about 3.3 million deaths worldwide (WHO, 2014). The cognitive approach helps individuals to come to grips with the problems leading to emotional distress to gain a broader perspective on their reliance on drugs for pleasure and relief from discomfort. In addition, specific cognitive strategies help to reduce urges and at the same time, establish a stronger system of internal controls. Moreover, cognitive therapy can help patients to combat their depression or anxiety which frequently fuels addictive behaviours. A major trust of cognitive therapy of substance abuse is to help the patient in two ways: (1) to reduce the intensity and frequency of the urges by undermining the underlying beliefs and (2) to teach the client specific techniques for controlling or managing their urges (Beck et al., 1993). This presentation focuses on two main topics. First, cognitive-behavioural therapy (CBT) models of intervention for SUDs. The relapse prevention model is the most commonly described CBT intervention

### KEYWORDS

Substance use disorder; treatment; psychotherapy; cognitive-behavioural therapy; relapse prevention

for SUDs and was developed to assist clients who had achieved abstinence through detoxification in order to maintain abstinence over the long term (Marlatt & Donovan, 2005). Other interventions were guided self-change, behavioural couples therapy, and community reinforcement approach. Also, personality-targeted CBT intervention represents a more personalized version of the CBT model to address heterogeneity and comorbidity within SUDs by targeting common personality risk factors for behavioural and mental health problems that co-occur with SUDs (Morin et al., 2017). These cognitive behavioural interventions for SUD are presented in more detail. The second topic is researches. The articles on the treatment of SUD with CBT that were published in the last 10 years have been screened in national and international databases.

[Abstract:0746][Other]

## Development and neurobiology of theory of mind

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### ABSTRACT

Theory of Mind (ToM) is defined as the ability of one to perceive the mental states and emotions of other people. It is important for the successful social interaction that the person can understand that other people can have different beliefs and behave differently from their beliefs. The ToM forms the basis for the ability to predict and understand the meaning of people's behaviour. ToM, which is the ability of the individual to understand the mental and intellectual state of himself or others, is another aspect of social intelligence. Other concepts such as mindreading, mentalization, mentalization, metarepresentation, and other minds are also used in the literature in addition to ToM concept for conceptualizing the mental state of others.

"Theory of Mind" was first used as a concept by Premack and Woodruff, primatologists and psychologists in 1978. "Premack and Woodruff "Does the chimpanzee have a 'theory of mind?' suggested that chimpanzees could make inferences about the mental state of their species. The evaluation of ToM skills in children was first performed by Wimmer and Perner in 1983. They used the unexpected transfer test and the stories they developed in this method in order to measure the ability of children to deduce the mental state of others.

As the importance of normal person relationships and psychiatric status is understood, research on the neural bases in the brain of ToM skills is increasing. The first step is the discovery of mirror neurons and the idea that these neurons can form neural networks. Although these neurons were first described in primates, they were also found to be present in the human brain in functional imaging studies. It is defined that mirror neurons are involved in defining the motion of others. In general, studies have shown that the frontal, temporal, parietal cortex in ToM gives the foreground results. It has been shown that the right hemisphere is active and plays an important role in understanding and meaningfully empathizing imitative and facial expressions.

### KEYWORDS

Autism; child; neurobiology; social cognition; theory of mind

[Abstract:0747][Schizophrenia and other psychotic disorders]

## How can we overcome treatment resistance in schizophrenia? Is clozapine fear justifiable or exaggerated? Principles of clozapine treatment in stages and psychosocial approaches in overcoming treatment resistance

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### ABSTRACT

Clozapine from the dibenzodiazepine group is the only antipsychotic drug approved by the FDA because it affects both positive and negative symptoms and is a gold standard in treatment-resistant schizophrenia patients, as well as reducing the risk of suicidal behaviour in

### KEYWORDS

Clozapine; gold standard; efficiency; tolerability; psychosocial intervention

schizophrenia and schizoaffective disorder. There are also studies showing that chronic use of clozapine improves interpersonal cohesion, social and occupational functioning in some of the patients, which also contributes to their continuing education and training, reducing hospitalization frequency and duration of hospitalization.

It is thought that 1 / 3–1 / 5 of patients with schizophrenia are treatment-resistant

There are serious side effects such as agranulocytosis, myocarditis / cardiomyopathy and epileptic seizures, daytime sedation may cause side effects such as urinary incontinence, hypersalivation, weight gain, metabolic syndrome and constipation at night.

Clozapine at least 10–15 times less than expected in the world and in Turkey and is often used in 2–10%. In a recent study conducted with outpatients, it showed that clozapine use was less than 8%.

This leads to the fact that the most prominent leading clinicians do not have enough consciousness and experience to manage serious side effects, and the need to have a blood count every week for 18 weeks leads physicians to be reluctant to use clozapine.

These side effects and difficulties can in fact be overcome with conscious approaches and the advantages brought about by the widespread use of TRSMs which allow close and frequent follow-up of patients with schizophrenia

#### *While starting clozapine*

The effect of clozapine has been proven in patients with treatment-resistant schizophrenia. However, prescription of clozapine is limited due to need the gradual increase in dose in the initiation protocol, the long and costly follow-up protocol, the interaction with many drugs, the presence of life-threatening side effects, the gradual cessation of treatment within 1–2 weeks, and the high cost of treatment. Therefore, these conditions motivate clinicians to identify patients with adequate response. In addition, when compared with other antipsychotics, it is reported that clozapine needs a longer duration of treatment and the clinical response may appear to be relatively late. In this regard, drug plasma concentration, brain imaging, clinical parameters, genetic studies, quantitative electroencephalography (QEEG) studies were used to predict clozapine response.

Data obtained from current studies will prevent clinicians from wasting time in patients who are unlikely to respond to clozapine by not using a drug that does not have a positive effect on the treatment process, while at the same time preventing patients from being exposed to the side-effect profile of clozapine. However, progress in this area will significantly contribute to the prevention of improper use of health care facilities, the reduction of financial costs associated with the use of unresponsive drugs, the reduction of the use of additional medication and health units due to clozapine side effects

[Abstract:0748][Mood disorders]

## Prevalence of Comorbid Anxiety Disorders in Bipolar Disorder

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#### ABSTRACT

Many epidemiological and clinical studies report high prevalence of comorbidity between bipolar disorder (BD) and anxiety disorders (AD). This comorbidity is shown to be higher than the general population and higher than the comorbidity of unipolar depression and anxiety disorders. Comorbidity of AD is proven to cause challenges in the treatment and course of BD. Even though there is accumulating number of studies on this issue, pooling these data for each anxiety disorder's comorbidity (as generalized anxiety disorder, panic disorder, social phobia) in subtypes of BD as BD I and BD II and analysing the heterogeneity of published studies is needed. When comorbidity rates of AD and BD are better known, it may provide convenience to clinicians for their diagnostic, therapeutical and prognostic implications. Here, we are going to present our findings from our meta-analysis study.

#### KEYWORDS

Anxiety disorders; bipolar disorder; comorbidity; meta-analysis; meta-regression

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[Abstract:0749][Psychosomatic Medicine and Liaison Psychiatry]

## Gut–brain microbiota axis: psychobiotics and mental health – gastrointestinal symptoms in mental disorders

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### ABSTRACT

In clinical studies there is a strong relationship between gastrointestinal symptoms and mental disorders. As a well-known reality, there are direct and indirect interactions between our gastrointestinal system and our brain like between our whole body and our brain. These interactions have some physiological consequences which are necessities for a healthy and well performing gastrointestinal system in normal daily life of a human being. What is going on in our gastrointestinal system when something went wrong with our mental status? There are many gastrointestinal signs and symptoms when we feel any mental stress. We can directly feel that we are under stress, even just observing our gastrointestinal motility and changes in our daily gastrointestinal habits. Psychological stressors, can even modulate the intestinal immune system. Indeed, although acute stress accelerates the resolution of an infection by increasing both cellular and humoral immunity, prolonged periods of stress have the opposite effect and dampen immune responses to invasive pathogens, thereby increasing the vulnerability to infections. Finally, psychological comorbidities may lead to altered brain processing of incoming sensory signals, thereby contributing to functional gastrointestinal system symptom development. Psychological stressors contribute to the initiation and course of functional gastrointestinal system symptoms, potentially via mechanisms involving immune modulation and altered brain processing of incoming nociceptive signals. The stress-induced release of the mast cell mediators, histamine, tryptase and serotonin, trigger sensitization of afferent nociceptive neurons, thereby leading to aberrant visceral pain perception.

### KEYWORDS

Functional gastrointestinal system symptoms; mental health; gastrointestinal system; microbiota; microbiome

[Abstract:0750][Non-biological treatments]

## Theory of mind ability assessment tools and theory of mind-based therapies

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### ABSTRACT

Theory of mind (ToM) is defined as the capacity to interpret, deduce, and explain the mental states underlying the behaviours of others. It includes the abilities to understand false beliefs, clues, intents, humour, deception, metaphor, and irony. ToM is associated with various areas, such as joint attention, pretend play, language development, social behaviour, and executive functions. Tager-Flusberg and Sullivan described two aspects of ToM, social-cognitive and social-perceptual, and reported that these can be measured with different tests. The aspect known as social-cognitive ToM refers to the interpretation of mental states by looking at the behaviours of others, and false belief tests are used for evaluation. The aspect known as social-perceptual ToM is associated with the affective system and is defined as the ability to perceive the mental state of others based on directly visible information. The Reading the Mind in the Eyes test (Eyes Test) is most commonly used for evaluation. Both ToM components work together for understanding the mental states of other people. Various tests concerned with ToM have been developed. Efforts toward evaluation with different components have been made based on the idea that it is difficult to maintain that the concept of ToM represents a single ability. These components consist of understanding first-order false belief, second-order false belief, metaphor and irony, and faux pas. First-order false belief tests: These assess first-order false belief ability. This is the ability to understand what the subject himself knows and what the other person does not know. First-order false belief tests include the Sally-Anne test and Bonibon test (Smarties test). Second-order false belief tests: The second-order false belief task is the ability to predict the thoughts of a second person concerning a third individual. According to Perner and Wimmer, this ability is “belief about belief.” Second-order false belief tests include the Chocolate bar task and the Ice-cream truck task.

### KEYWORDS

Theory of mind; therapies; belief; tests

Hinting task: Developed by Corcoran et al. (1995), the Hinting task is one of the advanced ToM tests. It tests the ability to estimate the true intention behind indirectly expressed verbal statements.

Faux pas: Baron-Cohen et al. (1999) used the Faux pas task to evaluate high mental attributions. Recognition of faux pas is regarded as the most complex ability in developmental terms, and as a good measurement tool for fine ToM disorders. This ability requires both comprehension skill and emotional empathy components.

Reading the mind in the eyes task: One of the advanced ToM tasks, this was designed to test how well the subject can put himself in another's place and how well he understands others' mental states.

Recognition of the ToM and the possibility of evaluating this by means of tests have made it possible to develop social skills training techniques. Role-playing, coaching, and modelling are some social skills training techniques used.

The aim of this presentation is to discuss the tests used in evaluating ToM abilities and the clinical use of social skills training.

[Abstract:0751][Psychotherapies]

## What does psychodynamic psychotherapy promise us?

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### ABSTRACT

In the inner world of our patients, there is a path that extends from past to present and is almost always the same way if not intervened. Psychotherapies are like navigation guides that will make this journey more smooth and peaceful. One of our most basic tasks as psychiatry professionals is to understand the inner world of our patients. Thus, we can understand the elements that cause problems in the external world. Some of these elements may exhibit repetitive patterns. At the basis of this pattern may be the nature of their relationship established with early childhood objects. The nature of this relationship in the past can manifest itself in the relationships they have established today. Similarly, the way our patients relate to their therapists gives clues about their relations in the outside world. Psychodynamic psychotherapy promises us a very useful method of understanding the inner world of our patients. Psychodynamic psychotherapy is based on the idea that childhood experiences and unresolved past conflicts can significantly affect an individual's current state of life. For this reason, it is understood that adulthood relationships may be a consequence of childhood unconscious patterns. Psychodynamic psychotherapy reveals the unconscious patterns of object relations, conflicts, and desires that might cause problems. Psychodynamic psychotherapy emphasizes an understanding of unconscious conflict in the clinician-patient relationship as well as in the patient's life outside of therapy, through transference, counter-transference, defence mechanisms, and resistance. The clinician interprets and recognizes the patient's repetitive patterns and unconscious conflicts. The therapeutic relationship between the patient and the clinician is more important than any technique in producing a positive result. A strong therapeutic alliance is defined by the following: the patient is connected to the clinician, feels that the therapist is aided, and cooperates with him. The therapeutic strategy followed to help patients to deal with their problems based on determining the patient's desires, expectations, and dreams about other people; the way the patient perceives the reactions of other people to these desires, expectations, and fantasies, should be evaluated against the imaginary reaction of the other. The therapist defines these thoughts and emotions from the stories of the patient's childhood and adulthood experiences and observes how they emerge in a therapeutic relationship.

### KEYWORDS

Psychodynamic psychotherapy; therapeutic relationship; repetitive patterns

[Abstract:0753][Psychopharmacology]

## Methylphenidate effects on EEG characteristics in school age children with attention-deficit/ hyperactivity disorder

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**ABSTRACT**

Attention-Deficit/ Hyperactivity Disorder (ADHD) is a neurodevelopmental disorder characterized by inattentiveness and / or hyperactivity-impulsivity that disturbs the functioning or development of the individual. It is known that ADHD is accompanied by a number of electroencephalography (EEG) changes. Typically, ADHD children have increased theta activity which occurs primarily in the frontal regions, increased posterior delta and decreased alpha and beta activity, also most apparent in the posterior regions, compared to children without ADHD. Calculations of ratios of EEG activity between frequency bands have also been used to assess differences between clinical groups, with ADHD children having an increase in the theta/alpha and theta/beta ratios compared to normal children. These results have been shown as indicating that ADHD children have a maturational lag in central nervous system development or are cortically hypoaroused.

In addition, the effects of drugs used in the treatment of ADHD on EEG have been investigated for a long time. Psychostimulants are the first choice drugs in the treatment of ADHD for many years. Psychostimulants have been shown to improve, but not normalize, many ADHD-associated abnormal EEG activities. methylphenidate (MPH) has a tendency to decrease the theta band and increase the beta band power, particularly when associated with medication-related improvements in cognition. Studies have shown that regular use of MPH in ADHD increases beta power on EEG. Several researchers have reported that EEG measures discriminate well between children with and without ADHD and others have asserted that the EEG works well in determining medication responders from non- responders. In this study, we tried to evaluate the effects of methylphenidate on EEG in children with ADHD during school age. In our current study 80 right handed, psychotropic medication naïve, 6–10 years old boys with a total IQ score of 75 or more and newly diagnosed with ADHD according to DSM-5 criteria were recruited. Detailed psychiatric evaluation, clinician and parent rated scales, along with WISC-IV and Bruininks-Oseretsky Test of Motor Proficiency was administered and eyes open and closed resting state Electroencephalography (EEG) recordings were taken. In this study, it was observed that there was a decrease in theta/beta ratios in the frontal and parietal areas with MPH. This is dominant on the left but not statistically significant.

**KEYWORDS**

Attention-deficit/ hyperactivity disorder; electroencephalography; methylphenidate; psychostimulants; school age

[Abstract:0754][Other]

## Microbiota: a novel target for mental disorders

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**ABSTRACT**

In the human intestinal tract up to  $10^{14}$  microorganisms are living. The diversity and number of bacteria differentiate according to anatomical areas. Bacteroidetes, Firmicutes, Actinobacteria, and Proteobacteria are among the most common bacterial phyla identified in the human intestine. The common functions of intestinal microbes are defined as nutrient metabolism, opportunistic pathogens defence, immune system development, and intestinal barrier function regulation. The intestinal microbiota alterations have been demonstrated in many neuropsychiatric conditions including Parkinson's disease, multiple sclerosis, autism, chronic fatigue syndrome, depression, and anxiety symptoms. Faecal microbiota transplantation (FMT) is a technique of transplanting faeces from a healthy donor to receiver's gut to treat the impaired intestinal microbiota. FMT was studied in preclinical studies in neuropsychiatric disorders. Thus, the aim of this presentation is to evaluate the associations between microbiota, gut, and brain axis and the possible effect mechanism of FMT in neuropsychiatric disorders.

**KEYWORDS**

Microbiota; brain gut axis; psychiatry; immune system; depression

[Abstract:0755][Psychotherapies]

## Cognitive behavioural therapy (CBT) approaches in anxious children and inclusion of families in treatment

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**ABSTRACT**

The clinical interview is one of most common methods for assessing childhood anxiety. Numerous interview schedules are designed to be used to both children and parents have been developed and empirically tested. Although most of these interviews are designed to elicit general diagnoses in children, not all have been found to be reliable and valid for diagnosing anxiety. The reliability of children reports tends to increase by their age, and conversely reliability of parents reports tends to decrease. The assessment of anxiety in children requires a multimethod approach, getting information from clinical interviews, self-report, parent and teacher ratings, behavioural observations, as well as family history and patterns of interaction. Developmentally sensitive synthesis of behavioural and cognitive treatment approaches would lead to therapeutic gain for the anxious child. It has been well documented that there is a relationship between the nature of parent and child anxiety and the role of parental behaviour in maintaining the child's anxiety. In the literature, it is noted that parents of anxious children are more likely to engage in behaviours that communicate a sense of continued threat and danger to their child. Other research suggests that parents of anxious children tend to be more overly controlling, protective and critical, and this results in the child having fewer opportunities to develop successful coping skills. These findings would suggest that children of anxious parents become sensitive to the threatening features of their environment. If parents are educated in, and able to support, the treatment rationale, they are able to send consistent messages to the child about the importance and value of the skills they are learning. The transferring the skills from clinical to real-life situations can be encouraged. The extent of parental involvement will vary depending upon the nature of the problem and the age of the child. In terms of age, it is noted that parental involvement is more important for younger children. On the other hand, with older adolescents the parents may have a less direct role in therapy sessions, although they will still need access to psychoeducational resources and information that will allow them to support the intervention outside of the clinic setting. Parents have been involved in child-focused CBT in various roles. If parents are involved, their role needs to be defined, the focus of the parental sessions needs to be clarified, and the process by which parents facilitate change in their child needs to be defined. In this presentation, CBT approaches to an anxious child and adolescent and involving the family will be described.

**KEYWORDS**

Anxiety; children; family; behaviour; CBT; therapy

**References**

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[Abstract:0756][Other]

## A novel approach for understanding mental disorders: brain–gut axis

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**ABSTRACT**

It has been reported that the gut microbiota have approximately 40,000 bacterial species and  $10^{14}$  (100 trillion) microorganisms. This number is 10 times more than the number of total human cells. In addition, these microorganisms contain 150 times more genes than the human genome. There is a growing evidence of the role of the gut microbiota in all aspects of health and disease, including brain health. Roles for the bacterial commensals and brain–gut axis in various psychiatric and neurological conditions, such as depression, autism, stroke, Parkinson's disease, and Alzheimer's disease, are emerging. Microbiota dysregulation has been documented in all of these conditions or in their animal models. Over the past decade, it has become clear that the bi-directional communication pathway between gut bacteria and the central nervous system, the microbiota–gut–brain axis, exerts a deep influence on some important brain processes, such as neuroinflammation, activation of the stress axes, neurotransmission, and neurogenesis. Gut bacteria influence these processes through their ability to synthesize neurotransmitters (e.g.  $\gamma$ -amino-butyric acid, noradrenaline, and dopamine) and modulate activation of the immune system, along with their ability to

**KEYWORDS**

Brain; microbiota; gut microbiota; intestines; mental disorders

produce metabolites, such as short-chain fatty acids, that have neuroactive properties. Moreover, the gut microbiota and the brain are linked through additional pathways, such as the vagus pathway, enteroendocrine signalling and through the modulation of key dietary amino acids, such as tryptophan.

Understanding the role of gut bacteria in the regulation of the brain functions will contribute to the development of new therapeutic strategies for neuropsychiatric disorders.

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[Abstract:0757][Mental retardation]

## Management of challenging behaviour in intellectually disabled adults

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### ABSTRACT

Challenging behaviour (CB) is a social construct and has been defined by Emerson as: Culturally abnormal behaviour(s) of such intensity, frequency, or duration that the physical safety of the person or others is likely to be put in jeopardy, or behaviour which is likely to limit the use of, or result in the person being denied access to ordinary community facilities [1]. In order to include a developmental perspective, some have added “or impair a child’s growth, development or family life.” Challenging behaviour in individuals with intellectual disability (ID) is a complex but common problem that can present diagnostic and management challenges for healthcare professionals. All behaviour serves a purpose, has an origin and a meaning, and is therefore produced by an interaction between an individual and their environment. Challenging behaviour can include a range of behaviours and usually categorized as physical aggression towards people or objects, self-injury, sexually inappropriate behaviour, and offending behaviour.

**Epidemiology:** The prevalence figures of challenging behaviour in adults vary from 82% to 6.1% depending on the definition used for ascertainment, study methodology, and settings and population. In a study with adults with ID (N:151) carried out in Turkey, it was found out that 34% of adults displayed CB [2]. In the literature, aggressive behaviour was found to be associated with male gender; self-injury was more likely in those with severe or profound ID and those with communication difficulties. Diagnosis of autism was associated with self-injury, aggression and disruption to the environment.

**Aetiology:** Challenging behaviour is not a diagnosis and often reflects some underlying physical or psychological problems. Communication difficulties and atypical presentation of mental disorders can pose significant problems for clinicians to identify the exact cause of the CB.

**Management:** Understanding the physical and mental health needs along with the social context is important. A thorough process of assessment will usually require multiple interviews of the index patient, their family and carers and professionals in their network. Physical assessment with investigations often reveals useful information. A systematic approach to CB has the potential to improve the care and the quality of life for the people involved. There is very little support for the use of pharmacological treatment for people with CB and ID in the absence of co-existing mental illness. However, medication can be required in the presence of high arousal and severe aggressive behaviour. There is growing interest in behavioural interventions for reducing CB.

### KEYWORDS

Intellectual disability; challenging behaviour; adults; management; interventions

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[Abstract:0758][Mood disorders]

## What are positive/negative affects of nutrition on depression?

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### ABSTRACT

Major depression is a common mood disorder that is increasingly recognized as a chronic and recurrent illness [1]. Antidepressants are effective medications for the treatment of major depression, however, in clinical trials only about one-third of patients achieve remission [2]. So, effective and safe adjunctive treatments are of potential benefit in order to improve therapeutic response to antidepressant drugs. Nutrients consumed from the diet are critical for proper brain function and there is increasing evidence for the relationship between mood and dietary quality [3]. It has been shown that an unhealthy Western dietary pattern was associated with increased prevalence of depression. Additionally, the consumption of refined and fried food, sweetened beverage and high fat intake have been shown to be associated with an increased risk of depression [4]. Basically, nutrition and dietary compounds have been suggested to be involved both in the onset, maintenance and treatment of depression. Nutraceuticals can modulate the neurobiological mechanisms underpinning depression and they can have beneficial effects in the treatment of depressive disorders. Prospective studies have also examined the relationship between diet and depression. It was found that a healthy diet was effective for the treatment of depressive symptoms. Recent studies and meta-analyses have shown some promising results for omega-3, N-acetyl cysteine, S-adenosyl methionine, L-tryptophan/5-hydroxytryptophan, vitamin D, zinc, and creatine [5]. Nutraceutical compounds are generally safe, but they must be used carefully especially when given in combination with serotonergic agents. As a conclusion, current evidence supports the use of dietary approaches and nutraceuticals in the treatment of major depression

### KEYWORDS

Major depression; food; diet; nutrition; nutraceutical

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[Abstract:0760][Mood disorders]

## Neurobiology and treatment of comorbid anxiety disorders in bipolar disorder

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### ABSTRACT

Anxiety disorders (AD) are frequently comorbid with bipolar disorder (BD) and they significantly affect the course and treatment response in BD patients. There are important overlaps in the neurobiology of both disorders, which may explain this high comorbidity. Neuroendocrine, autonomic, and immune dysregulations take role in the aetiology of both the disorders. Genetic polymorphisms that are related to growth factors, intracellular signalling, serotonergic, and dopaminergic pathways have been linked to both AD and BD. Also structural and functional changes in brain regions such as amygdala, DLPFC, VMPFC, and

### KEYWORDS

Bipolar disorder; anxiety disorder; treatment; neurobiology; mood stabilizers

ACC are reported in both disorders. On the other hand, there is a systems level convergence of emotion and cognition interplay, which may explain AD vulnerability in BD. However, studies that compare BD patients with or without an AD diagnosis for the neurobiological differences are scarce. It is important to understand the neurobiology of this comorbidity, since it may guide neurobiology based treatment approaches. Current literature suggests a burden in the treatment of AD in BD. Antidepressant treatments, frequently used for the treatment of AD, are not found suitable for long-term treatment of AD in BD. Mood stabilizers which are known to have more anxiolytic effects or atypical antipsychotics or short-term benzodiazepine use have been studied with limited evidence. Among the various psychotherapy methods that have been investigated, cognitive behavioural therapy was shown to produce the highest benefit. In this presentation, current evidence of neurobiology and treatment of comorbid anxiety disorders in bipolar disorder will be summarized.

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[Abstract:0763][Psychosomatic Medicine and Liaison Psychiatry]

## Psychiatric aspects of women with breast cancer

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### ABSTRACT

Breast cancer is the second most prevalent type of cancer and is equally common in developing as well as developed countries (American Cancer Society, 2013). Despite favourable survival in developed countries, the most frequent cause of cancer deaths in women is still breast cancer, in developed as well as in developing countries. Cancer is a serious health problem that mostly leads to death in the absence of early diagnosis and treatment. In addition to causing death in millions of people, it brings a considerably high probability of the occurrence of psychiatric disorders. Accompanying psychiatric disorders have a significant impact on a patient's quality of life, self-care, adaptability to treatment, and over the course of time, the severity and prognosis of cancer as well as response to treatment. Patients with breast cancer may suffer from significant psychological problems due to several reasons including uncertainty about treatment, physical symptoms, fear of recurrence and death, change in female identity, body image and sexuality, difficulties in daily life activities, family-related problems, and lack of emotional support. Cancer involves a high probability of the occurrence of psychiatric disorders, notably depression, anxiety, and adjustment disorders. The frequency of depression among patients with cancer ranges from an extremely low rate of 1% to considerably high rates such as 50%, partly due to the differences in cut-off scores suggested by varied diagnoses and scales. On the other hand, the frequency of suicide among patients with cancer is relatively higher with a relative risk of two times more than the general population. Most patients with breast cancer are well-adjusted, single patients with advanced-stage breast cancer who have poor socio-economic conditions have been found to have a higher suicide risk. Breast cancer involves a certain degree of malignancy, which leads to sexual dysfunction more than other cancer types because mastectomy is a common procedure. Other major factors that reduced sexual appetite of patients with breast cancer were reported as loss in breast tissue, hair loss, pain, body image, childbirth capacity, and changes in perception of medical status. One of the most common symptoms seen in patients with cancer is insomnia. Patients with breast cancer report higher prevalence of insomnia compared with patients with other types of cancer from 38% to 61%. Also steroids and medications used in symptomatic treatment such as metoclopramide, an antiemetic drug, can lead to anxiety. Drugs that cause encephalopathy and delirium may simultaneously give rise to anxiety. Also diagnosis and treatment of breast cancer may induce psychological challenges such as anxiety, depression, anger, uncertainty about the future, hopelessness, desparateness, fear of recurrence of cancer, fear of separation from relatives, fear of pain,

### KEYWORDS

Breast cancer; depression; suicide; psychiatric symptoms; fear

decrease in self-esteem, impairment of body image, fear of losing sexual capabilities, anxiety of not being loved or shown interest, and fear of death. Finally, patients with cancer may show emotional and behavioural changes during diagnosis and treatment processes. This may manifest itself both at a level of psychiatric disorder and in the form of mild emotional symptoms and behaviours.

[Abstract:0764][ADHD]

## Computer-based tests in ADHD diagnosis

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### ABSTRACT

Attention-deficit hyperactivity disorder (ADHD) is characterised by symptoms of inattention, hyperactivity, and impulsivity. It is an early onset, enduring heterogeneous neurodevelopmental deficit, with an estimated prevalence worldwide of 5–7%. Scientific publications show that the prevalence of ADHD is increasing year by year. Healthcare providers believe that still many ADHD patients are undiagnosed. ADHD has no definite biological, radiological, or genetic marker and the authors agree that ADHD is a clinical diagnosis. Therefore, the diagnosis is mainly based on clinical observations and questionnaires, which are arranged according to DSM criteria and if needed, neuropsychological or other testing are performed. It means that the diagnosis is influenced by perceptions of many different members of a child's community. Parents and teachers (according to their ethnic and cultural background) may have different views and perceptions of behavioural norms. In the absence of an objective gold standard, computerized continuous performance tests have been developed to help in the diagnosis of ADHD as objective measurements. The CPT test is a computer-based test that involves the rapid presentation of a series of visual or auditory stimuli over a period of time (typically numbers, letters, number/letter sequences, or geometric figures). Subjects taking the CPT tests are instructed to respond to the "target" stimulus by pressing a button and to refrain from responding to "non-target" stimuli.

Responding to the designated target is referred to as a "correct response," while missing a target is referred to as an "omission error." Response to any stimulus other than the target is referred to as a "commission error." Other measures of CPT responses include the number of correct responses, reaction time, and variability in reaction time. Although CPTs have been used for many years, they are often criticized for their test-retest reliability, low sensitivity, and specificity rates. But over time, CPTs are developed. A good example is MOXO d-CPT which includes visual and auditory stimuli serving as distractors. This feature increased the sensitivity and specificity rates. And today we are talking to use d-CPT with EEG (electroencephalography) together to help ADHD diagnosis. Healthcare providers should be innovative, suspicious, objective, and most importantly evaluate all data together with clinical findings.

### KEYWORDS

ADHD; computer-based tests; continuous performance tests; CPT; MOXO d-CPT

[Abstract:0765][Psychosomatic Medicine and Liaison Psychiatry]

## History of ECT: past and present

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### ABSTRACT

Physical Psychiatric Treatments first started with fever treatment in 1917 (Wagrer) Insulin coma therapy on Monfred Sakel in Berlin in 1933, and Cardiazol shock treatment in 1934 by Meduna. Electroshock therapy in real sense was practised in Rome by Uga Cerletti and Lucio Bini. The first ECT application was made on April 15, 1938. Cerletti has attempted treatment by injecting the substance called "acrogoine" from schizophrenia, which is obtained from the brain of animals who have received ECT. The first ECT in Turkey La Paix Hospital Dr. Mazhar Osman Uzman's

### KEYWORDS

Electroconvulsive treatments; schizophrenia; depression; history of psychiatry; ECT

assistant during his presidential period. It was implemented by Kenan Tunahan Dr. According to Vasil Yagcioglu, the first application was made in the Greek Greek Hospital. The purpose of ECT today is to treat by generating electrical stimulation of generic seizures. For many years, it has been practised without ECT anaesthesia for many years. In addition to observing the seizure with advanced ECT devices, recording of the seizure with EEG, qualitative and contingent evaluation of the seizure is performed and the healing of the patient is ensured. In addition to EEG, modern instruments used in EMG and ECG recordings are used.

[Abstract:0766][ADHD]

## ADHD and childhood traumas

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### ABSTRACT

Adult ADHD was 3.4% (1.2–7.3) on average, assuming that ADHD is the most common childhood psychiatric disorder (ADHD) with attention-deficit/hyperactivity disorder and mean attention-deficit/ hyperactivity disorder that are close to half of child psychiatric patients. Fifty per cent of adults (32.8–84.1%).

Low socioeconomic levels (1994) (Satterfield, Hoppe and Schell, 1982; Weiss and Hechtman, 1993), divorce rates with lower academic achievement and lower job success, and higher rates of accidents for adults with ADHD in childhood. Historically, although ADHD is primarily thought of as a childhood disorder, we now know that ADHD symptoms do not begin to develop into adulthood. Many prospective and retrospective studies have shown that individuals with ADHD in childhood have 50–80% of adulthood (Weis and Hectman 1993, Wender 1995). Despite the fact that approximately 5% of children have ADHD, 2% of children are diagnosed (Shekim, Asarnow, and Hess 1990), and the possible recognition of ADHD symptoms and possible dehydration in a large number of dehydrated individuals and adults in recent years, few studies have shown that adult cognitive psychiatric features resemble psychiatric characteristics seen in children, but other studies have shown that antisocial features, major depression, and anxiety disorder are similar in children and adults (Biederman, Newcorn and Sprill, 1991), hate feelings and emotions (Ratey and Greenberg 1992). Another widespread misconception is that adolescents reported child abuse during childhood as well as adultery from their childhood, 18 physical, sexual, and emotional abuse, as was the case with rheumatic and psychiatric problems (Rucklidge and Tiger 2000). Another large-scale survey of physical and sexual trauma over 10 year olds, physical and sexual trauma in males, 31.1% in females, 21.1% in females, 12.8% in females and 4.3% in males.

### KEYWORDS

ADHD; childhood trauma; PTST; trauma; depression

[Abstract:0767][Psychotherapies]

## EMDR therapy

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### ABSTRACT

Eye Movement Desensitization and Reprocessing (EMDR) is a psychotherapy treatment that was originally designed to alleviate the distress associated with traumatic memories (Shapiro, 1989a, 1989b). Shapiro's (2001) Adaptive Information Processing model posits that EMDR therapy facilitates the accessing and processing of traumatic memories and other adverse life experience to bring these to an adaptive resolution. After successful treatment with EMDR therapy, affective distress is relieved, negative beliefs are reformulated, and physiological arousal is reduced. During EMDR therapy, the client attends to emotionally disturbing material in brief sequential doses while simultaneously focusing on an external stimulus. Therapist-directed lateral eye movements are the most commonly used external stimulus, but a variety of other stimuli including hand-tapping and audio stimulation are often used

### KEYWORDS

EMDR; therapy; psychological trauma; depression; AIP



(Shapiro, 1991). Shapiro (1995, 2001) hypothesizes that EMDR therapy facilitates the accessing of the traumatic memory network, so that information processing is enhanced, with new associations forged between the traumatic memory and more adaptive memories or information. These new associations are thought to result in complete information processing, new learning, elimination of emotional distress, and development of cognitive insights. EMDR therapy uses a three pronged protocol: (1) the past events that have laid the groundwork for dysfunction are processed, forging new associative links with adaptive information; (2) the current circumstances that elicit distress are targeted, and internal and external triggers are desensitized; and (3) imaginal templates of future events are incorporated, to assist the client in acquiring the skills needed for adaptive functioning.

[Abstract:0768][Impulse control disorders]

## Impulsivity in impulse control disorders and other psychiatric disorders

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### ABSTRACT

Impulsivity is an imbalance between behavioural activation and is prominent in psychiatric disorders. Several definitions have been proposed for impulsivity from different perspectives. From bio-psycho-social perspective, impulsivity is characterized by decreased sensitivity to long- and short-term negative consequences of risky behaviours and failure in inhibiting impulsive immediate and unplanned actions. From a cognitive perspective, impulse control as an important component of executive functions and impulsivity is the inability to inhibit behavioural impulses and thoughts. According to DSM-5, impulsivity is defined in terms of an aspect of disinhibition, and considered as an immediate reaction to stimuli, unplanned reaction on the spur of the moment or with no regard for its consequences, problem in programming or adhering to programmes, sense of urgency, and self-harming behaviour in the time of emotional turmoil. While DSM conceptualization only includes negative and pathological aspects of impulse control disorders, this definition is not including the role of dysfunctional impulsivity in other psychiatric disorders. Impulsivity symptoms are present in several psychiatric disorders, such as attention-deficit/ hyperactivity disorder (ADHD), depression, manic episodes of bipolar disorder, impulsive aggressive disorders of personality (borderline, antisocial, histrionic and narcissistic), neurological disorders with behavioural disinhibition, eating disorders, dementia, and substance/alcohol abuse. There are several studies revealing the role of impulsivity in mental disorders and results in the literature have shown a correlation between impulsivity and severe behavioural complications such as committing suicide, criminal conviction in patients with bipolar disorder, antisocial personality disorder, and substance-use disorders. In this manner, defining impulsivity as a concept and symptom and understanding neurobiological mechanisms to discuss its relation to mental disorders can produce advances in development of specific treatments.

### KEYWORDS

Impulsivity; psychiatric disorders; symptom; behaviour; neurobiological

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[Abstract:0769][Mood disorders]

## Phytotherapy for depression

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**ABSTRACT**

Phytotherapy provides an alternative in the treatment of several medical conditions, including psychiatric disorders such as depression. Previous research suggests that patients may turn to herbal medicine because of a reluctance to take prescription medications that are anticipated to cause side effects or a dissatisfaction with the results. They consider phytotherapy to be a safer or more natural treatment alternative, which may be associated with improved compliance. In this presentation, current alternatives for the phytotherapy of depression, ranging from St. John's Wort to saffron, will be discussed.

**KEYWORDS**

Phytotherapy; herbal; medicine; depression; alternative

[Abstract:0771][ADHD]

## Interview tools and imaging modalities in adult ADHD

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**ABSTRACT**

Current literature findings suggest that the symptoms of childhood attention-deficit/hyperactivity disorder (ADHD) persist into adulthood. Patients experience devastating effects of ADHD on their careers, relationships and personal safety which cause a great morbidity across lifespan. Thus, diagnosis of ADHD is of great importance. Despite the significant negative impact on the quality of life, many patients ignore ADHD because of lack of knowledge. On the other hand, evidence of survey studies with physicians shows that physicians even psychiatrists avoid diagnosis or treatment due to the negative stigma associated with ADHD. The first step of ADHD diagnosis is patient self-awareness about the ADHD and motivation to seek for solution. In this regard, The World Health Organization and the Workgroup on Adult ADHD have developed The Adult ADHD Self-Report Scale (ASRS-v1.1) Symptom Checklist. This screening test was prepared as a self-screening questionnaire for patients to determine if they might have adult ADHD. The clinical diagnostic process is accomplished when the patient meets DSM-5 criteria for an ADHD disorder. The main requirements for the diagnosis for the ADHD are the onset of and the persistence of the ADHD symptoms. When evaluating for ADHD, clinicians will use a variety of clinical practice tools to gather information, including standardized clinical rating and self-report checklists, behaviour questionnaires, and/or rating scales. Interview tools are a helpful component of a comprehensive evaluation for ADHD and provide information needed to screen, diagnose, and develop a treatment plan. During treatment, they can be used to track symptoms and monitor treatment progress. Although neuroimaging research has provide unprecedented windows on the neurobiology of ADHD and the neural effects of medications used to treat the disorder (as yet), none of these methods has been found to be sensitive and specific enough to serve as a standard diagnostic test.

**KEYWORDS**

Attention-deficit/hyperactivity disorder; interview; diagnostic tools; neuroimaging

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[Abstract:0772][Other]

## Treatment of depression and anxiety disorders in patients with epilepsy

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**ABSTRACT**

Depression and anxiety disorders are well known to be common in patients with epilepsy. They should be screened and treated properly because they are associated with many adverse outcomes. Many physicians may be reluctant to treat epileptic patients because they may be afraid of side effects of drugs in such a vulnerable population of patients. In terms of pharmacological management, selective serotonin-reuptake inhibitors and serotonin and norepinephrine-reuptake inhibitors (SNRIs) are considered as the first-line therapy for depression in epileptic patients because they are unlikely to provoke seizures and have favourable adverse-effects profiles. To prevent adverse effects, antidepressants should be started at low doses, and titrated upwards in small increments until the desired clinical response is achieved. Clinicians should be aware that SSRIs may inhibit hepatic enzymes and consequently increase the serum levels of antiepileptic drugs. So, prior to initiating antidepressants, plasma levels of antiepileptic drugs should be checked. Both groups of antidepressants have been shown to be effective against both depression and anxiety in epileptic patients. Choice of antidepressant will depend upon a number of factors including whether one with sedating, arousing, or anxiolytic properties is required; familiarity with common side effects of antidepressants is also essential since the patients need to be warned about these. Educational interventions were found to be beneficial in improving the knowledge and understanding of epilepsy, coping with epilepsy, compliance to medication, and social competencies. Cognitive-behavioural therapy (CBT) can alleviate symptoms of both depression and anxiety and a combination of psychotherapy and medication has been shown to be more effective.

**KEYWORDS**

Epilepsy; anxiety; depression; treatment; therapy

**References**

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[Abstract:0773][Addiction]

**Myths and realities in addiction during adolescence**

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**ABSTRACT**

Addiction can be defined as a disorder which is chronic and is characterized by compulsion to seek, take, or use of the “dependent thing,” loss of control when the reach or intake is limited, and emergence of a negative emotional state when access to the “dependent thing” is prevented. Adolescence, the period in which the impulse control is still weak, is a particularly vulnerable time for initiations of habitual heavy consumptions. In literature the addiction terminology has been mostly taken up as drug, nicotine, and alcohol addiction where also gaming, internet, or smartphone addictions attracted attention in recent days. In this conversation it is aimed to discuss the addictions frequently observed during adolescence in the concept of “myths and realities.”

**KEYWORDS**

Adolescence; addiction; substance abuse; internet

[Abstract:0774][Addiction]

**Comorbidity in substance use disorder and current treatment approaches**

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**ABSTRACT**

Substance use disorders are known as one of the most prevalent, deadly, and costly of health problems. Comorbid substance use disorder and other psychiatric disorders are very common in both clinical and epidemiological samples. Research has consistently found that the presence of other psychiatric disorders among those with substance-related disorders is substantial. Two-third of the substance use disorder patients were accompanied by additional psychiatric disorders. The most common axis-1 diagnosis in substance use disorders are anxiety disorders, mood disorders, psychotic disorders, and attention deficit and hyperactivity disorders. When substance use disorders and comorbid psychiatric disorders are seen together, course of these disorders and treatment response are worse and this condition has a negative effect on patients' quality of life. Treatment of comorbid substance use disorder and psychiatric disorders has special difficulty. One of the difficulties in this comorbid situation is that drugs used in these disorders have addiction potential. The other potential difficulty is that these patients have high suicidality risk. In the treatment of this population, safety and stabilization of the patient must be ensured. After that in the long period, both pharmacologic and psychosocial treatment strategies must be used collaterally. The most effective treatment approach in patients with comorbid substance use disorder and severe psychiatric disease is to apply the treatment methods of each disease by the same clinician who is good in two areas in the same therapeutic setting. When treatment of this disease is made effective, success of therapy of both substance use disorder and comorbid disease increases and the course of these diseases is better.

**KEYWORDS**

Substance use disorder; addiction; psychiatric disease; comorbidity; treatment

[Abstract:0775][Mood disorders]

## Bright light therapy in depression treatment

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**ABSTRACT**

For 30 years, bright light therapy (BLT) has been considered as an effective, fast-acting, and well-tolerated treatment option for seasonal affective disorder (SAD) and although still questionable in non-seasonal types of depression [1]. A comprehensive review that evaluated 20 placebo-controlled studies reported BLT to be superior to placebo in non-seasonal depression. This review emphasizes that there are more significant differences in the effectiveness of BLT in high-quality studies [2]. A meta-analysis, based on randomized, controlled trials with stringent inclusion criteria suggests that BLT is efficacious for SAD and non-SAD with effect sizes equal to the most antidepressant pharmacotherapy trials [3]. A recent meta-analysis, which included 458 patients, revealed that BLT is an effective treatment as an augmentation therapy compared to antidepressant usage alone. In addition, the effect size of BLT was found to be similar to that of other common augmentation strategies [4]. According to the American Psychiatric Association Practice Guideline for the treatment of patients with major depressive disorder, BLT might be used to treat non-seasonal affective disorder as well as seasonal depression. Other studies have shown that BLT is well tolerated compared to other pharmacological agents and that drop-out rates due to side effects are much less [5]. In addition, a recent meta-analysis investigating the efficacy of BLT for bipolar depression revealed BLT to be an effective and safe treatment option as an adjunctive therapy, as our study [6,7]. Consequently, a treatment option that is fast-acting like BLT may facilitate recovery in the acute phase of depression and may help to form better adherence and higher remission rates. There is a need for large sample sized, double-blind controlled studies for establishing the efficacy and safety of BLT for the treatment of depression in future.

**KEYWORDS**

Antidepressant; bright light therapy; depression; seasonal affective disorder; treatment

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[Abstract:0776][Other]

## Mutational falsetto (puberophony) and its treatment

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### ABSTRACT

Mutational falsetto, also publicly known as puberophonia, is a functional voice disorder with the higher pitched voice or voice register shifts that persist beyond puberty. It can sometimes prolong till late adulthood. Falsetto voice is weak, thin, breathy, hoarse, effeminate, and immature. Most of the patients have pitch breaks and inadequate resonance too. This voice register instability and weak voice is a social challenge for the daily life of an adolescent. Although mutational falsetto is a temporary adolescent voice, in cases where it is not treated, it can transform into a chronic voice problem and it can negatively affect their early adolescence period psychosocially. The diagnosis can be made clinically by an experienced physician or a speech pathologist. It is usually effectively treated with voice therapy. For mutational falsetto, the intervention was applied by modifying voice therapy techniques, such as larynx manipulation, larynx-depressing exercise, and producing vegetative voice. In case of failure of treatment with voice therapy, surgical intervention can be considered.

### KEYWORDS

Puberophony; voice; adolescence; voice therapy; psychoacoustic

[Abstract:0777][Psychopharmacology]

## Recognizing anticholinergic side effects

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### ABSTRACT

Our understanding of anticholinergic side effects has improved in recent years. An anticholinergic effect means opposing the actions of acetylcholine in the nervous system. While this may be a desired action of a specific medication, it may also appear as an unwanted adverse effect of drugs used for various indications currently. Because acetylcholine is a major neurotransmitter involved in critical functions in the brain and periphery, increased burden of anticholinergic side effects caused by medications even for true indications can cause cognitive and functional decline, especially among older adults [1,2]. However, whether such an increased risk of disabling adverse effect consequently limits ongoing treatments of patients by leading to dose reduction, switching to another drug or complete withdrawal is not clear as some barriers to deprescribing in such cases have already been reported [3]. Given that even mild side effects due to a specific medical treatment can decrease functionality and increase dependency [4], and loss of independence increases caregiver burden and negatively affects quality of life [6], increased costs due to anticholinergic side effects at any level of care cannot be neglected. Although currently there is no clear information about the cost analysis of anticholinergic side effects as a whole, some indirect evidence indicates increased cost of using newer drugs with less anticholinergic side effects from the same drug family reduces healthcare expenses [6,7].

Anticholinergic side effects may be seen broader than expected in the body. Moreover, they may not always be related to the central nervous system. Thus, the identification of anticholinergic side effects may be challenging especially in subjects with multiple chronic conditions, disabilities, having a history of mental disease or dementia, using

### KEYWORDS

Adults; anticholinergic drugs; anticholinergic side effects; cognition; older adults

multiple drugs, etc. Studies that used general symptom scales have reported a long list of side effects or adverse reactions in individuals using drugs with probable or possible side effects. In general, other than the nervous system, symptoms can occur in the alimentary tract and intestines, haematopoietic organs, genito-urinary system, reproductive organs, musculo-skeletal system, respiratory system, and sensory organs [8]. The list of side effects, however, is much longer and includes, dry mouth, sore throat, dry skin, reduced sweating, constipation, functional ileus, fever, photosensitivity, blurred vision, tachycardia, hypertension, urinary hesitation, nocturnal incontinence, impaired coordination, confusion, memory problems, incoherence, reduced ability to concentrate, hallucinations, and dementia. More general symptoms such as drowsiness that may be missed by the patient, caregiver, or the physician may also be experienced. Up to one-third of older adults use anticholinergic drugs which are significantly associated with an increased number of anticholinergic symptoms, and dry mouth and constipation can be seen in almost half of the individuals [9]. Notably, tricyclic antidepressants and agents used for treating urinary incontinence come forward with their more frequent anticholinergic side effects. On the other hand, not all drugs are susceptible for anticholinergic side effects and the severity of adverse reactions can differ by the drug classes [10]. Different drugs with a similar clinical indication and efficacy may show different levels of anticholinergic side effects, limiting the choices of some generics from the same family among older adults. In conclusion, efforts should be made to increase physician awareness about anticholinergic side effects, especially among older adults. These side effects should be realized as the “risk” of any treatment with a specific indication and, on an individual basis, such risks should never outweigh the benefits.

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[Abstract:0778][Psychopharmacology]

## Deprescribing drugs with anticholinergic properties

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### ABSTRACT

In the era of drug development and enhanced clinical trial designs for newer indications, chronic diseases can be treated more successfully. On the other hand, apart from the goals of symptom relief or biochemical improvements, more robust outcomes including reduced morbidity, improved functional measures, and delayed mortality have also gained priority. Consequently, post-marketing experience about both the effectiveness and harms of drugs

### KEYWORDS

Anticholinergic drugs;  
anticholinergic withdrawal;  
beers criteria; deprescription;  
stop criteria



has been definitive in decision making of absolute benefits and harms. In this context, any drug that has been widely used for years may now be regarded unsafe [1]. Nevertheless, deprescription or withdrawal of medications has never been a trending topic in chronic conditions.

Beers Criteria from the United States [2] and STOPP/START from Europe [3] point to a need for improvement for the prescription of drugs with anticholinergic effects in older adults. Researches have also shown that these two are compatible for most parts and applicable in different populations [4]. Beers criteria recommend avoidance of first-generation antihistamines; antiparkinsonian agents benztropine and trihexyphenidyl; disopyramide; a long list of antidepressants; and some skeletal muscle relaxants in people aged 65 years or older. Concerns and limitations were also mentioned about antimuscarinics used to treat urinary incontinence among Beers criteria, but loratidine was removed from the list of drugs to be avoided in the update version [2]. The START/STOPP criteria showed a 31% increase in its version 2 update after seven years and include recommendations against the use of diphenoxylate, loperamide, or codeine phosphate for the treatment of severe gastroenteritis, selective alpha-blockers in males with frequent urinary incontinence, first-generation antihistamines and long-term opioids in patients with falls, and long-term opioids in those with dementia unless indicated for palliative care or management of moderate/severe chronic pain syndrome [3]. Moreover, both publications address use of scales [5–8] to rank anticholinergic activity before decision making of continuing or withdrawal of a medication but Beers criteria acknowledge a list of drugs with strong anticholinergic properties. However, although elements of the deprescribing process have been defined by several authors [9], there is no specific guideline outlining how to perform evidence-based deprescription in the care of older adults. Ongoing research are expected to identify the problems and introduce successful interventions to reduce the prescription of anticholinergic and sedative medicines [10,11]. Yet, advanced clinical skills and experience may help reduce the burden of anticholinergic drug exposure, but a broader use of an anticholinergic risk scale by physicians seems critical [12]. In addition, involvement of patients in the process of deprescribing should not be ignored, and understanding of prescriber barriers needs to be determined to reduce iatrogenic harm [13].

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[Abstract:0781][Mood disorders]

## Are there any beneficial effects of physical exercise on depression?

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**ABSTRACT**

Depression is a serious and debilitating mental health problem that is estimated to affect 350 million people worldwide [1]. It is well known that it causes a significant occupational and social impairment with a recurrent or chronic course. However, SSRIs and cognitive behavioural therapies are accepted as current effective treatment strategies, and there is a considerable failure of available treatment approaches. Furthermore, depression creates a great socioeconomic burden in societies. In line with these issues, new therapeutic approaches are highly needed for not only treating depression but also preventing the development of depressive symptoms. There is a bidirectional relationship between physical activity and depression. In literature there is data that individuals with depression tend to show lower physical activity and lower physical activity seems to be related with higher levels of depressive symptoms particularly with somatic complaints and lower self-efficacy [2]. Both for preventing and reducing the severity of depression, physical exercise has been suggested in medical settings. According to the recent studies, there is robust evidence suggesting that exercise provides protection against future depression. Also, studies found that exercise was moderately effective in reducing depressive symptoms in individuals with depression. However, the optimal intensity of exercise and possible underlying neural effects of exercise are less known. In this section we will present the current literature regarding the effects of physical exercise in both preventing and managing depression. The beneficial and/or harmful effects of different exercise subtypes will be reviewed. Possible neuromolecular and neurochemical mechanisms of the exercise's antidepressant effect will be discussed. Finally, we will discuss how we should place physical exercise recommendations in treating our patients with depression in our daily practice.

**KEYWORDS**

Depression; physical exercise; non-pharmaceutical treatment options; clinical effects of exercise; neurobiological effects of exercise

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[Abstract:0782][Addiction]

**Substance use disorders and phytotherapy**

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**ABSTRACT**

Striking increases in the substance use have expanded the need for pharmacotherapeutic interventions. The obstacles that confront effective treatment of addiction – shortage of treatment professionals, stigma associated with treatment and the ability to maintain abstinence – have led to increased interest in alternative treatment strategies among both treatment providers and patients alike. Herbal products for substance use and withdrawal, such as kratom and specific Chinese herbal medications such as WeiniCom, can complement existing treatments. Unfortunately, herbal treatments, while offering some advantages over existing evidence-based pharmacotherapies, have poorly described pharmacokinetics, a lack of supportive data derived from well-controlled clinical trials, and severe toxicity, the cause for which remains poorly defined. Herbal products, therefore, require greater additional testing in rigorous clinical trials before they can expect widespread acceptance in the management of substance use.

**KEYWORDS**

Substance use; phytotherapy; herbal medications; disorder; pharmacotherapeutic

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[Abstract:0783][ADHD]

## Adult attention-deficient/hyperactivity disorder and classical cyst applications

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### ABSTRACT

ADHD is a problem diagnosed in childhood and continues in adulthood. In follow-up studies, 80% of children with ADHD have been shown to be adolescent and 50–70% continue in adulthood. Adult ADHD in our country has become more and more recognized in recent years, and ADHD findings were seen in childhood with a majority of patients diagnosed with Anxiety Disorder, SAB, or BAB in these developments. Despite the use of medication in the treatment of ADHD, especially during childhood, medication is used in some special cases (academic exams or family crises) in adults and these medicines are not paid for in adults over 25 years of age. Cognitive Behavioural Therapy (CBT) is the most commonly applied treatment for children and adolescents besides taking medication. Children with this diagnosis met with better results when they were receiving skills training with the CBT as well as drug therapy. In adults, academic performance and self-esteem are negatively influenced by reasons such as not being able to finish work and dependency tendencies. Due to the fact that executive functions are impaired, these patients are negatively affected by their care and organizational and planning skills, and their work and family lives are negatively affected. For this reason, the panel will focus on the importance of using ADHD and individual BDT and the techniques used. BDT treatment protocol steps:

- (1) Psychoeducation: Disease and CBT education
- (2) Identification of problem areas: Problems such as not focusing attention, deferring, being unable to organize, taking responsibility, impulse control problems are common.
- (3) Skill development; Organization and planning skills, attention training, problem-solving skills development, the ability to control the prosperity is studied.
- (4) Cognitive configuration: It allows patients to develop new ability to cope and to create new experiences in life-threatening areas that are difficult to manage up to now. With these new experiences, it can be ensured that the belief system is rearranged, the impulse control, the longer thinking action and the motor action are performed properly.
- (5) Working with Secondary Psychiatric Problems: Negative events and criticism since childhood hurt self-confidence and often confront comorbid diagnoses such as depression and SAB.

In recent years, studies on ADHD and CBT have increased. The Drug + CBT group was more effective in the single-blind study conducted by Safren et al. Significant improvements were observed in the symptoms of the patients in the 10 CBT patients, 10 in the cognitive training, and 10 in the pilot study (Virta et al. 2010). Another study in which Dialectical Behavioural Therapy (DBT) was reconstructed for ADHD based on the prediction that ADHD is a self-monitoring problem showed improvement in ADHD symptoms and depressive symptoms compared with patients on the waiting list (Hesslinger et al., 2002). The most important shortcoming of these studies is the inadequacy of the number of patients and there is a need for studies with a larger number of patients.

### KEYWORDS

ADHD; CBT; adult ADHD; BDT; psychoeducation

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[Abstract:0784][ADHD]

## Mindfulness in adults with attention-deficit/hyperactivity disorder (ADHD) therapy

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### ABSTRACT

Attention-deficit/hyperactivity disorder (ADHD) is a neurodevelopmental condition that is manifested in childhood with attention deficit, hyperactivity, and impulsivity. In the emergence of ADHD according to the results of the research, biological, genetic, psychosocial, and familial factors play a role. The prevalence of ADHD in the community is reported to be approximately 8% in childhood, 6% in adolescence, and 4% in adulthood. The inability to start a job in adult ADHD, the inefficiency and bad time management at work, the start of a large number of jobs, but not a majority, a meeting during a meeting, an inability to cope with stress and anger control problems, a tendency to tell the first thing that comes to mind and to fulfil marriage and responsibilities intensive problems often arise. Awareness is based on being able to pay attention to the present “moment” in a non-judgmental way, and accepting whatever it is experiencing. In this approach awareness and consciousness, acceptance, judgment, self-observation, and focus are the main components. Certain regions of our brain have the ability to control self, the ability to manage emotions, and to make healthy decisions. The aim of the awareness therapy in ADHD individuals is to teach them to be aware of their mind and body, to be able to control their own behaviours, to increase their attention skills, self-confidence level, anger control skills, to adapt to social environments, and to make inter-person relations more healthy.

### KEYWORDS

ADHD; neurodevelopmental condition; therapy; awareness; brain

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[Abstract:0785][Other]

## Cognitive behavioural therapy of obesity

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### ABSTRACT

Obesity is a chronic and progressive disease which is considered as one of the 10 most risky diseases by the World Health Organization (WHO), and which negatively affects the quality of life of the individual, and in which patients live usually for less than 60 years. Along with 2–3 times increased risk of obesity in individuals with mental illnesses, the rate of mental illness in obesity is 30–70% (3). Recently, cognitive behavioural therapy approaches have also started to make an important role in the treatment of obesity in addition to other treatments. Behavioural treatment of obesity aims to replace eating behaviours leading to obesity and unwanted behaviours about physical activity; with desired behaviours or decrease those unwanted behaviours, as well as to reinforce desired behaviours to become a “lifestyle.”

Cognitive Behavioural Therapy in Obesity:

### KEYWORDS

Consultation liaison psychiatry; obesity; cognitive behavioural therapy; self-monitoring; unwanted behaviours

- (1) Self-monitoring: Self-monitoring is the core of the treatment and serves the target of defining to be controlled behaviour.
- (2) Stimulus control: Stimulus control is established through reinforcement due to the desired behaviour in provision or the presence of target stimulus.
- (3) Control of eating behaviour: Aim is to decrease the speed and frequency of eating behaviour.
- (4) Reinforcement: Reinforcement by learning principles is based on the effects of results of behaviour on its frequency and intensity.
- (5) Cognitive restructuring: Cognitive behavioural therapy of obesity relies on evaluating the cognitions maintaining the problematic situation and replacing these conditions with functional alternative cognitions.
- (6) Proper nutrition education: Patients need to perceive nutritional education as a method to learn an eating behaviour that will last lifelong.
- (7) Increasing physical activity: After observing physical activity, behavioural techniques are developed in order to increase observed physical activity level.
- (8) Behavioural contracting: Contracting is applied in order to match reinforcement methods and stimulus control.
- (9) Methods to maintain ideal weight

Risky circumstances that may lead to relapse are determined during the active treatment period and strategies are developed in order to cope with these circumstances. In treatment of obesity, combining lifestyle changes such as diet and physical activity together with cognitive behavioural interventions increase treatment efficacy and enable maintaining the attained weight (4).

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[Abstract:0786][Other]

## Off label use of atypical antipsychotic drugs in paediatric population: a double-edged sword

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### ABSTRACT

Use of atypical antipsychotic agents (AAPs) in management of various psychopathologies in Child and Adolescent Psychiatric practice is gradually increasing. According to the Texas-Medicaid Study, total use of antipsychotics in children and adolescents has increased from 7.7% to 20.0% from 1996 to 2000. Possible reasons for the rising trend in antipsychotic use are listed as: (1) greater acceptability of psychotropic medication use in children; (2) increased knowledge and awareness; (3) limited access to non-pharmacologic treatments; (4) demand for quick and affordable treatments; (5) inadequate provider time and reimbursement for managing behavioural problems and (6) limited treatment options for vulnerable populations. FDA has approved risperidone for the treatment of irritability and aggression in autistic children aged 5–16 years and risperidone and aripiprazole for the treatment of schizophrenia in children aged 13–17 years. More recently, four other atypical antipsychotic medications were approved for the treatment of bipolar I disorder and schizophrenia: quetiapine, olanzapine, ziprasidone, and aripiprazole (for bipolar disorder only), paliperidone (for schizophrenia only). It is important to note that although the FDA has approved second-generation antipsychotic medications for these conditions, most paediatric use is off label, that is, prescribed for conditions not approved by the FDA. AAPs are more frequently used in paediatric samples for the management of Attention-Deficit/Hyperactivity Disorder (ADHD), Conduct Disorder (CD), and mood disorders rather than psychotic

### KEYWORDS

Atypical antipsychotics; off-label use; child and adolescent; safety; efficacy; adverse effects

disorders. Among adult patients with Major Depressive Disorder (MDD), AAPs' agents are frequently used in the management as augmentative agents along with anti-depressants. It was also suggested that AAPs may be used in adolescent patients with MDD and irritability/self-harming behaviours. A recent study from the US reported that AAPs' agents were more frequently used in the treatment of MDD in the late adolescence-early adulthood. They also reported that off-label use of antipsychotics for the management of depression and anxiety disorders was more common in female patients. Off-label use of APs is also common among patients with Intellectual Disability (ID) especially for non-compliance and behaviour problems. Clinicians show a tendency to use atypical antipsychotics rather than typical antipsychotics because of their decreased risk to cause extrapyramidal symptoms and tardive dyskinesia. In line with the literature, AAPs have been shown to reduce aggression, and practice guidelines support the appropriate use of atypical antipsychotics in youth. Even though the growing body of evidence supports the safety and efficacy of atypical antipsychotics, especially risperidone, for the treatment of aggression; off-label use of AAPs in youth and temporal trends for increasing use have also raised concerns about adverse effects of AAP use. Most commonly reported adverse effects in youth using AAPs were reported to be weight gain, obesity, hyperglycaemia, diabetes and insulin resistance (i.e. metabolic syndrome), cardiac problems, sedation, extra pyramidal symptoms (EPS), and hyperprolactinaemia. Also twofold to fivefold increase in the use of antipsychotic medications in children younger than 6 years has been reported, despite little information on their long-term effects on child health and the developing brain.

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[Abstract:0787][Other]

## Use of optic coherence tomography in psychiatric diagnosis and follow-up

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### ABSTRACT

Optic coherence tomography (OCT) is a novel imaging method that can capture biological tissue layers by acquiring high-resolution sections. This technique measures the delay time and intensity of infra-red light, which is transmitted to and reflected from different tissue layers. It gives cross-sectional images of tissues similar to, but with much a higher resolution than ultrasonography. Its use increased rapidly because it is a non-invasive and rapid method that can assess the macula thickness (MT), volume (MV), and retinal layers. Because OCT technology significantly enhances the imaging resolution, the segmentation of retinal layers, such as the ganglion cell layer (GCL), inner plexiform layer (IPL), and retinal nerve fibre layer (RNFL), is now possible. The RNFL involves axons of ganglion cells, the ganglion cell layer (GCL) involves bodies of ganglion cells, and the IPL involves dendrites of ganglion cells (Parver, 1991). Another parameter that can be measured with OCT is choroidal thickness. More recently, its use was expanded to neurodegenerative diseases because the retina is an anatomical extension of the brain, and retinal changes may occur in parallel with inflammation and CNS degeneration. OCT has shown retinal changes in neurodegenerative diseases, such as multiple sclerosis, Alzheimer's disease, Parkinson's disease, and restless leg syndrome which correlated with the severity of clinical disease. More recently, OCT was used to detect neuronal degeneration in psychiatric disorders. Our group demonstrated reduced GCL and IPL volumes in schizophrenia patients compared with controls using spectral OCT. We also detected significant negative correlations between disease severity parameters and GCL and IPL volumes. In our another study, it is suggested that the neurodegeneration that occur during the course of bipolar disorder may be demonstrated by decreased GCL at early stages, and as the disease progresses, involvement of other retinal layers, such as the RNFL

### KEYWORDS

Optic coherence tomography; ganglion cell layer; inner plexiform layer; retinal nerve fibre layer; macula; choroidal thickness



and IPL, may be observed. Again, our research team demonstrated that the OCT finding of decreased GCL and IPL volumes supports previous research suggesting degeneration in major depressive disorder. In another our study in patients with obsessive-compulsive disorder (OCD), we suggested that OCT can be used to detect neurodegeneration in OCD and that the GCL and IPL volumes can also be used to monitor the progression of neurodegeneration. Again, we have demonstrated that in a study comparing OCT results of conversion disorder (CD) patients with healthy controls, the GCL and IPL findings suggest that neurodegeneration occurs during the course of CD especially in subtype involving motor component. The choroid may be used to determine the active stage of the disease and to monitor inflammatory process like other inflammation markers used in systemic inflammatory diseases. In sum, there are significant results about OCT use in psychiatry. The analysis of GCL and IPL volumes with more sophisticated OCT devices provides better structure-function correlation and may be used to monitor the progression of neurodegeneration. I would like to thank Dr Aysun Kalenderoğlu, my assistant professor for the help in writing, and from whom I benefited from his knowledge on OCT.

[Abstract:0788][Psychotherapies]

## What is the situation of psychotherapy in Turkey?

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### ABSTRACT

Although psychotherapies and psychological treatment services are irreplaceable for modern psychiatry and psychological initiatives, there is a serious chaos in the area. The reason for the confusion is that there is no certainty concerning the concept, definition, and practice, as well as that there is uncertainty about the professional boundaries because they deal with many professions. The case in point all over the world is in a chaotic situation when it comes to Turkey. In the current legal situation, almost every attempt can be made named as "psychotherapy" except psychopharmacological and somatic therapies applied by the psychiatrists, whereas the treatment attempts made by the people outside psychiatry are almost criminal. There are many reasons for the chaos in the field of psychotherapy and psychological treatment services in Turkey, and it is necessary to find a solution as soon as possible. So, in this speech, we will try to create a panoramic image for the psychotherapy field in Turkey as well in the meantime we will try to focus on the practical implementation challenges.

### KEYWORDS

Psychotherapy; psychological treatment; modern psychiatry; psychological initiatives; panoramic image for psychotherapy

[Abstract:0789][Schizophrenia and other psychotic disorders]

## How can we overcome treatment resistance in schizophrenia? Is clozapine fear justifiable or exaggerated? Principles of clozapine treatment in stages and psychosocial approaches in overcoming treatment resistance While starting clozapine

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### ABSTRACT

The effect of clozapine has been proven in patients with treatment-resistant schizophrenia. However, the prescription of clozapine is limited due to need for the gradual increase in dose in the initiation protocol, the long and costly follow-up protocol, the interaction with many drugs, the presence of life-threatening side effects, the gradual cessation of treatment within 1–2 weeks, and the high cost of treatment. Therefore, these conditions motivate clinicians to identify patients with adequate response. In addition, when compared with other antipsychotics, it is reported that clozapine needs a longer duration of treatment and

### KEYWORDS

Clozapine; clozapine response; treatment resistant; schizophrenia; psychosocial approaches

the clinical response may appear to be relatively late. In this regard, drug plasma concentration, brain imaging, clinical parameters, genetic studies, and quantitative electroencephalography (QEEG) studies were used to predict clozapine response. Data obtained from current studies will prevent clinicians from wasting time in patients who are unlikely to respond to clozapine by not using a drug that does not have a positive effect on the treatment process, while at the same time preventing patients from being exposed to the side-effect profile of clozapine. However, progress in this area will significantly contribute to the prevention of improper use of health-care facilities, the reduction of financial costs associated with the use of unresponsive drugs, and the reduction of the use of additional medication and health units due to clozapine side effects

[Abstract:0790][Other]

## CBT for chronic migraine

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### ABSTRACT

Chronic migraine is a public health concern, causing serious amounts of disability, excessive drug usage, and frequent hospital admissions. Chronic migraine, described as headache occurring on 15 or more days per month for more than three months, which, on at least 8 days per month has symptoms of migraine headache according to The International Classification of Headache Disorders (ICHD-III beta version), negatively affects patients' quality of lives. Patients who have received appropriate prophylactic treatments for their pain management such as anticonvulsant, beta blockers, calcium channel blockers, and tricyclic anti-depressants but whose quality of life is negatively affected even though they are administered with adequate doses and period of time can be evaluated as treatment-resistant. The American Headache Society (AHS) has proposed in 2008 to name chronic migraine patients who have modified triggers, lifestyle factors, and those who have taken adequate amounts of acute and prophylactic drug combinations but still have not gained any significant change in their quality of life as "Refractory Chronic Migraine Patients." It has been reported that psychiatric conditions are important in the chronicity of migraine-type headache, which are known to be associated with temperament traits such as perfectionism, neuroticism, and suppressed aggression. Cognitive Behavioural Therapy (CBT) for pain management is a form of therapy which aims to modify thoughts and behaviour in a realistic and balanced way and change in behaviours during headache attacks. In CBT for migraine rationale for behavioural pain management, headache diaries, relaxation, pleasant imagery, and pleasant activities techniques might be used.

### KEYWORDS

Chronic migraine; cognitive behavioural therapy; refractory chronic migraine; relaxation; anxiety

[Abstract:0791][Autism]

## Psychopharmacological treatment of attention deficit hyperactivity disorder comorbidity in ASD

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### ABSTRACT

Autism spectrum disorder (ASD) and attention-deficit/hyperactivity disorder (ADHD) are neurodevelopmental disorders. ASD is characterized by impairments in communication and social reciprocity and stereotypic and/or repetitive behaviours. ADHD, the most common psychiatric disorder diagnosed in childhood, is characterized by symptoms of inattention, impulsivity, and/or hyperactivity beyond what would be expected for the developmental level. Despite these main symptom differences, between 30% and 50% of individuals diagnosed with ASD also exhibit elevated levels of ADHD symptoms. These behaviours may be related to comorbid attention-deficit/hyperactivity disorder (ADHD) or to other factors

### KEYWORDS

Autism spectrum disorder; attention-deficit/hyperactivity disorder; ADHD; psychopharmacology; treatment

that affect function in children with ASD (e.g. overarousal, anxiety). If the behaviours do not improve with environmental or behavioural interventions, they may respond to pharmacotherapy [1].

Psychostimulant medications: Methylphenidate appears to improve symptoms of hyperactivity and inattention in children with ASD, but the response to methylphenidate is lower in children with ASD than it is in children with isolated ADHD. In the largest crossover trial, approximately 50% of children with ASD responded to methylphenidate; the effect size ranged from 0.20 to 0.54, depending upon dose and rater, with greater improvement at higher doses [1,2]. Studies of amphetamines in the treatment of attentional symptoms in children with ASD are lacking. It is not clear that the results from trials of methylphenidate can be generalized to amphetamines [2].

Non-psychostimulant medications: Studies of atomoxetine for symptoms of hyperactivity and inattention in children with ASD are limited. Randomized crossover trials suggested some improvement in hyperactivity-impulsivity symptoms compared with placebo. However, as with methylphenidate, the overall effect size for atomoxetine in children with ASD and symptoms of ADHD is smaller than for children with ADHD without ASD [2,3]. Studies of alpha-2-adrenergic agonists are limited, and sample sizes are small. Some studies show that guanfacine and clonidine are effective in reducing hyperactivity, inattention, and irritability symptoms [1,2]. Other drugs that may be beneficial for symptoms of hyperactivity and inattention in children with ASD include risperidone and antiseizure drugs. The use of risperidone for symptoms of hyperactivity in children with ASD is supported by open-label and randomized controlled trials. The evidence for antiseizure agents is limited to small, open-label, or observational studies [2]. In conclusion, researches generally support the use of psychopharmacological treatments for reducing impairing ADHD symptoms in individuals with ASD. But further studies are needed to increase understanding of the effectiveness and about clinical practice.

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[Abstract:0792][Other]

## Metabolic syndrome and hyperlipidaemia in psychiatry: laboratory assessments

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### ABSTRACT

Metabolic syndrome (MS); diabetes mellitus, obesity, abdominal fat accumulation, dyslipidaemia, hypertension, and coronary artery disease are some of the major cardiovascular risk factors. In 1998, the World Health Organization published the criteria for defining the International Diabetes Federation in 2005. Then again in our country in 2005, the Turkey Endocrinology Metabolism Association (TEMMA) has published an identification guide associated with MS. The diagnostic criteria for MS in this guideline are:

Waist circumference: Men  $\geq 102$  cm; Women  $\geq 88$  cm

BMI:  $\geq 30$  kg/m<sup>2</sup>

Triglycerides:  $\geq 150$  mg/dL

HDL: Men  $< 40$  mg/dL; women  $< 50$  mg/dL

Blood pressure:  $\geq 130/85$  mmHg

Fasting blood sugar:  $> 110$  mg/dL

Urine albumin/creatinine ratio:  $\geq 30$  mg/g

Dyslipidaemia is among the primary components of MS. Dyslipidaemia is characterized by low HDL cholesterol and elevated triglycerides in MS patients are caused by the effect of visceral

### KEYWORDS

Metabolic syndrome; hyperlipidaemia; insulin resistance; MS; dyslipidaemia

obesity and insulin resistance. With LDL cholesterol usually at normal levels, there is an increase in the atherogenic and small dense LDL subgroups. Hypertriglyceridaemia and low HDL lead to an increased risk of cardiovascular disease. A single genetic, infectious, environmental factor that may explain the aetiopathogenesis of all components of MS has not yet been identified. However, insulin resistance is the basic pathology of this syndrome. According to many tests measuring insulin resistance, HOMA and QUICKY are reliable methods. It turns out that insulin resistance is very important as it is thought to be related to obesity, hypertension, and hyperlipidaemia.

[Abstract:0793][Other]

## Metabolic syndrome and hyperlipidaemia in psychiatry: treatment option

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### ABSTRACT

Life standards of schizophrenic and other psychiatric patient groups must be monitored and also kept under control. Both antipsychotics and antidepressants have various side effects and therefore each of them should be used with great attention. Some of these side effects are termed as metabolic side effects and these are the most important side effects of all. If necessary precautions are not taken serious physical problems may occur. While the treatment proceeds, the weight, blood sugar level, and blood lipid profile should be kept under control. Evaluating frequent blood tests, regular weight control, paying attention to keeping a balanced diet, and regular blood pressure control are necessary. If some of the controlled values are out of the expected boundaries, the medical treatment should be re-evaluated. Briefly while the psychiatric treatments are proceeding, regular internal examinations and regular blood tests should be done. All of the systemic disorders presented by the patients who have metabolic syndrome are phenomena that trigger each other and are both causes and consequences of each other. In this regard, reducing these systemic disorders should be the first plan before medical treatments in the treatment of metabolic syndrome.

**Diet and nutrition:** The most important phase of the treatment of the metabolic syndrome is controlled weight loss.

**Hypnoses:** The processes of making the patient gain a healthy and balanced diet as a habit by the use of hypnosis is called hypnoses which is a useful treatment option for the weight control of the suitable patient groups.

**Physical activities:** The main reasons for obesity are unhealthy diet and physical inactivity. Also in the course of the treatment of metabolic syndrome, physical activity is also as important as diet. All patients with metabolic syndrome should carry out a systemic diet and exercise programme. Patients who have lost approximately 10% of their weight due to an organized diet and exercise programme experience a decrease in nearly all the metabolic syndromes and symptoms of its components.

**Medical treatment:** For the treatments of problems that are also the components of metabolic syndrome such as insulin resistance, high blood pressure and blood cholesterol levels, obesity, and diabetes, there are medical options that can be used proportional to the advancement of the individual problems of the patient.

**Surgical treatment:** When the classical treatment options have failed, the most effective and the permanent treatment option is metabolic surgery. During the treatment course of the psychiatric patients, being under control and monitored by a nutrition specialist decrease the possibility of heart diseases and metabolic syndrome and increase patients' quality of life.

### KEYWORDS

Psychiatry; metabolic syndrome; treatment; hypnoses; psychiatric patient

[Abstract:0794][Autism]

## Problematic sexual behaviours and their treatment in children and adolescents with autism spectrum disorder(ASD) and intellectual disability

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**ABSTRACT**

Individuals in their teenage years try to get over from the effects of the parents and seek answers to "Who am I?" question. In this period, due to the effects of hormones and brain development not being complete, inappropriate sexual behaviours can be seen even in normal intelligence individuals. Intellectual disability is present in mentally retarded or autistic individuals; however, their hormone levels are normal. Thus, we see inappropriate sexual behaviours in these individuals more often. Sexual aggression, as well as physical aggression due to the effects of hormones, is increasing in individuals with autism and intellectual disability during adolescence. Masturbatory behaviours in the wrong places, sexual aggression to other family members are more frequent in those disabled group. Cognitive therapy is difficult to respond to these patients because of their cognitive development. Treatment strategies that include behavioural suggestions, use of psychopharmacologic or drugs that suppress sexual desire, and hormonal remedies to suppress male hormone in resistant cases will be discussed.

**KEYWORDS**

Problematic sexual behaviours; treatment; children; adolescents; autism; intellectual disability

[Abstract:0795][Autism]

## Using antipsychotics in children with autism spectrum disorders

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**ABSTRACT**

Autism spectrum disorder (ASD) is a heterogeneous neurodevelopmental disorder characterized by impairment in social communication and interaction and by restricted and repetitive behaviours, interests, and activities. Besides those core symptoms, serious behavioural disturbances such as irritability, which may manifest as aggression, tantrums, and deliberate self-injury are not rare in ASD. These symptoms further impair social interaction and communication, represent a significant burden to individuals and their families, and disrupt school and family environments. No psychopharmacologic drugs targeting the core symptoms of ASD have been approved yet. However, antipsychotics are found to be effective in the treatment of paediatric patients with irritability associated with autistic disorder, including symptoms of aggression toward others, self-injuriousness; temper tantrums, and quickly changing moods. Studies showed that antipsychotic agents decrease behavioural problems and increase the adaptation of the individual with ASD to the environment. The first-generation antipsychotic use is decreased in recent years. Second-generation antipsychotics risperidone and aripiprazole are approved by the FDA for the treatment of irritability associated with autistic disorder. Levine et al. (2016) reported that parents could expect benefits from risperidone in terms of irritability and lethargy with moderate to severe symptoms of ASD. The improvement of social skills was also reported with risperidone (Aman et al. 2015). Lamberti et al. compared risperidone and aripiprazole in the treatment of attention deficit hyperactivity (ADHD) symptoms in children with ASD, with 37 of the children completing the 24 weeks of treatment. They suggested that both aripiprazole and risperidone are effective in ameliorating the ADHD symptoms in ASD (Lamberti et al. 2016). Moreover, Ghanizadeh and Sahraeizadah (2014) reported that the safety and efficacy of aripiprazole and risperidone were comparable in their head-to-head comparison study. A few studies compared the effectiveness and adverse effects of olanzapine in children and adolescents with ASD. In this presentation, the effectiveness, tolerability, and side effects of the antipsychotics will be discussed in the ASD patients with behavioural disturbances.

**KEYWORDS**

Autism spectrum disorder; antipsychotic; risperidone; aripiprazole; olanzapine

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[Abstract:0796][Forensic Psychiatry]

## Comparative forensic psychiatry: mental health law in Turkey

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### ABSTRACT

Identifying the boundaries and context of the interaction between psychiatry and the law is a subject of a long-standing puzzlement for the members of both professions. Nevertheless, it is well known that there are certain paths in which both civil and criminal legal systems rely on psychiatric input. Psychiatrists have been increasingly aware of the need for expertise in legal aspects of psychiatric practice and in satisfying the legal systems' needs for psychiatric participation in adjudicating matters involving mental health. Indeed, such a necessity has led to the fact that forensic psychiatry has become one of the most acknowledged and respected psychiatric subspecialty in particular countries in recent decades. Forensic psychiatry primarily covers the field of expert witnessing; it also deals with the patients' clinical needs. *Mens rea* is the mental element of an offense, and psychiatric disorders have the potential to influence the competency or capacity to form any particular intention or behaviour that can lead to a crime. Therefore, psychiatrists are frequently asked to evaluate a defendant's mental state at the time of the offense to determine the required *mens rea* that is related to the crime. In different countries, psychiatrists are involved in various stages in law systems. For instance, assessment for insanity defence (or competency assessment for criminal responsibility) is one of the vital parts of forensic work in Mainland Europe countries, including Turkey, while very few cases of insanity come to the courts in Anglo-American law. On the other hand, in the United Kingdom, if there is a suspicion of a presented mental disorder of the offender that is thought unfair to proceed with the trial, psychiatrists are invited to assess an individual's fitness to plead (competence to stand trial in the United States). Clinicians are needed to indicate whether a defendant has sufficient understanding and cognition to comprehend the purpose of trial proceedings or to defend him/herself in front of the court. Although forensic psychiatry usually deals with the assessment and management of mentally disordered offenders and other patients with mental disorders who are, or have been potentially or actually violent, civil legislations also occasionally require psychiatric testimony. Civil law which relies heavily upon common law is the term used for the law dealing with disputes between individuals or organizations. Psychiatrists become involved in civil law on an occasional basis which usually requires a detailed clinical evaluation for judgment and decision-making abilities. Psychiatrists may be asked to comment on the mental capacity or state of mind of a patient or individual in relation to a contract or statement, to consider whether a particular act or omission committed by a defendant has caused a psychiatric disorder, or to comment a patient's requisite for authorization of a legal representation or a legal supervision in order to employ official proceedings. The civil law system used in most parts of the world is quite different. In Turkey, the Turkish Civil Code regulates the issues mentioned above that become subjects of psychiatric expert witnessing. Involuntary treatment of the mentally ill is an essential matter in the context of civil law. It is among the most controversial issues in mental health care and is the subject of ongoing debate among patients, mental health professionals, and a wider public due to its both ethical and legal amorphous characteristics. In Europe and other developed countries, independent mental health laws are in force and regulate involuntary commitment of psychiatric patients that mainly possess a danger to him/herself or the public due to their mental disorder. Mental health laws authorize the psychiatrists to determine a patient's need for involuntary treatment and hospitalization; however, for instance, clinicians' decisions would be challenged and frequently need to be backed by a second opinion or an independent tribunal according to the Mental Health Act in the United Kingdom. In some countries including Turkey, responsible psychiatrists should apply to the civil court for involuntary psychiatric treatment for non-criminal psychiatric patients. In Turkey, enactment of the Mental Health Law is in progress and is expected to come into force in the near future. The template of the Mental Health Law is inspired from the mental health legislation and clinical implications of mainland Europe countries and it is strongly asserted that Mental Health Law would disambiguate the controversies regarding evaluation and treatment processes that psychiatrists encounter in clinical settings.

### KEYWORDS

Compulsive treatment; expert witnessing; forensic order; involuntary treatment; mental health law



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[Abstract:0797][Psychopharmacology]

## Drug interactions in psychiatry

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### ABSTRACT

When more than one drug is taken or even taken together with certain foods, beverages, or non-prescription drugs, a drug interaction may be at risk. There are three major types of interaction that drug fields can encounter:

- (1) Drug–drug interactions: This type is the most common type of drug interaction. The more numerous drugs are taken, the greater the likelihood of drug interactions. Drug–drug interactions can reduce the effects of drugs, mild or unexpected side effects can increase the severity, or even increase the blood level and possible toxicity of a particular drug. For example, antipsychotics such as haloperidol or aripiprazole may be seen in combination with antidepressants such as bupropion or paroxetine or elevated blood levels by taking olanzapine and fluvoxamine together; carbamazepine can reduce many medicines and even their blood levels.
- (2) Drug–food interactions: Some medicines may interact with certain foods or drinks. For example, smoking can reduce blood levels of clozapine and olanzapine by 50%; but, grapefruit juice can elevate the blood levels of many medicines and even cause toxicity.
- (3) Drug–disease interactions: In current physical illnesses, a drug may affect the way it works. For example, venlafaxine can increase blood pressure and can be dangerous if you have high blood pressure. Similarly, bupropion may provoke epileptic seizures in epileptic patients.

Since the Hippocratic era, the role of physicians in the treatment of illnesses has been described as “BEFORE, DO NOT HARM!” it has been. In this regard, physicians should educate themselves and consciously prescribe medicines to their patients.

### KEYWORDS

Drug interactions; medications; prescribing; toxicity

[Abstract:0798][Mood Disorders]

## History of bipolar disorder

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**ABSTRACT**

The first information about bipolar disorder is found in Egyptian, Greek, Hebrew, and Chinese sources. In the Iliad of Homeros, Achilles' extreme wrath was named as "manis." Hippocrates (400 BC) first used the terms mania and melancholia. Cornelius Celsus (AD 100) identified melancholia in *De Medicina*. Arataeus (120–180 AD), Galen (129–199 AD), and Alexander of Tralles (525–605 AD) also used the term melancholia. Arataeus of Cappadocia (120–180 AD) revealed the relation between mania and melancholia close to today's knowledge. He suggested that melancholia is the onset of mania, mania has numerous forms, if mania is joyfully together, the patient can roam, play, dance day and night, and may travel in market place like a winner of a contest. Also he described mania as "numerous considerations can be found in the minds of patients, they may think of themselves as philosophers, poets or astronomers" (Arataeus 150 AD). Rhazes (Muhammad bin Zekeriya, Razi 865–925) defined melancholia as a separate entity morbidity. Avicenna (980–1037) gave very detailed information about melancholia, and pioneered bio-psycho-social and analytical approach. Esquirol (1816) suggested that in some manic events occasionally hypochondria and stagnation states (depression) may be encountered. Baillarger (1851) and Jules Falret (1854) pointed out that the manic and melancholic seizures follow one another. Karl Kahlbaum (1882) suggested that mania and melancholia have different seizures of the same disease (*Vesania typica circularis*, *Cyclothymia*). Kraepelin (1883) compared the pathologies of schizophrenia (he named as *Dementia praecox*), and pathologies including mania and melancholia, made a distinction, and named it as "Psychosis-Maniac Depressive" (PMD). Kraepelin defined PMD as "Apparently mania and melancholia are the opposite, whereas they are the clinical manifestations of the same disease, may come back behind the same person, it depends on physiological reasons, there is hereditary transitional feature and the prognosis is good." Also Kraepelin (1883) classified PMD as mania/melancholia, isolated mania, isolated melancholia, and involutional melancholia. In later years he suggested the terms of manic supor (1893), mania with inhibition (1899), euphoric depression (1904), and depressive anxious mania (1913). For the first time in DSM-I, the definition of "manic depressive reaction" has been used. In 1976, Dunner suggested that the disease should be divided into two subtypes, Bipolar 1 and Bipolar 2. In DSM-III, major depression and bipolar disorder were defined as two separate diseases with affective disorders. In DSM III-R, the definition of affective disorders was renamed as mood disorders to express a more inclusive and general situation. Bipolar disorder, which is included in mood disorders in DSM-IV and DSM-IV-R, was classified as bipolar and related disorders in DSM-5 published in 2013. In this presentation we aimed to talk about the history of Bipolar Disorder according to literature.

**KEYWORDS**

Bipolar disorder; mania; depression; history

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[Abstract:0799][Autism]

## Complementary and alternative treatments in autism spectrum disorder

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**ABSTRACT**

Complementary and alternative treatments (CAT) in autism spectrum disorder (ASD) are generally divided into biological and non-biological interventions. Biological complementary treatments are based on the use of certain vitamins and minerals, omega-3 fatty acids, the use of hormones such as melatonin and secretin, and gluten and/or casein-free diet. Biological treatments can be extended to treatments with serious risks such as chelation, hyperbaric oxygen therapy, immunoglobulins, antivirals, and avoidance of vaccination. Non-biological complementary interventions include neurofeedback, sensory integration therapy, music therapy, meditation, massage, physical activity, animal-assisted therapies, and

**KEYWORDS**

Complementary and Alternative Treatments; Autism Spectrum Disorder; biological complementary treatments; non-biological complementary interventions; animal-assisted therapies

acupuncture. In this presentation, the effectiveness and side effect profile of each Complementary and Alternative Treatment Methods in Autism Spectrum Disorder will be discussed through current literature.

## Looking Through Our Pain with Compassion: ACT Based Self Compassion Approach in Trauma Related Guilt and Shame

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### ABSTRACT

Prospective studies suggest that approximately 30% of trauma-exposed individuals will meet criteria for posttraumatic stress disorder (PTSD) within three months following the exposure while the remaining individuals seem to be resilient. After treatment of this affected population, some individuals continue to experience disruptions in quality of life, especially relationship difficulties, although PTSD symptoms have been reduced (1). Intervention on two trauma-related emotion – guilt and shame – seems to play a key role to overcome difficulties in relationships and self-compassion (SC) interventions could provide an effective way for this. Also the protective role of SC with respect to trauma-related psychopathology was indicated in many studies. Shame has two transdiagnostic behavioural dimensions; experiential avoidance and self-criticism, that are closely related to PTSD and Acceptance and Commitment Therapy (ACT)-based SC interventions could be useful for both dimensions. Neff conceptualized SC as feelings of care and kindness towards oneself through taking a non-judgemental attitude towards one's perceived inadequacies with a willingness to be open to one's own suffering without avoiding it (2). The ACT processes of defusion, acceptance, present moment, values, committed action, and self-as-context are to some degree inherently self-compassionate and so SC is implicit in the processes targeted by ACT. ACT work as SC focuses on deictic frames or perspective taking based upon Relational Frame Theory (RFT). RFT suggests that I and you are intimately interconnected, in that there cannot be an 'I/Here/Now' without a 'You/There/ Then.' From this perspective, ability to feel warmth and express warmth towards oneself, the target of SC, depends on perspective-taking frames (3). While SC can be seen as implicitly involved in all ACT work, making it explicit in therapy, especially when working with highly self-critical and shame-prone clients as in PTSD, may improve the outcomes. Studies on self-stigma, whose main emotional component is shame, provide support for the application of ACT for self-stigma and shame (4,5). Also in a study that addresses self-stigma related to HIV status, combination of ACT and Compassion-Focused Therapy (CFT) was found to be effective in increasing psychological flexibility and reducing HIV-related stigma (6). In light of these, self-criticism and shame should be taken in consideration in ACT work when studying patients with PTSD symptoms to improve therapy outcomes.

### KEYWORDS

ACT; self-compassion; shame; self-criticism

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## Avoidant/ restrictive food intake disorder (ARFID): Diagnosis and treatment approaches

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### ABSTRACT

Avoidant/restrictive food intake disorder (ARFID) is a new eating disorder diagnosis in the 5th edition of the diagnostic and statistical manual (DSM-5, 2013). The purpose of this presentation is to explain the creation of ARFID as a diagnostic class, and to explain the DSM-5 diagnostic criteria; to demonstrate what is known thus far about the prevalence of ARFID and feature of patients with this disorder; to ensure guidance to the psychiatrist and other providers on making a diagnosis of ARFID; and to discuss thrive treatment approaches. The supplement of ARFID to the DSM-5 has received a category of patients with clinically important restrictive eating, but without weight and shape concerns, who were inadequately classified in the past. For the reason that ARFID prevalence, risk factors, and continue mechanisms are not known, current treatment approaches are based on clinical experience rather than data. Additionally, most ARFID research has focused on children, rather than on adolescents or adults. There is a need for more studies in this field.

### KEYWORDS

Diagnostic and statistical manual 5; Avoidant/ restrictive food intake disorder; Eating and feeding disorder

## Telemedicine

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### ABSTRACT

According to the World Health Organization, telemedicine is that "The delivery of health care services, where distance is a critical factor, by all health care professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of health care providers, all in the interests of advancing the health of individuals and their communities" An astonishing amount of 25% of people globally are approximate to be affected by psychiatric illness in their lives (WHO, 2011). Although effective interventions to decrease mental health symptoms exist, many diseased individuals do not receive mental health care. One study reported a treatment gap exceeding 90% for usual mental disorders and alcohol-use disorders in India and China, two relatively well-resourced middle-income countries. While internet diffusion and mobile phone possession in particular have become greater in size globally, digital technologies propose a genuine opportunity to come through several of these barriers. Many systematic reviews and meta-analysis of randomized controlled trials have revealed the effectiveness of guided and unguided e-health interventions, for example, in cases such as depression, anxiety, alcohol disorders and insomnia. The implementation of e-health technologies has the potential to revolutionize the delivery of mental health education, training, care, and advocacy in low-resource settings.

### KEYWORDS

Telemedicine; teaching; therapeutics

## Here and now with the trauma: self-awareness based approaches

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### ABSTRACT

Mindfulness, originally a construct used in Eastern spiritual and philosophical traditions, has found new utility in psychotherapy practice. Mindfulness is defined as a process in which one's attention is guided non-judiciously by the current main conscious. Posttraumatic stress disorder (PTSD), which occurs as a result of exposure to severe stressors such as combat, domestic violence, threat of death, or natural disaster, is increasingly being treated with therapies intended to increase mindfulness. Mindfulness practice is expected to reduce physiological stimulation, increase attentional control, and encourage the acceptance of

### KEYWORDS

Mindfulness; post-traumatic stress; acceptance

unwanted experiences. Each of these can be considered as processes that persist in PTSD. Unfortunately, the literature to date suggests that the optimal ways to apply mindfulness for therapeutic change are not yet clear. This is not to suggest that mindfulness should be abandoned. By contrast, clinical wisdom suggests that mindfulness can be very meaningfully applied to support psychological change. Thus, the questions of for whom mindfulness will be most impactful, in what way it should be taught and how the experience of mindfulness may be best leveraged to support change will become paramount.

## SPSS for dummies

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### ABSTRACT

SPSS is known to be difficult. Those who don't know how to drive also think driving is difficult. A car has many parts and each has its own significance. The motor converts energy. There are gasoline, diesel and electrical motors. Gasoline motors are those that are most commonly used at the moment. Approximately 20% of the consumed fuel is directed to the wheels. Suction, compression, expansion and exhaust are the working stages of a four-cycle engine. The mechanism is slightly different in diesel and electric motors. The transfer elements are the clutch, crankshaft and the differential gear. However, it is not necessary to know all these to drive a car. Many people can use a car in their daily life after receiving the necessary training. Even those who do not transfer loads and passengers participate in car races or produce and repair cars can use a car in their daily life without knowing most of this information. Many psychiatrists need to use SPSS from time to time. It seems to be scary and too complicated for an ordinary person to use, something to stay away from as much as possible. The aim of the course is to show that SPSS is not a monster and that it can be used with various approaches. We will work with participants who have never used SPSS using free Internet resources. The data will be entered into SPSS by a voluntary participant and then will be analysed with SPSS using algorithms, through the use of these resources.

### KEYWORDS

SPSS; data analysis; psychiatry

## Metaphors in Cognitive Behavioral Therapy or Children and Adolescents

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### ABSTRACT

Children and adolescents often present with firmly held rigid beliefs, emotions, and behaviours representing their psychopathologies. As cognitive behavioural therapy (CBT) introduces a flexible framework for emotional change – which, according to the cognitive therapy, can be accomplished through a rational analysis of the cognitions and adaptive modification of the related behaviours metaphors and stories may be included in this flexible framework of meaning transformation. Providing a conceptual bridge from a problematic interpretation to a constructive and problem-solving new perspective, metaphors are especially useful in boosting-up children's information processing systems and aiding them to recall the new information they gained through the process of CBT. Although they can be simple figures of speech, metaphors are often presented in the form of short stories and parables that provide a more elaborate visual description. In this presentation, the importance of metaphors in CBT is emphasized and examples of metaphors and stories are provided for therapists to augment traditional cognitive behavioural interventions and for clinicians to enhance their daily clinical practice.

### KEYWORDS

Metaphor; CBT; children; adolescents

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