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ICP 2022 Symposia Presentations

INVITATION

It is our great pleasure to announce that the Turkish Association for Psychopharmacology (TAP)'s 13th International Congress on Psychopharmacology & International Symposium on Child and Adolescent Psychopharmacology (ICP 2022) will be held on November 09-12, 2022 in Antalya, Turkey.

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Symposia Presentations

13th International Congress on Psychopharmacology &
9th International Symposium on Child and Adolescent Psychopharmacology

The effects of ketamine on cognition in unipolar and bipolar depression

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Cognitive dysfunction is a recognized feature unipolar depressive disorder (UD) and bipolar depressive disorder (BD). By reducing the functionality, it significantly affects the occupational and social life areas of the patients and leads to a decrease in their quality of life. The main cognitive domains are defined as processing speed, attention, memory, executive functions and social cognition. Attention, executive functions, and processing speed are commonly impaired in depressive disorders (1). While generally people with BD appear to have a greater degree of cognitive impairment than those with UD, direct comparisons of both patient groups within a single study are lacking. Current symptoms, past course of illness, clinical features, such as the presence of psychosis and comorbid conditions, may all influence cognitive function in mood disorders. Despite the general lack of assessment of cognitive function in clinical practice, clinicians are increasingly targeting cognitive symptoms as part of comprehensive treatment strategies.(2). Monoaminergic antidepressants have collectively demonstrated moderate, albeit inconsistent, positive effects on cognitive function during depression treatment; effect sizes tend to be small, and domains other than psychomotor speed and delayed recall may not show a significant effect. It has long sought to identify antidepressant interventions that can improve areas of cognitive function associated with depression, or at least prevent any deterioration in cognitive performance that often occurs with anticholinergic or antihistaminergic compounds. Despite increasing interest in strategies to manage cognitive function, high-quality research examining pharmacological or non-pharmacological forms of intervention is scarce.

Over the past two decades, a number of clinical trials and case series have opened a new chapter in the treatment of depression by producing relatively consistent evidence of the rapid and potent antidepressant effect of ketamine at subanesthetic doses. Ketamine is the only anesthetic agent with analgesic, hypnotic and amnesic effects. In most studies to date, ketamine has been administered as a racemic mixture of the R-enantiomer (archetamine) and S-enantiomer (esketamine). Both archetamine and esketamine modulate glutamate transmission by acting as non-competitive N-methyl-D-aspartic acid (NMDA) receptor antagonists (3).

In meta-analyses of studies investigating the effect of ketamine administration on cognitive disorders in patients with UD and BD, no negative effect on cognition was observed in the short term in UD, while data in BD are limited. There is insufficient data to definitively answer the question of whether ketamine has lasting cognitive effects; therefore, larger controlled studies measuring cognition are needed (4). Future research should focus on different routes of ketamine administration, ketamine enantiomers, and BD populations.

Keywords: ketamine, cognition, depression

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Methylphenidate and other pharmacologic treatments for apathy in alzheimer's disease

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Originating from the Latin word of “ment”, meaning “mind”; “dementia” means “losing of the mind”, or in other words, a deterioration of the mental capabilities. American Psychiatric Association defines dementia as a clinical syndrome characterised by multiple cognitive disorder that affects daily activities including social and vocational activities. The prevalence in dementia increases incrementally with age and after the age 65; the risk doubles every five years. It is seen more commonly amongst women than men. Alzheimer’s disease (AD) is the most common cause for dementia. It is as neurodegenerative disease of the central nervous system (CNS). Psychiatrically, alongside the loss of other cognitive functions, the disease is characterised with increasing deterioration of memory and a growing loss of autonomy in daily life. It most commonly occurs after the age of 65.During the course of Alzheimer’s disease, plaques of histopataloghicly hyperphosphorylated tau and beta-amyloid (Aβ) are stored in the CNS, resulting in the loss of synapses and leading to apoptosis, which causes neuronal death. The primary deficit in AD is the deterioration of the cholinergic system in the brain, which is especially associated with learning and memory. Behavioural problems such as apathy, anxiety and irritability are often observed in patients suffering from AD. The term apathy is derived from the Greek word “apathiea”, meaning “a lack of feelings”. It is a neurocognitive syndrome that progresses with a low motivation and is characterised by a lack of or decrease in the thought process, goal-oriented behaviours and the accompanying emotions. In studies concerning AD, patients with apathy have been reported to have dysfunction in their anterior cingulate and medial frontal areas, as well as atrophy in their paraventricular nucleus and striatum. Although many treatments have been tried in order to cure apathy, there exists no FDA-certified treatment for it. There have been studies about non-pharmacological treatments such as music, physical exercise, sensory stimulation therapy and TMS. The FDA-certified acetylcholinesterase inhibitors and memantine that are also used in the treatment of AD have been shown to be effective in the treatment of apathetic behavioural symptoms. There are also studies involving antidepressants and antipsychotics that have shown to be effective on the treatment of apathy. While studies in the recent years about AD involving amyloid treatments and medications based on the Tau hypothesis, as well as ACE inhibitors and NSAIDs are still on trial; studies involving modafinil, amphetamine, amantadine have reported their positive effects on the treatment of apathy. Studies involving methylphenidate that acts by increasing the levels of noradrenaline and dopamine in the synaptic gap have seen a surge in recent years. Whereas a study [1] mentions the effects of the treatment with 20 mg of methylphenidate per day for patients diagnosed with senile apathy in 1975, a study conducted with 307 participants diagnosed with AD in 2021 has found that the treatment of 20 mg of methylphenidate per day is beneficial and safe [2]. Despite the many clinical studies conducted on apathy in AD patients, the fact that there is still no FDA-approved option for a treatment shows that further clinical studies are required.

Keywords: Dementia, Alzheimer Disease, Apathy, Methylphenidate

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An Introduction to transcranial magnetic stimulation: TMS in psychiatric disorders

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Despite the predominance of pharmaceutical agents for psychiatric disorders, monoamine transmitters are only part of the psychopathologies. Electroencephalography and other sophisticated forms of brain imaging such as positron emission tomography, single photon emission computed tomography, and functional magnetic resonance imaging are available options to understand the basic principles of psychiatric disorders better. Hypofunction or dysfunction in the dorsolateral prefrontal cortex (DLPFC) is a finding of MDD that can be modulated by Transcranial Magnetic Stimulation (TMS. Circuit-based dysfunction involving cortico-limbic dysfunction is described as a treatment target in MDD. Individual antidepressants get patients to remission about a third of the time. A recent meta-analysis shows that antidepressants have only a modest effect size of approximately 0.3[1].

TMS is a non-invasive brain stimulation technics that can change neuronal function by using electromagnetic fields. When pulses of TMS are delivered repetitively, this is called repetitive TMS, or r TMS. These pulses can be delivered at either high (10–20 Hz) or low frequency (<5 Hz). The maximal magnetic field can reach up to 1.5 Tesla right under the coil during the treatment. rTMS provide a brief and repetitive magnetic field. TMS therapy is indicated for treating major depressive disorder(MDD) who have failed to receive a satisfactory improvement in at least two antidepressant medications. In addition, TMS therapy has been rapidly evolving and becoming widely available for the treatment of psychiatric disorders such as obsessive-compulsive disorder (OCD), and posttraumatic stress disorder(PTSD).

OCD affects % 2.3 of the population and %1 of the population has no improvement from the current approved treatment. Cortico-Striatal-Thalamic-Cortical (CSTC) pathway hyperactivity is involved with symptoms of OCD which is highly consistent findings in the literature[2]. Deep TMS is an alternative approach that can result in the summation of electric impulses from various directions. According to a study published by Carmi et al., the response rate to deep TMS treatment was reported to be 45.2%[3]. In this presentation, the efficiency, safety, side effects, and usage areas of TMS treatment will be shared using the latest data in the literature. The role of TMS in the treatment of PTSD, OCD, and MDD will be discussed in detail, and the newly approved Stanford neuromodulation therapy by the FDA will be mentioned.

Keywords: iTBS, dTMS, rTMS, SAINT, Depression, Obsession

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Functional analytic psychotherapy: As core therapist skills

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Functional Analytic Psychotherapy (FAP) is a contemporary cognitive behavior therapy. FAP especially focus on both client interpersonal problems and the therapeutic relationship. FAP uses what happens in-session between client and therapist to create new and more effective ways for clients to connect with and respond to other people. Cases can be formulated according to "Functional Idiographic Assessment Template " developed by FAP theorists or according to classical functional behavior analysis. FAP make important behavioral interpretations so that positive changes in-session can generalize to clients' daily lives. For this, he uses the therapeutic relationship as a means of change in order to revive and remember emotions, to be exposed to these emotions and to continue life with them. In the session, some behaviors are evaluated within some functional behavior classes (such as Awareness, Courage, Therapeutic Love,). The excesses and deficiencies in these behavioral classes are evaluated and examined. The therapist-client behaviors related to the client's current problem during the session are called clinical-related behaviors (CRB). CRBs are divided into CRB1 and CRB2. While CRB1's represent behaviors that increase the client's problem and should be reduced, CRB2's represent behaviors that increase the client's functionality and that need to be increased in frequency and intensity. Clinical-related behaviors are examined within the framework of FAP's own five rules, and it is tried to increase CRB2s by stimulating them.
In this course, both the theoretical structure of FAP will be explained didactically and examples of establishing and developing the therapeutic relationship as a change tool will be presented.
Keywords: Functional analytic psychotherapy, Therapeutic relationship, Functional analysis, Behavior therapy

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Functional analytic psychotherapy: As core therapist skills

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Therapy is a dynamic process that aims to create positive changes in the client's life. In Functional Analytic Psychotherapy (FAP), experiences in the therapy room and the therapist-client relationship are essential sources for this change. Functional analysis of behavior and learning theories of behaviorism are used as tools for change in this relationship. FAP is an ABC analysis that considers behavior in its context, including antecedents and consequences, and classifies it according to its function. Consequences shape behavior. Some outcomes act as reinforcement and increase the likelihood of the behavior being repeated. Some consequences serve as punishment and are effective in extinguishing the behavior. By being in the session with full awareness, the therapist notices the manifestations of the client's daily problems in the session. He reveals these clinically relevant behaviors and reinforces positive changes in the client. He observes his influence's results and helps generalize these positive results in everyday life. The session acts as a natural laboratory where problems are handled. The client's problems are handled in the awareness, courage, and love model.
FAP requires the therapist to take a participatory observer position to identify problems and implement necessary interventions during the session. The therapeutic process in FAP is similar to driving a car. The therapeutic process in FAP is similar to driving a car. As much as knowing the car's parts and traffic rules, it also requires following and responding to constantly changing conditions in traffic. Being a 'participating observer' is like acting according to the flowing traffic rules.
In this context, therapeutic change -not in the past or in the future- occurs within the session and is shaped by the therapist's attitude.

Keywords: behaviour, love, courage, function, awareness

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Emerging concepts in times of stress: emotional resilience and metacognitive awareness regarding child mental health

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The term “emotional resilience” is expressed as the capacity to use coping skills (such as changing the schema of thinking, diverting attention to something else, seeking support, and looking for new ways) in regulating the intense negative emotions that children feel in the face of adverse life events.

Metacognition is expressed as a high-level cognitive component that enables an individual to notice, monitor, and examine his or her own thought process. The development of metacognitive processes begins between the ages of 3 and 5 years simultaneously with the development of the theory of mind and can continue for a lifetime. The development of metacognition and theory of mind accelerates in parallel with the development of cognitive processes, especially during school age. Having a higher metacognitive capacity provides monitoring the cognitive processes, such as learning, comprehension, memory, reasoning, and problem-solving.

Considering their definitions, the two terms emotional resilience and metacognition may be related to each other, affecting each other in a bidirectional way. Children who have higher cognitive awareness may also have higher emotional resilience. Adverse life events, which are also included in the concept of emotional resilience, are events that cause intense stress and disruptions in emotional–behavioral adjustment. Continuous exposure to these events during the developmental years may lead to psychiatric problems that may result in deficits in problem-solving, adaptive skills, and social competencies in the family and school systems.

Any deviation in the metacognition system is believed to have a significant impact on the formation and maintenance of many psychopathologies. The dysfunctional thoughts and coping styles may lead to internalization problems, such as depression and anxiety, and externalization problems, such as conduct and impulse control disorders. Studies investigating the role of metacognition in adult psychiatric disorders are emerging. There is a limited number of studies on metacognition in children, which are mainly based on the effects of metacognition on learning skills and academic study strategies. Furthermore, the number of studies conducted in the pediatric psychiatric clinical sample is also limited.

Recent studies conducted by our clinical research team from Marmara University Faculty of Medicine, Child Psychiatry on metacognition in child psychiatric disorders will be discussed in this presentation. Attention Deficit Hyperactivity Disorder and childhood anxiety disorders will be the main topics regarding emotional resilience and cognitive flexibility.

The children in Turkey are exposed to a long and difficult struggle in negative living conditions, such as natural disasters (earthquakes), poverty, inland migration, crowded families, and education in achievement-oriented academic settings. These individuals who face social, emotional, and psychological barriers may have trouble. With these new studies, it would be possible to detect factors that may affect metacognitive awareness and emotional resilience at an early stage. Strategies can be implemented to improve metacognitive awareness and emotional resilience, such as thinking positively, gaining emotional control, and making rational decisions against challenging events to manage the difficulties of life. These skills,

which are included in the definition of emotional resilience, can be achieved with metacognitive skills, the results of our studies supported this hypothesis. In the future, academic programs specifically for children with psychiatric morbidity can be created by considering the effects of metacognitive awareness on learning skills.

Keywords: emotional resilience, metacognition, children, psychopathology, stress

The Relationship between oncology and depression

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Cancer is one of the long-term diseases that affect the lives of patients and their relatives. It constitutes twenty-five percent of deaths, especially in developed countries, and is the second leading cause of death after heart diseases. According to the World Health Organization, it causes the death of millions of people worldwide in 2018 cancer disease estimates and is therefore one of the diseases in the first place. In Turkey, 300 thousand people are diagnosed with cancer every year, and heart diseases take the first place in terms of morbidity, while cancer comes second. Cancer, which is one of the most important and tragic problems of all humanity recently; People generally have reactions and thoughts such as fear of death, hopelessness, helplessness, being alone and fear of death. Despite all the developments in cancer treatment over the years, the diagnosis of cancer still continues to be a disease that arouses anxiety and depressive feelings in people, contains uncertainties over time, and suggests pain and death.
Although medical treatments such as chemotherapy and radiotherapy for cancer prolong life, they cause a wide variety of physical and psychosocial problems. The most common psychiatric problems are adjustment disorder and severe depressive symptoms. The diagnosis of major depression is one of the most important psychiatric disorders that should be carefully examined in cancer patients, and it affects the patient's commitment to life, self-care, compliance with controls, and the response of cancer to treatment over time. As a result, psychiatric symptoms cause a decrease in quality of life and life expectancy.
When people first hear about the possibility of cancer or are first diagnosed, they create various psychological reactions during treatment and palliation periods. When the suspicion of cancer is first discussed with the patient, fear, anxiety, disappointment, loss of independence, and concerns about dying alone occur. Some of these reactions are normal, but psychiatric treatment is needed in cases where distress increases and quality of life deteriorates.
In the prevalence study of cancer-related psychiatric disorders, it was reported that the prevalence of psychiatric disorders was in a variable range of 9-60%. While 90% of the patients had psychiatric disorders after the illness or in response to treatment, 10% of the patients had diagnoses such as personality disorder or anxiety disorders before cancer. The relationship of the cancer patient with society, family and personal experiences, self-confidence are important factors that are effective in overcoming both cancer and psychological conditions.

Keywords: patient, fear, anxiety, disappointment, loss of independence

The Relationship between HIV and depression

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Human immunodeficiency virus (HIV) infection is one of the most important public health problems worldwide, considering its psychological and physical consequences. According to the World Health Organization and the United Nations Program on HIV/AIDS (UNAIDS), 38.4 million people were living with HIV, 1.5 million were newly infected with HIV, and 650 thousand people died from AIDS-related illnesses at the end of 2021.

The introduction of highly active antiretroviral therapy (HAART) into clinical practice provided a significant decrease in mortality and transformed HIV infection into a manageable chronic disease. However, psychiatric comorbidities, particularly depression, have been indicated to be responsible for negative outcomes in HIV-positive patients, such as reduced medication adherence, quality of life, and treatment efficacy, possibly worsening the illness's progression and increasing mortality.

Individuals with an HIV diagnosis frequently show distress most likely due to an adjustment reaction and they may benefit from psychotherapy rather than medications. Nevertheless, epidemiologic studies have consistently reported high rates of depression in the HIV-infected population.

A complex relationship exists between HIV and depression. It’s challenging to differentiate clinical depression from the impacts of HIV on the central nervous system (CNS), the side effects of antiretroviral medication, and other medical and endocrine abnormalities that result in mood disturbances.

Several associations have been identified between chronic neuroinflammation, stress-induced neuroendocrine changes, neurotransmitter abnormalities, and depression. These interrelated mechanisms may be caused directly by viral action and indirectly by psychological stress related to HIV diagnosis. In HIV-infected patients, a positive correlation has been shown between depression and systemic or cerebrospinal fluid levels of inflammatory cytokines such as tumor necrosis factor-alpha (TNFα), interleukin 1β (IL-1β), and IL-6, and elevated levels of these cytokines have been linked to abnormalities in glutamatergic and monoaminergic pathways of the brain.

Psychological factors related to depression in HIV-infected patients have been attributed to psychosocial issues related to HIV infection, such as the awareness of having an illness that can not be cured, the stigma related to sexually transmitted diseases, the necessity for adherence to antiretroviral treatment, and other comorbid complications. In particular, it has been indicated that isolation, lack of support, and discrimination contribute to depression.

Treatment options for comorbid depression should be considered according to patients' stage of illness and their particular HIV treatment plan, and psychopharmacology must include monitoring for drug interactions. Psychological interventions such as cognitive-behavioral therapy (CBT) and mindfulness-based therapies, and psychotropic medications such as selective serotonin reuptake inhibitors (SSRIs) and tricyclic antidepressants (TCAs) have been shown to be effective in improving depressive symptoms. HIV-positive patients whose depressive symptoms are treated will not only get relief from depression but also be more likely to adhere to, and benefit from, their treatment.

Depression is the most common neuropsychiatric complication but is still underdiagnosed and undertreated in HIV-infected patients. Considering the negative impact of depression on adherence to antiretroviral therapy, the progress of the HIV illness, and the quality of life of patients, it is important to recognize depressive symptoms and provide accurate treatment.

Keywords: AIDS, antiretroviral therapy, depression, human immunodeficiency virus, HIV

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Safety of electroconvulsive therapy in adolescent patients

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Objective: Electroconvulsive therapy (ECT) is a recognized and effective treatment in adults for several psychiatric and neurological conditions in which the use of pharmacotherapy is ineffective, untimely or contraindicated. It has been used with success in mood and psychotic disorders, catatonia, neuroleptic malignant syndrome, Parkinson's disease and intractable seizures. Its benefits have been recognized and its risks identified through an extensive body of research. The benefits of ECT are not limited to the adult population; research has been conducted on its use in child and adolescent populations for decades. In 2004, the American Academy of Child and Adolescent Psychiatry published practice parameters for the use of ECT in adolescent populations. However, ECT continues to be underused in cases where it is clearly indicated. Pharmacological treatments for certain psychiatric disorders in young people are often ineffective and may cause major side effects; thus, it is important to investigate other treatments. This article reviews the literature on the efficacy and safety of ECT in this age group and examines the evidence for the suggestion that it may be used inappropriately.
Method: This article, we review the use of ECT in the adolescent population; its indications, administration, contraindications and risks, with emphasis on articles published after the American Academy of Child and Adolescent Psychiatry practice parameters were formulated. We also review reasons behind the underutilization of ECT in adolescents for whom this treatment modality is indicated. All studies published on the use of ECT in persons 18 years of age or younger were obtained. The reports were systematically reviewed.
Results: Sixty reports describing ECT in 396 patients were identified; most (63%) were single case reports. The overall quality was poor but improved in the more recent studies. There were no controlled trials. Rates of improvement across studies were 63% for depression, 80% for mania, 42% for schizophrenia, and 80% for catatonia. Serious complications were very rare,

whereas minor, transient side effects appeared common. Medical conditions that should receive particular attention during a course of ECT are disorders of the central nervous system (CNS), cardiovascular, and respiratory system. With modern anesthesia techniques and careful medical management of each high-risk patient, most can successfully complete a course of ECT.
Conclusions: ECT in the young seems similar in effectiveness and side effects to ECT in adults. However, this conclusion is qualified by the lack of systematic evidence. More research and education of professionals and the public are needed. It is suggested that ECT registers be set up, that surveys and controlled trials be conducted, and that seizure thresholds, the optimal anesthetic, effects of concurrent medications, and cognitive consequences of ECT in the young be investigated.

Keywords: Electroconvulsive therapy, adolescents, safety

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Efficacy of electroconvulsive therapy in adolescents

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With the demonstration of the effectiveness of ECT in various psychiatric disorders in adults, its effectiveness in adolescents began to be investigated. However, because of controversy surrounding the usage of ECT in youth, until the early 90s, it was a very rarely used treatment method in adolescents [1]. In recent studies, efficacy is observable in the treatment of severe and treatment-resistant psychiatric disorders, such as; mood disorders , schizoaffective disorder, schizophrenia, catatonia and neuroleptic malignant syndrome [2]. Although ECT is considered an effective and a safe treatment, albeit more commonly used in adults than in adolescent patients, limited experience and sparse literature about ECT in adolescents are a significant barrier for its optimum use in this age group. The American Academy of Child and Adolescent Psychiatry issued practice treatment parameters for ECT in adolescence. Three parameters were cited in the guidelines for selecting ECT as a therapeutic modality: diagnosis, severity of symptoms, and resistance to adequate psychotropic treatment [3]. Although ethical issues in this field are complex, the conflict can usually be resolved with a case-by-case analysis. The potential consequence of overprotection is that adolescents remain untreated because of unfounded ethical concerns and/or unrealistic fears regarding ECT.
In this presentation, the use and effectiveness of ECT in adolescents will be reviewed in the light of recent studies in this field, and the reasons that limit its use will be discussed with the participants.

Keywords: electroconvulsive therapy, ECT, adolescent, efficacy

Towards the normalization of prevention of substance use and other mental health disorders

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Most substance use disorders (SUDs) emerge in adolescence and early adulthood. Early interventions in young people may reduce the risk and severity of SUD and other psychiatric disorders. However, national data from the Netherlands and many other countries show that by far most treatment-demand in youth addiction care concerns late-adolescents and young adults (16 to 22 years old), with only a small minority of younger adolescents. Hence, we are not able to reach our young people early enough for prevention and treatment, and when we reach them, they often already show a high concentration of comorbid psychiatric disorders and social dysfunction, and early signs of a chronic intermittent course of SUD. What has become increasingly clear is that we must reach our addicted young patients at an earlier stage, when symptoms are still mild or transient, or perhaps even before that – when they only show precursors of possible dysfunction.

One of the most prominent and central precursors of dysfunction is our ability – or lack thereof – to control or "self-regulate" our behaviors, cognitions, and emotions. Many scientists from different disciplines argue that poor self-regulation is perhaps the core endophenotype and determinant of the development of mental health disorders, including addiction. Several prospective general population studies, including the well-known Dunedin study, have shown that poor childhood self-control early in life – particularly in the first 10 years – is a strong predictor of many negative outcomes later in life, up to 20 to 30 years later in adulthood.

Although correlational in nature, these findings suggest that early childhood interventions that are deliberately aimed at improving self-regulation may be effective in preventing these negative life outcomes, and that early prevention and intervention targeted at improving self-control may reduce the risk of a broad array of psychiatric and social problems, including addiction. Indeed, several recent large-scale systematic reviews [1,2] suggest that self-regulation skills are malleable and can be learned through instruction and practice, and perhaps most so in the early years, roughly around 3 to 6 years, when there is a steep increase in learning curve, when the plasticity of the brain is still high, and when self-regulation skills are still very much in development.

This presentation and workshop provides an overview of the rationale and study findings of early prevention of substance use disorders and other mental health disorders. In terms of broad prevention, much can be gained by widespread, consistent implementation and normalization of early prevention at the pre- and elementary school level.

488 words

Keywords: Substance use disorder; early prevention and intervention; self-regulation

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Social jetlag as a triggering factor in psychiatric disorder

Gökçe Kavak Sinanoğlu

Manavgat Devlet Hastanesi

Social jetlag syndrome is an irregularity between biological and social time [1]. In daily life; There is a balance between the sundial, the circadian rhythm and the social clock. The deterioration of this balance due to social life and travels has led to the emergence of the concept of social jetlag. In another definition, social jetlag is defined as the time difference between the midpoint of sleep on work days and off days, and is the result of the inconsistency between the individual's own biological rhythm and the daily schedule determined by social constraints. Studies show that two-thirds of working people experience social jetlag at least once a week [2] In Europe, more than 30% of the population suffers from a duration of social jetlag longer than 2 hours [3]. It is estimated that 70% of students and staff experience at least one hour of social jetlag and almost half of them experience more than two hours. The effect of social jetlag on human physiopathology has been investigated for the first time since 2006, suggesting that it is a relatively new concept. If social jetlag is the incompatibility between biological rhythm and social rhythm, first of all, it is necessary to understand what biological rhythm is and how this rhythm is regulated. We have an internal rhythm that determines how much of a hormone will work in a day, how body temperature will change, and when thousands of changes in our body will occur. This rhythm is a biological rhythm. Our biological rhythm; Factors such as our genetic heritage, the hormone melatonin, the suprachiasmatic nucleus, and our biological internal clock affect it. In the study, which won the Nobel Prize in 2017, it was shown that the genes that regulate the 24-hour rhythm of a person are the genes encoding the PER protein, and that the PER protein accumulates in the cell at night and its daytime structure is disrupted. As a matter of fact, it has been shown that a person's sleeping and waking hours are organized thanks to the genes we inherited from our family that encode this protein, which works differently day and night. The suprachiasmatic nucleus (SCN) is considered the main oscillator that coordinates daily rhythms. Light resets oscillations in the SCN through a mechanism involving melanopsin-containing retinal ganglion cells reflecting directly onto the SCN via the retino-hypothalamic pathway. In an indirect way, circadian information reaches the pineal gland, where the hormone melatonin is produced, which can change the phase of oscillations in the SCN. Both melatonin and neural information from retinal ganglion cells can also act directly on the sleep-wake system itself. Thus, light input and the circadian system work together to modulate the characteristics of the sleep-wake cycle[4]. Our biological internal rhythm, or chronotype, is the term used to describe a person's innate preference for the timing of sleep and activity, as exemplified by the existence of morning and evening people. Humans and all other mammals have a self-sustaining internal body clock with a periodicity of close to 24 hours. This system gives rhythmicity to various behavioral and physiological processes and neurobehavioral processes, allowing an organism to predict recurring daily environmental changes such as the light-dark cycle. The chronotype reflects the timing of peak cognitive and physical performance. Mornings have the highest cognitive performance in the morning, while evening types have the highest performance in the afternoon/evening. Apart from our biological rhythm, we have a rhythm that is organized according to our social behaviors such as the time we go to work or school, exercise, and the time we spend with our social environment. If the

social rhythm is not synchronized with the biological rhythm, we can briefly say that we are in social jetlag because there is a difference between the clock in our brain and our social life hours. To determine the amount of social jetlag a person experiences, it can be evaluated subjectively by using questionnaires such as the Munich Chronotype Questionnaire [5]

Keywords: Social jetlag, chronotype, social rhythm

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Social jet lag: The Impact on the onset and recurrence of psychiatric disorders

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Sosyal jetlag sendromu biyolojik ve sosyal zaman arasındaki düzensizliktir (1). Günlük yaşamda; güneş saati, sirkadyen ritim ve sosyal saat arasında bir denge mevcuttur. Bu dengenin sosyal yaşam ve seyahatler nedeniyle bozulması sosyal jetlag kavramının ortaya çıkmasına neden olmuştur. Yapılan araştırmalar çalışan insanların üçte ikisinin sosyal jetlag'ı haftada en az bir defa yaşadığını göstermektedir (2). Sosyal jetlag pek çok ruhsal hastalığın etyopatogenezinde önemli görülmektedir.

Duygudurum bozukluklarında sosyal ritim hipotezi, değişen sosyal ritimlerin duygudurum epizodlarının etyolojisindeki rolünü ve buna bağlı sirkadiyen ritim düzensizliklerini vurgular. Sosyal ritmin bozulması, bipolar bozukluğa yatkınlığı olan bireylerde duygudurum epizodlarının başlamasına yol açabilecek bir sosyal ve biyolojik kaskatı başlatır (3). Ayrıca duygudurum bozukluğu olan hastalarda daha fazla sosyal ritimde bozukluk ve düzensizlik olduğu görülmektedir. Çalışmalar soyal ritim düzenindeki artışın uyku kalitesinde artma ve depresif belirti şiddetindeki azalma ile korelasyon gösterdiğini bildirmiştir (3). Duygudurum bozukluklarında nükslere karşı koruyucu bir strateji olarak kişilerarası ve sosyal ritim terapisi ön plana çıkmaktadır (4).

Modern yaşam şekli ve yapay ışık kullanımı ile başlayan uyku döngüsünün sosyal yaşama göre adapte edilmesi bilgi toplumu çağında artarak devam etmektedir. Yönetsel işlevler ve nörobilişsel performans sirkadyen değişiklikler gösterir. Dikkat eksikliği ve hiperaktivite bozukluğu hastalarında uyku bozukluğu prevalansının yüksek bulunması nedeniyle sirkadyen

ritim bozuklukları/sosyal jetlag ve üst düzey bilişsel işlevler arasındaki ilişkiyi araştıran çalışmalar mevcuttur ve sosyal jetlag ve ödül ilişkili beyin işlevlerinde bozulma, dikkatte azalma ve dürtüsellik arasında ilişki tespit eden çalışmalar ile bu karmaşık ilişkili netleştirilmeye çalışılmaktadır (5).
Sosyal jetlag ile ilişkili olduğu düşünülen önemli faktörlerden biri de yeme alışkanlıklarıdır. Yapılan çalışmalarda sosyal jetlag ile şekerli yiyecek ve içecek alımının ilişkili olduğu bildirilmiştir. Ayrıca sosyal jetlag ile artmış fast food tüketimi, azalmış meyve ve sebze tüketimi arasında da ilişki olduğu belirtilmekte olup sonuç olarak sosyal jetlag yaşayan bireylerin daha düşük diyet kalitesine sahip olduğu düşünülmektedir. 2022 yılında 372 katılımcı ile yapılan bir çalışmada sosyal jetlag; daha düşük oranda sezgisel yeme davranışı, daha yüksek oranda emosyonel yeme ve yeme davranışı üzerinde kontrol kaybı gibi değişkenler için prediktör olarak bulunmuştur (6). 12-17 yaş aralığında 1581 ergen ile yapılan bir başka çalışmada 2 saatten daha fazla sosyal jetlag yaşayanların aşırı kiloluğa veya obeziteye sahip olma olasılığının sosyal jetlag yaşamayan ergenlere kıyasla 1.84 kat artmış olduğu belirtilmiştir (7). Bu anlamda diyet düzeni, emosyonel ve sezgisel yeme gibi faktörler ile sosyal jetlag ilişkisi göz önünde bulundurulduğunda yeme bozuklukları ve obezite ile ilgili araştırmalarda sosyal jetlag değişkenin de yer almasının bütüncül yaklaşım bağlamında önemli olduğu sonucuna varılabilir.
Bütün bu bilgiler ışığında bu oturum kapsamında sosyal jetlagın psikiyatrik bozuklukların oluşumu ve yinelemesine etkisinin güncel literatür eşliğinde tartışılması amaçlanmaktadır.

Keywords: social jetlag, psychiatric disorders, circadian rhythm

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The Effect of social jet lag on relapse and recurrence in mood disorders

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Bipolar disorder is a chronic mood disorder characterized by periods of mania, hypomania, depression, and normal mood, with relapses-remissions. The World Health Organization reported BD as the 46th most common cause of mortality and disability in the world. In addition, suicide rates throughout life are high in BD patients, while approximately 1 out of 250 patients dies from the complications of the disease. Epidemiological and molecular genetic data show that BD is a complex disease; it is thought to arise as a result of the interaction of several biopsychosocial factor. In recent years the role of psychosocial variables has increasingly come to be appreciated, with much of the research in this area concentrating on the role of stressful life events, those that are characterized by their level of 'threat' or unpleasantness. Social rhythm hypothesis in mood disorders, emphasizes the role of changing social rhythms in the etiology of mood episodes and related circadian rhythm irregularities. Disruption of social rhythm initiates a social and biological cascade that may lead to the onset of mood episodes in individuals with a predisposition to bipolar disorder. In addition, it is seen that patients with mood disorders have more social rhythm disorders and irregularities. Studies have reported that an increase in the social rhythm pattern correlates with an increase in sleep quality and a decrease in the severity of depressive symptoms. Interpersonal and social rhythm therapy comes into prominence as a protective strategy against relapses in mood disorders. Recently, with the increase in the development and use of technology in the field of mental health, it has been observed that smartphone applications that monitor mood and circadian rhythms in mood disorders have positive effects on prevention of relapses and functionality and quality of life. In SIMPLe observational studies, patients with bipolar disorder using this application compared to the control group; It has been seen that there are improvements in sleep, eating patterns and social rhythm, the risk of relapse is low and it increases adherence to treatment.

Keywords: bipolar disorder, circadian rhythm, social rhythm, social jetlag, social zeitgeber

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The Effect of social jetlag on ADHD and impulsivity

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The adaptation of the sleep cycle according to social life, which started with the modern lifestyle with the use of artificial light, continues increasingly in the age of information society. Even among healthy population, executive functions and neurocognitive performance show circadian changes. In addition to this, there is a high prevalence of sleep disorders in ADHD patients which make them vulnerable to social jetlag.

An interesting consequence of circadian rythm disorder is referred as a discrepancy between the timing of sleep on work days and work free days. This construct, which is referred to as social jetlag, is often overlooked in the management of attention deficit and hyperactivity disorder (ADHD) patients. ADHD patients often present with "evening (late) type" chronotype. Late chronotypes show the largest differences in sleep timing between work and free days which leads to sleep debt on work days, and compensation of it on free days.

There are studies investigating the relationship between circadian rhythm disorders/social jetlag and high-level cognitive functions. Studies detect a relationship between social jetlag and reward-related brain dysfunction, decreased attention, and impulsivity (1). On the other hand, sleep disturbances may exacerbate the symptoms of ADHD. In a study assesing the impact of social jetlag and chronotype on attention, inhibition and decision making in healthy adults; social jetlag was associated with significantly faster and less variable reaction times and commission errors on the continuous performance test (2). In an attempt to recover their sleep debt, inattention and impulsivity, there is an increased risk for ADHD patients to self-medicate themselves with stimulants (caffeine, nicotine) and induce sleep with alcohol consumption (3). These factors are one of the major contributors of increased clinical complexity and decreased treatment response among patients with ADHD. Therefore, the aim of this speech is to elaborate the effects of social jetlag on ADHD symptoms and impulsivity.

Keywords: Sleep, chronotype, social jetlag, ADHD

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The Effect of social jet lag on eating disorders

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Social jet lag is a circadian misalignment that occurs when individuals' sleep-wake times vary between weekdays and weekends. Social jetlag is associated with many medical problems, including increased heart rate and cortisol levels, and an increased risk of metabolic syndrome. In addition, dietary patterns and eating styles are among the important factors thought to be associated with social jetlag. In terms of dietary habits, studies have reported that social jetlag is associated with higher intake of sugary foods and beverages. In addition, it is stated that there is a relationship between social jetlag and increased fast food consumption and decreased fruit and vegetable consumption, and as a result, individuals with social jetlag are thought to have lower diet quality. In a study conducted with 372 participants in 2022, social jetlag was found to be a predictor for lower intuitive eating behavior, higher emotional eating behavior, and loss of control over eating behavior. It has been reported that intuitive eating behavior is associated with a lower rate of weight control behavior (such as fasting, skipping meals, using diet pills, vomiting) and less binge eating behaviors in the long term. In addition, it is thought that emotional eating may be associated with dysfunctional eating behaviors in eating disorders. Moreover, it has been reported that these behavioral patterns may vary depending on both the type of eating disorder and whether the emotion is positive or negative. A study revealed that patients with anorexia nervosa eat less than usual in response to negative emotions, whereas patients with diagnosis of blumia nervosa eat more than usual in response to negative emotions. In addition binge eating disorder may be associated with an increased body mass index. In this context, obesity may be an important variable in the relationship between eating disorders and social jetlag. In a study that included 1581 adolescents aged 12-17 years, it was reported that those who experienced social jetlag for more than 2 hours were 1.84 times more likely to have overweight or obesity compared to adolescents who did not experience social jetlag. In this context, considering the relationship between dietary habits, emotional and intuitive eating, and social jetlag, it can be concluded that the inclusion of the social jetlag in research on eating disorders and obesity is important in the context of a holistic approach. Within the scope of this presentation, it is aimed to discuss the relationship of social jetlag primarily with eating disorders and secondarily with obesity in the light of current literature.

Keywords: Circadian rhythm; eating disorder; emotional eating; intuitive eating; obesity; social jetlag.

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Malpractice in child and adolescent psychiatry

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World Medical Association defined medical malpractice as “lack of standard treatment, lack of skills by the physician or the loss incurred by not providing treatment”. Nowadays, the sensitivity to medical malpractice and lawsuits against physicians have increased, and it has also become frequently mentioned in written and visual media. A lawsuit against a physician for occupational responsibility, even if unsuccessful; can result in social and occupational stigma, emotional stress and loss of performance. For these reasons, it is inevitable for physicians to review possible legal consequences during medical practice.
The work of child and adolescent psychiatrists commonly centers on young people. Children develop and pass through stages of cognitive, language, physical, and emotional maturation. Independent of stage, they are viewed legally as minors who have not attained adult status. Designation of who is the ‘‘patient’’ (eg, the minor or the family), confidentiality, lack of definition of ‘‘assent’’ for care, responsibility for patient safety, paucity of evidence-based data for medical decisions, conflicts in apportioning decisional responsibility, myriad definitions of ‘‘child psychotherapy,’’ off-label or formally unapproved uses of medications, and potential self- or other-directed dangerousness, are all areas or situations that entail risky decision-making by clinicians and therefore require knowledge of risk assessment and management.
The two cardinal principles for the child and adolescent psychiatrists in avoiding and defending malpractice suits are to practice in accordance with his or her best clinical judgment and to document care, particularly in areas in which an unexpected adverse result may lead to a lawsuit. The most common areas that give rise to suit are failure to protect a child inpatient from assault or sexual interaction with another inpatient, adolescent suicide, medication errors, and issues related to child abuse.

Current status and future developments in the cognitive behaviour treatment (CBT) of psychological problems in children.

Paul Stallard

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Anxiety and depression are common during childhood with up to 10% of children aged 3-17 years being affected. If left untreated, anxiety and depression will persist into adulthood and may negatively affect future mental health, academic achievement, relationships and work. The past 30 years has seen growing and consistent evidence that Cognitive Behaviour Therapy (CBT) is an effective psychological treatment for anxiety and depression. It has the largest evidence base of all the psychotherapies and is recommended by expert advisory groups in the UK and USA. Up to 60% of children will show positive improvements following CBT. However, whilst effective, a number of children fail to benefit from these approaches. Furthermore, the availability of CBT is limited. Specialist child mental health services have limited capacity resulting in many children failing to seek, or receive, the help they require.
This presentation will focus on recent developments to increase the effectiveness and improve the accessibility of CBT for children with anxiety and depression. Examples will include the use of disorder specific as opposed to generic models for the treatment of social anxiety, a disorder that responds less well to traditional CBT. The focus on exposure, an evidenced based strategy, will be described in the brief, one session treatment (OST) model for childhood phobias. The use of technology to increase access to CBT will be described and the strengths, limitations and effectiveness of using technology to deliver and support CBT will be summarised. Examples of promising CBT programmes will be provided including SPARX a serious computer game for the treatment of childhood depression and the online support and intervention (OSI) for parents of anxious children. Finally, the use of a mental health app (BlueIce) to prevent self-harm will be summarised.

Keywords: Cognitive Behaviour Therapy; Children and Adolescents; Technology; Disorder Specific Models

Clinical and neurobiological features in the distinction between recreational game users and internet game addiction

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DiaMind Zihin Akademisi

Reward deficiency syndrome (RDS) has been described as a statement resulted in many behavioral disorders due to chemical imbalances in the brain’s reward system. substance use disorder, depression, early life stress, immune dysregulation, ADHD, PTSD, compulsive gambling, technology addiction and compulsive eating disorders recruit underlying RDS mechanisms in multiple brain centers. Among the dysfunctions observed in RDS in are dysregulated resting state networks, which recently have been assessed in detail in chronic drug users by, positron emission tomography, functional magnetic resonance imaging, and functional connectivity analysis. disrupted executive-cerebellar networks but increased occipitalputamen connectivity, probably resulting from addiction-sensitive cognitive control processes and bottom-up sensory capabilities inhealthy adults with elevated tendencies to

develop internet addiction. These findings confirmed the FCDs of hyperactive impulsive habit system, hypoactive reflecting system and sensitive interoceptive reward awareness system as potential neuroimaging biomarkers (the left inferior frontal cortex (IFC), middle frontal cortex (MFC) and angular gyrus (AG), the right premotor cortex (PMC) and middle cingulate cortex (MCC), and the bilateral cerebellum, orbitofrontal cortex (OFC) and superior frontal cortex (SFC).) for IA, which might provide objective indexes for the diagnosis and efficacy evaluation of IA. Internet gaming disorder appears to be consistently associated with reward-related decisionmaking deficits. Resting-state functional connectivity measures predictive of IGD and severity of internet addiction. Across classification and regression analyses, the DMN emerged as being most informative in predictions.

Keyword: Recreational Game Users, Internet Game Addiction, Neurobiology

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What does litmus paper contain in the distinction between addicted and healthy use?

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Mobile phone, internet, social networks and digital online games are the most important communication and entertainment tools for people and especially young people. Therefore, it is very difficult to imagine a life without technology.The use of technology can be of two types; Healthy use or Addiction.

In studies; differences were found between healthy use and addiction in terms of alexithymia, dissociation, endophenotypes, metacognition, and self-compassion.

Individuals with alexithymia have serious difficulties in establishing friendships and generally have low social functioning. It has been reported that alexithymic personality traits play a role in the development of technology, internet and online game addiction. An individual with a high level of alexithymia may feel better by engaging in social interactions online, and this can help with mood regulation, leading to addiction in the process.

Normative dissociation is thought to be associated with people's experiences of excessive use of technology. The user-described loss of awareness and control and the “what just happened” question after surfing social media are all characteristic of normative dissociation. Impulsivity is the endophenotype that underlies addiction.Among the different behavioral measures of impulse control, the definition of "Delay Discounting" (DD) is often used to assess the capacity to tolerate delay in reward. With regard to addiction, DD is also considered an endophenotype, potentially useful for identifying the affected nature of the genotype that predisposes to a disorder.

Self-compassion has been reported to be a valuable quality during adolescence as it provides protection against developmental vulnerabilities. Self-compassion is also described as one of the healthy ways to cope. It has been shown in various studies that self-compassion is negatively related to addictions.

Another issue that can be emphasized in technology, internet and digital game addiction is metacognitive abilities. Individuals with good metacognitive abilities can identify and correct

their own cognitive processes, cognitive distortions and misinterpretations. Studies have shown that metacognitive problems play a role in the development of technology, internet and digital game addiction.
It has been determined that intense desire and tolerance to the use of technological tools are the most common symptoms of technology addiction. The need for a more advanced, high-end technological device, computer or higher software is also accepted as tolerance. Withdrawal symptoms in behavioral addictions are mostly manifested by anger, irritability, insomnia and depressive symptoms.
Adolescence is also the most risky period for technology addiction, and they are exposed to digital game playing, social media use and use of technological tools at an early age in order to be accepted by their peer groups as well as the impulsiveness of adolescence.
The level of social functionality defined as being able to work, maintain interpersonal relationships and take care of oneself; It affects the social support, activity level and general life functionality of the individual. In addictions, rights such as health, education and work, which are the requirements of being human, are lost over time, and negative consequences such as unhealthy life, disability, leaving education unfinished, and being fired from work also negatively affect social functioning.

Keywords: technology addiction, alexithymia, dissociation, endophenotypes, metacognition, self-compassion.

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Red flag signs of the transition from healthy use to addiction and possible interventions

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Children are increasingly using digital technologies from an early age. They can have their first experience with digital technologies before age two. There has been an increase in the use of technology by children and young people since the 2000s. The pandemic has also led to an increase in the use of technology by children. Due to the rules that we need to pay attention to protect from disease, children and young people spend extended periods at home. While technology provides opportunities such as education, socialization, and communication, it also causes sedentary behaviors to emerge due to long periods spent in front of the screen.
There are various recommendations from the World Health Organization (WHO) regarding screen use in children. WHO states that increased screen use in very young children may have adverse effects on children's development. While screen use is not recommended for children under one year of age, it is recommended that children aged 2-4 should spend a maximum of one hour in front of the screen. Excessive screen time may have risks such as obesity, depressive symptoms, decreased academic performance, sleep-related deterioration, decreased psychological well-being, hyperactivity, and inattention. While most current research deals

with screen time, the context and content of screen time are also essential. There may be risks associated with bullying, abuse, and similar negative situations when using technology. In addition, children and adolescents with depression, anxiety disorder, attention deficit hyperactivity disorder, or eating disorders may also be more vulnerable to the impact of technology.
Screen use has various risks and benefits for academic skills, friendships, and socialization. For these reasons, it may be more rational to find appropriate ways of use rather than focusing only on the risks of technology. The Royal College of Pediatrics and Child Health asks families four questions about screen use. Is screen time in your household controlled? Does screen use interfere with what your family want to do? Does screen use interfere with sleep? Are you able to control snacking during screen time? If the answers to these questions are plausible, it can be said that the family is on the right track. Regarding the use of technology, it may be appropriate for the family to model appropriately for their child, to ensure their safety while online, to encourage the children to learn various activities, and to set boundaries for screen use.
The use of technology will continue to find an increasing place in the lives of children and adolescents in the coming years. Achieving the appropriate balance of use and protecting children are vital priorities.

Keywords: technology use, addiction, children

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Borderline personality disorder or dissociative disorder; Is the distinction easy?

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Pathological dissociation has been described in articles on "borderline personality" almost since the term diagnostic has been coined. Many studies have shown that levels of dissociation are higher in Borderline personality disorder (BPD) than in other psychiatric disorders in general. Many researchers have also shown that childhood traumatic experiences are at high levels in both BPD and complicated dissociative disorders. Dissociation is associated with BPD in some different ways. Some people with the severe dissociative disorder have concomitant BPD. However, there is always diagnostic confusion and overlap. Up to three-quarters of all cases diagnosed with BPD show clinical dissociation, usually defined by the Dissociative scales. Several lines of evidence have raised the question of whether Borderline Personality Disorder (BPD) is an independent disease entity or can be better conceptualized as belonging to the spectrum of dissociative disorders. The fact that both groups have a wide symptom cluster and the existence of childhood traumas makes the discussion difficult. Until the diagnostic relationships are better understood, it would be good to conceptualize those presenting with

BPD and dissociative disorders. The diverging and overlapping aspects of the two phenomenological clusters should be well-identified. In conclusion, we invite clinicians to systematically evaluate dissociation to reach a better diagnosis for a more specific treatment indication in BPD.
Borderline personality disorder is a personality disorder that effects the way you think and feel about yourself and others, causing problems functioning in everyday life. It includes self-image problems, difficulty managing feelings and behavior, and a pattern of unstable relationships. As a defense mechanism, dissociation is often associated with borderline personality disorder. DSM-5 defines dissociation as “disruption of and/or discontinuity in the normal integration of consciousness, memory, perception, identity, emotion, body representation, motor control, and behavior". Pathological dissociation has been described in articles on "borderline personality" almost since the term diagnostic has been coined. Many studies have shown that levels of dissociation are higher in Borderline personality disorder (BPD) than in other psychiatric disorders in general. Many researchers have also shown that childhood traumatic experiences are at high levels in both Borderline personality disorder and complicated dissociative disorders. Dissociation is associated with Borderline personality disorder in some different ways. Some people with severe dissociative disorder have concomitant Borderline personality disorder. However, there is always diagnostic confusion and overlap. Up to three-quarters of all cases diagnosed with Borderline personality disorder show clinical dissociation, usually defined by the Dissociative scales. Several lines of evidence have raised the question of whether Borderline Personality Disorder (BPD) is an independent disease entity or can be better conceptualized as belonging to the spectrum of dissociative disorders. The fact that both groups have a wide symptom cluster and the existence of childhood traumas makes the discussion difficult. Until the diagnostic relationships are better understood, it would be good to conceptualize those presenting with Borderline personality disorder and dissociative disorders. The diverging and overlapping aspects of the two phenomenological clusters should be well-identified. In conclusion, we invite clinicians to systematically evaluate dissociation to reach a better diagnosis for a more specific treatment indication in Borderline personality disorder.

Keywords: borderline, dissociation, trauma

Therapeutic approach to borderline personality disorder and dissociative disorders

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Treatment of borderline personality disorder (BPD) and dissociative identity disorder (DID) begin with psychoeducation in the first step. Then comes the pharmacological treatment focused on the patient's symptoms and the psychotherapy that completes it. This combined therapy is currently the most appropriate treatment for BPD and DID. BPD consists of a range of symptoms and is often accompanied by comorbid diseases, so the treatment plan should be flexible and special for the individual needs of the patient. Although there is no main drug in pharmacotherapy for these disorders, the drug is selected according to the patient's symptoms. Treatment includes the use of antidepressants, mood stabilizers, antipsychotics, benzodiazepines and naltrexone. Psychotherapies have a great place in the treatment of BPD. Analytical and supportive therapy approaches can be used. In this context, dialectical behavioral therapy, transference-focused psychotherapy and psychoanalytic psychotherapy with a masterson approach are included in the treatment. The therapy process includes

challenges, ups and downs due to borderline psychopathology. It would be helpful for the therapist to clearly define treatment goals. In the treatment of dissociative identity disorder, the therapist can use many types of therapy including psychoanalytic therapy, cognitive therapies, behavioral therapy, and hypnotherapy. It is important to focus on the patient's past traumas. In therapy, it includes stages such as uncovering and recognizing alters, introducing each other, reconciling them, family analysis, and group therapies. Traumas are important in the history of bkb and did, and trauma-oriented approach has a great place in treatment.

Keywords: borderline, dissociative, personality disorder, therapy

Increase in violence and peer bullying: a disease or a learned behavior? Inappropriate role models, new generation parenting, unbalanced catharsis, unavoidable loneliness, immature ego

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Bullying includes intention of harm, repetitiveness and power imbalance, and is associated with a wide-range of indices of short- and long-term maladjustment. A 2019 report from the United Nations Educational, Scientific and Cultural Organisation (UNESCO) examined the global prevalence of bullying in childhood and adolescence and found that almost one in three (32%) children globally has been the victim of bullying on one or more days in the preceding month, and that 1 in 13 (7.3%) has been bullied on six or more days over the same period. However, there is substantial regional variation in the prevalence of bullying across the world, ranging from 22.8% of children being victimised in Central America, through 25.0% and 31.7% in Europe and North America, respectively, to 48.2% in sub-Saharan Africa. Bullying is a field with clear and immediate relevance to the lives of children and young people. It is a dynamic empirical literature that takes into consideration the complexity of young people’s lives, their interactions, and the important ways in which these have changed over time. Both being a victim and being a bully are risk factors. Bullying victims are at a heightened risk of developing poor self-esteem, depression, persisting into adult life, self-harm, suicidal ideation and attempts, anxiety, eating disorder symptoms, post-traumatic stress disorder, negative body image (particularly among girls), psychosomatic problems, sleeping problems, dating violence victimization and poor life satisfaction. Along those lines, bullying victims are also more likely to obtain lower levels of academic achievement. Being a bully is found to be associated with mental health problems, social adjustment problems, violence, criminal behavior, relationship difficulties, dating violence and drug use later in life. Aside from those directly involved in bullying, those witnessing bullying taking place also experience mental health difficulties as a result. In this presentation, possible risk factors for increased peer bullying and violent behavior such as inappropriate role models, new generation parenting, unbalanced catharsis, unavoidable loneliness and immature ego will be discussed.

Keywords: violence, peer bullying, role models, parenting styles,unbalanced catharsis, unavoidable loneliness

The Relationship between neurodevelopmental disorders with violence and peer bullying

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Bullying is defined by Olweus (1993) as aggressive, intentional acts carried out by a group or an individual repeatedly and over time against a victim who has weaker power, which include acts such as physical actions (e.g., hitting, pushing) and verbal actions (e.g., teasing, spreading rumors). Children with learning disability (LD), intellectual disability (ID), attention-deficit/hyperactivity disorder (ADHD), and autism spectrum disorder (ASD) reported higher risk of being bullied compared to their peers. Controlling for the co-morbidity of different diagnosis is important in investigating the frequency of bullying. School bullying has attracted worldwide attention for its negative effects on children and adolescents. School bullying has increased educational and public health concerns worldwide in the past decades, with prevalence rates ranging from 5% to 70% and the latest report of 11% across Asia, Europe, and America. Students with disabilities, particularly those with autism spectrum disorder (ASD), are at a higher risk of bullying involvement at school. Autistic individuals report higher rates of bullying, child abuse, sexual victimisation and crime victimisation than non-autistic individuals . Traits of autism, such as, misunderstanding non-verbal interactions or inappropriately responding in reciprocal conversations , may increase the risk of victimisation. Restricted and repetitive behaviours may make individuals stand out from their peers, increasing vulnerability to bullying . They may also experience high levels of social isolation and stigma . Bullying victimization refers to exposure to aggressive behavior repeatedly and over time from one or more perpetrators who have greater physical or social power than their victims . Convincing evidence has shown the causal association between being bullied and mental health problems in children and adolescents including anxiety, depression, non-suicidal self-injury, and suicidal behaviors. Bullying has been significantly associated with attention-deficit/hyperactivity disorder (ADHD) Early detection and intervention of ADHD in bullies may be effective in reducing bullying behavior. Compared with children without TS, children with TS overall experience more bullying victimization and perpetration. Health care professionals treating children with TS could assess challenges with peer relationships and co-occurring disorders to provide targeted support and referral.

Keywords: Neurodevelopmental Disorders, Violence, Peer Bullying

The Relationship between pandemic, immigration and other sociocultural factors with violence and peer bullying

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Violence is a significant public health problem that has lasting effects on the physical, mental, social health of people. It is associated several risk and protective factors. Besides individual factors, an many sociocultural factors are related to violence. To understand how these factors contribute to violence is important in order to organize violence prevention programs.

In this presentation sociocultural norms in expression of intense emotions (eg. anger), frustration-aggression hypothesis, social learning hypothesis, social identity theory will be discussed. Among the social risk factors, poverty is one of the most prominent. 'Cycle of poverty' and 'cycle of violence' feed each other. Gender roles, and firearms policies are other well-known long-existing sociocultural risk factors. Pandemic, immigration, social media are relatively new factors that change today's sociocultural structure, so their impact to violence can not be ignored.
Bullying is a worryingly widespread form of violence among children, especially in schools. Due to the fact of vicious cycle of violence both offending and victimization during childhood predicts offending and victimization in adulthood.
Violence prevention programs that intend to a better cost effectiveness include sociocultural factors. The INSPIRE program of World Health Organization (WHO), and community violence prevention strategies of Center Disease of Control (CDC) will also be discussed in this presentation.

Keywords: Violence, bullying, sociocultural risk factors

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Psychopathology, phenomenology and dreams

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In this presentation, the current understanding of explanatory psychopathology will be criticised. Secondly, the contributions of phenomenology to our understanding of psychopathology, and within this context, how dreams can be studied with a phenomenological approach will be discussed.
As a scientific discipline, psychopathology is generally defined as the study of mental disorders. The dominant trend in psychopathology is to reveal the causal explanations (dynamic, cognitive, existential, biological, etc.) of mental disorders. However, the validity and value of causal explanations are not similar for physical phenomena and phenomena of consciousness. Since the phenomena that psychopathology deals with are the phenomena of consciousness, causal explanations in this field remain at the theoretical and hypothetical level. Therefore, psychopathological approaches based on explanation cause some important problems in clinical practice. According to the descriptive phenomenological approach, what is essential in clinical practice is the self and its experience, rather than a mind-process that needs to be explained. In explanatory approaches (especially in the approach that gradually reduces the mind to the information processing processes of the brain with the developments in neuroscience), self and experience are turned into an epiphenomenon. Turning the self and experience into an epiphenomenon creates problems for the establishment of empathy, which is extremely important in clinical practice. In this confusion, Phenomenology offers us the possibilities of

understanding psychopathology from within more accurately, as well as a more effective clinical practice.
Phenomenology is the name of both a philosophical movement and a method. Along with including different approaches, the main purpose of phenomenology is to try to perceive and describe the phenomenon as what it is by suspending the assumptions. Phenomenology does not exclude explanatory psychopathological approaches, but points to their risks and suspends (epoche) them. If we simplify the phenomenological attitude in clinical applications, we can talk about the following stages: First stage; turning to the phenomenon with a human interest and curiosity (intentionality). Second stage; suspension of all assumptions about the phenomenon (epoche). Third stage; perceiving and describing the self-explanatory phenomenon. Fourth stage; sharing this description at the required level. This process will elicit empathy from the start and allow the empathic bond to be strengthened throughout the process. Dreams are a complicated field for both psychology and psychopathology. The biggest problem with dreams is that dreams are approached with hypothetical explanations. The history of psychotherapy has shown us that dream theories based on causal explanations are not very helpful to clinicians. The phenomenological approach considers dreams, like waking experiences, as experiences with a central self. In this respect, the Phenomenological Dream Self Model, that is developed by a phenomenological approach, offers clinicians the opportunity to work effectively and safely with dreams in their clinical practice.

Keywords; Psychopathology, phenomenology, explanation, description, dreams

Human being, meaning and meaning of life

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Neo-Kantian philosopher Ernst Cassirer conceives the production of meaning as a distinctive, ontological feature of man. He defines man as "animal symbolicum", since man is a producer of meaning, and the meaning is associated with a symbol (symbol), which also emphasizes that man is a linguistic being.
But the issue of "meaning", specifically the "meaning of life", is one of the points where the modern psychological view remains silent. We are born into a tradition, a language, a web of meaning, but this is ignored. The modern perspective compares the human mind and existence to a blank white page, expecting people to build their world of meaning and value from scratch. “Culture” is thought of as a simple environmental add-on. “Will” is considered a feature that concerns theology, not psychology. However, since people know the language and can give a name to things, the most qualifying feature is that they are meaning producers.
We swim in a sea of meaning with every word we learn, even every moment of verbal and nonverbal communication. Meaning is like dissolved oxygen in water, thanks to it we can live and go. For anyone who can manage to live, life has, one way or another, an explicit or implicit meaning. Trying to give a general answer to the meaning of life is like asking the chess champion, "Master, what is the best move in chess?" To see the meaning you give to life, it is enough to look at where you are holding on to survive to this day, to start living again every morning. The meaning is where you hold on, you stuck it there like chewing gum. Like a fish pulling its head out of the water once in a while, we fall out of the sea of meaning. But these states of us do not correspond to what happens, they are exceptional. If it doesn't happen often and doesn't last long, these moments can be a shake-up, an opportunity to awaken.

Since there is always a task waiting for us, an issue that we are expected to overcome and solve, life does not have a universal meaning, but a search for a new meaning is always on the agenda. We all question life moment by moment, or rather, we are questioned by life. "Does life have meaning?" Although the question does not normally come to our minds, asking this question openly and repeatedly is a sign that we cannot get healthy oxygen as before and that the water has started to become polluted. The answers we can produce to the question of the meaning of life, our lives themselves, and the way we live one by one, are the way we fulfill our responsibility to live. Whoever, for one reason or another, gives up on fulfilling his duties, missions, and responsibilities to nullify the question of the meaning of life and make this question unnecessary, that person is disturbed.
Mental disorders are, in a way, the manifestations of problems that arise in the human world of meaning due to biological or environmental reasons. Psychotherapy and psychotherapist exist to guide the traveler who is confused with the meaning world, to show the meaning gap in his life, and to fill it according to his needs. In psychotherapy, two brave people with different meanings meet. The client who says “where am I wrong”; the other is the therapist, who can afford to guide another person's world of meaning knowing that his world of meaning is slippery and that he should never make the patient accept it, and who has nothing but his knowledge and experience in psychotherapy theories and techniques. It takes courage and wisdom training to be able to save the meaning seeker from groping and guide him with awareness.

Keywords: meaning, the meaning of life, modern psychiatry, psychotherapy

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Digital therapeutics: where we are and where we are going in the post-pandemic era?

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Digital Therapeutics (DTx) is defined as delivering medical interventions directly to patients using evidence-based, clinically evaluated software to treat, manage, and prevent a broad spectrum of diseases and disorders. They are used independently or in concert with medications, devices, or other therapies to optimize patient care and health outcomes.” DTx products are examined and approved by regulatory bodies using the same standards of evidence as traditional medical treatments for safety, efficacy, quality, privacy, and ongoing clinical impact. Over the last decade, over 30 DTx have been approved by FDA and EMA for clinical uses. Mental health and addiction are the fastest-growing areas in this new field and have great potential to encompass technological solutions to enhance healthcare delivery. DTx helps treat and manage a disease or improve health function, including disease prevention, by modulating patient behaviour and remote monitoring to yield enhanced and long-term health outcomes. DTx products empower patients, healthcare providers, and payers with intelligent and accessible tools for addressing various conditions through data-driven interventions. This presentation will introduce the DTx concept and explain how DTx manages diseases in Psychiatry.

Keywords: Digital therapeutics, Virtual reality, ADHD, Addiction, Depression

Addressing child and youth mental health using community-based mental health literacy approaches

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According to World Health Organization, health literacy is a stronger predictor of an individual's health status than income, employment status, education level and racial or ethnic group. Mental health literacy is a construct that has arisen from the domain of health literacy and is defined as: understanding how to obtain and maintain positive mental health; understanding mental disorders and their treatments; decreasing stigma related to mental disorders; and, enhancing help-seeking efficacy (knowing when and where to seek help and developing competencies designed to improve one's mental health care and self-management capabilities). Mental health literacy sets the foundation for mental health promotion, prevention, and ongoing care. It has been identified and researched extensively to improve child and youth mental health through improved outcomes such as knowledge and understanding, stigma, help-seeking efficacy (e.g., help-seeking intentions and behaviors), general wellbeing, and perceived stress. Childhood and adolescence are when young people develop physically, mentally and socially and therefore it is a stage of both challenges and opportunities. Considering that approximately 70% mental disorders can be diagnosed during this period of time and most young people go to schools, addressing mental health literacy in schools is essential to develop a healthy young generation.

In the context school mental health literacy, we have developed a number of interventions for children and youth in elementary, secondary, and post-secondary education settings. These include Elementary Mental Health Literacy Resource (Grades 4-6 students), Mental Health & High School Curriculum Guide (Grades 9-12 students), Know Before You Go (Grade 12 students), Transitions (first year college students). These interventions translate most recent scientific knowledge about child and youth mental health into resources/interventions that can be easily applied in regular classrooms by teachers, flexibly used on campus by young people, or in the community by related stakeholders. These interventions then have been researched using most robust research methods for their effectiveness, including randomized controlled trials, control studies, cross-sectional studies, as well as qualitative research inquiries. To promote the uptake of these evidence-based interventions into routine practices, we have designed, customized, and applied implementation science strategies and methods in schools across Canada with success.

Using approaches of data science (research), knowledge translation, and implementation science, school-based mental health literacy interventions have been tested to be effective, plausible, and sustainable in improving child and youth mental health. Such interventions successfully support related stakeholders and communities to provide a positive and resilient environment for young people to grow and develop.

Keywords: Mental health literacy, children and youth, schools, stigma, well-being, stress

Mental processes in children with chronic disease

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Chronic diseases are progressive and are a process that can cause regressions and deterioration in the physical and mental development of the child, affecting the family as well as the children. Behavioral and mental problems in addition to physical symptoms may affect adherence to treatment and the course of the disease. Many factors such as their temperament, family functionality, peer relations, and cultural beliefs affect the adaptation of children in this process. Risk factors specific to chronic disease are age of onset, etiology, type of disease, deformity rate, and course of the disease. Primary attachment and trust relationship generally to be established for 3 years and younger. They are completely dependent on their caregivers, may not understand the severity of the disease, and are influenced by their parents' reactions. In this period, explaining the disease in detail to the parents helps them in terms of possible feelings such as guilt and anxiety, and can positively affect their children's compliance with treatment. Autonomy from parents and learning individualization and active use of language are important features in this period in children aged 3-6. There is a fear of physical harm and abandonment. In this period self-centredness is at the forefront. The cause of the disease, the result of a bad behavior in the hospitalization can be seen as punishment. This situation can lead to regression in acquired skills called regression. The overprotective attitude of parents towards their children during this period may cause them to become passive and dependent on others. Children have difficulty in expressing their experiences and fears in words, so their inner world can be understood by using tools such as games and pictures. In the 7-13 age period, the fear of losing control and death comes to the fore with adolescence. They may accept the hospitalization and treatment process more easily, but they may still think that the illness is the result of doing something wrong. Separation from family, strangers, fear of being abandoned in an unfamiliar hospital are the most important concerns. The most important factor in this period is school, and attendance at school and routines is the most important protective factor in this period. In this period, they adapt more easily when more detailed information about the disease and treatment is explained in accordance with their age. In adolescence, the second period of separation and individualization begins, and peers take an important place in this period. During this period, risky behaviors such as not taking their medications or taking their medications uncontrollably for the purpose of suicide can be seen. As a result, self-perception is negatively affected in children with chronic diseases, and they show symptoms of depression, loneliness and fears, irritability, isolation, and regression.

Keywords: chronic diseases, adjustment, mental process

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Mental processes in children on the brink of death

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In order to understand children on the brink of death, it is first necessary to understand the perception of death in children. The concept of death makes the individual curious and frightened in every period of life, especially in childhood. Until the 1970s, it was thought that children could not conceptualize death until the age of 10 and therefore did not worry about their own death. In 1971, Waechter showed that children with terminal illness, even without knowledge of their prognosis, experienced higher anxiety and used more death themes in their stories than other children. Today, it is known that children can understand the concept of death at a very early age and show emotional reactions to death. However, children's questions about death and their reactions to death differ according to their developmental stages. One of the most important factors affecting children's reactions to the concept of death is the way death is explained to the child. For this reason, it is important to explain death in accordance with the age and developmental stage of the child.

It becomes difficult to give clear answers to the questions of the child and the family when no response to treatment is received and death is now expected. Sudden changes, uncertainties and uninformed medical interventions may effect children’s emotional status negatively. Avoiding informing children leads both parents and professionals to lie. This situation leads to the deterioration of the relationship of mutual trust and respect. Anxiety, uncertainty and loss of trust leave the child alone in this difficult period. The truth that everyone knows but cannot be shared becomes more frightening. Failure to speak the truth results in children not getting the emotional support they need from their parents when they need it most. Children often feel that, despite their own troubles and difficulties, they must act as if they are unaware of the seriousness of their problem in order to provide emotional support to their parents. Secret agreement between the child and parents does not reduce the difficulty of the process, on the contrary, the pain is buried inside. At the same time, this silent and secret agreement deprives the child of the necessary and existing support. Children fear the process of death and the mourning and pain that dominate it, rather than death. To the extent that the child and family are informed, they find the opportunity to talk about their fears and concerns and relax.

Children think of terminal illness and death as the result of their own mistakes in a period of magical and egocentric thinking. Therefore, they may feel guilty and shame. Children should be reminded frequently that they are not responsible for their illness and should not be allowed to feel shame and guilty.

Keywords: Adolescent, Children, Death

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The Grieving process in the children

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Bereavement is a state of loss, independent from emotional reactions. According to Freud, it is possible to talk about transcendental losses such as thought, habit and purpose[1]. Grief can be defined as subjective, cognitive, emotional, behavioral and physical responses to a loss. The reactions given during the grieving process are called grieving reactions.
Grief and response to death in children depends on various factors such as cognitive development level of the child, nature of the loss experienced, previous losses, parental attitude and answers given to the child's questions about the loss[2]. Among the losses experienced by the child, the loss of the parent or primary caregiver affects the child the most. The baby establishes a bond first with the mother or the primary caregiver. This bond is important in the development of the child and in the grieving process since the child cannot live without it [3].
From preschool to early childhood, children try to understand the concepts of death. The children must know four concepts to perceive death. These are finality (also termed nonfunctionality) , irreversibility, causality and inevitability (also termed universality)[4]. Infants, toddlers, and young children generally equate death with disappearance or separation. It is known that the age of acquisition of the three concepts (irreversibility, non-functionality and universality) takes place usually between 5 and 7 years of age[4]. The ages of perceiving these concepts in children after a traumatic event can differ. Several studies have shown that such personal experience may promote the acquisition of the concepts of death, whereas other studies have failed to support this conclusion. These concepts are formed with the cognitive development of the child and with traumatic events the children face[5].

Keywords: Grieving Process, Grief, Children, Bereavement

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Therapeutic approach to the family in the grieving process

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The grieving process of children can be affected from various factors such as closeness of the relationship with the person who died, and developmental stage, temperament, psychological/psychiatric status of the child. At this point, the attitudes and behaviors of parents towards their children during the grieving process are also important. Parents can help their children by modeling with their emotions, and by supporting/approving the expression of the children's emotions in grieving process. They can give concrete and clear information about death to their children considering the child's developmental stage, and they can be open to listen the questions about the person who died and the child's anxious questions about his/her future. During the grieving process of the child, parents can also be in their own grieving process and try to adapt to the new financial/psychosocial outcomes. It seems important that parents to get support from their relatives, spouses, friends and doctors, nurses etc. If parents express their emotions frankly, they may also enable their children to express their feelings comfortably. In addition, the long and intense grief process of parents may lead to decreasing their tolerance to their child's emotional reactions, and the grieving process of the child may be affected negatively. For this reason, the mental well-being of the parents is also important in the grieving process of the children. Psychoeducation, supportive psychotherapies, antidepressants and anxiolytic drugs may contribute to the treatment processes of the parents in accompanying psychiatric conditions and may help parents to accept their child's negative emotions.

Keywords: Grief, family, therapeutic

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Benzodiazepines as anxiolytics

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Diazepam, alprazolam, lorazepam and clonazepam are the members of benzodiazepine (BDZ) grup drugs, which are widely used for the treatment of anxiety disordes all over the World. BDZs are showing their effects through $GABA_A$ receptors. GABA is the principal inhibitory neurotransmitter in the brain and reduces the activity of neurons in the amygdala and cortico-thalamic loops. There are 3 types of GABA receptors ($GABA_A$, $GABA_B$ and $GABA_C$) and $GABA_A$ receptors are the targets of BDZs for anxiolytic action. $GABA_A$ receptors consist of $GABA_A$ binding site, BDZ binding site and a chloride channel. BDZs act as positive allosteric modulator during anxiolytic action. İt means that BDZs have anxiolytic effect if only GABA and BDZ together bind to $GABA_A$ receptors.

Current guidelines (APA, NICE and WFSBP) do not recommend BDZs as first-line treatment for anxiety disorders. According to these guidelines, BDZs may be used in combination with SSRIs/ SNRIs during the first weeks of the tretment in exceptional cases for a limited time. The anxiolytic effects of BDZs begin soon after oral or parenteral application and BDZs do not lead to initially increased jitteriness, agitation and insomnia. The administration of BDZs may alleviate the 'activation' induced by the SSRI and reduce frequency and severity of panic attacks, before the SSRI become effective. However, BDZ treatment may be associated with CNS depression, sedation, sleepiness, fatigue, dizziness, increased reaction time, attention and concentration problems and memory problems. After longterm treatment with BDZs (over 4 to 8 months), dependency may occur in some patients, especially in patients predisposed for substance abuse. Thus, the risks and benefits should be carefully considered before treatment with BDZ.

With the production of newer antidepressants (AD) like SSRI/SNRIs, the treatment strategies of anxiety disorders changed over time and these drugs became the first line treatment option. This strategy change does not appear to have occured due to the results of newer ADs-BDZ direct comparison studies. There are only a few studies comparing the efficacy and side effect profiles of these agents. A meta-analysis of this studies, provides evidence that BDZs are more efficacious than ADs for reducing GAD symptoms, with demonstrated superior tolerability [1]. Despite the current guidelines BDZs are widely continue to be used in the treatment of anxiety disorders, sometimes for long periods. In the United States, 55% to 94% of patients with anxiety disorders are treated with BDZs. In a 10 year follow-up study with panic disorder diagnosed patients, BDZs were the most commonly used medication for panic disorder [2]. In an other one year follow-up study %88.4 of BDZ users were long-term users (>12 weeks) and long-term use was associated with being 30 years or older, having a comorbid physical illness, meeting criteria for comorbid agoraphobia, reporting the use of sleep-aids, and concurrent SSRI utilization [3].

The use of BDZs in the treatment of anxiety disorders is like a double edged knife. Be careful where you stick it.

Keywords: Benzodiazepines; generalised anxiety disorder; panic disorder; social anxiety disorder; treatment

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Antiepileptics as anxiolytic medicines

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A variety of drug groups have been shown to be effective in treating many of the anxiety disorders, with selective serotonin reuptake inhibitors (SSRIs) being considered first-line agents for virtually all anxiety disorders. Various antiepileptic drugs are thought to modulate GABA and glutamate, therefore, treating anxious patients with such agents may restore the homeostasis between these two neurotransmitters and decrease neuronal over-excitability, particularly in the amygdala.There have been a number of investigations conducted in the form of case reports, case series and open-label trials, suggesting the potential usefulness of antiepileptic drug treatment in a variety of anxiety disorders [1]. A broad area for the use of antiepileptic drugs in psychiatry is anxiety disorders, especially generalized anxiety (GAD), social phobia and panic attacks, as well as post-traumatic stress disorder (PTSD). Open studies provide some limited evidencefor the usefulness of carbamazepine in PTSD, whereas for other anxiety syndromes the evidence is vague or negative (eg, for panic disorder). For valproate, one controlled study and several open studies reported efficacy in panic disorder alone or when accompanied by mood symptoms. Moderate evidence stemming from a small, but controlled study exists for the use of lamotrigine in PTSD; however, no proper-sized randomized studies have been conducted so far. The GABA transporter inhibitor tiagabine and GABA transaminase blocker vigabatrine, which theoretically should be useful in anxiety states, were either not tested in controlled studies (vigabatrine) or could not fulfil the promises of open studies in a randomized placebo-controlled study of GAD (tiagabine). This situation is different for two other antidepressants, gabapentin and pregabalin. For gabapentin, two double blind placebo-controlled studies showed positive results in panic disorder and social phobia. Even more compelling is the evidence for pregabalin. Five positive double-blind, placebo-controlled studies in GAD and one positive controlled study in social phobia make this compound indeed a well-proven anxiolytic medication. For GAD, an optimal dosage of 200 to 450 mg /day had been determined [2].

Keywords: Antiepileptics, anxiety disorder, treatment

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Buspirone and other drugs as anxiolytic medicines

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Buspirone, which was launched in 1986, has been shown to be effective especially in the treatment of generalized anxiety disorder (GAD). To be not addictive and not causing withdrawal symptoms are its advantages over benzodiazepines. The absence of side effects such as weight gain, sexual dysfunction and motor incoordination facilitates its use. It is thought that buspirone exerts its anxiolytic effect by reducing the discharge of serotonin in the limbic system. Therefore, its effects begin later than other anxiolytic agents (2-4 weeks). Buspirone is used in the treatment of GAD and some comorbid conditions with GAD like migraine, alcohol use disorder and organic mental disorders. It has been shown to be effective in the treatment of SSRI-induced sexual dysfunction and bruxism. Serotonergic agent buspirone is also widely used in combination with other antidepressant drugs to increase their effectiveness. İt has been suggested that it is effective in the treatment of behavioral symptoms seen in organic brain syndrome and ADHD.

Propranolol, which was widely used in psychiatry practice in our country, is not approved for use in the treatment of anxiety disorders. However, it is known to be effective in the treatment of physiological symptoms of anxiety. İt is often preferred in the treatment of lithium induced tremor in divided doses.

Hydroxyzine is the only FDA-approved antihistamine agent for the treatment of anxiety disorders. İt has been shown that it is as effective as buspirone in the treatment of GAD. İt is also often preferred for the treatment of sleep disturbances, motion sickness and emesis in clinical practice.

Keywords: Buspirone, propranolol, hydroxyzine, anxiolytic effect

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Overview of anxiety medicines

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Rational Use of Drugs in Anxiety Drug Treatments

World Health Organization (WHO) defined Rational Drug Use (RUD) in Nairobi in 1985 as "The ability of people to provide the appropriate medication, in the appropriate time and dose, at the most affordable cost and easily, according to their clinical manifestations and individual characteristics."

The appropriate drug for an indication can be selected rationally, if the criteria of effectiveness, safety and cost have been taken into account.

Based on the principle of health and equality in accessing health as a human right, WHO has concluded that access to drugs should be seen as an integral part of long-term drug policies. By looking at from a broader perspective, this issue has been considered as a part of the entire health policy.

The use of wrong, unnecessary, ineffective and high-cost drugs all over the world causes problems in various dimensions. For these reasons, various solutions have been tried to be produced and developed in the world. In this context, studies on "Rational Use of Medicines" have been initiated in the world.

Properties that Should Be Present in the Ideal Anxiolytic:

- Thedrug should relieve anxiety effectively.
- The effectiveness of the drug should not depend on the source and severity of anxiety.
- The drug must be safe. This means that the interval between the therapeutic dose and the toxic dose of the drug is wide
- Thedrug should relieve anxiety without affecting consciousness too much. This means that the sedative effect that negatively affects the daily working life of the person is not too much
- Withdrawal symptoms should not occur in case of sudden discontinuation of the drug.In other words, the drug used in the treatment of anxiety should not be addictive.

Rational Use of Benzodiazepines in the Treatment of Anxiety

Benzodiazepines are mostly used in the treatment of anxiety. Rational use of benzodiazepines includes:

BZ's should only be used to control anxiety symptoms that cannot be controlled without medication. BZ should not be used to relieve short-term and mild anxiety and tension caused by temporary stresses of daily life.

Treatment with BZ's should be carried out in a reasonable time that can minimize the risk of addiction. In long-term treatment, which increases the risk of addiction, treatment should be interrupted from time to time, during this period placebo should be given instead of BZ and returning to BZ treatment again reduces the risk of addiction.

The elimination half-lives of BZ's vary widely between individuals. Individual effective dose adjustment should be made by good monitoring the patient.

If there is no adequate improvement in symptoms despite a week or two of treatment, treatment should be abandoned and alternative treatments should be started.

The patient should be informed about not using alcohol, antihistamines and other sedatives that may interact with BZ's.

At the end of a chronic treatment, BZS should be discontinued by gradually reducing the dose.

Keywords: Anxiety, Anxiolytics, Rational Use of Drug

Sleep problems and treatment in childhood externalizing disorders

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Externalizing disorders are characterized by behaviors related to poor impulse control, including disobeying the rules, aggression, impulsivity and attention deficit. Externalizing disorders in children and adolescents specifically include Attention-Deficit Hyperactivity Disorder (ADHD), Oppositional Defiant Disorder and Conduct Disorder. According to the current literature, these disorders are seen in children and adolescents with a frequency ranging from 7% to 10% and are more common in boys. Childhood externalizing disorders are also a high predictor of many adult impulse control disorders, including Substance Use Disorder and Antisocial Personality Disorder.

Academic researches in this field indicate that sleep disorders in healthy children may lead to mobility, impulsivity, attention and behavior disorders, leading to deterioration in academic functionality and social relations. There are also studies stating that there is a bidirectional relationship between sleep and externalizing behaviors. Children with externalizing disorder may apply to the clinic primarily with sleep-related complaints. However, externalized behaviors may also be the complaint of many cases with sleep disorders, who apply to the clinic. Attention-Deficit Hyperactivity Disorder is a frequent precursor of Oppositional Defiant Disorder and Conduct Disorder, which includes other externalizing disorders. For this reason, it is observed that most studies in the literature focus on sleep problems and the treatment in children with ADHD. It is pointed out that approximately 25-50% of children and adolescents with ADHD have sleep problems. The most common sleep problems reported in children with ADHD include difficulty falling asleep, resistance to bedtime, insomnia, prolonged fatigue due to wakefulness and daytime sleepiness. In addition, in comparative reseraches which made with case-control studies has been reported that disorders such as Restless Legs Syndrome, Periodic Movement Disorder in Sleep, Parasomnia and Respiratory-Related Sleep Disorders are more common in children with ADHD. Therefore, in the initial evaluation of these cases, 5-item questions evaluating sleep problems known as BEARS (Bedtime issues, Excessive daytime sleepiness, night Awakenings, Regularity and duration of sleep, Snoring) can be used. In addition, detailed sleep surveys that examine more specific sleep symptoms, such as the Children's Sleep Habits Questionnaire, should also be used. In such cases, the most appropriate treatment is the combination of sleep hygiene and pharmacological interventions in order to minimize the relationship between symptoms and sleep. In order for clinicians dealing with externalizing disorders and sleep problems to obtain appropriate solutions in many patients, further research and different medication interventions are required to manage these two disorders together.

Keywords: Externalising Disorder, Sleep Problems, Attention-Deficit Hyperactivity Disorder

Sleep disorders in internalizing psychiatric disorders in children and adolescents

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Sleep related problems are among the most common concerns presenting at Pediatrics and Child Psychiatry outpatient clinics. Sleep disorders, which are known to have negative consequences on psychical health, cognitive functions, emotion regulation and academic/social performance, affect a significant number of children and adolescents, especially in the clinical population. Sleep disturbances have been found to co-morbid with several psychiatric disorders, including anxiety disorders, depression, attention deficit and hyperactivity disorder (ADHD), mental retardation, obsessive compulsive disorder (OCD), substance use disorders and post-traumatic stress disorder (PTSD). The reasons for the considerable overlap of sleep-related problems among the symptoms of internalizing disorders such as depression and anxiety disorders have increasingly been investigating in children and adolescents. Numerous studies have suggested that sleep loss or disruption of normal circadian rhythms is associated with emotional dysregulation. This relationship is bidirectional, in that persistent rumination and negative thoughts can lead to heightened levels of physiological arousal, that prevent a resting state necessary for sleep onset. Diagnostic and Statistical Manual of Mental Disorders (DSM-5) emphasizes the need for independent diagnose of a sleep disorder regardless of mental or other medical problems that may accompany and replaces primary insomnia with the diagnosis of insomnia disorder to avoid the primary/secondary determination. Recently, it has been suggested that integrative interventions to specifically target co-morbid sleep problems should considered for children with anxiety or depression.

Keywords: sleep disorders, anxiety, depression, children, adolescent

Sleep problems and treatment in children with chronic diseases

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One of the greatest stress in a child's life is disease. According to the World Health Organization, chronic diseases are “irreversible pathological diseases that leave permanent sequelae that need special rehabilitation caused by the changes that require long-term follow-up and care” . In recent years, the number of chronic diseases which seen inchildren has increased significantlyLiving with a chronic disease and adaptation to the results of this chronic disease are very difficult for children and their families. Painful applications during the process of treatment and the frustrations which disease brought can cause emotional and behavioral difficulties in children. Children with chronic diseases explain sleep problems. Children's immune system as well as emotional development can not be healthy without sleeping routine. Insufficient sleep even cause abnormal neuronal connections in terms of cognitive and emotional development. There is a bidirectional interaction between chronic diseases and sleep. Increasing sleep quality provide positive contributions to the treatment of children.

Keywords: sleep probelm, chronic diseaes, tip 1 diabetes mellitus

Youth in transition: A prospective cohort study into the course of addiction and mental health problems from adolescence to young adulthood

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Substance use disorders (SUDs) are prevalent in the general population, tend to follow a chronic or chronic-intermittent course, are associated with many individual and social problems, and – as most mental disorders – often have their onset in adolescence. Hence, the course of SUD among adolescents and young adults should be high on our research agenda. Nevertheless, the literature regarding the development, persistence or desistance and treatment of SUD in youth is sparse, and research in this area lags considerably behind that of research in adult SUD. The present study, entitled Youth in Transition, aims to fill this gap and focuses on a subgroup that is particularly at risk for chronicity: adolescents who seek help in addiction treatment.

The primary objectives of the Youth in Transition study are (1) to investigate the rate of persistent vs. non-persistent DSM-5 SUD from late adolescence (16 to 22 yrs) to early adulthood (20 to 26 yrs) among youth in the two and four years following their entry in addiction treatment, and (2) to investigate the prognostic value of baseline predictors and treatment variables for predicting addiction treatment outcome after two and four years. Secondary objectives are to determine the longitudinal treatment outcome trajectories pertaining to comorbid mental health disorders, social functioning and quality of life, and their association with SUD-outcome trajectories over time.

In a naturalistic, multi-center prospective cohort design, we have included youths (n=430), who consecutively entered addiction treatment at ten participating organizations in the Netherlands. Inclusion was prestratified by treatment organization, to ensure a nationally representative sample. Eligible youths were 16 to 22 years old and sought help for a primary DSM-5 cannabis, alcohol, cocaine or amphetamine use disorder. Prior to the start of this study, we determined that these two criteria combined – age and primary substance – covered nearly three-quarters (72%) of all treatment demand in Dutch youth addiction care. Assessments focus on lifetime and current substance use and SUD, comorbid non-SUD mental disorders, family history, life events, social functioning, treatment history, quality of life, chronic stress indicators (hair cortisol) and neuropsychological tests (computerized executive function tasks) and are conducted at baseline, end of treatment, and two and four years post-baseline. Baseline data and treatment data (type, intensity, duration, type of termination) will be used to predict outcome – persistence of or desistance from SUD. Currently, we have completed the baseline assessment and approximately three-quarters of the two year follow-up.

This presentation will provide an overview of the rationale and design/methods of the Youth in Transition study and present data from the baseline assessment. Data showed that virtually all youths met the DSM-5 criteria for severe SUD (6 or more criteria). More than three-quarters had a past-year – internalising and/or externalising – mental disorder next to SUD, and still nearly one quarter met the criteria of three or more concurrent mental disorders. Perhaps most indicative of the interconnectedness of addiction and other mental disorders, more than half of the youth had received treatment for a non-SUD mental disorder prior to their current addiction treatment.

Keywords: Adolescents; youth addiction treatment; substance use disorder; long-term course of SUD

Other treatment options in clozapine-resistant cases

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Although antipsychotic treatment is one of the principal options for the management of schizophrenia, about a third of the patients with schizophrenia do not respond well to first- or second-generation antipsychotics (TRS). TRS is associated with greater severity of symptoms, more frequent relapses, repeated hospitalizations, poorer socio-occupational functioning, and poorer quality of life.

Clozapine is established as the gold standard for antipsychotic treatment of patients suffering from treatment-resistant schizophrenia. However, 40% to 60% of TRS patients do not have an efficacious outcome or only have a partial response to clozapine treatment (CRS).

A multitude of augmentation strategies have been tried in randomized controlled studies for resistance schizophrenia, including lithium, carbamazepine, valproate, benzodiazepines, beta-blockers, antidepressants, anti-inflammatory agents, glutamatergic agents, and electroconvulsive therapy. However, none of these strategies has reliably demonstrated efficacy for people whose psychosis did not respond to antipsychotic monotherapy.

The commonest strategy to deal with CRS is augmentation with another antipsychotic. Risperidone, aripiprazole, amisulpride, and typical antipsychotics are the most commonly evaluated augmenting agents. Despite the size of the evidence, the majority of reviews have concluded that adding a second antipsychotic to clozapine does not have any significant impact on clinical response, overall symptom severity, or severity of positive symptoms. Of the antipsychotics, amisulpride has the greatest benefit in the domains of positive and negative symptoms and improves the side effect profile of clozapine. Risperidone has shown some efficacy in ameliorating positive symptoms, and aripiprazole has benefit in the negative symptom domain. Aripiprazole offsets some of the metabolic side effects of clozapine. Apart from problems of resistance, non-adherence is a major hindrance to effective treatment with clozapine. Recent studies suggest that apart from reducing non-adherence, LAI augmentation of clozapine may also have a role in enhancing clozapine response in CRS.

The number of RCTs examining the augmentation of clozapine with antidepressants and mood stabilizers is comparatively less. There is little evidence of the benefits of antidepressant augmentation on the severity of symptoms. Similarly, though mood stabilizer augmentation is reported to be beneficial in some metaanalyses, others have either found no benefit or evidence of significant symptom reduction only in low-quality trials. Of the mood stabilizers, only sodium valproate has positive data supporting its use and tolerability.

Other pharmacologic agents are memantine, glycine, sarcosine, minocycline, anti-inflammatory agents, NAC, and ginkgo biloba. D-serine, NAC and sarcosine as adjuncts to non-clozapine antipsychotics have therapeutic benefit in the treatment of negative and total symptoms of chronic schizophrenia. Nonpharmacological interventions include cognitive behavioral therapy, ECT, and transcranial magnetic stimulation. Some of the more recent reviews have concluded that electroconvulsive therapy (ECT) is an effective augmentation strategy, especially when medications fail to decrease persistent positive symptoms.

Keywords: Treatment-resistant, Schizophrenia, Clozapine

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Extraction of psychiatric indicators from QEEG in terms of entropy and connectivity

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Nerve cells are electrically and chemically excitable units of the brain. Neurotransmitters released by a presynaptic neuron, changes in the extracellular environment such as exposure to heat or cold, interactions with sensory stimuli such as light or smell, or other chemical and/or mechanical events act as stimuli perceived by the neurons. The corresponding membrane potential variations depend on which ion channels are opened by the stimulus. In similar manner, action potentials (APs) can be triggered by temporal and spatial summation of depolarized and hyperpolarized potentials at excitatory and inhibitory synapses depending on neurotransmitter binding to receptors. These electrochemical activities can be measured by using neuroimaging modalities such as EEG and MEG. EEG series include superimposed post-synaptic potentials in combination with nerve APs at synchronized neurons with absence of external stimuli. The function of the neuron is dependent on both age and genetic factors as well as experience a variety of sensory stimuli such as emotional, auditory, visual, somatosensorial, audio-visual and cognitive. Local EEG complexity levels are associated with the number of activated neurons communicated to each other in area close to recording electrode [1,2]. The global brain connectivity is associated with functional integration of cortices assumed to be modules of a random network [3,4,5]. Resting-state EEG analysis can provide investigation of default-mode brain network differences between patients and controls in terms of both local EEG complexity and global brain connectivity levels by examining entropy metrics at single-channel recordings and coherence/synchronization estimators in between electrode pairs.

Keywords: EEG, complexity, graph theory, brain connectivity, ADHD

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The Role of QEEG-based entropy and connectivity in child and adolescent psychiatry

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Problems connecting spatially disparate brain regions are the new paradigm of neuroscience in understanding neurodevelopmental diseases. In the last two decades, data from neuroimaging studies have revealed the structural and functional network systems of the human brain, and all these network systems have been conceptualized under the term "connection". Three different types of connectivity have been identified: anatomical connectivity created by assemblages of neurons and the axonal structures that connect them, functional connectivity created by temporal synchronization of spatially different brain regions, and effective connectivity determined by revealing the direction or causality of neural interaction.

Functional connectivity (FC) can be examined with functional magnetic resonance imaging or quantitative electroencephalogram (qEEG). Although fMRI studies provide important information about connectivity, since measuring neural activity according to blood oxygenation level is an important limitation, it reduces temporal resolution and may not detect temporal changes. qEEG, on the other hand, seems to precede fMRI in showing activation between brain regions, as it has a high temporal resolution, captures temporary changes, is easier to apply, is cheaper, and takes a shorter time. While EEG cannot directly reveal structural connections, it is applied to predict functional and effective connectivity.

FC is usually measured by correlation, entropy, coherence, and graph theory. Nonlinear EEG analyses have provided valuable information about cortical dysfunctions in neuropsychiatric disorders that cannot be evaluated by linear analysis. Coherence and entropy-based QEEG analysis can give us information about connectivity and neuron activation as a non-linear analysis method.

Complexity, which is addressed in most studies using entropy measures, actually means "significant structural richness." Entropic measures do not provide information about the complexity of a system, but only how ordered and predictable a system is. Recent studies have found that reduced EEG complexity is linked to an increased degree of dysfunction.

It shows that lower cognitive performance in adolescents with attention deficit hyperactivity disorder (ADHD) is associated with impaired cortical information processing, as demonstrated by the lower complexity of the EEG. Previous literature has shown that entropy is more successful in predicting ADHD than the theta/beta ratio, which is the classical EEG finding. Studies on attention have also shown that entropy is low at rest and high during the attention task. It has been shown in other EEG studies that the increase in EEG complexity in the ADHD GROUP during cognitive tasks was not as much as the control group. In an adult study evaluating EEG complexity during visual attention tasks, entropy analyses were found to have better classification accuracy compared to the θ/β ratio at high attention levels. Several studies have suggested that the complexity of resting brain activity can provide information about cognitive performance, such as sensitivity to stimuli and cognitive flexibility.

Especially in the field of child psychiatry, the need for biomarkers in diagnosis, treatment and follow-up is increasing. qEEG comes into prominence in new studies and clinical practice because it is non-invasive, easy and we can evaluate connectivity.

Keywords: ADHD, qEEG, Entropy, Functional connectivity, Complexity

QEEG-based entropy and connectivity in treatment follow-up in attention deficit hyperactivity disorder

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DiaMind Zihin Akademisi

Attention deficit hyperactivity disorder (ADHD) is a common childhood neurodevelopmental disorder for which methylphenidate (MPH) is a first-line therapeutic option. This study is obtained to investigate the effect of MPH treatment based on neuro-cortical complexity levels estimated by applying embedding entropy aproaches to eyes-opened resting state EEG series in children with ADHD.
The second study is obtained to investigate the effect of MPH treatment based on neuro-cortical connectivity levels estimated by applying quantitative electroencephalogram (qEEG) connectivity nonlinear measures aproaches to eyes-opened resting state EEG series in children with ADHD. For this purpose, three connectivity nonlinear measures approaches were applied to short segments of both pre- and post- medication EEG series
Three embedding entropy approaches were applied to short segments of both pre- and post-medication EEG series. EEG signals were recorded for 25 boys with combined type ADHD prior to the administration of MPH and at the end of the first month of the treatment.
In the 2nd study, EEG signals were recorded from 25 boys with ADHD-combined type before MPH administration and at the end of the 1st month of the treatment. The nonlinear connectivity analyses were determined with mutual ınformation (MI), coherence function (CF) and phase locking value (PLV) techniques.
In comparison to Approximate Entropy (ApEn) and Sample Entropy (SampEn), Permutation Entropy (PermEn) provided the most sensitive estimations in investigating the impact of MPH treatment. In detail, the considerable decrease in EEG complexity levels were observed at six cortical regions (F3, F4, P4, T3, T6, O2) with statistically significant level ($p < 0.05$). As well, PermEn provided the most meaningful associations at central lobes as follows: 1.) The largeness of EEG complexity levels was moderately related to the severity of ADHD symptom detected at pre-treatment stage. 2.) The percentage change in the severity of opposition as the symptom cluster was moderately reduced by the change in entropy.
In the 2nd study, a statistically significant increase in functional connectivity levels were found with MPH treatment between the regions indicated by the F3-F4, F7-F8, P3-P4, and T5-T6 electrodes ($p<0.01$).
The reduction of neuro-cortical complexity especially in the frontal regions of MPH treatment and the correlation of this decrease with clinical improvement may pave the way for researches on the etiopathogenesis of ADHD.
In the 2nd study, we show with nonlinear qEEG analysis that MPH treatment increases the global functional connectivity of the ADHD brain. The increase of neuro-cortical connectivity especially in the frontal regions of MPH treatment may pave the way for researches on the etiopathogenesis of ADHD.

Keywords: Attention deficit hyperactivity disorder, entropy, complexity, coherence, connectivity, methylphenidate, qEEG

The Relationship between neurological soft sign and resting state QEEG parameters in children with attention deficit hyperactivity disorder

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Attention deficit hyperactivity disorder (ADHD) is a neurodevelopmental disorder that generally starts in early childhood and progresses with symptoms of attention deficit, hyperactivity and impulsivity that are not appropriate for the age of the individual. Behavioral inhibition disorder has been suggested as the main deficiency in ADHD. Neurological soft signs (NSS) are motor and/or sensory disorders that do not belong to a specific region of the brain and are not part of a neurological syndrome detected on neurological examination. The most common neurological symptoms are; Overflow movements (OM), Involuntary Movements (IM), Dysrhythmia, Dysmetria and Intention Tremor. Multiple abnormalities of the motor system have been described in some children with ADHD, including persistence of overflow movements, impaired timing of motor responses, and deficits in fine motor abilities. Neurological soft sign such as clumsiness, right-left confusion, slowness in repetitive motor tests, and dysgraphia are common in children with ADHD.
The results of numerous structural and functional neuroimaging studies support that ADHD is a neurodevelopmental disorder characterized by structural and functional brain differences. Various brain regions, including fronto-striatal, fronto-parietal, fronto-cerebellar, fronto-striato-parieto-cerebellar, and fronto-temporal circuitry, are responsible for ADHD pathophysiology. Understanding brain network organization can facilitate diagnosis and treatment in neuropsychiatric diseases. The brain network is a complex dynamic network in which information is continuously processed and transported between spatially distributed but functionally connected subnets or individual brain regions. In Graph Theory, the brain is assumed to be a complex network, and both structural and functional brain network measurements can be calculated through neuroimaging and electrophysiological research studies. Researchers have begun to use global connectivity indices, one of the Graph Theory parameters, to explain EEG-based brain connections in various neuropsychiatric and cognitive disorders. Several recent studies have shown that graph theoretical analysis can be considered a reliable approach to quantify functional/structural brain connectivity abnormalities in various neuropsychiatric and cognitive disorders through fMRI analysis. Previous studies have shown that ADHD patients exhibit decreased functional integration and increased segregation in brain networks compared to the healthy group .When we look at the literature, in graph theory studies using fMRI to evaluate differences in functional connectivity in children with ADHD; children with ADHD have been shown to have increased modularity, decreased global efficiency, and increased local efficiency compared to controls. In our study of children with ADHD, a significant difference was found between the neurological soft signs and global connectivity indices between the ADHD and control groups. A correlation was found between the total duration score of neurological soft signs and the global connectivity indices. There is a need for studies that will contribute to the inclusion of soft neurological soft signs and qEEG (non-invasive, easy, with which we can evaluate network connectivity) more frequently in clinical practice in diagnosis, treatment and follow-up in ADHD.

Keywords: neurological soft signs, qEEG, graph theory, connectivity

Novel neuromediator markers and sleep disorders

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Although sleep seems to be basically a function of the brain, developments in its pathophysiology show that sleep occurs as a result of interactions involving the whole body. Sleep is shaped by the interaction of many systems such as genetic and environmental factors, neurodevelopmental events, neurochemical, neuroinflammatory, endocrine and autoimmune systems, and gut microbiota, which is the source of neuroactive mediators. Although it has been stated that there are deteriorations in sleep function as a result of problems in the interaction between these systems, there is not yet a specific marker to diagnose sleep-wake disorders.

Both normal sleep and several types of sleep disorders have been found to have significant genetic and immunologic influences. Restless legs syndrome (RLS) and periodic limb movements in sleep (PLMS) have familial aggregation, and several genes, and recent genome-wide association studies have identified single nucleotide polymorphisms linked to RLS and PLMS. Narcolepsy/ cataplexy are associated with HLA DQB1*0602 and a T-cell receptor a locus, although functional correlations have not been evident. Obstructive sleep apnea (OSA) is a complex disorder involving multiple traits. Angiotensin-converting enzyme has been proposed as a risk variant for OSA. Obesity, which has both environmental and genetic influences, is a significant risk factor for OSA. Fatal familial insomnia and advanced sleep phase syndrome, sleep walking are sleep disorders with a definite genetic basis also (1).

Multiple cytokines and other molecules are involved in both positive and negative feedback loops affecting nonrapid eye movement (NREM) and rapid eye movement (REM) sleep. Most of the evidence revolves around two cytokines: IL-1 beta and TNF- alfa. Moreover, sleep disorders, such as insomnia and sleep disordered breathing, are associated with increased dysregulation of inflammatory processes (1,2).

Neurotransmitter system can lead to effect cytoprotective and neuroprotective effects, disruption of them can further contribute to the neurotoxic effects and that contribute to sleep disorders. Melatonin has immunomodulatory actions, such as regulating oxidative stress, apoptosis, and mitochondrial homeostasis, and changed its secretion can lead to sleep disorders like insomnia, hypersomnia (3).

The gut microbiome may affect the hypothalamic-pituitary-adrenal axis via regulating the secretion of neurotransmitters such as cortisol, tryptophan, and serotonin. Microbial metabolism produces a variety of neurotransmitters, cytokines, and metabolites such as serotonin, dopamine, GABA, shortchain fatty acids, melatonin. It is well known that these neurotransmitters are related both to the occurrence of REM sleep and to the development of sleep disorders (4). As a result it is important to approach sleep and sleep disorders by considering all systemic mechanisms.

Keywords: neuromediator, sleep, sleep disorders

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Novel neuromediator markers and psychotic disorders

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Psychosis is a complicated neuropsychiatric condition that equally affects people of both sexes and more than one percent of the population all over the worldwide. Positive symptoms of psychosis include overexcitation, hallucination and delusion. Negative symptoms of psychosis include avolition, isolation and anhedonia. Cognitive deterioration is another hallmark of psychosis. Psychosis is a complicated and persistent neuropsychiatric condition. Biphasic dysregulation of dopamine signalling is characterised by an overexpression of dopaminergic transmission in the mesolimbic pathway, which is responsible for causing positive symptoms and a low expression of dopaminergic transmission in the mesocortical pathway, which is responsible for causing negative symptoms and cognitive decline. In clinical settings, patients with psychosis are often treated with either typical or atypical antipsychotic drugs, both of which work by blocking either dopamine or serotonin receptors, or both. Unfortunately, the current clinically accessible drugs (typical and atypical) that operate in a dopaminergic or serotonergic way or employing both systems for the therapy are only useful for alleviating the symptoms of psychosis but do not treat the underlying cause of the condition. They are also linked to partial effectiveness, limited compliance, and relapse of psychotic symptoms; have extrapyramidal side effects; and have been linked to diabetes mellitus, agranulocytosis, cardiovascular problem, etc. It is becoming more important to research novel routes and targets for the development of possible antipsychotic medications in order to get around the negative side effects and inadequate outcomes that are associated with currently utilised antipsychotic drugs.

There are currently no prospective medications on the market that might prevent the start of the condition or slow down its course since researchers do not have a sufficient knowledge of the pathogenic process, which may be the explanation for this. Dopamine and serotonin aren't the only two neurotransmitters that have been the focus of recent research in this field; fresh research is looking at the roles of additional potential contributors. In etiopathology, a complex interaction between neurotransmitters in different parts of the central nervous system believed to be responsible for this condition, such as acetylcholine, dopamine, gamma-aminobutyric acid (GABA), glutamate, and serotonin, is still under investigation.

The pathophysiological mechanism that underlies the beginning and development of psychosis, as well as the diagnostic neuropathology and biomarkers that are both sensitive and specific, have not yet been established. In recent years, novel theories have been developed focused on neuromediators (dopamine, glutamate, and serotonin), neuroinflammation, the cannabis hypothesis, the gut-brain axis model, and oxidative stress respectively. The fact that the Cholinergic system, Matrix Metalloproteinases (MMPs), Caspases, Catechol-O-Methyltransferase (COMT), phospholipase A2, Kinase Family Enzymes, Peroxisome proliferator-activated receptors (PPARs), mitochondrial dysfunction, and proinflammatory cytokines play a role in the pathophysiology of psychosis is exciting.

Psychosis is a multifactorial and complex disease. New targets responsible for psychosis development should be the focus of future study. The importance of these targets will be explained by future preclinical and clinical research.

Keywords: Psychotic disorders; Novel neuromediator; Biomarker; Neuroinflammation; Dopamine; Serotonin

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Neuromediator markers and bipolar and related disorders

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Bipolar disorder (BD) is one of the most studied and investigated psychiatric disorders. It is characterized by alternating severe mood episodes ranging from depressive to manic/hypomanic. The recurrence of mood episodes is often associated with unfavourable clinical outcomes, including functional impairments, higher rates of medical and psychiatric comorbidities and a lower response to treatment. In addition to affective symptoms, neuropsychological and cognitive performance deficits, mainly related to memory, attention and executive tasks, are common.

Etiology of bipolar disorder still remains uncertain, even if a great deal of progress have already been made, identifying different biomarkers. Due to the heterogeneous disease course of BD, a subgroup of patients may present with progressive biological changes in the periphery, including neurotrophic factors, inflammatory markers, and oxidative stress markers.

The results of studies related to brain-derived neurotrophic factor (BDNF), which is the most studied neurotrophic factor in bipolar disorder, are conflicting. Many studies found no statistically significant changes in BDNF levels between patients at the early and late stages of this illness. However, one study found a negative correlation of length of illness with BDNF levels. Most of studies reported no differences in plasma BDNF levels between affective states, and one study showed lower BDNF levels in depressive and manic patients compared to euthymic patients. A recent meta-analysis found a negative correlation between BDNF levels and the severity of depressive symptoms in BD patients.

Many studies have reported that inflammation may play a critical role in the pathophysiology of BD, potentially underlying the biological basis of neuroprogression. Some studies showed increased levels of the pro-inflammatory cytokine TNF-α at late stages of BD compared to their respective control groups. However, a recent meta-analysis failed to show consistent relationships between the studied inflammatory biomarkers and the main psychiatric and clinical variables of the disorder.

In a recent meta-analysis examining oxidative stress parameters and antioxidants in adults with unipolar or bipolar depression versus healthy controls, unipolar and bipolar depression showed higher levels of thiobarbituric acid reactive substances.

In another meta-analysis using original articles with proteomic analysis, authors gathered data on differentially expressed proteins in the plasma and serum proteomes of subjects with BD compared to healthy controls. 5 proteins were identified: IGF-1, TF, A2M, C3, and APOA1.

Study indicated the association of uncovered proteins with two main metabolic pathways: complement system and coagulation cascade.
Although many biomarkers have been identified that can guide BD, the results are inconsistent. The proteomics approach can provide promising developments.Further studies with broad samples and validation cohorts, longitudinal designs with patients in early phases of BD, and integrating proteomics results with other omics data (phenomics, genomics, metabolomics, connectomics) could provide additional information about differentially expressed proteins in selected biological pathways.

Keywords: Bipolar disorder, Biomarkers, Proteomics,illness progression

Novel neuromediator markers and substance use disorders

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Substance use disorders (SUDs) are characterized by the rapid resurgence of craving and desire for the substance used, even after a long time of abstinence, and the continuation of use despite the anticipated negative effects of substance use. In the process leading to addiction, it is believed that there are structural and functional changes in many parts of the brain. Although the changes in the mesolimbic reward pathway come to mind first among these, various circuits and many neurotransmitters play a role in the pathophysiology of many different behaviors seen in substance use disorders.
Alterations in dopaminergic pathways in substance use disorders are among the most studied subjects. It is known that dopamine concentrations increase in the striatum with acute and chronic substance use. It has been observed that chronic substance use reduces tonic dopamine release and blunts dopamine release for activities other than substance use. In addition to the concentrations, changes also occur in receptors and transporters of dopamine in SUDs. Differences in dopamine transporter (DAT) expression have been observed depending on the drug used and the downregulation of D2 receptors has been associated with many addictive conditions, including SUDs.
It is believed that glutamatergic innervations interconnected with dopaminergic pathways play a role on the addiction initiation, relapse and addiction-related memory formation. These circuits originate from the prefrontal and anterior cingulate cortices, hippocampus and amygdala and extend to the ventral striatum. It has been reported that there are changes in tonic and phasic glutamate release in these pathways with acute substance use. Similarly, glutamate levels seem to be altered by conditioned cues related to substances.
Functional changes have also been observed on glutamate receptors. There is evidence for the role of ionotropic N-methyl-D-aspartate (NMDA) and alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA) receptors in the formation of substance-related memories and relapse. Changes in the density and distribution of these receptors have been reported in different addictions. In addition, the relationship between SUDs and metabotropic glutamate receptors has also started to attract attention. Another area of interest on glutaminergic transmission is glutamate transporters. Treatments targeting these transporters are expected to gain an important place in addiction treatment in the near future.
Variations in the endocannabinoid system (ECS) in relation with SUDs have been another important research matter. The data suggests that the ECS has a modulating effect in opioid, stimulant and, as expected, cannabis use disorders.

Gamma-aminobutyric acid (GABA) and Brain-derived neurotrophic factor (BDNF) are among other neuromediator molecules that deserve to be mentioned in terms of their relationship with SUDs.
Finding different neuromediator markers that may vary at different stages of the addiction cycle may pave the way for the development of more personalized and longer-term treatments. By finding markers that will help identify individuals who may be at risk for the development of addiction, new strategies that can be effective in countering substance use disorders can be designed.

Keywords: addiction, biomarkers, dopamine, glutamate, substance use

The Psychological treatment of obsessive compulsive disorder (OCD) in children and young people. parts 1 & 2.

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Obsessive Compulsive Disorder (OCD) is a severe psychological disorder characterised by recurrent, intrusive and persistent thoughts, urges or images (i.e. obsessional thoughts) resulting in repetitive routines or rituals (i.e. compulsive behaviours). Up to 4% of children are affected with OCD which can significantly impair functioning at home, in school, and socially.
Cognitive Behaviour Therapy (CBT) has proven to be effective and is recommended as the first line treatment of mild to moderate childhood OCD. CBT with children encompasses three main approaches. The traditional approach is primarily based upon behavioural strategies of exposure and response prevention (E/RP). This involves systematically and repeatedly triggering the child's obsessive thoughts (i.e. exposure) whilst resisting the associated compulsive behaviours (i.e. response prevention). This results in the child letting their obsessive thoughts occur without attempting to neutralise them thereby breaking the OCD cycle. The second approach emphasises the importance of the child's cognitions in the onset and maintenance of OCD. This is primarily a cognitive approach which involves identifying and challenging the personal meanings the child ascribes to their obsessional thoughts. Treatment involves identifying and challenging key cognitions associated with OCD including thought-action fusion ("thinking about things will make them happen"), personal responsibility for harm ("I am responsible for bad things happening") and inflated expectations of the severity of possible harm ("people will die"). Cognitive Therapy encourages the child to challenge these thoughts and to develop alternative, less dysfunctional, explanations. The third approach acknowledges the wider family perspective and the importance of family factors in maintaining OCD. In particular, family accommodation in which family members reinforce their child's OCD through participating in their obsessive behaviours, avoiding potential triggers and offering repeated reassurance have been identified as important. By learning alternative ways to deal with the child's obsessions and compulsions parents can help their children to break out of their OCD.
This two-part workshop will focus on the use of CBT for the treatment of childhood OCD. This workshop will have a clinical focus and will provide an overview of OCD and the core treatment approaches of exposure and response prevention, cognitive therapy and family accommodation. An integrated approach will be described and the core intervention elements of psychoeducation, anxiety awareness, cognitive enhancement, family accommodation and exposure and response prevention illustrated. Methods for challenging key OCD cognitions including behavioural experiments, responsibility pie charts and testing logical inferences will be highlighted. Key techniques to reduce family accommodation including challenging parental

beliefs, stepping back from their child's OCD and reclaiming life will be summarised. Finally, the process of E/RP involving psychoeducation and hierarchy development will be presented.

Keywords: Obsessive Compulsive Disorder; Children and Adolescents; Cognitive Behaviour Therapy; Cognitive Therapy; Family Accommodation.

Trauma and dissociation from a psychodynamic perspective

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The word "trauma" means wound or injury. Thus, we do not understand trauma as an event but as a psychobiological "wound" evolved in relation to a variety of coupled psychological, biological, social, and other environmental factors.
Psychoanalysis began as a theory of trauma. The concept of trauma is central to Freud's original formulations of hysteria. In 1896 Freud presented a theory about hysteria which is generally known a "seduction theory". According to seduction theory hysterical patients suffer from long term-effects of sexual assualts during childhood. After 1896 Freud changed his mind and developed new and quite different theories.
Dissociation was first identified and described by Janet (1889) as a disorder that was consequent to severe trauma. Janet, who defined dissociation as a lack of integration among two or more different "systems of ideas and functions that constitute personality". Freud (1895) did not use the term dissociation, but referred to an almost identical phenomenon, that of "splitting of consciousness". Freud's formulation differed significantly from that of Janet by taking into account the etiological role of conflict. Historically relevant to the concept of traumatic dissociation, Freud (1919) introduced the publication of a symposium on "war neurosis." For Winnicott (1971), the process of dissociation was synonymous with a form of splitting of the ego or personality, similar to the split between a true and a false self. For Ferenczi (1933) noted the dissociation between the part of the child identified with the abusive object and the child seeking the caring and comforting object. Kernberg (1984) delineated dissociated splitting of internalized object relations into polarities of all good and all bad, idealized and devalued divisions.
Dissociation refers to an autohypnotic, altered state of consciousness that can affect memory processes, awareness, alertness and identity. Clinical dissociation is understood to be a primitive response to traumatic overstimulation of the ego and psychic pain, in which aspects of the traumatic event, such as affect, memory, or meaning, are internally split off from awareness, or from each other, thereby shielding the individual from their immediate effects. Dissociation falls on a continuum from common, mild states of absorption such as daydreaming, to the severe levels of disturbance seen in dissociative identity disorder.
Dissociation in trauma entails a division of an individual's personality, that is, of the dynamic, biopsychosocial system as a whole that determines his or her characteristic mental and behavioral actions. The division involves two or more insufficiently integrated dynamic but excessively stable subsystems. These subsystems exert functions and can encompass any number of different mental and behavioral actions and implied states. These subsystems and states can be latent or activated in a sequence or in parallel. As each dissociative part, the individual can interact with other dissociative parts and other individuals. This division of the personality manifests in dissociative symptoms that can be categorized as negative (functional losses such as amnesia and paralysis) or positive (intrusions such as flashbacks or voices) and

psychoform (symptoms such as amnesia, hearing voices) or somatoform (symptoms such as anesthesia or tics).

Keywords: Trauma, dissociation, psychoanalysis, psychodynamics

Understanding sexual trauma and self-mutilation: Integrating psychodynamic, clinical and forensic perspectives

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Child sexual abuse has short and long term effects on child's physical and mental health. However, it seems that abuse can have different effects on victims. It is thought that qualitative characteristics of the abuse and the perpetrator are related to the extent of the trauma related harm.
Suicide and NSSI are thought to be related with similar trajectories and risk factors such as impaired problem solving, adverse childhood experiences and psychopathologies Suicide and NSSI are reported to be associated with child sexual abuse and may result in mortality and morbidity. It has been reported that especially girls with a history of sexual abuse are at higher risk of suicide and self-injury compared to boys. It is thought that self-injury in people with a history of trauma is associated with trauma symptoms such as dissociation and has a function in coping with these symptoms. Nevertheless, it is thought that self-harm without the desire to die may function by different mechanisms from suicide. While desire to end unbearable psychological pain and hopelessness have role in suicidal attempts, with NSSI, a person can shift the focus from psychological pain to physical pain. Dissociation is another way to get rid of mental pain in sexually abused individuals. Dissociation is defined as division of personality in case of traumatic effect in those with insufficient personality integration. Dissociation can lead to impairment in consciousness, memory, identity and perception of the environment. Although dissociation is a response to trauma that sometimes serves as an adaptive mechanism, dissociative symptoms can be perceived as a challenging or even threatening experience. NSSI is sometimes executed to feel real and alive and the relationship between NSSI and dissociation may be due to that function. Our results suggested that one of the functions of NSSI may be to relieve distress from dissociative symptoms. In the literature, there is a study which reported association of dissociation with suicidality and NSSI was conducted in general adolescent population. Dissociation was reported as the most powerful predictor for both suicidality and NSSI. It was frequently reported that children and adults with child sexual abuse history have higher suicide and NSSI rates. In our country, a study was conducted with sexually abused adolescents that was investigated suicidality, NSSI and dissociative symptoms. In this study, it was reported that suicide and NSSI are found predictive for each other. As a result of literatüre review, it can be thought that adolescents who try to harm themselves have the potential to repeat it.
Prevention strategies are gaining importance in the management of suicide and NSSI, as suicide attempts and NSSI can have serious consequences such as death. Identifying risk factors for suicide and self-mutilation is thought to have a central role in prevention.

Keywords: Suicide, self-injury, sexual abuse

Mind wandering: Terminology and conceptual issues

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The phenomenon of how our mind shifts attention between external sources is a subject of interest to neuropsychiatry, which has been researched for many years. Despite being exposed to sensory input almost constantly in daily life, consciousness often spontaneously shifts from this external information to thoughts, feelings, or images that do not originate from ongoing perceptual processing. It is stated that the individual will always have to decide about how much he will pay attention to the thoughts produced by himself and the information coming from the external social or physical environment. The ability to focus and maintain attention is a key indicator of a functional attention system. Attention problems may cause temporary distraction from the task due to an external stimulus, or failure to perform the intended action due to internal thoughts. In daily life, the situations in which the individual focuses only on the task he fulfills are defined as "task focus". In some cases, this process may be accompanied by self-generated thoughts. In other words, thoughts related to task can be produced in the mind in relation to the task in the present. In this case, the focus of attention continues on task-related issues. Sometimes attention can be distracted by a stimulus from the external environment, and therefore attention is temporarily disconnected from the task being carried out. Unlike these situations, sometimes the focus of attention leaves the task being carried out without the need for any external stimulus and shifts to internally produced thoughts independent of the task (1, 2). These self-generated thoughts unrelated to the task can undermine current goal orientation. In recent years, researchers have given various names to thoughts and images that occur when attention shifts away from external tasks to more private, inner stream of consciousness. Later, this situation was named as “mind wandering” to create a common and understandable term. Mind wandering is often characterized by attention oriented away from an external task towards our internal, self-generated thoughts. Mind wandering is an example of a cognitive state in which “self-generated thoughts and feelings” arise independently of simultaneous perceptual input and any external task performed (stimulus-independent, task-unrelated thought). Self-generated thoughts, defined independently of external stimuli, are a complex and heterogeneous class of cognition. This is sometimes experienced with effort and purpose and may be directly related to personal goals or wishes. Sometimes it occurs without any intention and captures attention until a stimulus or a moment of awareness (3). Studies have explored the form and content of self-generated thoughts that occur during mind wandering and have found that they are often an eclectic mixture of thoughts regarding the future and memories from the past, usually with personal relevance. The psychological foundations of mind wandering are explained by different cognitive hypotheses about executive control and meta-awareness, and its relationship with the default mode network is emphasized.

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Mind-wandering: Neurobiology and measurement

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Mind-wandering is a shift in the contents of thought away from an ongoing task and from events in the external environment to self-thoughts and feelings. Previous experimental studies have shown that people have mind-wandering about 30 to 50 per cent of the time when awake every day (1). Mind-wandering studies use the technique of experience sampling (ES) to capture moments when we are conscious of intrinsic or extrinsic input (2). The most common ES method is the probe-caught method to acquire data using a sampling regime. Participants are interrupted and probed regarding the contents of their experience intermittently. Other experience sampling methods include the self-caught, retrospective, and open-ended methods. Moreover, mind-wandering could be measured objectively but indirectly with divergent eye movements, greater pupil dilation, more frequent eye blinks, and changes in EEG and the blood-oxygen-level-dependent signal as recorded during fMRI.

The neural basis of mind-wandering includes different networks and theories, including default mode network (DMN), executive control theory, and dorsal attention network (DAN). The DMN is the principal neural circuitry associated with mind-wandering. The DMN is a network composed of several brain regions that are interconnected and maintain resting metabolic activity. The posterior cingulate gyrus (PCC) and medial prefrontal cortex (mPFC) form the core of the DMN and interact with subnetworks, including the medial temporal system and the dorsal subsystem (1). The PCC and mPFC often involve self-reference or autobiographical memory. When an individual's task is to imagine another place or time, the regional activity of the DMN is significantly enhanced. In the resting state, the core area of the DMN is negatively correlated with the core area of the brain involved in the process of external perception, such as the occipital cortex. Consistent with functional neuroimaging studies indicating the involvement of the mPFC in mind-wandering, inhibitory transcranial direct current stimulation (tDCS) of the mPFC, has been shown to reduce mind-wandering. An event-related potential (ERP) known as the P3 occurs approximately 300 milliseconds after processing task-relevant events and indexes task-related attention. P3 is smaller for individuals who experienced high levels of task-unrelated thinking during a task. Moreover, affective processes influence the self-generated thought that occurs during mind-wandering. Dysphoria is associated with greater mind-wandering, and studies have indicated that when people's minds wander, their mood is generally low. This relationship is mediated by the content of the mind-wandering experience, with higher unhappiness associated with the past. Higher levels of rumination among individuals with depressive symptoms are associated with functional connectivity between the mPFC and insula of the salience network (3).

Keywords: Mind-Wandering, Neural Mechanisms, Default Mode Network, Experience Sampling

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Mind wandering: from theoretical framework to therapeutic technique
Mind wandering: Costs and benefits

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Mind-wandering (MW) is one of the mental activities that a shift of attention away from external tasks toward internally self-generated thoughts. Spontaneous, automatic thoughts that appear in mind are rapid and short-lived. The contents of these automatic thoughts affect individuals' emotional states and behaviour. In this respect, MW can impact the emotional state of the individual. There is no clarity about the importance and possible benefits of MW in guiding behaviour and emotional state. The positive or negative outcome of MW depends on the context. The negative aspects of MW have often been studied, and MW propensity has negative effects in many contexts, most remarkably reading, tests of sustained attention, tests of working memory and intelligence. Negative traits and self-focused MW can create a negative vicious circle on mood. However, recent studies have revealed that MW also has some positive adaptive functions such as future thinking, creative thinking, autobiographical planning. MW can be seen as a relaxation tool that allows the brain to free itself from intense mental activities. We need more information to understand the functionality of MW. In order to minimize negative consequences of MW, it may be essential to formulate and implement specific strategies.

Keywords: mind wandering, costs, benefits

Course: Use of technology and psychoeducational psychotherapy in the follow-up of mood disorders in adolescents

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Mood Disorders are increasingly common in adolescents. Considering the willingness and proximity of adolescents to use technology, the use of technology can also be chosen in the follow-up of the psychiatric problems they experience. Mood diaries or sleep related logs can be recorded via an app
Psychoeducational psychotherapy is also used for parents and adolescents to understand and recognize mood disorders and to anticipate possible difficulties they may encounter. In this

course, current information about the use of technology and psychoeducational psychotherapy in mood disorders in adolescents will be shared and case examples will be given.

Keywords: mood disorder, psychoeducational psychotherapy, technology

Use of technology and psychoeducatıonal psychotherapy in the follow-up of adolescents diagnosed with mood disorders
Which points are important in the follow up of adolescent diagnosed with mood disorders?

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There has been growing interest in the clinical and public health implications of mood disorders that affecting children and adolescents. Both depression and mania themselves are affecting both cognitve and social functioning. Functional impairment effects youngesters daily life, also failure in daily life makes young people depressed or agitated.
Current literature depicts the disease as devastating with substantial impairment across psychosocial domains, high risk of suicide, psychosis, significant familial aggregation, and protracted illness course in which the classically described cycles of disease followed by well periods are rarely observed .
Also sleep disturbances are important for children and adolescents diagnosed with mood disorders. Among youngsters with depression, mania or chornic irritability, difficulty in falling asleep, sleep countinuity and shortness in sleep duration are common.
Difficulties with sleep and disruptions to circadian rhythms are hallmarks of mood disorders. In the case of mood disorders, disruptions to sleep can form part of a clinical diagnosis based on the criteria established in the Diagnostic and Statistical Manual of Mental Disorders (5th ed., DMS-V, American Psychiatric Association, 2013). Both insomnia and hypersomnia can form part of a diagnosis of major depressive disorder (MDD), the most common mood disorder. Sleep and mood are tightly linked, with mood tending to decrease as time since last sleep increases, and interventions to improve poor sleep can improve symptoms of depression or mania. Database searches were undertaken to identify publications on insomnia, but also on other sleep problems such as hypersomnia, short sleep duration, self-identified and/or generic ‘sleep problems’ and circadian sleep-wake cycle dysrhythmias.
Another important aspect during follow up of youngesters daignosed with mood disorders is monitoring suicide ideations, suicide attemps and self harm behaviours.
A mainstay in the identification and management of youth at risk for suicide is the use of suicide risk factors, such as past suicide attempt(s), past or current suicidal ideation, mood disorders, substance use disorders, psychosis, male gender, and lack of family support. A history of at least one medically serious suicide attempt or violent self-harm is a particularly important risk factor.
Anger managment is another behavioral problem that may affect daily functioning and interpersonal relationships. Anger, irritability, and aggression are most common reasons for child mental health referrals. During mood disorders, managing anger outbursts is essential.
Psychoeducation, behavioral interventions, and pharmacological approaches are important for managment of mood disorder among adolescents and children. During pharmacological treatments, metabolic, cardiac, neurological side effects should be considered.

In this part of the course important follow up points, partly mentioned above, among adolescents diagnosed with mood disorders will be discussed.

Keywords: Mood disorders, adolescence, follow up, sleep problems, sucidality, side effects

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Emotion recognition: A Conceptual and neurobiological perspective

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Emotion recognition refers to recognize emotions from voices, eyes, body movements and facial expressions(1). The emotion recognition difficulties play a role in the developmental and communicational problems and psychopathologies(2).
Emotion recognition is immature at birth and develops with age throughout childhood and adolescence(3). Babies prefer to look at positive faces more than negative faces(4). Recognition of happiness is fully developed at age 6, while recognition of negative emotions continues to develop more slowly throughout adolescence, approaching adult level at age 14(5).
Even though preschoolers understood emotions in anger, happiness, and neutral-voiced expressions, they made more mistakes than older children in recognizing emotions from tone in verbal expressions. Facial emotion recognition develops earlier than verbal emotion recognition, suggesting that facial emotion processing precedes verbal emotion processing. Chronaki et al. study showed that emotion recognition from facial expressions reaches adulthood at the age of 11(6).
Emotion recognition is associated with structural and functional brain regions and neurotransmitter levels(7). Deficiencies in recognizing and labeling emotions in children are associated with changes in brain regions such as the amygdala, insula, dorsal anterior cingulate (DACC), dorsolateral prefrontal cortex (DLPFC), ventrolateral prefrontal cortex (VLPFC), parietal cortex, and medial temporal gyrus(8).
In a study evaluating relation between emotion recognition and core brain regions revealed that the posterior PFC was related to a lower happiness recognition and a higher sadness recognition, whereas the medial orbitofrontal region was related to a lower sadness recognition and a higher happiness recognition(8).
Studies in children report that the amygdala and PFC are activated when observing fear, happiness, anger, and neutral facial expressions. Angry and happy prosodic speech increases activity in the posterior temporal cortex, more so with angry speech(1).
As a result, there are many studies in emotion recognition, however literature in preschool period is relatively scarce. In this presentation, we aim to enlighten the development of emotion recognition during childhood and relations between brain structures regarding emotion recognition.

Keywords: emotion recognition, childhood, brain structures

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Is Language more than language? Emotion recognition in children with developmental language disorder

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Developmental Language Disorder (DLD) is characterized by deficiencies in comprehension and production of language that may affect mainly morphosyntax, semantic, and pragmatic domains. DLD is seen at the percentage of 9,9 in the population [1] and may have long-term socio-emotional outcomes [2]. Although language is the basic focus in DLD, social communication incapacities of these children may also be the major concern according to emerging literature [3].

Social communication is a broad term that may include content and form of the language, conversational capabilities, social and emotional learning processes [4]. It emerges from the dynamic and synergistic relations among social interaction, social cognition, pragmatics, and language processes (receptive and expressive). According to Brinton and Fujiki [5] linguistic impairments, social cognition deficits, emotion regulation, and emotion understanding deficiencies are the main factors that play crucial role in social communication competencies of children diagnosed with DLD.

Emotions are distinguished signals especially for the children with language impairments [6]. They are rapid and apparent visual and auditory sources of social information [7]. In this way, those children may adapt their behaviors socially within their limited linguistic capacities. Language whether may predict the later emerging ability of emotion recognition

[8] or become a bridge between social cognition and emotion understanding [9]. Although emotions are innate features embodied human beings and the other mammalians, language may also not be late existing ability of our species [10]. Thus, the nature of association between language, emotion, and socialization is still questionable.
In this presentation, social communication ability of the children with DLD will be discussed with the regard of their emotion recognition and understanding competence. As a result, it is going to be assumed that DLD may not be just a problem of language and those children with this diagnosis should be evaluated and treated in this broader context. Therefore, social, and emotional needs of these children have to be met in therapeutic and educational setting in this framework.

Keywords: Language, Emotion, Social Communication, Developmental Language Disorder (DLD), Emotion Recognition, Emotion Understanding

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Emotion processing and externalization disorders in preschool children

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Preschool children with externalizing behavior problems, such as attention deficit/hyperactivity disorder (ADHD), oppositional defiant disorder, and conduct disorder (CD), represent the most common referrals to mental health clinics, with rates ranging from 7% to 25% [1]. It was

suggested that emotional processes might affect the externalization problem' steps. From a developmental perspective, children who misread emotion cues may develop cognitive errors in intent attributions and response choices that cohere over time. In addition, poor emotion knowledge may predict the inability to manage and utilize emotions adaptively for prosocial outcomes.

Recently, it has been emphasized that emotion dysregulation is a core feature of ADHD and a major contributor to the functional impairment experienced by children with ADHD. Individuals with ADHD are impaired across multiple domains of emotion dysregulation, including emotion recognition/understanding (ERU), emotion reactivity/negativity/lability, emotion regulation, and empathy/callous-unemotional traits. A meta-analysis study examining emotion processing revealed that children with ADHD had the greatest impairments in emotion reactivity, negativity, and lability. However, as with executive functions, there is significant heterogeneity for emotion regulation deficits in children with ADHD [2].

One of the domains of self-regulation identified as relevant for studying the adaptive functioning of young children is emotion regulation (ER). ER refers to responding effectively to emotional reactivity in a flexible manner, including the ability to facilitate a reduction in the intensity of emotional arousal intensity but also to generate and control emotions when contextually necessary. Preschool children with externalizing behavior problems which are reported as having higher conduct problems and callous-unemotional traits, which refer to low levels of guilt, empathy, and caring for others, display poorer ER [3].

Preschool children with ADHD were treated with an intervention program, ERU improved from pre-intervention to post-intervention, and change in ERU predicted improvements in executive functions [4]. Although emotional processing is a component of overall social functioning, literature is suggested it is an important piece to consider when working with young children with externalization problems.

Keywords: preschool children, emotion processing, externalization disorders, emotion regulation, emotion recognition/understanding

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Emotion recognition and internalizing disorders in preschool children

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Internalizing disorders are characterized by anxiety, depressive, and somatic symptoms. We frequently encounter cases that these disorders accompany each other in the clinic. There are theories and studies on emotion recognition as a common pathway of mentioned psychopathologies. For example, elevated depressive and separation anxiety disorder symptoms were associated with less accurate facial emotion recognition, whereas for generalized anxiety disorder, elevated symptoms were associated with more accurate facial emotion recognition, specifically recognition of happiness and fear (Rappaport et al., 2021). Social anxiety disorder may also interpret vague social cues as threatening, resulting in lower thresholds for identifying others' anger expressions, faster response, or increased accuracy in recognizing anger (Maoz et al., 2016).

Amygdala, which has an important place in the neurobiology of depression and anxiety disorders, is also involved in emotion processing (Šimić et al., 2021). In MRI studies, patients with anxiety and/or depression showed amygdala hyperactivation when exposed to fearful facial expressions compared to the control group (Beesdo et al., 2009). The right amygdala-medial prefrontal cortex functional connectivity was examined by fMRI in 24 preschool children, connectivity was positively related to emotion regulation ability; negatively related to negative affect and right amygdala reactivity to facial expressions of emotion (Gaffrey et al., 2021).

The development of the ability to recognize and understand emotions portrayed in facial expressions and non-verbal cues, is essential to the development of socioemotional competence. Emotion recognition in childhood also has been shown to predict social functioning and psychological well-being (Kujawa et al., 2014).

As Winnicott says, "There is no such a thing as baby", it is not possible to evaluate a child independently of the relationship with the caregiver especially in the preschool period. Feng et al showed that behavioral inhibition may place children of childhood-onset depression mothers at risk for developing maladaptive ways of regulating negative emotion, whereas mothers' positivity may serve as a protective factor for children (Feng et al., 2008). Attachment types and characteristics can be effective in explaining this connection. More securely attached children experience more global positive affect and less global negative affect, are better able to regulate emotions, and more often use cognitive and social support coping strategies (Cooke et al., 2019).

As a result, we can deduce that the pre-school development of emotion recognition and regulation will have important effects on the child's future life and possible psychopathologies such as anxiety and depression. Understanding the environmental and neurobiological basis of this development is important for intervention studies and early diagnosis.

Keywords: Emotion Recognition, Internalizing Disorders, Preschool Children

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Suicide attempts in adolescence

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According to Turkish Statistical Association and Center for Disease Control, second leading cause of death in adolescents was completed suicide attempts (CDC 2017, Türkiye İstatistik Kurumu 2011). However, underlying psychobiological processes in suicide behavior are not well established yet. The common risk factors of suicidality in adolescents could be either psychological, behavioral, cognitive, interpersonal, and personal (Thompson and Swartout 2017). Completed suicidal attempts are 25-60 times less common when compared to uncompleted ones. Furthermore, roughly 100.000 adolescences aged between 12 and 17 were examined in emergency service following suicide attempts in 2014 (CDC 2017).
One of the prominent psychological risk factors for suicide attempts were depressive symptoms (Goldsmith et al. 2002) and major depressive disorder have been associated with a five-fold risk for suicide attempt, even after controlling for other comorbid disorders (Goldston et al. 2009). Even though psychological and psychiatric problems are the most significant risk factors for suicidality (Nock et al. 2010), the majority of patients do not commit suicide, and thus, there might be other factors that increase suicide risk. Self-reported (Brezo et al. 2006) and performance-based (Swann et al. 2005) studies have linked suicidality with impulsivity in both adult and adolescents.
Impulsivity is defined as a tendency to prompt, unplanned actions towards internal or external stimuli regardless of the negative consequences and have a broad and multidimensional construct. The UPPS-R shows different domains of impulsivity such as sensation seeking (SS)

- searching intense, novel or risky experiences; lack of premeditation (LPM) - behaving recklessly, regardless of the consequences; lack of perseverance (LPS) - the predisposition to restraint goal-directed behaviors; and emotional tendency to urgency - hasty behavior in response to negative (negative urgency, NUR) and positive emotions (positive urgency, PUR). Affective impulsivity, particularly negative urgency is separate from other types of impulsivities and might be linked to suicide attempts, depressive symptoms, borderline personality disorder symptoms, impulse-control disorders, and non-suicidal self-harm (Rawlings et al. 2015) which are directly related to suicidality. Furthermore, depression, personality disorders and impulsive responses to emotions are predicted a faster time to suicide attempts. Aforementioned information has assumed that emotional impulsivity has a multidimensional association with the different variety of suicide behaviors. Moreover, two recent studies claimed that emotional regulation and impulsivity had a strong cognitive association with each other and were related to cognitive impulsivity which was measured by the BIS-11 instrument. Despite increasing number of studies concerning suicidality in adolescents, the precise link between impulsivity, depression and suicidal attempts remains vague. Although there is emotional and executive construct related to impulsivity, studies commonly assess single and unitary dimensions of impulsivity. Herewith, it is unknown which dimension of impulsivity is significantly related to suicidal behavior and whether the impulsive behavior is a crucial predictor or mediator for suicidality. Aforementioned relations may guide the clinicians in developing the preventive measures for a risky group of adolescents.

Keywords: adolescence, suicide, impulsivity

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Emergency cases in child and adolescent mental health Cases presenting with anxiety

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Applications to the emergency department with anxiety symptoms have an important place among child and adolescent psychiatry emergencies. Anxiety symptoms may arise from organic etiologies as well as from generalized anxiety disorder, panic disorder, obsessive compulsive disorder and bipolar disorder. Anxiety can take many forms. These can be physical symptoms such as chest pain, palpitations, nausea, sweating, as well as emotional symptoms such as restlessness, fear and panic. It is important to evaluate the patient's signs and symptoms in detail and to review the differential diagnoses. In addition, psychoeducation is an important part of the treatment. Of course, psychopharmacological treatment options for the cause should also be evaluated.

Keywords: Adolescent, Anxiety, Child, Emergency, Symptom

Agitation and agression in children and adolescents in the emergency department (ED)

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Private Clinic

Objective: Agitation and agression in children and adolescents in the emergency department (ED) can be very harmful and dangerous for the patient himself/herself, the other patients, and the staff. The restraint is needed for %6-10 of children who were presented to ED for psychiatric reasons. Unfortunately, at least 30 children died in restraint related situations in the United States. Nevertheless, there is little guidance to manage agression and to be able to avoid restraint.
Methods: Best Practices for Evaluation and Treatment of Agitated Children and Adolescents (BETA) in the Emergency Department Consensus Guidelines were created by the American Association for Emergency Psychiatry and the American Academy of Child and Adolescent Psychiatry Emergency Child Psychiatry Committee.
Results: This guideline describes general and spesific suggestions for medication use and according to guideline, the etiology of agitation is important for the choice of treatment.
Conclusion: This guideline should be considered for the use in pediatric emergency departments in Turkey.

Keywords: Agitation, agression, emergency department

Side effects of some psychopharmacological agents

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Some drugs can cause hyperkinetic movement disorders and hypokinetic ones, such as parkinsonism, by changing the biochemical properties of the central nervous system. Drug-induced hyperkinetic movement disorders are frequently encountered in clinical practice and

significantly impair patients' quality of life. Current or previously used drugs in the anamnesis, drugs added recently, and dose changes should be questioned. In the treatment, the responsible drug should be discontinued. If the drug cannot be discontinued due to the underlying disease, the dose should be reduced and switched to a less risky drug. If none of these can be done, adding another effective drug for treatment is appropriate.

Acute dystonia (1) is continuous muscle contractions of a bending nature that lead to abnormal postures. It develops after starting or increasing the dose of dopamine receptor antagonist drugs. The reaction often occurs after the first dose and in half of the patients in the first 48 hours. Dystonia most commonly affects the eyeballs, face, tongue, jaw, neck, and trunk muscles. For example, with tongue protrusion, the head involuntarily turns backward or sideways, the mouth opens strongly, the trunk contracts back, and the eyeballs contract upwards or sideways. Acute dystonia from drugs resolves within minutes with parenterally administered anticholinergic or antihistamine drugs. The most common is biperiden 1-2 mg.

Acute akathisia (2) is a feeling of inner restlessness accompanied by complex, repetitive stereotypical motor movements. Most often, typical neuroleptics, antiemetic agents, and rarely serotonergic drugs can develop acute akathisia. It occurs a few weeks after the use of drugs. Patients cannot sit for a long time; they are in constant motion, such as moving their feet and walking around. Akathisic movements are complex, partially purposeful, repetitive movements that can be suppressed and reduced by distraction. Propranolol (<80 mg/day doses), mirtazapine, benzodiazepine may be beneficial.

Neuroleptic Malignant Syndrome (NMS) (3) is a rare, life-threatening idiosyncratic reaction. NMS symptoms may begin hours or days after starting the medication. Clinically, hyperthermia, diaphoresis, widespread rigidity, and unresponsiveness to antiparkinsonian drugs are noted. These symptoms may be accompanied by tremors, sialorrhea, dystonia, trismus, myoclonus, dysarthria, dysphagia, and rhabdomyolysis. Disorders ranging from confusion to coma, autonomic incontinence, and instability develop at the level of consciousness. In biochemical examinations, elevated creatine kinase and leukocytosis are detected in the blood. In treating NMS, first of all, the neuroleptic drug responsible for the picture is discontinued. In different clinical observations, dantrolene, bromocriptine, and levodopa were used. Benzodiazepines and amantadine have also been helpful.

Tardive Syndromes (TS) (4) are a group of hyperkinetic movement disorders characterized by repetitive and stereotypical involuntary movements that may occur during long-term treatment with agents that block dopamine receptors. It may disappear with early discontinuation of the causative drug but may also occur after discontinuation of the responsible drug. The risk factors for TS are advanced age, female gender, long duration of drug use, cumulative drug exposure, history of affective disorder, history of substance use, and early extrapyramidal side effects such as parkinsonism (5).

Keywords: Acute Dystonia, Acute Akathisia, Neuroleptic Malignant Syndrome, Tardive Syndromes

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How do antidepressants work?

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The first clinically useful antidepressant medications were discovered serendipitously about 60 years ago (1). Subsequently, laboratory studies revealed that these drugs increased synaptic concentrations of serotonin and norepinephrine, and this action was hypothesised to underpin their antidepressant action (2). The researchers first focused on monoamine neurotransmitter receptors to understand effectiveness of antidepressants. With the elucidation of molecular and cellular path ways that regulate neuronal function, research has progressed beyond monoamine neurotransmitter receptors to focus on intracellular signalling cascades, gene expression, and protein translation as central for antidepressant drug action (3).
Evidence suggests that synaptic plasticity mechanisms are affected by chronic stress, and that antidepressant treatments oppose or reverse these effects. At the molecular level, chronic stress causes alterations of glutamate, intracellular signalling, transcription factors, and gene expression (including epigenetic changes) (4). BDNF signalling pathways are also decreased by stress and in post-mortem brains of indviduals with depression (5,6). Chronic, but not short-term administration of SSRI or norepinephrine reuptake inhibitor antidepressants can enhance synaptic plasticity and block the synaptic deficits caused by stress (5,7).
By contrast with stress, chronic antidepressant administration, both SSRI and norepinephrine reuptake inhibitor agents, increases the expression of BDNF and its receptor TrkB in the prefrontal cortex and hippocampus (5,6). Moreover, the behavioural actions of typical antidepressants in animal models are blocked by deletion of BDNF, and infusion of BDNF into the prefrontal cortex or hippocampus is sufficient to produce antidepressant effects (5-7). Additionally, fluoxetine-induced synaptic plasticity in the ocular dominance and fear extinction studies is dependent on BDNF, and BDNF infusions are sufficient to produce these effects (8,9). These studies show that antidepressant induction of BDNF expression, over the course of several weeks of treatment, enhances synaptic plasticity that contributes to behavioural response to these agents. Antidepressant treatment also increases downstream signalling, including the cAMP and Ca2+ that increase the expression of BDNF (10).
Although currently available antidepressants have a delayed clinical onset, a single dose of ketamine, a non-competitive open channel NMDA (N-methyl-D-aspartate) antagonist, produces rapid antidepressant actions within hours and leads to a rapid resolution of suicidal ideation (11). Moreover, many of these studies include patients who have not responded to two or more typical antidepressants (eg, SSRI or SNRI agents). The results also show that a single dose of ketamine rapidly increases synapse number and function in medial prefrontal cortex neurons, and reverses the synaptic deficits caused by chronic stress (12,13). Psychedelic drugs likely work via 5-HT_{2A} receptors but require more research to elucidate their antidepressant effects (14).

Keywords: antidepressants, neuroplasticity, stres, BDNF

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How long should we continue antidepressant treatment? The role of maintenance treatment

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Depressive disorders often have a chronic and episodic course. The heterogeneity of MDD results in a varied longitudinal course, but half of patients will have a chronic or recurrent course of depression (1). It is accepted that the mean recurrence rate of depression is 40% after the first episode, 55% after the second episode and 90% after the third episode (2). For this reason, the goal should not be only the remission, but also prevent the recurrence via the maintanence treatment strategies.

According to the studies about maintenance treatment of depression, it is shown that ADs are effective in the prevention of recurrence (3,4). It is stated that ADs which are used in the acute phase should be used at the same dosage in the maintenance phase of the treatment (5,6). In the guidelines, it is recommended that patients maintain treatment with antidepressants for 6 to 9 months after achieving symptomatic remission, while those with risk factors for recurrence and experiencing recurrent depression extend antidepressant treatment to 1-2 years (7,8). In the literature, there are few studies about the recurrence prevention efficacy of maintenance treatment longer than 2 years (3,9).

In summary, ADs are effective pharmacological treatment options in the prevention of recurrence of depression, but it is important to ask; how to use ADs in the maintenance treatment, how long it should continue and what are the critical points regarding maintenance treatment and ADs' discontinuation. In this presentation, it is aimed to answer these questions according to current evidence in the literature.

Keywords: Depression, Antidepressants, Recurrence, Maintenance, Pharmacotherapy

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How long should we continue antidepressant treatment: Disadvantages of long-term treatment.

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Antidepressants are still widely used in first-line treatments of depression today. Clinicians have been promoted to maintenance therapy with antidepressants (ADs) for the years as a results of the recurrent nature of unipolar depression. Despite the common approach of pharmacological prevention extending to lifelong, the global burden of depression has increased over the last 30 years (1). In particular, the promotion of SSRIs as more tolerable played a major role in encouraging the long-term use of ADs. In fact, the renaming of "withdrawal symptoms" to "discontinuation symptoms" in commercial interest has led to neglect of the long-term outcomes of SSRIs. On the other hand, sub-threshold symptoms of

depression were easily turned into a drug target in the globalizing world market. And the anxiety disorders, likewise, have been cosmetic target of SSRIs.
It is known that the durations are ranging from only weeks to months in prominent studies presenting the results of long-term AD treatment. The frequency and duration of AD use has been far beyond even a bias as if depression is not likely to remit as much as it relapses, which renders non-pharmacological coping treatment models worthless. Projecting the results of limited follow-up researches into the administration of ADs for indefinite periods has had some financial and medical costs over the years. The deceptive definitions of treatment-resistant created regardless of the influence of residual symptoms on the life quality shift the treatment paradigm to medication-based (2).
There has been a substantial body of evidence suggesting detrimental effects of long-term use of ADs as well as studies implicates prolonged prevention with pharmacotherapy. Contrary to predictions in actual treatment trends, it has been argued that the ADs induces the treatment-unresponsive course and potential resistance to treatment in the case of rechallange of the pharmacotherapy. As previously revealed in a meta-analysis, discontinuation of antidepressants may be associated with fewer relapses and a longer time to relapse (3). Fava et al proposed the phenomenon of “paradoxical effect” which refers to potential onset of depressive symptoms and the aggrevation of initial manifestation of the disease (4). If parsing out of the outcomes of STAR*D, it would disclose the convincing evidence with respect to which extent the loss of antidepressant efficacy and the increased refractoriness in the subsequent treatment steps. Furthermore, cognitive and metabolic side effects were encountered frequently in the course of protracted treatment with ADs.
To summarize, it has been propagated by the current paradigm that there was no other choice but to continue the treatment with ADs. It is aimed that the current presentation would let the clinicians to gain a keen insight into the evidence acquired over the years about prolonged treatment of depression with ADs. The AD induced phenomenones and long-term side effects were discussed in the current presentation.

Keywords: prolonged antidepressants, paradoxical effect, oppositional tolerance, treatment resistance depression, efficacy of antidepressants

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What do the guidelines say about the treatment of psychosis?

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Psychotic disorders are mental disorders that can present with heterogeneous symptoms, including delusions, hallucinations, disorganized speech or behavior, and impaired cognitive ability. Relapses are common in psychotic disorders, leading to loss of functionality in the patient and the family. Treatment guidelines are tools that help clinicians plan practical, effective, and evidence-based treatments to improve patient's quality of life. This presentation is primarily aimed to review the current treatment guidelines for schizophrenia and other psychotic disorders. First of all; the selection, dose, and duration of antipsychotics in the first episode of psychosis will be discussed and the guidelines' recommendations on these issues will be discussed. It will also be discussed in which patients and under which conditions antipsychotic discontinuation may be appropriate in first-episode psychosis. Then, treatments that can be used in cases of recurrence and relapse will be discussed in light of the guidelines. Afterward, it will be focused on how long the maintenance treatment should continue and at what doses. During maintenance treatment, information will be discussed according to which criteria the choice between oral antipsychotics and depot antipsychotics should be made. In the last part of the presentation, treatment possibilities in treatment-resistant schizophrenia will be discussed, and also what the guidelines recommend in situations such as aggression-suicidality and agitation that force clinicians will be emphasized.

Keywords: psychosis, schizophrenia, treatment, guideline

Do Glutamatergic modulators have a role in the treatment of obsessive compulsive disorder and related disorders?

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Obsessive compulsive disorder (OCD) is the main disorder of OCD and related disorders in DSM V diagnostic group. Body diysmorlphic disorder, trichotillomania, skin picking disorder and hoarding disorder are other psychiatric disorders of this group. Evidence-based pharmacological interventions for OCD and related disorders are targeted mainly at the serotonergic and dopaminergic pathways. Despite the availability of treatment options (therapy and pharmacological), about half of all patients with OCD fail to respond adequately to treatment; about 30% are refractory to treatment. Therefore, new treatment approaches are being developed for OCD and related disorders. One of the etiolocigal and treatment options for OCD and related disorders under study has been the glutamergic system and related agents. Glutamate is a ubiquitous excitatory neurotransmitter, which is involved in normal physiology, a variety of central nervous system functions, including excitotoxicity and neuronal migration. It is implicated in the pathogenesis of various neuropsychiatric disorders such as epilepsy, Parkinson's disease, Alzheimer's dementia, schizophrenia and OCD. Glutamatergic abnormalities, which are accused together with dopamine and serotonin in the physiopathology of OCD, and which have been increasingly researched in recent years, have been shown in both animals and humans. While no glutamate modulator can be considered proven as an efficacious treatment of OCD and related disorders, there is also evidence from clinical trials that

glutamatergic agents may be useful in the treatment of OCD and related disorders. Promising suggestions of benefit have been reported for memantine and riluzole. The evidence is thinner for N-acetylcysteine. Intriguing research on D-cycloserine and ketamine suggest potential benefit as well. Glycine, sarcosine, topiramate, lamotrigine, minocycline and pregabalin have been shown to be effective in the treatment of OCD too. However, additional work, using larger samples, is needed to expand and confirm these promising benefits. In this panel, it is aimed to discuss the role of the glutamergic system in OCD and related disorders, and the use of glutamergic agents for treatment, in the light of the literature.

Keywords: Obsessive-Compulsive Disorder, glutamate, memantine, riluzole, lamotrigine

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‘Naltrexone/Bupropion and phentermine/topiramate extended release form’ in the treatment of obesity

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The concept of obesity is defined according to body mass index (BMI≥30) rather than accompanying eating behaviors. Although food addiction is not yet accepted as an official diagnosis, it includes maladaptive eating behaviors even though people are satiated and the negative effects on health are visible (1). Not every obese person needs eating compulsions; however, obesity types in which there is an increased motivational effort for food and this is mediated by the reward circuit can be considered as an impulsive compulsive disorder.
Many new treatments for obesity are either approved or in end-stage clinical testing. One of the new obesity treatments is targeting multiple regions in the hypothalamic appetite pathways; phentermine, which is a stimulant, and topiramate, which is an anticonvulsant. There are studies showing that the combination (phentermine/topiramate 3,75mg/23mg) provides effective weight loss, especially in the first year of treatment, and prevents regain in the second year. In addition, the combination reduces the sympathomimetic effects and tolerance caused by phentermine alone and creates a synergistic effect by prolonging the duration of action (2).
Another combination, bupropion/naltrexon 8mg/90mg, leads to behavioral changes in the feeding and reward pathway and activates the anorexigenic pathway. It produces more weight loss than the use of both drugs as monotherapy. The combination, approved by the FDA, provides both weight loss and prevents regaining of lost weight; however, it is not recommended as first-line therapy (3).

Keywords; obesity, phentermine/topiramate, bupropion/naltrexon

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A New approach to the prevention and treatment of delirium: 'Dexmedetomidine'

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Delirium is a mental disorder with symptoms such as attention, memory, sleep-wake cycle, orientation, and thought disorder. It is very common in the clinic. Delirium cases are seen in inpatient up to 70%. However, it is often overlooked by clinicians[1]. The development of delirium is unfavorable for the prognosis of the patients. This situation may cause worse prognosis especially in elderly patients [2]. Often there is an underlying organic cause. There are many risk factors such as elderly age, male gender, inactivity, drug use, deterioration of hemodynamics, and structural brain anomalies [3]. The main treatment for delirium is the treatment of the underlying organic causes. It is necessary to avoid drugs as much as possible, as they may worsen the patient's condition. However, sometimes it may be necessary to treat symptoms such as agitation, hallucinations, and anxiety in the patient [4]. In this case, the drugs of first choice are antipsychotics and sometimes benzodiazepines. Although the use of these drugs is effective in reducing delirium symptoms, their contribution to the recovery of delirium is limited [5]. Dexmedetomidine is a potent selective α2-agonist and has sedative, anxiolytic and analgesic activity. It is used especially in intensive care units to provide sedation without respiratory depression in patients with mechanical ventilation [6]. In recent studies, there are data on the positive contributions of dexmedetomidine to the recovery of delirium, especially in delirium patients [7]. Although the information on the mechanism of action in delirium is not clear, the most likely hypothesis is inhibition of presynaptic noradrenaline transmission. In addition, it is thought that it does not cause respiratory depression, decreases the neuroendocrine response to surgery, and its anxiolytic and analgesic activities have an effect on the recovery of delirium [8]. Delirium is a mental disorder that is frequently encountered in the clinic and is difficult to recognize by clinicians from time to time. Patient management and pharmacological treatment should be well known. Considering that the drugs used in delirium may increase the symptoms of delirium, dexmedetomidine may be a good option in the treatment. Further research is required on this subject.

Keywords: Delirium, Dexmedetomidine, Subacute Delirium, Adrenergic alpha-2 Receptor Agonists, Nonopioid Analgesics

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Institutional care for young children and its developmental results

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Childhood is the most sensitive and critical period of mental development. The quality of the growth and development of children is possible with the temperamental characteristics of the parents, adequate and appropriate care for health and nutrition, secure attachment with the caregiver, and safety of the child. However, it is possible for the child to become vulnerable due to many reasons such as poverty, family problems, physical, mental or mental deficiencies in the parents, death of the mother or father, neglect or abuse. In this case, children are brought under the protection of the state and raised in different care models.

Millions of orphaned, abandoned and ill-treated children worldwide are not given adequate care by their families. For hundreds of years, two main societal approaches to the care of these children have been established: caring for children in institutional settings such as orphanages or dormitories, or placing children in families through foster care/adoption. Yet studies of caring for children who do not have access to a safe family environment show that the problem is arguably the most severe to date. The United Nations (UN) World Report on Violence Against Children 2006 reports that around 133-275 million children witness violence between their primary caregivers each year, and that at least 150 million girls and 73 million boys are subjected to sexual abuse. In addition, UNICEF estimates that close to 100 million children live on the street and 1-2 million are victims of sex and labor trafficking. The most vulnerable among these children are “children who cannot receive family care”. Although it is difficult to accurately record the actual number of children in institutions, estimates are that around 2,000,000 to 8,000,000 children live in institutional care worldwide.

According to the official data of 2018, 14,214 children are still under institutional care in Turkey. SHÇEK provides services with a total of 111 social house sites (6383 children), 1192

social houses (6199 children), and 63 child support centers (1632 children). The total number of adopted children is 16,809 and the total number of children cared for in foster homes is 6468. In a study conducted in Turkey in 2005 to evaluate the child protection system, it was shown that more than 70% of the children were placed under protection due to economic and social problems and that more than half of the institutional children had the conditions to return to their biological parents when the necessary environment and support were provided. In addition, in the United Nations Convention on the Rights of the Child signed by Turkey in 1995, it is stated that "children have the right to live with their parents unless it is determined to be contrary to the best interests of the child". As support was given, 11,485 children were returned to their families between 2005 and 2017.
In our presentation, in which the destructive developmental results of institutional care in early childhood are examined in line with the literature findings, it is emphasized that the importance of the timing of exposure to institutional care and that children who are taken into family care can experience developmental improvement in most areas. Impacts at developmentally critical periods highlight the need for urgent interventions and policy changes in terms of timing. These findings point to the need to develop intervention programs to prevent separation from families, to provide support services for families in need, and to develop counseling programs to prevent abandonment, abuse and neglect.

Keywords: Child, Institutionalized; Psychology, Developmental; Child, Abandoned; Child, Orphaned; Child Psychiatry; Outcome Assessment

Prodromal and resıdual symptoms in bipolar disorder

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Bipolar disorder is a severe, recurrent and disabling disorder with devastating consequences for the individual, family and society. It also shortens life expectancy, imposes high costs on healthcare systems, and carries a high risk of relapse and recurrence. The risk of relapse and recurrence within two years of the first episode is approximately 60 percent. In addition, more than half of patients experience more than one episode. Even in patients treated conservatively, the risk of relapse and recurrence is about 25%. Evidence suggests that recurrent episodes in bipolar disorder are associated with progressive structural changes in the brain, such as thinning of the gray matter, enlargement of the ventricles, deterioration of cognitive function, and decreased functionality and responsiveness to treatment. Therefore, recognition of prodromal signs is important to prevent episodes and neurodegeneration caused by episodes, reduce the need for hospitalization, cause fewer cognitive deficits, improve disease prognosis, and preserve neuroplasticity by allowing early diagnosis and early interventions.
Prodromal signs can be defined as early symptoms and signs that are distinct from the acute clinical phase. In studies conducted in patients with bipolar disorder, a significant proportion of patients have been reported to have subthreshold manic or depressive prodromal symptoms, including elevated or irritable mood, increased energy, racing thoughts, slurred speech, depressed mood, anhedonia, sleep disturbances, fatigue, self-harm, and suicidal ideation. It reportedly takes an average of 10 years from onset to definite diagnosis for patients with bipolar disorder. Considering the high morbidity, mortality, and chronic course caused by delay in diagnosis, the importance of recognizing prodromal symptoms for early diagnosis and treatment becomes clear.

Apart from the recurrent episode periods, sub-threshold residual symptoms often occur in bipolar disorder. Subtle signs of disease that persist despite significant improvement are referred to as residual symptoms. In clinical practice, residual symptoms are ignored, and the focus is on the recurrent episode periods. However, in a chronic disorder that progresses with remissions and exacerbations, residual symptoms are essential in that they have a high probability of recurrence. Residual symptoms impair the patient's quality of life and have a negative impact on functionality. There are studies that report that the negative impact of residual symptoms, particularly depressive symptoms, on social and psychosocial functioning is more pronounced. In one study, it was shown that more than half of the patients had residual manic and depressive symptoms. In another study, residual manic and depressive symptoms were found to affect the number of perseverative errors, fluency of speech, and ability to plan. A study examining 74 patients reported that 68 percent had residual mania symptoms and 54 percent had residual depression symptoms. Residual symptoms can be classified as mood-related, cognitive, neurovegetative, social, and behavioral.
Prodromal and residual symptoms are ignored during clinical follow-up of patients with bipolar disorder. Detection of prodromal symptoms and early intervention are critical for delaying episodes, reducing the severity of episodes, and even preventing relapse, recurrence, and hospitalization. Residual symptoms impair the patient's quality of life between episodes, predispose to new episodes, and lead to a worse disease course. In addition, the importance of psychoeducation, family interview, maintenance therapy, and long-term clinical follow-up for prodromal and residual symptom detection and early intervention is becoming increasingly clear.

Keywords: bipolar disorder, prodromal symptoms, residual symptoms, functionality, quality of life, prognosis

Prodromal and residual symptoms in depression

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The term depression is commonly used to describe an emotional state, a syndrome, and a group of specific disorders. In this context, depression has emotional, cognitive, somatic, perceptual and behavioral symptoms. Despite many effective treatments, depression remains a very common, disabling and costly condition.
Diagnostic criteria for depression are designed in classification systems such as the International Classification of Diseases (ICD) and (Diagnostic and Statistical Manual of Mental Disorders) DSM. These classification systems specify criteria for the number, severity, and duration of symptoms that the patient is expected to undergo before an acceptable diagnosis. However, in clinical practice, it is not uncommon to encounter sub-threshold symptoms of the clinical picture before a depressive episode is diagnosed. This is called a prodrome. Such subthreshold symptoms may persist for a significant period of time in some patients and may cross the threshold into clinical depression with or without stressors. Prodrome can be considered an early marker of depression and is probably biologically determined. Various studies have also revealed other subsyndromal states, namely oligosymptomatic mood states and brief episodes variously referred to as minor, subsyndromal, brief, or intermittent. In addition, these studies have increased the importance of early detection of individuals at risk (1,2).

Although mood instability, such as sudden and intense mood changes in a relatively short period of time, is a widely experienced feature, it is argued that it is a precursor to depression due to the lack of a uniform definition. The neurobiological correlates of mood instability have not been fully deciphered, and current evidence suggests abnormalities associated with the amygdala and prefrontal cortex (3). In medicine, prodromes can be identified by early symptoms and signs that differ from the acute clinical phase. The prodromal period generally refers to the time interval between the onset of the first prodromal symptom and the onset of the characteristic signs/symptoms of the fully developed disease. Anxiety/tension, irritability, loss of interest, sleep disturbance, decreased drive or motivation, emotional distance, depressed mood, gastrointestinal problems, fatigue, impaired concentration, and decreased energy are reported as prodromal symptoms in patients with depressive disorder.
Residual symptoms are experienced by most patients treated for depression, including those who have achieved remission. These symptoms prevent individuals from fully recovering and feeling truly "well". Often, symptoms associated with deficits in positive affect (such as anhedonia, irritability, anxiety, pessimism, and lack of motivation) persist after other symptoms of depression have resolved.
Traditional nosography has emphasized a cross-sectional description of syndromes. Evaluation of prodromal symptomatology and its relationship to the residual phase of affective disorders can complement this approach by providing a longitudinal perspective. Such a perspective paves the way for the development of clinical staging in psychiatry.
Over the years, staging has been increasingly recognized as an important component of clinical assessment, particularly with reference to unipolar depression.
Identifying prodromes helps plan early intervention and preventive strategies in individuals, and also gives a clue about the likelihood of clinically significant depression developing as a full-fledged syndrome. Thus, it minimizes the impact of a depressive episode and improves the quality of life.

Keywords: prodromal, residual, depression

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Prodromal and residual symptoms in schizophrenia

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Schizophrenia is a serious mental illness whose lifetime prevalence variates between 06-1.9%, emerges during young ages, relapses that vary may also emerge in addition to persistent symptoms, deteriorates functionality and goes along with disability. Diagnosis of schizophrenia is a diagnosis that may be skipped easily generally. The disease contains a chronic process where remission and relapses follow immediately afterwards acute period after a prodromal stage generally. Any relapse process is a factor in deterioration of mental status and the disease becoming chronic. Patient generally suffer over three attacks during life and the part attacks fall into remission. During such process, decline in functionality and progress of neuro-biological damage correlate with each other. Some patients may recover partially with treatment. And the best response is taken at first psychotic attack however the disease relapses again within a couple of years due to non-compliance with treatment. Even though the disease generally has bad prognosis, one of significant causes of bad prognosis is getting late in starting treatment. It should not be forgotten that untreated period of disease in schizophrenia is a prognostic factor that impacts all other factors adversely. Getting late in starting treatment has direct relationship with prodromal symptoms, increase of such process is also related to severity of symptoms.
Early response services put into effect recently across the world drew attention to importance of early response to the disease, prevention of development of schizophrenia at persons under risk also included. Nevertheless, using description of clinical high risk (CHR), scales were determined to classify persons under high risk or in other words, persons considered to be having prodromal syndrome.
Although advances in pharmacological treatments show significant efficacy on positive symptoms, it is known that that is are not very effective on negative and cognitive symptoms, and even have a negative effect. Only 6 % of patients being in remission no longer suffered from a residual symptom at the time of discharge. These symptoms, which cannot be eliminated in schizophrenic patients especially after they are in clinical remission, are the symptoms whose effects on social functionality and quality of life are tried to be reduced through rehabilitation. These symptoms, which have been described since the time of Kraepelin and Bleuler, can be described as further deterioration of normal behavior and functions. Negative symptoms such as blunt affect, emotional withdrawal, decrease in mental activities and loss of control over willpower, loss of interest and will, in accordance with the definition of "avulsion syndrome" by Kreapelin, form the basis of residual symptoms. Residual symptoms include symptoms other than the patient's psychotic episodes and the side effects of the drugs used. These symptoms of the patient do not benefit from medications. It should be noted that residual symptoms and deficiency symptoms are different from each other. Residual symptoms that have not improved during remission period after the treatment process, are often seen as blunted affect, conceptual disorganization, passive or apathetic social withdrawal, emotional withdrawal, lack of judgment and insight, poor attention, somatic concern, difficulty with abstract thinking, anxiety, and poor rapport.

Keywords: Schizophrenia, prodromal, residual