

# 8<sup>th</sup> International Congress on Psychopharmacology & 4<sup>th</sup> International Symposium on Child and Adolescent Psychopharmacology

## POSTER RESEARCH PRESENTATIONS

[Abstract:0004][Others]

### Sleep and life quality of individuals with septum deviation

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**OBJECTIVE:** Nasal septum deviation is a major cause of nasal obstruction. Although the relationship between sleep quality and respiratory functions is studied well, studies involving the relationship between sleep quality and nasal septum deviation are inadequate in Turkey. In this study we aimed to evaluate sleep and life quality of individuals with septum deviation who presented to the otolaryngology outpatient clinic.

**METHODS:** Fifty-one patients were enrolled in the study. Chronic sinusitis, obesity, nasal polyps, allergic rhinitis, history of chronic psychiatric disorder, presence of chronic medical illness were the exclusion criteria. 29.4% were women and mean age was 27.4. The data was collected by using Sociodemographic Form, Nasal Obstruction Symptom Evaluation (NOSE) scale, Short Form-36 (Sf-36), and Pittsburgh Sleep Quality Index (PSQI).

**RESULTS:** Mean NOSE score was  $52.4 \pm 22.4$ . The PSQI scores revealed that 25.5% (n=13) of participants' (sleep quality was well, while 74.5% (n=38) of them was bad. Those have worse sleep quality have higher NOSE scores than those who have better sleep quality. The difference between the study groups was statistically significant. There were statistically significant negative correlations between the NOSE scores and all subscales of the SF-36. Emotional role functioning and Social functioning subscales of SF-36 had highest correlation coefficients with NOSE total scores and the correlation was statistically significant.

**CONCLUSION:** The results obtained from the study showed that patients with nasal septum deviation had lower points in sleep and life quality scores. In a study with 3,442 patients, it was shown that patients with chronic nasal obstruction had lower scores in sleep and life quality when compared with the healthy controls. In this present study, statistically significant relationship was found between nasal obstruction severity and disruption of sleep quality. Although decreased scores in all areas of quality of life in patients with nasal obstruction, only the reduction in the subscales of emotional role difficulties and social functioning were statistically significant. We believed that these results were due to small sample size. Cross-sectional nature of the study, small sample size, and not including a control group were limitations of the study. Results of this study supports the notion that it is important to evaluate sleep and life quality of individuals with nasal septum deviation.

**Keywords:** septum deviation, sleep quality, life quality

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[Abstract:0006][Dependencies]

## The relationship between internet addiction and depression in adolescents with attention deficit and hyperactivity disorder

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**OBJECTIVE:** Attention Deficit and Hyperactivity Disorder (ADHD) is one of the most common neurodevelopmental disorders of childhood. Previous research has been shown that ADHD is commonly comorbid with other psychiatric disorders. Depression occurs in adolescents with ADHD at a significantly higher rate than in adolescents without ADHD. The internet is becoming major influences in the lives of adolescents. Internet addiction is a disorder which includes preoccupation with internet and failing in control of internet use that causes impairment in the global functioning of life. Behavioral dys-inhibition, poor neurocognitive skills, and immediate reward preference in children with ADHD have been suggested as risk factors for internet addiction. In addition, various studies have examined the relationship between Internet addiction and the psychological characteristics of adolescents, including depression. In this present study, we aimed to determine the relationship between internet addiction and depression in adolescents with ADHD.

**METHODS:** One hundred and eleven patients with ADHD whose age range 12 to 18 who were followed up in Erciyes University Medicine Faculty's Child and Adolescent Psychiatry Department were included in this study. The control group consisted of 108 adolescents who have no history of psychiatric disorders by psychiatric interviews. Patients and control groups were asked to complete sociodemographic data form, Internet Addiction Scale (IAS), and Children's Depression Inventory (CDI). Parents of all adolescents were asked to complete Attila Turgay Scanning and Evaluation Scale based on DSM-IV for Behavioral Disorders in Children and Adolescents.

**RESULTS:** ADHD group's mean age was  $13.9 \pm 1.9$ , control group's mean age was  $13.7 \pm 1.8$  years. There were 29 girls, 82 boys in ADHD group and 30 girls, 78 boys in the control group. There were no significant age and sex differences. The two groups had the similar socioeconomic level. IAS include deprivation, control difficulties, functional impairment, and social isolation subscales. IAS subscales ( $p=0.007, 0.000, 0.008, 0.000$ ) and total scores ( $z=-3.814, p=0.000$ ) of adolescents with ADHD were found significantly higher in comparison to the control group. IAS scores correlated significantly with domains of inattention ( $r=0.406, p<0.001$ ), hyperactivity ( $r=0.495, p<0.001$ ), and impulsivity ( $r=0.434, p<0.001$ ) scores. When compared to control group, ADHD group depression scale scores were significantly higher ( $z=-3.259, p=0.001$ ). IAS and CDI scores were not statistically different between sub-types of ADHD. IAS scores had positive correlation with depression scores in ADHD group ( $r=0.429, p=0.000$ ) and control group ( $r=0.549, p=0.000$ ).

**CONCLUSION:** These results support that ADHD would present as a risk group for internet addiction. Similarly depression scale scores were significantly higher in the ADHD group. This result confirms a relationship between ADHD and depression. The relationship between internet addiction scale scores and depression scale scores are similar in ADHD and control group. Thus, ADHD is thought to be an independent risk factor from depression for internet addiction risk.

**Keywords:** ADHD, adolescent, depression, internet addiction

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[Abstract:0012][Mood disorders]

## Early puberty among Saudi schoolgirls and its impact on depression behavior in Jeddah city

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**OBJECTIVE:** The recent human history has witnessed before in worldwide the transformation of child growth and development and these changes including the decreasing age at puberty for girls. While there is evidence that the age of puberty among girls appears to have been declining in recent decades in different countries around the world such as industrialized countries, the oil-rich countries, and the

Arabian Gulf region, unfortunately the data regarding the average age of puberty for girls is considered scarce in Saudi Arabia and the Arabian Gulf region. In addition, it has been observed recently in Saudi society that the girls had attained puberty at an early age before 11 years old, also early puberty for girls may causes some health, psychological, and behavioral effects in the long run. So, the purpose of this study is to assess the present age of puberty among schoolgirls in Jeddah, Saudi Arabia and to find out whether the rate of fall in pubertal age had continued or stopped. The other purpose is to examine the influence of early puberty on the behavior of Saudi girls through this critical and important period of their lives.

**METHODS:** A study was conducted on 508 randomly selected elementary school female students from the city of Jeddah. The data was collected by conducting interviews with each student while at school by using the questionnaire of the behavior assessment system for children (the second edition) (BASC-2). The interview questions included demographic information such as name, age, grade and pubertal date as well as the statements of the questionnaire. We aimed to evaluate the personality and self perception of girls going through puberty. The scores were calculated and converted into percentage by using the appendix of the scale. Also, statistical analysis was conducted on the data by applying chi square test with confidence interval 95%.

**RESULTS:** The findings of the study showed that the average age of puberty among Saudi girls is currently 10.11 years. Concerning of the evaluation of the behavior this study also showed that pubertal girls suffer from depression behavior in a higher percent. This is more pronounced with a significant relationship estimated by ( $p=0.00$ ) ( $r=0.15$ ) and positive correlation between puberty and depression symptoms. In addition, the pubertal girls are at risk status of developing many other behavioral problems.

**CONCLUSION:** The age of puberty among Saudi girls is less than previous studies. Hence, the age at puberty is still declining, which means that is following the secular trend. Our goal in current study was not only to examine the reduction of the mean age at puberty in Saudi girls but also to explore how the pubertal phase would influence the behavior among these girls and will impact on the society as all. Moreover, there is a significant relationship between early puberty and the negative behavior of girls such as depression during this period. Trends in pubertal age of girls and their attitudes should be taken into account.

**Keywords:** early puberty, depression, pubertal age, Jeddah, Saudi Arabia

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[Abstract:0015][Mood disorders]

## Neutrophil lymphocyte ratio in patients with major depressive disorder

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**OBJECTIVE:** Neutrophil lymphocyte ratio (NLR) is accepted as an inflammation marker. The objective of the study is to indicate the variations in NLR that occurs in patients with major depressive disorder.

**METHODOLOGY:** Forty prospective major depressive disorder patients diagnosed based on DSM-IV-TR and treated in our clinic were included in the study. The control group included forty healthy individuals who presented to our clinic, however not diagnosed with active psychopathology in the examination, and paired with the patient group in age and gender. Lymphocyte and neutrophil percentages taken during the application before the treatment from the cases were recorded in the forms. NLR was calculated by the division of neutrophil rate by the lymphocyte rate for each patient.

**RESULTS:** There were no significant differences between the groups based on socio-demographic characteristics such as age, gender, marital status, income level, smoking, and employment. Mean NLR value was  $1.58 \pm 0.59$  in the patient group, and  $2.05 \pm 0.89$  in the control group. The difference between these means was statistically significant ( $p=0.007$ ). In the control group the neutrophil percentage, and in the patient group the lymphocyte percentage was significantly higher. There were no differences between the groups on white blood cell counts.

**CONCLUSION:** It was determined that the NLR is significantly lower in patients with major depressive disorder when compared to the control group. The changes in NLR could reflect the changes in central nervous system metabolisms. Hence, NLR could be an indicator of the fact that immune system is suppressed in chronic inflammation in psychiatric disorders such as major depressive disorder.

**Keywords:** neutrophil, lymphocyte, major depressive disorder

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**[Abstract:0016][Personality disorders]****Comparison of copeptin levels and blood lipid profile in borderline personality disorder patients with or without self-mutilation**Sevda Korkmaz<sup>1</sup>, Bilal Ustundag<sup>2</sup>, Omer Ozer<sup>1</sup>, Gulay Tasci<sup>1</sup>, Suheda Kaya<sup>1</sup>, Metin Atescelik<sup>3</sup>, Murad Atmaca<sup>1</sup><sup>1</sup>Department of Pschiatry, Firat University, School of Medicine, Elazig, Turkey<sup>2</sup>Department of Biochemistry, Firat University, School of Medicine, Elazig, Turkey<sup>3</sup>Department of Emergency, Firat University, School of Medicine, Elazig, Turkey

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**OBJECTIVE:** Self-mutilation, known as self-harming behavior of an individual without the intention of suicide, is commonly observed in individuals with borderline personality disorder. The objective of the study is to compare copeptin levels that are known to be related to aggressive behavior and blood lipid profiles in borderline personality disorder patients with and without self-mutilation.

**METHODS:** Twenty patients with self mutilation [SM (+)] and 20 patients without self mutilation [SM (-)] between the ages of 18 and 49, diagnosed with borderline personality disorder based on DSM-IV-TR diagnostic criteria and presented to Firat University Psychiatry Outpatient Clinic were included in the study. Socio-demographic and clinical data form, Hamilton Depression Rating Scale (HAMD), Hamilton Anxiety Rating Scale (HAMA), and Barrat Impulsivity Scale (BIS) were administered to all participants. Copeptin levels and plasma lipid levels were studied in the blood samples taken from the participants.

**RESULTS:** HAMA mean points for SM (+) group was found as 36.45±13.2, and for SM (-) group it was found as 35.7±12.9. There was a statistically significant difference between the depression points achieved by the two groups (p=0.046). Total BIS points average for SM (+) group was determined as 71±9.71, while it was determined as 66.8±7.92 in SM (-) group. There was no statistically significant difference between the groups based on anxiety points. Barrat planning, Barrat motor, and Barrat total points for SM (+) group were higher than the SM (-) group. However, the difference was not statistically significant (p >0.05). Mean copeptin level found in SM (+) group (37.54±18.8 ng/mL) was statistically significantly higher than SM (-) group (18.53±16.6 ng/mL) (p=0.002). A negative correlation was found between mean copeptin and mean total cholesterol levels (r=-0.436; p=0.005), and between copeptin and LDL levels (r=-0.403; p=0.01) in both SM (+) and SM (-) patient groups.

**CONCLUSION:** Findings of the study demonstrated that as cholesterol and LDL levels decreased, copeptin levels increased, and that could be related to the self-mutilation behavior.

**Keywords:** borderline, self-mutilation, copeptin, lipid

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**[Abstract:0017][Stress and related conditions]****Frequency of anemia in chronic psychiatry patients**Sevda Korkmaz<sup>1</sup>, Sevler Yildiz<sup>1</sup>, Tuba Korucu<sup>1</sup>, Burcu Gundogan<sup>1</sup>, Zehra Emine Sunbul<sup>1</sup>, Hasan Korkmaz<sup>2</sup>, Murad Atmaca<sup>1</sup><sup>1</sup>Department of Psychiatry, Firat University, School of Medicine, Elazig, Turkey<sup>2</sup>Department of Cardiology, Firat University, School of Medicine, Elazig, Turkey

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**OBJECTIVE:** Anemia could cause psychiatric symptoms such as cognitive function disorders and depression, or could deteriorate an existing psychiatric condition when it is untreated. The objective of this study is to scrutinize the frequency of anemia in chronic psychiatric patients, and clinical and socio-demographical factors that could affect this frequency.

**METHOD:** All inpatients in our clinic that satisfied the study criteria and received treatment between April 2014 and April 2015 were included in this cross-sectional study. Socio-demographic data for 378 patients were included in the study and hemoglobin and hematocrit values were recorded during their admission to the hospital. Male patients with a hemoglobin level of under 13 g/dL, and females with a hemoglobin level of under 12 g/dL were accepted as anemic.

**RESULTS:** Axis I psychiatric diagnoses conducted demonstrated that 172 patients had depressive disorder, 51 had bipolar disorder, 54 had psychotic disorder, 33 had conversion disorder, 19 had obsessive-compulsive disorder, 25 had generalized anxiety disorder and 24 patients had other psychiatric conditions. It was also determined that 25.4% of the patients suffered from anemia. 35% of females and

10% of the males were considered anemic. The frequency of anemia was highest among psychotic disorder patients (35%), followed by generalized anxiety disorder patients (32%), and obsessive-compulsive disorder patients (26%). Anemia was diagnosed in 22% of depressive disorder patients, 25% of patients with bipolar disorder, and 24% of conversion disorder patients.

**CONCLUSION:** The prevalence of anemia in chronic psychiatry patients is more frequent than the general population. Hence, the study concluded that it would be beneficial to consider the physical symptoms, and to conduct the required examinations to determine anemia in this patient group.

**Keywords:** anemia chronic psychiatry

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**[Abstract:0018][Mood disorders]**

## Blood levels of AgRP, CBG, and cortisol in patients with bipolar disorder

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**OBJECTIVE:** Bipolar disorder (BD) is associated with cardio- and cerebrovascular disease, and with metabolic and endocrine disorders. Obesity, a metabolic disorder, is reported to be significantly more prevalent in patients with BD than in subjects without BD. This study was designed to examine various sociodemographic characteristics and biochemical parameters including serum levels of agouti-related protein (AgRP), CBG and total cortisol in patients with BD. Additionally, the results were compared to those of healthy controls with similar Body Mass Index (BMI) in order to contribute to the understanding of the neurobiology of BD that can overlap with obesity.

**METHOD:** Twenty-nine patients with BD type I admitted to the outpatient psychiatric clinic were enrolled provided that they had been in the euthymic period for at least two months. Twenty-five sex- and BMI-matched healthy controls were included as the control group. Blood samples were collected in tubes containing K3EDTA as an anticoagulant and serum separator. Samples were centrifuged at 3000 rpm for 10 min to obtain plasma and serum. The plasma and serum samples were then stored at -80° C until biochemical analyses. The levels of glucose and insulin and HOMA index, human obestatin and AgRP, the free cortisol index (FCI) were obtained.

**RESULTS:** Twenty-nine patients with BD and 25 healthy subjects were enrolled. Mean bipolarity index of the BD patients was 78.00±7.76, and mean duration of the disease was 10.26±6.25 years. Levels of AgRP and CBG and cortisol were significantly higher in the patient group ( $p=0.005$ ,  $p=0.021$  and  $p=0.034$ , respectively). However, there were no differences in the levels of obestatin, FCI, glucose, insulin, and HOMAIR between the two groups. AgRP was not correlated with any parameters in the patient group. Cortisol was positively correlated with obestatin levels and BMI in the patient group, but not in the control group. CBG was positively correlated only with BMI in the control group, and with none of the parameters in the patient group.

**CONCLUSION:** Although the patients were older than the controls, age did not effect AgRP, cortisol, and CBG. The control group had higher levels of education and employment. This may be due to the control group being enrolled from the hospital staff, including administrative personnel, nurses, and support personnel. In this study, blood AgRP levels were higher in patients with BD in comparison with healthy controls with similar BMIs. AgRP may therefore play a role in the neurobiology of BD independently of obesity and overweight. In this study, BD patients in the euthymic period had higher levels of cortisol and CBG. High levels of CBG and cortisol may result from feedback mechanism in the event of excess expression or from CBG release triggering compensatory activation of the HPA axis, and thus to high levels of adrenal cortisol production. In this study, plasma levels of obestatin did not differ between the groups with similar BMIs. Obestatin was correlated with cortisol levels in the patient group, but not in the control group. Similar findings were reported in a study of the feeding behavior of rats, which reported that obestatin does not modify the secretion of glucocorticoids. A conflicting result was obtained in this study, however, in the patient group in terms of the relationship between obestatin and cortisol. Further clinical and experimental studies are required to clarify the physiological effects of obestatin in BD patients. The cross-sectional design and small sample size are limitations of this study. We also analyzed blood levels of hypothalamic neuropeptides, instead of levels in the hypothalamus, and this may present another limitation.

**Keywords:** Agouti-Related protein, bipolar disorder, cortisol, corticosteroid-binding globulin, obesity

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[Abstract:0031][Others]

## Relationship between anger, anxiety, and depression in the cases with suicide attempts

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**OBJECTIVE:** Suicide is considered one of the most serious and urgent public health and social issues in Turkey and can be seen in a broad population of patients from severe mental disorders to the normal persons reacting to stressful life circumstances. Aggressive behavior, levels of depression, and anxiety are considered as some of the important risk factors for suicidal behavior. We aimed to compare the relationship between levels of trait anger, anger expression, anxiety and depression of subjects who were presented to the Emergency Service with suicide attempt.

**METHODS:** After the clinical interview, Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), and State-Trait Anger Scale (STAS) were administered to 45 patients who presented with suicide attempt. The data were analyzed using NCSS 2007&PASS 2008 Statistical Software. Correlation analyses were performed by Spearman's Rank Correlations.

**RESULTS:** Thirty three subjects (73.3%) were female, 12 subjects (26.7%) were male and all subjects' mean age  $26.9 \pm 10.3$  years. When analyzing the relationship between BDI, BAI and STAS in suicide attempts; Beck depression score and inner anger score were 40.3%; Beck anxiety score and inner anger score were 34.2% in the positive direction have statistically significant relationship ( $p < 0.01$ ) and ( $p < 0.05$ ); while there was no statistically significant relationship between Beck depression score and Beck anxiety score with trait anger, anger control, and outward anger scores ( $p > 0.05$ ).

**CONCLUSION:** Generally inner anger is reported to be causing psychiatric problems such as depression, somatic illness, suicide attempts, and physical illness such as ulcers and heart diseases in the literature. It is seen that anger and self-control influence suicide attempts. We found that suppressed anger was effective on depression and suppressed anger was identified as determinant of depression. Our study shows depression, anxiety, highly expression of trait, inner and outward anger and difficulty in controlling anger were associated with suicide attempts. Those who attempted to commit suicide had higher levels of anger and greater difficulty to control their anger and cope appropriately. We can say that they are not expressed in the appropriate styles. These findings suggest the low levels of outward and inner anger and high levels of anger management may be protective of suicide attempts. In sum, it is thought that as well as other necessary treatment for depression and anxiety, developing better anger control skills may be effective in preventing from suicide. Limitations of this study: the number of people included, lack of assessment of Axis-II disorders, and other risk factors for suicide.

**Keywords:** anger, anxiety, depression, suicide

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**[Abstract:0032][Others]**

## The effect of religious belief and forgiveness on coping with diabetes

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**OBJECTIVE:** It has been shown that religious beliefs and spirituality affect diabetes management and the level of forgiveness claimed to have a role in the protection of physical and mental health. We aimed to examine the relationship of religious beliefs and forgiveness of patients diagnosed with diabetes mellitus (DM) with various sociodemographic characteristics and emotional problems.

**METHOD:** The study included 100 patients diagnosed with Type 2 DM. A data collection form, the Scale of Forgiveness and Religiosity (SFR), Problem Areas in Diabetes Scale (PAID), Beck Depression Inventory (BDI), State-Trait Anxiety Inventory (STAI), and the Audit of Diabetes-Dependent Quality of Life (ADDQoL) were administered. Blood glucose and HbA1c test results were recorded.

**RESULTS:** The female patients were determined to have a higher level of religious belief than the male patients ( $p=0.004$ ). A statistically significant relationship was only determined between the scores of the STAI-I and the religious belief scales ( $r=0.198$ ,  $p=0.049$ ). A statistically significant negative relationship was determined between the forgiveness scale points and the BDI ( $r=0.326$ ,  $p=0.001$ ), the STAI-II ( $r=0.308$ ,  $p=0.002$ ) and PAID ( $r=0.313$ ,  $p=0.001$ ) and a positive correlation with ADDQoL ( $r=0.284$ ,  $p=0.004$ ).

**CONCLUSION:** As the religious belief scale used in the evaluation has a multi-dimensional structure, the individual tendency to differ from these dimensions and sectarian differences (Sunni vs. Shiite) in the study region might have different effects on results. It was concluded that forgiveness by patient of self or others reduced the emotional problems experienced related to diabetes by reducing stress levels and could increase quality of life.

**Keywords:** diabetes and psychiatry, diabetes and religion, forgiveness, diabetes and quality of life

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**[Abstract:0035][Others]**

## Care-giving burden and quality of life in diabetic foot patients' care-givers

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**OBJECTIVE:** The levels of perception of the burden are known to be affected by various personal and disease-related characteristics. Studies which compare burden of internal patients' care-givers with psychiatric patients' care-givers, reported higher care-giving burden in psychiatric patients. We aimed to compare the levels of care-giving burden of those caring for patients with diabetic foot with care-givers of psychotic patients. Care-givers of those with inguinal hernia were enrolled as the control group to determine the characteristics related to the care-giving burden.

**METHOD:** The study included the care-givers of 30 hospital inpatients with diabetic foot, 30 inpatients with inguinal hernia and 30 patients with a recorded diagnosis of psychotic disorder at Çorum Community Mental Health Center. The Zarit Burden Interview Form, Beck Depression, Beck Anxiety, Hospital Anxiety and Depression (HAD) and Short Form-36 (SF-36) scales were all administered.

**RESULTS:** The caregivers of the diabetic foot group were found to be mostly non-working females. No difference was found between the burden levels of psychotic and diabetic patient groups but the burden level of care-givers of psychotic patients was determined to be

significantly higher than the control group ( $p=0.00$ ). The depression and anxiety scales of the diabetic foot group were significantly higher and some points of the quality of life scales were determined to be significantly lower. A correlation between the duration of care-giving and the burden was only determined in the diabetic foot group ( $r=0.421$ ,  $p=0.02$ ).

**CONCLUSION:** Care-givers of diabetic foot patients remained more socially isolated. This was probably due to having to live with an elderly person requiring care. For various reasons, care-givers of diabetic foot patients were found to have higher levels of anxiety and depression, lower quality of life and burden levels as high as those of the psychotic disorder group. Therefore, in the context of protecting the physical and emotional health of care-givers, careful monitoring and when necessary, supportive treatment would be appropriate.

**Keywords:** care-giving burden, diabetic foot, quality of life

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[Abstract:0037][Sleep disorders]

## Cognitive dysfunction in patients with REM dependent and other types of obstructive sleep apnea syndrome

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**OBJECTIVE:** The functional disorders which are related to obstructive sleep apnea syndrome (OSAS) have been determined to be attention, executive functions and working memory. However, the patients with OSAS have been evaluated as a homogeneous population in these studies, and the cognitive functions in different OSAS groups have not been examined. OSAS subtypes include positional, REM dependent, NREM dependent and stage independent.

The aim of this study was to compare the cognitive functions of patients with REM dependent and REM non-dependent OSAS.

**METHODS:** Twenty REM dependent and 50 Rem non-dependent patients who presented to the Sleep Disorders Clinics of Erenkoy Neuropsychiatric Diseases Education and Research Hospital and met the inclusion criteria of the study were included in the study. They were diagnosed polysomnographically (PSG) and clinically to have ROSAS and REM non-dependent control OSAS (COSAS) among 1,077 patients pre-diagnosed at the clinic as OSAS. Data collection form, Epworth sleepiness scale, Serial digit learning test, Stroop test, Trail making test, and Three words three shapes test were applied to the participants.

**RESULTS:** Comparison of the sociodemographic parameters are shown in Table 1. Comparison of the clinical variables between groups is shown in Table 2. In the COSAS group the variables that define the severity of the disease arousal index ( $t=-4.95$ ,  $p=0.00$ ), AHI ( $t=-4.24$ ,  $p=0.00$ ), mean duration of apnea ( $t=-2.58$ ,  $p=0.01$ ), oxygen desaturation index ( $t=-4.36$ ,  $p=0.00$ ) and periodic leg movements index ( $t=-2.92$ ,  $p=0.00$ ) were higher. Comparison of the cognitive functions between groups is shown in Table 3. No significant differences were observed between groups regarding the cognitive functions.

**CONCLUSION:** In the previous studies examining the clinical properties of ROSAS, the disease was reported to be observed in patients with mild OSAS as well. To our knowledge, there is no study examining the impairment in the cognitive functions of the patients with OSAS whose apneas are predominantly observed during the REM sleep periods. Our finding suggests that no additional impairing effect is observed on the cognitive functions since the abnormal respiratory events are predominantly observed in the REM period of the sleep. It may be concluded that the cognitive impairment in the patients is generally related to the impairment in the sleep structure.

**Keywords:** sleep apnea, cognitive functions, sleep stages, REM dependent

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**[Abstract:0091][Others]**

## Comorbid somatic illnesses in psychiatric inpatients

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**OBJECTIVE:** It is known that, the physical disease in psychiatric patients are often ignored. The mean life expectancy of psychiatric patients are approximately 25 years lesser than the general population. These somatic symptoms can be reduced to quality of life of patients who had diagnosed with psychiatric disorders. This study's aim is to determine the frequency of the somatic disease in the psychiatry patients and to evaluate the relationship between the somatic diagnosis, the psychiatric diagnosis, and clinic characteristics

**METHODS:** This study used a retrospective design and 142 participants who were hospitalized to our psychiatry inpatient department of Dicle University Hospital, Diyarbakir, Turkey, between January to October, 2015 were enrolled.

**RESULTS:** There were 51.4% of the patients was suffering from somatic diseases. Increased somatic diseases were significantly correlated with the growing age ( $p < 0.05$ ). There were no significant differences between the somatic diseases and gender, psychiatric diagnosis, electroconvulsive therapy (ECT), and hospitalization duration ( $p > 0.05$ ).

**CONCLUSION:** We found that somatic diseases particularly endocrinological and neurological diseases were highly accompanied to psychiatric disorders. Unfortunately, psychiatric patients can be experiencing many problems in daily life activities including expressing themselves. Therefore, they can be stigmatized by the community as well as present with lower rate of asking for help to address their somatic symptoms. Clinicians should remember to check all symptoms characterized by actively and systematically accompanied somatic diseases in psychiatric patients. We believe that becoming more sensitive to the somatic diseases' symptoms in psychiatric patients may reduce patients' morbidity and mortality.

**Keywords:** psychiatric diseases, inpatients, comorbidity, somatic disease

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**[Abstract:0101][Psychosomatic medicine-Liaison psychiatry]**

## The association of perceived degree of handicap due to tinnitus and depression, anxiety symptoms in patients with tinnitus

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**OBJECTIVE:** Tinnitus or ringing in the ears, is defined as the sensation of hearing ringing, buzzing, hissing, chirping, whistling, or other sounds. Tinnitus is seen 1-2% of the community as a disease. Tinnitus can often lead to sleep disturbances and concentration problems. The aim of the treatment is to reduce perceived severity of tinnitus and dysfunction due to tinnitus. The most effective treatment of tinnitus is psychotropic drugs. Anxiety and depressive symptoms are common in patients with tinnitus. Anxiety and depressive symptoms could be predisposing, triggering and maintainer factor of tinnitus. The aim of this study was to determine the relationship between different dimensions of tinnitus and anxiety and depression levels.

**METHODS:** Sixty-four patients with tinnitus were evaluated with using sociodemographic form, Hospital Anxiety Depression Scale (HADS), and Tinnitus Handicap Questionnaire (THQ).

**RESULTS:** Thirty one of the patients were female and 33 of the patients were male. The average age of the patients was  $43.56 \pm 15.27$ . The average score of tinnitus handicap scale was  $40.71 \pm 24.03$ . The average score of depression subscale of the hospital anxiety depression scale was  $8.14 \pm 5.03$ . The average score of anxiety subscale of the hospital anxiety depression scale was  $6.97 \pm 4.42$ . There was a positive correlation with THQ total and HADS anxiety and depression subscale scores. There was strong correlation with Factor 1 which includes physical health, emotional status, and social consequences of tinnitus with anxiety and depression subscale scores of HADS. There was a

strong correlation with Factor 2 which includes hearing difficulty related to tinnitus with depression subscale scores of HADS. There was a strong correlation with Factor 3 which includes the patients' view on tinnitus with anxiety subscale scores of HADS.

**CONCLUSION:** Physical health, emotional status, and social consequences of tinnitus were associated with both anxiety and depression levels. Hearing difficulties related to tinnitus was associated with depression levels and the patients' view on tinnitus was associated with anxiety levels. In sum, psychiatric evaluation should be part of the treatment of tinnitus patients.

**Keywords:** tinnitus, anxiety, depression

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[Abstract:0118][Dementia syndromes]

## The relationship between the premorbid personality traits and the behavioral and psychological symptoms of Alzheimer's disease

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**OBJECTIVE:** In this study, we aimed to examine the relationship between the premorbid personality traits and the behavioral and psychological symptoms of Alzheimer's disease. Behavioral and psychological symptoms which may emerge during the progress of dementia are a basic source of stress for patients and their relatives. They constitute the most common reason of placement of patient in an hospice care temporarily or permanently.

**METHODS:** We have randomly selected 147 inpatient dementia patients who were followed-up at the Cerrahpasa School of Medicine's Geriatric Psychiatry Department, and have routinely been administered Standardized Mini Mental Test (SMMT), behavioral pathology in dementia assessment scale (Behave-AD), and Global Deterioration Scale (GDS) in clinical assessment. 45 patients who are diagnosed to be Alzheimer type dementia and whose family members or relatives may be reached are included in our study. Relatives of each patient have been asked to fill in the Munich Personality Test (MPT) – relatives form for the purpose of assessment of premorbid personality traits of the subjects.

**RESULTS:** Forty five patients, aged 55 to 91 years were included in the study with a median age of 76.04 (SD=8). In assessment of education status of the subjects, the last graduated school was taken into consideration, and the subjects who have not attended to any school were questioned to learn whether they were literate or not. All of the subjects included in our study were living in the community. 5 subjects (11.1%) have died after the date of application to our clinic. However, these patients were also living at their own home when they died. Duration of disease varied from 1 year to 15 years. Average duration of disease was 5.6 years (SD=3). SMMT is applied for them. Mixed SMMT scores of the subjects varied between 6 and 27, and mixed SMMT score average was 17.4 (SD=6). Considering the MPT answers received from the first relatives of 45 patients who could be reached, the correlation of MPT total and sub-scores with Behave-AD sub-scores were reviewed. It could be stated that high level of premorbid isolation tendency and schizoidia scores were the predictors of hallucinations and aggression. Low level of premorbid frustration tolerance is found to be associated with the present anxiety and the higher Behave-AD general assessment scores.

**CONCLUSION:** We concluded that certain premorbid personality traits could be a risk factor for the later development of behavioral and psychological symptoms in Alzheimer's disease. Psychopathologic symptoms could actually be exaggerations or morbid distortions of lifelong behavioral tendencies, and it may also be explained by reflection of neuropathological processes occurring in the brain in dementia onto clinical practice, in reliance upon detection of similar findings in studies conducted on different types of dementia and in different cultures. Further studies with larger sample size and prospective design within a biopsychosociocultural model are needed.

**Keywords:** dementia, alzheimer disease, premorbid personality traits, behavioral and psychological symptoms

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**[Abstract:0122][Eating disorders]****Relationship between depression and eating behaviours among bariatric surgery candidates: a Turkish sample**Guzin Mukaddes Sevincer<sup>1</sup>, Numan Konuk<sup>2</sup>, Derya Ipekcioglu<sup>3</sup>, Halil Coskun<sup>4</sup>, Suleyman Bozkurt<sup>4</sup><sup>1</sup>Department of Psychology, Istanbul Gelisim University, Istanbul, Turkey<sup>2</sup>Department of Psychiatry, Istanbul University Cerrahpasa Medical Faculty, Istanbul, Turkey<sup>3</sup>Bakirkoy Training and Research Hospital for Psychiatry, Neurology and Neurosurgery, Istanbul, Turkey<sup>4</sup>Department of Bariatric and Metabolic Surgery, Bezmialem Vakif University, School of Medicine, Istanbul, Turkey

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**OBJECTIVE:** Although bariatric surgery is generally effective in terms of substantive weight loss, there is great variability in outcome and about 20% of individuals either fail to achieve the desired weight loss or begin to regain excessive amounts of weight after initial success. There has been considerable effort to identify possible predictors of outcomes after bariatric surgery. The purpose of this study was to further examine whether depression is associated with eating behaviors, which can contribute to severe obesity, in a sample of Turkish bariatric surgery candidates.

**METHODS:** This cross-sectional study was conducted using 168 consecutively examined bariatric surgery candidates in a university clinic. Participants were asked to complete the Dutch Eating Behavior Questionnaire (DEBQ), the Beck Depression Inventory (BDI), and sociodemographical and clinical variables data forms. Correlations and linear regression analyses were performed in order to evaluate relationship between clinical and demographic variables.

**RESULTS:** The participants' mean age were 37.7 years old (SD=11.3) and BMI were 46.4 kg/m<sup>2</sup> (SD=6.7). The study group were primarily in middle socioeconomic class (n=98, 59%) and married (n=102, 60.7%). According to the BDI scores, 75.5% of the patients had mild, moderate or severe depressive symptomatology. While restrictive eating scores showed a negative correlation ( $r=-0.17$ ;  $p=0.04$ ), emotional eating ( $r=0.3$ ;  $p=0.002$ ) and external eating ( $r=0.2$ ;  $p=0.04$ ), were found to be positively correlated with the BDI Scores. BDI scores were significantly correlated with increased external eating ( $\beta=0.03$ ,  $p<.02$ ) and emotional eating ( $\beta=0.03$ ,  $p<.002$ ) scores. BMI ( $\beta=-0.02$ ,  $p=0.02>0.1$ ) was not correlated with DEBQ total scores.

**CONCLUSION:** Compared to other obese individuals and individuals in general population, comorbid psychopathology is quite prevalent in bariatric surgery candidates. While anxiety disorders are the most common current psychiatric disorder, affective disorders, especially major depressive disorder, is the most frequent lifetime form of psychopathology among bariatric surgery candidates. Kalarchian et al. found that higher rate of lifetime mood and anxiety disorders comorbidity were associated with less weight loss in first 6 months after surgery. Similarly, de Zwaan et al, showed that preoperative depression was a predictor of postoperative depression and was associated with less weight loss in a 24 to 36 months follow-up period. Our research suggests that mild, moderate or severe depressive symptoms are available in most of the bariatric surgical candidate patients. There is a positive correlation between depression level and emotional/external eating behaviors and a negative correlation between depression levels and restrictive eating behaviour. Diagnosis and treatment of the depression in preoperative period will affect the operational outcomes of these patients in long- term.

**Keywords:** obesity, bariatric surgery, depression, eating

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[Abstract:0124][Psychopharmacology]

## Urinary extract profiles of illicit substance at Sakarya: three years' report

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**OBJECTIVE:** Substance abuse is a serious problem all over the world. There are many studies reports the substance use profile of individuals with probations but few studies presents their toxicology laboratory analysis. There is no study from Turkey conducted with urine drug screening so this is the first study reports a quantitative profile of urine drug screening for illicit substances in Sakarya, Turkey.

**METHODS:** This study presents the urine analysis of all illicit substances which were made in the laboratory of Sakarya Training Research Hospital (STRH) between March 2012 and February 2015. The results obtained from socio-demographic data and urine tests of 2948 patients were analyzed by examining their hospital record files. Urine drug screening was conducted with immunoassay quantitative analysis. CEDIA (Cloned Enzyme Donor Immuno Assay) was used as the immunoassay method during the analysis of the urine tests.

**RESULTS:** In this study, 96.74% (n=2852) of 2948 people subjected to substance analysis were males, their ages varied between 12 and 76 and their mean age was 28.30±9.46. 98.1% (n=1005) of the 1024 patients determined to have substance positivity were males, their ages varied between 14 and 70 and their mean age was 29.39±9.65. Changing based on the years in this study, positivity was determined in 34.73% of all patients subjected to urine analysis in our laboratory (n=1024/2948). The drugs which were screened commonly in all three years are marijuana, opioid, amphetamine, benzodiazepine, cocaine, and barbiturate. Screening of ecstasy and creatine levels started from 2013 while the screening of synthetic cannabinoids started within the last quarter of 2014. The rates are given for each drug based on the sampling screened. Distribution of the urine positivity of the substances contain marijuana 79.5% (n=814), amphetamine 30.17% (n: 309), ecstasy 23.74% (n=199), benzodiazepine 9.1% (n=94), synthetic cannabinoid 5.5% (n=12/243); opioid 5.2% (n=54), cocaine 1.67% (n=14), and multiple substance 29.9% (n=308). The average substance levels of the patients who were determined to have substance positivity in urine were 138.78±78.85; 2494.03±1567 and 3601.67±1957.93 for marijuana, opioid and amphetamine, respectively.

**CONCLUSIONS:** According to the study conducted in STRH laboratory, 34.73% of the patients subjected to illicit substance analyses in urine between 2012 and 2015 were found to have substance positivity. The most commonly detected substance was marijuana and it was followed by amphetamine, ecstasy, benzodiazepine, synthetic cannabinoid, opioid, and cocaine, respectively. The study underlines the importance of updating the laboratory kits in order to detect new illicit substances. Additionally, this study provides the mean urine levels of the illegal substances. Comparing this data with the data of the studies which shall be conducted in Turkey and other countries may generate useful results and can trigger the pharmacoeconomic, pharmacocultural, and pharmacogenetic studies in this field.

**Keywords:** illegal substances, urine drug screening, toxicology

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**[Abstract:0145][OCD]****Evaluation of peroxiredoxin-1 and urotensin-2 levels in patients with obsessive-compulsive disorder**M Fatih Tastan<sup>1</sup>, Feridun Bulbul<sup>2</sup>, Mehmet Tarakcioglu<sup>3</sup>, Haluk A. Savas<sup>2</sup><sup>1</sup>Biga State Hospital, Canakkale, Turkey<sup>2</sup>Department of Psychiatry, Gaziantep University, Gaziantep, Turkey<sup>3</sup>Department of Biochemistry, Gaziantep University, Gaziantep, Turkey

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**OBJECTIVE:** There are limited literature data about the role of oxidative stress in the pathophysiology of obsessive-compulsive disorder(OCD). In addition Peroxiredoxin-1 and Urotensin-2 levels has not been examineexamined together in OCD. In this study we aimed to evaluate Peroxiredoxin- 1 and Urotensin-2 levels in patients with OCD.

**METHODS:** Forty-eight patients with OCD who were diagnosed in Psychiatry Clinic of Gaziantep University and forty-eight healthy volunteers were enrolled in the study. Serum Peroxiredoxin-1(PRX-1) and Urotensin-2(UTS-2) levels were evaluated in Gaziantep University Biochemical Laboratory.

**RESULTS:** PRX-1 and UTS-2 levels were significantly lower in OCD patients than controls(in order p: 0,007 and p: 0,039). In patients there was strong positive linear relationship between PRX-1 and UTS-2 values (r: 0,744, p: 0,001).

**CONCLUSION:** In our study, PRX-1 and UTS-2 values which can show antioxidant activity were found low in patients with OCD. These findings indicate the decreased antioxidant activity in patients with OCD.

**Keywords:** obsessive-compulsive disorder, oxidative stress, peroxiredoxin-1, urotensin-2

**Bulletin of Clinical Psychopharmacology 2016;26(Suppl. 1):S100****[Abstract:0155][Dementia syndromes]****Comparison of caregiver burden among patients with Lewy Body Dementia and Alzheimer's Dementia**Mehmet Ilkin Naharci<sup>1</sup>, Hasan Oztin<sup>1</sup>, Umit Cintosun<sup>1</sup>, Ahmet Ozturk<sup>1</sup>, Senay Oguz<sup>1</sup>, Necmettin Kocak<sup>2</sup>, Ergun Bozoglu<sup>1</sup>, Huseyin Doruk<sup>1</sup><sup>1</sup>Department of Geriatric, Gulhane Military Medical Academy, Ankara, Turkey<sup>2</sup>Department of Public Health, Gulhane Military Medical Academy, Ankara, Turkey

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**OBJECTIVE:** Caregiver burden in patients with dementia is a condition that impairs both patients and caregivers physical, psychological and functional health. In this study, we aimed to examine characteristics of patient and caregiver in Lewy body dementia (LBD) and Alzheimer's dementia (AD) groups and to compare the caregiver burden between the two groups.

**METHODS:** Subjects, presented to the geriatric outpatient clinic of Gulhane Military Medical Academy, were assessed in this analysis. Older people with caregiver were considered for advanced assessment. AD patients (n=30) and LBD patients (n=29) with caregiver were considered as patient groups. Older people with normal cognitive function (n=32) with caregiver were included as control group. All socio-demographical and clinical data of subjects and their caregivers were recorded and compared. In order to evaluate caregiver's depression, Zarit Burden Interview was used and depression was recorded according to past medical history and current medicine status. The Mini Mental State Examination (MMSE) test and Cornell dementia depression scale were used to examine cognitive and depressive status of patients. To diagnose AD, the National Institute of Neurological and Communicative Diseases and Stroke/ Alzheimer's Disease and Related Disorders Association (NINCDS-ADRDA)' and 'the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)' and also to diagnose LBD, 'Diagnosis and management of dementia with Lewy bodies: third report of the DLB Consortium' criteria were used.

**RESULTS:** The mean age of caregivers in AD, LBD, and control groups were 53.5±6.9, 52.8±13.1, and 47.2± 9.3 years, respectively. The mean caregiving periods (year) in AD, LBD, and control groups were 5.0±3.0, 3.5±1.2, and 5.2±3.3, respectively. The difference in caregiving period between LCD and control groups was significant (p=0.031). The majority of subjects was female (n=58, 58.2%). When compared to three groups, there was not any significant difference in current smoking and alcohol status, education, marital status, hypertension, and diabetes mellitus. The highest proportion of ischemic heart disease was in LBD group (35.7%, p=0.034). Depression was prevalent in caregivers of AD group (50%, p=0.04). The thought of nursing home placement and work in a job of caregivers were not different in all

groups. The college graduated caregivers were prevalent in all groups (n=48, 52.7%). The relationship level of caregiver was different in all groups (p=0.001). The majority of those in LCD group were spouse (44.8%) and in AD group were their children (90%). Depression level in dementia was higher in LBD group (mean=16.2±6.0) and significantly different from AD group (mean=12.1±5.2) (p=0.007). Zarit Burden Interview score was the highest in LCD group (mean=18.5±10.3) and significantly different from control group (mean=7.4±6.4) (p<0.001)

**CONCLUSIONS:** In our study, it was observed that caregiver burden in patients with dementia was significantly increased. When examined dementia groups, perceived stress and exhaustion were more among caregivers of LBD than those of AD. Interventions aimed to decrease caregiver burden are needed to implement in patients with dementia, especially with LCD, and in their caregivers.

**Keywords:** lewy body dementia, alzheimer dementia, zarit caregiver burden

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**[Abstract:0160][Perinatal psychiatry]**

## Smoking, alcohol and substance use frequency in a pregnant sample from Sakarya, Turkey

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**OBJECTIVE:** Alcohol and substance use is a major health problem in Turkey, as it is around the world. There has recently been a rapid increase in women using substances; although this tends to reduce during pregnancy, it is of critical importance for the health of both mothers and their children to determine the exact level of use. The aim of the present study was to examine smoking, alcohol, and substance use frequency in pregnancy.

**METHODS:** This study was conducted on pregnant women in Sakarya, Turkey. The women who agreed to participate in the study were evaluated consecutively; in total, 1082 were included in the study. The study team prepared a sociodemographic data form and adapted the 'introduction part' from the Addiction Profile Index to take pregnancy into account.

**RESULTS:** The age range of the women was 18-45 years old, and the average age was determined to be 28.35±5.52. The women's education level was 23.4% elementary school graduates and literate, 20.6% middle school graduates, 31.2% high school and equivalent school graduates, and 24.8% university graduates. 99.5% of the patients were married. The number of pregnancies was 2.13±1.25 on average (at the range of 1-8), and the number of children was 0.80±0.91 (at the range of 0-6). The substances most frequently used by women in previous and current pregnancies were cigarettes and tobacco products (11.0 and 11.8%, respectively), alcohol (0.6% and 0.4%) and, rarely, synthetic cannabinoids (0.3% and 0.2%). No other use of illicit substances was reported by the women. Upon comparing the use of alcohol and substances during pregnancy and over their lifetimes, the use of tobacco was found to be significantly lower in previous pregnancies than in lifelong use (p=0.000). Similarly, the use of tobacco in the most recent pregnancy was found to be significantly lower than over a lifetime (p=0.000). The use of alcohol in previous pregnancies and the most recent pregnancy was also considerably lower than the lifelong use (p=0.000). We performed a linear regression analysis in order to analyze the predictor factors for the use of tobacco and alcohol in the most recent pregnancy. The results showed that, lifelong tobacco use and use in previous pregnancies were positive predictors for the use of tobacco in the current pregnancy and the use of alcohol and cigarettes in previous pregnancies was also a positive predictor for the use of alcohol in the current pregnancy.

**CONCLUSION:** Cigarettes are the most frequently used substance in pregnancy but alcohol and synthetic cannabinoids are also risky substances. It is recommended that physicians sensitively enquire about all substance use, mainly including alcohol and synthetic cannabinoids, in pregnant women who admit to clinics, and to include such questions in their routine inquiries.

**Keywords:** smoking, alcohol use, substance, pregnancy

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**[Abstract:0165][Others]**

## Tennis enhances well-being on university students

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**OBJECTIVE:** Well-being is a multifaceted concept and includes psychological, social, and physical components. To define psychological well-being operationally is difficult because of its multifaceted nature. An aspect of psychological well-being may be defined as the absence of negative psychological symptoms as anxiety, depression, anger, hostility, and others. Hence, the approaches which contribute to decrease levels of anxiety, depression and other psychological symptoms are thought as approaches that extend psychological well-being. Sports and physical activities are widely recommended, both as guidelines and in clinical practice, because of their broad range of positive effects on health, depression, anxiety, and psychological wellbeing. Several studies have examined the anti-depressive and anxiolytic effects of physical activities in clinical populations, but the non-clinical population has not been examined to the same extent. Furthermore, no prospective studies have shown the effect of tennis on psychological symptoms in a non-clinical population.

**METHODS:** This study was carried out with 76 volunteer students from Kocaeli University who had elected tennis lessons as the University Elective Lessons (UEL). Tennis exercise programs consisted of a singular 90-minute basic tennis skills lesson for 13 weeks. The lessons were started with stretching for 5 minutes and jogging for 10 minutes and followed with 75 minutes of sportive activity based on tennis skills. At the beginning and end of the study, the students were given the Symptom Checklist 90 Revised (SCL-90-R), the Beck Anxiety (BAI) and the Beck Depression (BDI) scales and they were evaluated by the DeWitt-Dugan Tennis Service Test, DeWitt-Dugan Speed Test, and the Dyer Backboard Tennis Test.

**RESULTS:** This study included 44 males and 32 females and the average age of all participants was  $20.93 \pm 0.75$  years (range: 20–22 years). No significant gender differences were found in terms of tennis skills, BAI, BDI and SCL-90-R scores. Upon evaluating the pre- and post-tests, we found that tennis skills were significantly increased; and BAI and BDI scores were significantly decreased. Evaluating the general symptoms of the students is conducted, SCL 90-R scores are both calculated separately for subgroups and total scores. There was significant differences for several subscores of SCL 90-R between before and after tennis training.

**CONCLUSION:** This study underlies three topics about the relationship between sports and mental health. First this study confirms a well-known reality that sports increase well-being in individuals but it differently from most of the previous studies this study shows that beneficial effect in a non-clinical group. The second; this study answers the question that if tennis as kind sport activity which requires both physical and mental skills has a beneficial effect as other sports and suggest that tennis reduces depression and anxiety symptoms and general mental symptoms in young age groups as other sports. Last this study presents an alternative answer to the question that how long length, duration and what frequency of sport is beneficial for psychological symptoms and suggest that 90 minutes of tennis training once week for 13 weeks is effective on decreasing psychological symptoms.

**Keywords:** tennis, depression, anxiety, wellbeing, sport

**Bulletin of Clinical Psychopharmacology 2016;26(Suppl. 1):S102**

**[Abstract:0170][Schizophrenia and other psychotic disorders]****Comparison of neuropsychological test battery on patients with schizophrenia before and after ECT**Fagan Zakirov<sup>1</sup>, Erhan Yuksek<sup>2</sup>, Nazife Gamze Usta Saglam<sup>3</sup>, Murat Emul<sup>3</sup><sup>1</sup>NPIstanbul Hospital, Istanbul, Turkey<sup>2</sup>State Hospital, Viransehir, Urfa, Turkey<sup>3</sup>Department of Psychiatry, Istanbul University, Cerrahpasa School of Medicine, Istanbul, Turkey

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**OBJECTIVE:** Schizophrenia is a severe mental disorder. In several psychiatric disorder ECT is efficacious treatment modality. There is evidence that cognitive function at least as important as the positive and negative symptoms. Prefrontal cortex is associated with cognitive functions and catecholaminergic system found rich in prefrontal cortex which might play a role in cognitive function. ECT stimulation depolarization of neurons may lead to intensive neurotransmitter. Thus we aimed to study the comparison of neuropsychological test battery on patients with schizophrenia before and after ECT.

**METHODS:** In schizophrenia patients we use Neuropsychological test battery before and after ECT. We have included 34 schizophrenia patients and 32 healthy controls in the study. Patients were administered sociodemographic information question form and Neuropsychological test battery, Positive and Negative Syndrome Scale (PANSS), Calgary Depression Scale.

**RESULTS:** The average age of the participants was  $38.76 \pm 12.03$ . 17 of the patients were male while the remaining 17 were female. At education years there was no significant difference between the patients with schizophrenia group and the healthy controls ( $p=0.114$ ). Significant decrease was recorded in PANSS points after ECT ( $p=0,001$ ). Before ECT on neuropsychological test battery there was a significant difference between the patients groups and the healthy controls ( $p=0.001$ ). In patient group before and after ECT there was a significant difference on neuropsychological test battery ( $p=0.001$ ).

**CONCLUSION:** Cognitive functions are important in schizophrenia. In this present study, there was a significant difference between neuropsychological test battery of healthy group and patients with schizophrenia group. After ECT also there was a significant difference in neuropsychological test batteries in schizophrenia patients before and after ECT.

**Keywords:** schizophrenia, ECT, neuropsychological test battery

**Bulletin of Clinical Psychopharmacology 2016;26(Suppl. 1):S103**

**[Abstract:0180][Mood disorders]****Presence of fragmented QRS complexes in patients with bipolar disorder; manic episode**Yasin Hasan Balcioglu<sup>1</sup>, Mustafa Akkus<sup>1</sup>, Tevfik Kalelioglu<sup>1</sup>, Abdullah Genc<sup>2</sup>, Sukru Cetin<sup>3</sup>, Esra Sena Genc<sup>1</sup>, Nesrin Karamustafalioglu<sup>1</sup>, Murat Emul<sup>4</sup><sup>1</sup>Department of Psychiatry, Bakirkoy Training and Research Hospital for Psychiatry, Neurology and Neurosurgery, Turkey<sup>2</sup>Department of Psychiatry, Sisli Hamidiye Etfal Training and Research Hospital, Istanbul, Turkey<sup>3</sup>Department of Cardiology, Sisli Hamidiye Etfal Training and Research Hospital, Istanbul, Turkey<sup>4</sup>Department of Psychiatry, Istanbul University, Medical School of Cerrahpasa, Turkey

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**OBJECTIVE:** Today, it has already been revealed that bipolar disorder is strongly associated with increased risk of cardiovascular diseases (CVD). Risk of coronary heart diseases has not been widely examined although other cardiovascular abnormalities such as metabolic syndrome and hypertension have commonly become subjects of the studies in terms of CVD's in mental illnesses. Fragmented QRS (fQRS), a depolarization abnormality, which is a promising risk marker in coronary heart diseases (CHD). In this study we evaluated the presence of fQRS in bipolar manic patients' electrocardiograms (ECG) to anticipate the CVD risk.

**METHODS:** Ten male patients who were diagnosed as bipolar disorder with manic episode according to DSM-5 from Bakirkoy Training and Research Hospital for Psychiatry, Neurology and Neurosurgery were included in this study. The presence of fragmentation in QRS complexes, QT durations, QTc durations, and heart rates were examined.

**RESULTS:** There were 10 male patients whose average age was  $28.20 \pm 9.41$  years. The average heart rate of the patients was  $89.3 \pm 8.09$  bpm. In electrocardiograms (ECG), QT and QTc durations were measured as  $383 \pm 36.24$  and  $475 \pm 41.34$  ms respectively. The frequency of

the presence of fQRS in patients with bipolar disorder; manic episode was 30%.

**CONCLUSION:** Our results signalled that the frequency of fQRS in patients with bipolar disorder; manic episode should not be underestimated. Acute coronary syndromes including sudden cardiac death are highly probable in these patients. fQRS is one of the most important promising markers for CHD risk, therefore ECG of the patients with bipolar disorder - manic episode should be routinely recorded. In addition presence of fQRS should be kept in mind. Consequently, psychiatrists should be cautious about these conditions.

**Keywords:** bipolar disorder, coronary heart diseases, QRS fragmentation

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**[Abstract:0182][Dependencies]**

## Effects of synthetic cannabinoids on renal functions

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**OBJECTIVE:** Synthetic cannabinoids(SCs/bonsai) are a group of drugs, initially produced, claimed and marketed as legal recreational substances in mid-2000's in Europe. SCs are strongly affinitive to CB1 receptors in central nervous system and cause many psychiatric symptoms such as disorganized behavior, hallucinations, and delusions. Therefore, bonsai intoxication and bonsai-related psychosis are the most popular fields of psychiatry, forensic psychiatry, drug dependence and forensic toxicology. However physiological effects, especially renal complications, of SCs are rarely reported as case reports in the literature. Hence, comprehensive studies are limited. In this study, we aimed to demonstrate existence of potential nephrotoxicity regarding their effects on renal function tests -blood urea nitrogen (BUN) and creatinine and serum potassium levels.

**METHODS:** Serum levels of BUN and creatinine of 53 patients, diagnosed as bonsai intoxication, and 54 healthy people, are retrospectively screened. All participants had no previous renal illness history. DSM-5 criteria were used to diagnose substance dependence, and all SC dependents have been smoking the drug at least for 6 months.

**RESULTS:** Independent Samples t-tests were applied both groups. Serum BUN and creatinine levels are significantly higher in SC dependents (respectively  $p=0.006$  ( $p<0.01$ );  $p=0.012$  ( $p<0.05$ )).

**CONCLUSIONS:** SCs are common in Turkey due to its affordability and easy accessibility. Their pharmacological effects are exponentially potent compared to natural cannabis, however pharmacokinetic and pharmacodynamic aspects still remained unclear. Our results showed that SCs deteriorate renal functions. Several case reports on acute tubular necrosis related bonsai abuse have been reported. Metabolites such as XLR-11 may be responsible for tubular damage, however no certain data explaining nephrotoxic pathophysiology has been published. Extensive prospective studies need to be conducted regarding understanding of nephrotoxicity of SCs.

**Keywords:** bonsai, forensic toxicology, nephrotoxicity, synthetic cannabinoids

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[Abstract:0184][ADHD]

## The relationship between attachment and parenting styles in parents of adolescents with attention deficit hyperactivity disorder

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**OBJECTIVE:** Attention deficit and hyperactivity disorder (ADHD) is one of the most commonly occurring psychiatric disorders seen during childhood. Attachment is defined as the lifelong relationship between the child and care-giver; furthermore it is the duration of time when the child forms emotional bonds towards the caregivers. Some studies have postulated that there may be a relationship between insecure attachment and ADHD, and that problems with attachment may contribute towards the development of ADHD. Parenting style shapes family and dictates the socio-emotional development of the child. Caregivers in children with ADHD have been found to be more dismissive and exert more control over the child's own volition when compared to the caregivers of children who do not have ADHD. However, there is lack research in the literature examining attachment styles between children or adolescents and their caregivers, and link between parenting styles. In this study we aimed to examine the parenting styles of mothers and the styles of attachment between the care-givers and the adolescents.

**METHODS:** This study was carried out over a period of three months at the University of Kocaeli University Child Psychiatry Department's ADHD Outpatient Clinic and included adolescents between the ages 13-17. 53 adolescent participants meeting the inclusion criteria were included in both the ADHD and the control group.

Both groups were asked to fill the adolescent and maternal self-reported forms followed by diagnostic interviews carried out to screen the presence of chronic physical illness, history of head trauma, non-biological parents, co-morbid psychiatric diagnosis to ADHD. Participants scoring below 80 in the Wechsler scale were excluded. Diagnosis of ADHD of the participants in the study group was made using the K-SADS-PL-T. Adolescents who met the criteria after being assessed by K-SADS-PL-T, also filled out the Socio-demographic Information Form, Relationships Scales Questionnaire (RSQ), and Parental Attitude Research Instrument.

**RESULTS:** There was no difference in age or gender distribution between the ADHD and control groups. Furthermore, there was no difference between maternal ages of the participants both in the ADHD and control groups. Democratic attitude subscale of RSQ in the control group values were higher than the ADHD group ( $p < 0.05$ ). Other subscale scores did not show significance between the two groups. A moderate positive correlation was found between the maternal democratic attitude and maternal secure attachment ( $r = 0.311$ ,  $p < 0.05$ ). A moderate level of negative correlation was found in maternal fearful attachment style between democratic attitude and equalitarianism scores ( $r = -0.316$ ,  $p < 0.05$ ). There was no difference between parental attitudes and adolescent attachment styles.

**CONCLUSION:** Our study has shown that adolescents with ADHD who compared for secure and insecure attachment styles had no difference between maternal parenting attitudes. In this study as expected, mothers of children with ADHD are more critical and secure attachment style of mother cause more receptive approach to their children.

**Keywords:** attachment style, attention deficit hyperactivity disorder, parenting attitude

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[Abstract:0197][Psychosomatic medicine-Liaison psychiatry]

## Could alexithymia play a role in premature ejaculation?

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**OBJECTIVE:** We aimed to examine the effect of alexithymia on premature ejaculation (PE) which is diagnosed when considered to be of psychogenic origin like other sexual dysfunctions described by American Psychiatric Association.

**METHOD:** Sixty three patients who have been diagnosed with PE due to DSM-5 (group 1) and forty six control subjects (group 2) were enrolled into this study. Ages and marital statuses were recorded. Any drug use that may cause sexual dysfunction directly or indirectly through mood, and having any disease such as penile, neurological, psychiatric, or endocrine were defined as exclusion criteria. Before applying questionnaires, informed consents were obtained from all participants. Toronto Alexithymia Scale (TAS) which has three subscales and Premature Ejaculation Diagnostic Tool (PEDT) were administered to all participants in both groups.

**RESULTS:** All members in group 1 had an intravaginal ejaculation latency time lower than 1 minute, and all members in group 2 had higher than 1 minute. Statistical analysis has shown that group 1 and group 2 had no statistical difference in terms of age or marital status ( $p>0.05$ ). Furthermore, TAS scores were not found to be statistically different between groups ( $p=0.28$ ). As expected PEDT scores were significantly higher in group 1 ( $p<0.001$ ). Advanced statistical analysis of the data especially will be performed on measurements of TAS subscales.

**CONCLUSION:** Rather than a mental disorder, alexithymia is regarded as a trait of personality which can vary in severity among individuals. It is conceptually defined as being unable to identify and distinguish emotions and consequently have difficulty while expressing them. Furthermore, alexithymia is suggested to be divided into two types as primary and secondary in terms of whether or not there is an underlying stress factor or a mental disorder. Other than the above definitions, alexithymia has a sub-dimension described as insufficient fantasy skills and imaginal processes. In clinical practice alexithymia often leads to difficulty of diagnosis and a low response in the treatment. A previous study which evaluated relationship between emotional dysregulations and PE reported that higher scores of alexithymia in patients with PE and a positive correlation of alexithymia level and PE severity. Additionally, in that study externally oriented cognitive style as a subscale of TAS had showed the highest correlation with PE severity. Another previous study showed that depressed mood was a confounding factor on association between alexithymia and sexual dysfunction. As shown above, role of alexithymia in PE would be clarified only when its factorial impact on etiopathogenesis of PE understood. Our findings have not indicated a correlation of total TAS score and PE. This may due to lack of detailed analysis of TAS subscales. Advanced statistical analysis will be performed at the earliest opportunity. But our results may contribute to emphasize the requirement for further studies on multifactorial etiology of PE. A comprehensive research aimed to dissect each factors on PE may expose the role of alexithymia most accurately.

**Keywords:** premature ejaculation, alexithymia, emotions

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**[Abstract:0198][Psychosomatic medicine-Liaison psychiatry]**

## Are dissociation prone individuals immune to premature ejaculation?

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**OBJECTIVE:** We aimed to study the relationship between dissociation and premature ejaculation (PE) which is diagnosed when considered to be of psychogenic origin like other sexual dysfunctions described by American Psychiatric Association. Because sexual arousal and orgasm requires a complete attention and consciousness for the stimuli we hypothesized that a basal non-pathological dissociation would be necessary for delay capability in a normal orgasm. Based on the conceptual fact that dissociation is an experience of disruption in perception it may play a role in this capability.

**METHOD:** Sixty three subjects who have been diagnosed with PE due to DSM-5 (group 1) and forty six control subjects which is similar in terms of age and marital status (group 2) were recruited for the study. Any drug usage that may cause sexual dysfunction directly or indirectly through mood, and having any disease such as penile, neurological, psychiatric, or endocrine were defined as exclusion criteria. Before applying questionnaires informed consents were obtained from all participants. Somatoform Dissociation Questionnaire (SDQ) is a scale developed for assessing somatic symptoms of dissociation. Validity and reliability of the Turkish version of this scale was performed by Sar et al. In this study, SDQ and Premature Ejaculation Diagnostic Tool (PEDT) were administered to all participants in both groups.

**RESULTS:** Statistical analysis has shown that group 1 and group 2 had no statistical difference in point of age or marital status ( $p>0.05$ ). Furthermore, SDQ scores were found to be lower in patients diagnosed with PE in a statistically significant manner ( $p<0.001$ ). As expected PEDT scores were significantly higher in group 1 ( $p<0.001$ ).

**CONCLUSION:** During sexual intercourse, distraction from the moment or a disruption of consciousness and perception may occur through dissociation as a non-pathological process. Such mechanism may underlie the normal orgasm and ensure a control over it. In

our study, we found SDQ scores lower in patients with PE. This may be due to lack of a basal dissociation level that was unlike a pathological defense mechanism. A study on immature psychological defense mechanisms to predict women's penile-vaginal intercourse orgasm indicated that both dissociation and somatization were related with lower possibility of orgasm. The measurement tool used in our study is a questionnaire that assesses quantity of both somatization and dissociation. So our findings show close similarity expect gender difference in methods with results of study on women's penile-vaginal intercourse orgasm mentioned above. Another difference in methodology is the direction of cause and effect relationship of the hypothesis. That study indicates these immature defense mechanisms to be the reason of pathological anorgasmia, but ours indicates a basal non-pathological form to be the reason of a normal orgasm. Further studies of dissociation and PE relationship can be designed on an experimental basis and multidimensional psychological measurements.

**Keywords:** premature ejaculation, dissociation, orgasm

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**[Abstract:0200][Others]**

## Validity and reliability of the Turkish version of DSM-5 acute stress symptom severity scale-child form

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**OBJECTIVE:** This study aimed to assess the validity and reliability of the Turkish version of DSM-5 Acute Stress Symptom Severity Scale- Child Form. DSM-5 Acute Stress Symptoms Severity Scale Child Form is consisted of 7 items that assess the severity of acute stress symptoms of children and adolescents aged between 11–17 years. It is designed to be used in the first assessment and within the treatment process of children and adolescents that are diagnosed with acute stress disorder (or individuals with clinically severe acute stress disorder symptoms). For each item, the individual is requested to fill out the severity of the symptoms he has had within the last 7 days. Total score varies between 0 to 28 and higher scores indicate a much more severe acute stress disorder being present.

**METHOD:** The scale was prepared by carrying out the translation and back-translation of the DSM-5 Acute Stress Symptom Severity Scale-Child Form. Study group consisted of 30 patients that have been treated in a child psychiatry unit and diagnosed with posttraumatic stress disorder and 83 healthy volunteers that were attending middle or high school during the study period. As for reliability analyses, internal consistency coefficient and item-total score correlation analysis, test-retest reliability; and for validity analyses, explanatory factor analysis and for concurrent validity, correlation analyses with Child Posttraumatic Stress Reaction Index was also used along with DSM-5 Acute Stress Symptom Severity Scale-Child Form.

**RESULTS:** Mean age of the study group was  $15.6 \pm 1.5$  and 54.9% (n=62) female. 87.9% of the group was attending school. 80% of the patient group has been followed up since 1–6 month while 16.7% over 6 months in child psychiatry unit of CBU. Regarding reliability analyses, Cronbach alpha internal consistency coefficient was calculated as 0.921 while item- total score correlation coefficients were measured between 0.658 and 0.825. Test-retest correlation coefficient was calculated as  $r=0.634$  ( $p<0.0001$ ). Before the application of explanatory factor analysis, Kaiser- Meyer-Olkin analysis to assess whether sample was in congruity indicated a coefficient value of 0.894. By using Bartlett test, chi-square value was calculated as 550.108 ( $p<0.0001$ ). In factor analysis, one factor with eigenvalue above 1 was maintained. The eigenfactor value was 4,784 and explained 68,3% of the total variance. Factor loads of scale items were found between 0.737-0.885. As for concurrent validity, the scale showed a high correlation ( $r=0.684$ ,  $p<0.0001$ ) with Child Posttraumatic Stress Reaction Index. This result supports the validity of the scale.

**CONCLUSION:** It was concluded that Turkish version of DSM-5 Acute Stress Symptom Severity Scale-Child Form could be utilized as a valid and reliable tool both in clinical practice and for research purposes.

**Keywords:** acute stress symptom severity scale - child form, reliability, validity

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**[Abstract:0202][Others]**

## Validity and reliability of the Turkish version of DSM-5 posttraumatic stress symptom severity scale-child form

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**OBJECTIVE:** This study aimed to assess the validity and reliability of the Turkish version of DSM-5 Posttraumatic Stress Symptom Severity Scale-Child Form.

DSM-5 Posttraumatic Stress Symptoms Severity Scale Child Form is consisted of 9 items that assess the severity of posttraumatic stress symptoms of children and adolescents aged between 11–17 years. It is designed to be used in the first assessment and within the treatment process of children and adolescents that are diagnosed with posttraumatic stress disorder (or individuals with clinically severe posttraumatic stress disorder symptoms). For each item, the individual is requested to fill out the severity of the symptoms he has had within the last 7 days. Total score varies between 0 to 36 and higher scores indicate a much more severe posttraumatic stress disorder being present.

**METHOD:** The scale was prepared by carrying out the translation and back-translation of DSM-5 Posttraumatic Stress Symptom Severity Scale - Child Form. Study group consisted of 30 patients that have been treated in a child psychiatry unit and diagnosed with posttraumatic stress disorder and 83 healthy volunteers that were attending middle or high school during the study period. As for reliability analyses, internal consistency coefficient and item-total score correlation analysis, test-retest reliability; and for validity analyses, explanatory factor analysis and for concurrent validity, correlation analyses with Child Posttraumatic Stress Reaction Index was also used along with DSM-5 Posttraumatic Stress Symptom Severity Scale-Child Form.

**RESULTS:** Mean age of the study group was  $15.6 \pm 1.5$  and 54.9% (n=62) female. 87.9% of the group was attending school. 80% of the patient group has been followed up since 1–6 month while 16.7% over 6 months in child psychiatry unit of CBU. Regarding reliability analyses, Cronbach alpha internal consistency coefficient was calculated as 0,909 while item- total score correlation coefficients were measured between 0.611 and 0.780. Test-retest correlation coefficient was calculated as  $r=0.663$ . Before the application of explanatory factor analysis, Kaiser- Meyer-Olkin analysis to assess whether sample was in congruity indicated a coefficient value of 0.892. By using Bartlett test, chi-square value was calculated as 550.167 ( $p<0.0001$ ). In factor analysis, one factor with eigenvalue above 1 was maintained. The eigenfactor value was 5.269 and explained 58.5% of the total variance. Factor loads of scale items were found between 0.691-0.840. As for concurrent validity, the scale showed a high correlation ( $r=0.794$ ,  $p<0.0001$ ) with Child Posttraumatic Stress Reaction Index.

**CONCLUSION:** It was concluded that Turkish version of DSM-5 Posttraumatic Stress Symptom Severity Scale - Child Form could be utilized as a valid and reliable tool both in clinical practice and for research purposes.

**Keywords:** posttraumatic stress symptom severity scale - child form, reliability, validity

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[Abstract:0204][Others]

## Turkish validity and reliability of DSM-5 dissociative symptoms severity scale-child form

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**OBJECTIVE:** This study aimed to assess the Turkish validity and reliability of DSM-5 Dissociative Symptoms Severity Scale- Child Form. DSM-5 Dissociative Symptoms Severity Scale is an 8-item measure that assesses the severity of dissociative experiences in children ages 11–17. The measure is completed by the child upon receiving a diagnosis of a dissociative disorder (or clinically significant dissociative symptoms) and thereafter, prior to follow-up visits with the clinician. Each item asks the child receiving care to rate the severity of his or her dissociative experiences during the past 7 days. The total score can range from 0 to 32, with higher scores indicating greater severity of dissociative experiences.

**METHOD:** The scale was prepared by carrying out the translation and back translation of DSM-5 Dissociative Symptoms Severity Scale. Study groups consisted of 30 patients diagnosed with Posttraumatic stress disorder that have been treated in a child and adolescent psychiatry unit and 83 healthy volunteers from middle and high schools in the community. As for reliability analyses, internal consistency coefficient and item-total score correlation analysis, test-retest reliability; and for validity analyses, explanatory factor analysis and for concurrent validity, correlation analyses with Adolescent Dissociative Experiences Scale (ADES) was also used along with DSM-5 Dissociative Symptoms Severity Scale.

**RESULTS:** Mean age of the study group was  $15.6 \pm 1.5$  and 54.9% (n=62) female. 87.9% of the group was attending school. 80% of the patient group has been followed up since 1–6 month while 16.7% over 6 months in child psychiatry unit of CBU. Regarding reliability analyses, Cronbach alpha internal consistency coefficient was found to be 0.824 and item- total score correlation coefficients as between 0.464 and 0.648. Test-retest correlation coefficient was calculated as  $r=0.784$  ( $p<0.0001$ ). Before the application of explanatory factor analysis, Kaiser- Meyer-Olkin analysis to assess whether sample was in congruity indicated a coefficient value of 0.824. By using Bartlett test, chi-square value was calculated as 281.047 ( $p<0.0001$ ). In factor analysis, one factor with eigenvalue above 1 was maintained. The eigenfactor value was 3.620 and explained 45.2% of the total variance. Factor loads of scale items were found between 0.566-0.722. As for concurrent validity, the scale showed a high correlation ( $r=0.687$   $p<0.0001$ ) with the Adolescent Dissociative Experiences Scale (ADES).

**CONCLUSION:** It was concluded that Turkish version of DSM-5 Dissociative Symptoms Severity Scale- Child Form could be used as a valid and reliable tool both for clinical practice and research purposes.

**Keywords:** DSM-5 dissociative symptom severity scale, validity, reliability

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[Abstract:0208][Schizophrenia and other psychotic disorders]

## The effect of vitamin B12 deficiency on neutrophil-lymphocyte ratio in patients with schizophrenia

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**OBJECTIVE:** Schizophrenia is a neuroinflammatory disease which is seen 1% of the population. Previous studies showed an increase of the neutrophil-lymphocyte ratio (NLR) in schizophrenic patients. In this study, we examined whether there is any effect of vitamin B12 deficiency on neutrophil lymphocyte ratio in patients with schizophrenia.

**METHODS:** Ninety-five patients with schizophrenia who were hospitalized on inpatient clinic of Abant Izzet Baysal University Medical

Faculty were included in this study. Neutrophil, lymphocyte values, and B12 levels were evaluated retrospectively. Patients were divided into two groups according to vitamin B12 levels. Vitamin B12 levels under 200 pg/ml is the first group, the second group is patients with vitamin B12 levels over 200 pg/ml.

**RESULTS:** Vitamin B12 levels were under 200 pg/ml in 28 patients. Vitamin B12 levels were under 200 pg/ml in 24 patients with schizophrenia. And vitamin B12 levels were over 200 pg/ml in 44 schizophrenic patients. NLR was  $2.52 \pm 1.27$  in patients with vitamin B12 levels under 200 pg/ml. NLR was  $1.96 \pm 0.88$  in patients with vitamin B12 levels over 200 pg/ml. There was statistically significant difference between NLR in schizophrenia patients with vitamin B12 levels under 200 pg/ml and over 200 pg/ml ( $p < 0.05$ ).

**CONCLUSION:** Increase in the inflammatory process in patients with schizophrenia was reported previously. In our study, high NLR in schizophrenic patients with low vitamin B12 levels can be interpreted that vitamin B12 deficiency can increase inflammation in patients with schizophrenia or increased inflammation may reduce vitamin B12 levels via accelerating vitamin B12 consumption.

**Keywords:** schizophrenia, NLR, vitamin B12

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[Abstract:0210][Dependencies]

## Neutrophil-lymphocyte ratio in patients with alcohol dependence: a preliminary study

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**OBJECTIVE:** Alcohol dependence is a neuroinflammatory disease and alcohol leads to inflammation by activating various mechanisms. Neutrophil/ lymphocyte ratio is an indicator of systemic inflammatory response. In this study we aimed to compare neutrophil / lymphocyte ratio in hospitalized patients with alcohol dependence and healthy controls.

**METHODS:** One hundred fifty six hospitalized patients with alcohol dependence were evaluated retrospectively and neutrophil/ lymphocyte ratio were calculated and compared with 31 healthy controls.

**RESULTS:** While neutrophil lymphocyte ratio in the alcoholic group was  $1.88 \pm 0.82$ , in healthy control group neutrophil-lymphocyte ratio was  $1.79 \pm 0.53$ . There was no statistically significant difference between alcohol dependence group and healthy controls in terms of neutrophil / lymphocyte ratio.

**CONCLUSION:** Our findings showed that neutrophil lymphocyte ratio is not different in patients with alcohol dependence from the healthy controls. However, there were several limitations in our study. First of all, our study was retrospective and only hospitalized patients with alcohol dependence for detoxification treatment with their own request were included in this study. Comorbid psychiatric disorders, duration of alcohol use and severity of alcohol dependence could not be evaluated in patients with alcohol dependence in this study. Prospective, controlled studies are needed to assess the potential differences of neutrophil / lymphocyte ratio in patients with alcohol dependence.

**Keywords:** alcohol, dependence, neutrophil/lymphocyte ratio

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[Abstract:0213][Anxiety disorders]

## Validity and reliability of the Turkish version of DSM-5 generalized anxiety disorder severity scale child form

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**OBJECTIVE:** This study aimed to assess the validity and reliability of the Turkish version of DSM-5 Generalized Anxiety Disorder Severity Scale- Child Form. DSM-5 Generalized Anxiety Disorder Severity Scale- Child Form 11–17 is a 10-item measure that assesses the severity of generalized anxiety disorder in children and adolescents. The measure was designed to be completed by the child upon receiving a diagnosis of generalized anxiety disorder (or clinically significant generalized anxiety disorder symptoms) and thereafter, prior to follow-up visits with the clinician. Each item asks the child to rate the severity of his or her generalized anxiety disorder during the past 7 days. The total score can range from 0 to 40, with higher scores indicating greater severity of generalized anxiety disorder.

**METHOD:** The scale was prepared by carrying out the translation and back- translation of DSM-5 Generalized Anxiety Disorder Severity Scale-Child Form. Study group consisted of 48 patients that have been treated in a child psychiatry unit and diagnosed with any anxiety disorder and 99 healthy volunteers that were attending middle or high school during the study period. As for reliability analyses, internal consistency coefficient and item-total score correlation analysis, test-retest reliability; and for validity analyses, explanatory factor analysis and for concurrent validity, correlation analysis with Screen for Child Anxiety and Related Emotional Disorders (SCARED) and DSM-5 Generalized Anxiety Disorder Severity Scale-Child Form were made.

**RESULTS:** Mean age of the study group was 15.1±1.7 and 51% (s:75) male. 98.6 percent of the group was attending school. 100% of the patient group has been followed up since 1-6 month in child psychiatry unit of CBU. Regarding reliability analyses, Cronbach alpha internal consistency coefficient was calculated as 0.926 while item- total score correlation coefficients were measured between 0.602 and 0.809. Test-retest correlation coefficient was calculated as  $r=0.584$  ( $p<0.0001$ ). Before the application of explanatory factor analysis, Kaiser-Meyer-Olkin analysis to assess whether sample was in congruity indicated a coefficient value of 0.880. By using Bartlett test, chi-square value was calculated as 1023.881 ( $p<0.0001$ ). In factor analysis, one factor with eigenvalue above 1 was maintained. The eigenfactor value was 6.061 and explained 60.6% of the total variance. Factor loads of scale items were found between 0.671-0.855. As for concurrent validity, the scale showed a high correlation ( $r=0.704$   $p<0.0001$ ) with Screen for Child Anxiety and Related Emotional Disorders (SCARED).

**CONCLUSION:** It was concluded that Turkish version of DSM-5 Generalized Anxiety Disorder Severity Scale - Child Form could be utilized as a valid and reliable tool both in clinical practice and for research purposes.

**Keywords:** DSM-5, generalized anxiety disorder severity scale - child form, reliability, validity

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**[Abstract:0214][Anxiety disorders]****Validity and reliability of the Turkish version of DSM-5 agoraphobia severity scale-child form**

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**OBJECTIVE:** This study aimed to assess the validity and reliability of the Turkish version of DSM-5 Agoraphobia Severity Scale- Child Form. DSM-5 Agoraphobia Severity Scale- Child Form. 11–17 is a 10-item measure that assesses the severity of symptoms of agoraphobia in children and adolescents. The measure was designed to be completed by the child upon receiving a diagnosis of agoraphobia (or clinically significant agoraphobia symptoms), and thereafter, prior to follow-up visits with the clinician. Each item asks the child to rate the severity of his or her agoraphobia during the past 7 days. The total score can range from 0 to 40, with higher scores indicating greater severity of agoraphobia.

**METHOD:** The scale was prepared by carrying out the translation and back- translation of DSM-5 Agoraphobia Severity Scale-Child Form. Study group consisted of 48 patients that have been treated in a child psychiatry unit and diagnosed with any anxiety disorder and 99 healthy volunteers that were attending middle or high school during the study period. As for reliability analyses, internal consistency coefficient and item-total score correlation analysis, test-retest reliability; and for validity analyses, explanatory factor analysis and for concurrent validity, correlation analysis with Screen for Child Anxiety and Related Emotional Disorders (SCARED) and DSM-5 Agoraphobia Severity Scale Child Form were made.

**RESULTS:** Mean age of the study group was  $15.1 \pm 1.7$  and 51% (s:75) male. 98.6 percent of the group was attending school. 100% of the patient group has been followed up since 1-6 month in child psychiatry unit of CBU. Regarding reliability analyses, Cronbach alpha internal consistency coefficient was calculated as 0.890 while item- total score correlation coefficients were measured between 0.516 and 0.743. Test-retest correlation coefficient was calculated as  $r=0.566$  ( $p<0.0001$ ). Before the application of explanatory factor analysis, Kaiser- Meyer-Olkin analysis to assess whether sample was in congruity indicated a coefficient value of 0.831. By using Bartlett test, chi-square value was calculated as 830.252 ( $p<0.0001$ ). In factor analysis two factors that could explain 64.5% of the variance were obtained. Eigenfactor value of the first factor was 5.073 and this explained 50.7% of total variance. In the first factor a total of 6 item were present. When items were evaluated in detail, first factor included anxiety and feelings of fear in the face of the encountered situations and also the somatic symptoms experienced. Eigenfactor value of the second factor was 1.379 and this explained 13.8% of total variance. These items were related to avoidance behavior that appear in case a separation situation occurred. As for concurrent validity, the scale showed a high correlation ( $r=0.572$   $p<0.0001$ ) with Screen For Childhood Anxiety and Related Emotional Disorders (SCARED).

**CONCLUSION:** It was concluded that Turkish version of DSM-5 Agoraphobia Severity Scale- Child Form could be utilized as a valid and reliable tool both in clinical practice and for research purposes.

**Keywords:** DSM-5 agoraphobia severity scale- child form, reliability, validity

**Bulletin of Clinical Psychopharmacology 2016;26(Suppl. 1):S112**

**[Abstract:0220][Eating disorders]****Temperament and character traits in patients with depression with or without night eating syndrome**

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**OBJECTIVE:** Personality defines according to temperament and character features in psychobiological model. Some character and temperament dimensions may influence people's vulnerability to psychiatric disorders; for example people who have higher scores of harm avoidance vulnerable to have major depressive disorder. People with high novelty seeking (NS) scores tend to be more impulsive; patients with substance use disorders and bulimia nervosa had higher NS scores. Night eating syndrome (NES) is defined by consumption of considerable amount food after dinner and nocturnal eating. We considered that patients with NES additionally depression might have more novelty seeking behavior than patients only had depression.

**METHODS:** A total of 71 patients with unipolar depression completed the self-report Night Eating Questionnaire (NEQ), Temperament and Character Inventory (TCI), Beck Depression Inventory (BDI), and Beck Anxiety Inventory (BAI). NEQ has 16-item to measure of severity night eating syndrome and has a diagnostic cut-off score. Patients were classified into two groups called patients with NES and controls according to NEQ score. TCI has 240-item to assess four temperament and three character dimensions. Independent sample t Test was used to compare NES, BDI, BAI, and TCI. Pearson correlation analysis was performed to show correlation between NES and TCI.

**RESULTS:** NES rates was 40.8% (n=29) in our sample and the mean NEQ score was  $24.31 \pm 5.14$ . There were no significant differences between patients with NES and controls according to gender ( $\chi^2=1.327$  and  $p=0.515$ ), age ( $p=0.241$ ), education ( $\chi^2=1.537$  and  $p=0.674$ ), working status ( $\chi^2=2.044$  and  $p=0.360$ ), smoking ( $\chi^2=2.640$  and  $p=0.104$ ) and alcohol using ( $\chi^2=0.440$  and  $p=0.507$ ). Patients with NES had higher BAI scores than controls ( $26.62 \pm 14.50$  and  $18.45 \pm 11.75$ ,  $p=0.011$ ) but there was no significant difference according to BDI scores ( $29.10 \pm 9.51$  and  $24.90 \pm 10.99$ ,  $p=0.10$ ). According to TCI, there were only significant difference for third sub-dimension (extravagancy versus reserve) of novelty seeking temperament between patients with NES and controls ( $5.83 \pm 1.98$  and  $4.64 \pm 2.45$ ,  $p=0.035$ ), and positive correlation ( $r=-0.251$ ,  $p=0.035$ ) but no significant differences for other temperament dimensions.

**CONCLUSION:** We find similarly results for NES prevalence in which was predicted 35.2% in patients with depression. Patients with NES additionally depression were demonstrated had higher novelty seeking behavior and to be more extravagant than patients only had depression. NS is associated with impulsivity, irritability, overspending and exhibiting high-risk behaviors (Bensaeed 2014). Having statistically higher BAI scores in patients with NES might be associated with personality features. It is important to keep in mind that patients with NES additionally depression might have been more impulsive and might have tended to have more suicidal behaviour than patients only had depression.

**Keywords:** night eating syndrome, depression, temperament

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**[Abstract:0226][Anxiety disorders]****Adult separation anxiety disorder and the childhood separation anxiety disorder in parents of children with separation anxiety disorder**Ozlem Ozel Ozcan<sup>1</sup>, Lale Gonenir Erbay<sup>2</sup>, Arzu Caliskan Demir<sup>1</sup>, Dilsad Miniksar Yildiz<sup>1</sup><sup>1</sup>Department of Child and Adolescence Psychiatry, Inonu University, School of Medicine, Malatya, Turkey<sup>2</sup>Department of Psychiatry, Inonu University, School of Medicine, Malatya, Turkey

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**OBJECTIVE:** Separation anxiety disorder (SAD) may arise from childhood and continue through adulthood as well as first signs can become noticeable in adulthood period as an independent condition. The broad range of complex genetic and environmental risk factors are accused of the etiology. The current data preoccupy the importance of researching the existence of parental "Separation Anxiety" at that time or experienced in the past as a familial or parental risk category. This study was designed to assess the role of Adult Separation Anxiety (ASA) as a risk factor for the children who were diagnosed with SAD at the ages of 5-16 years and compare the results with those of children without any mental health problem.

**METHODS:** This study was performed at Inonu University Turgut Ozal Medical Centre, during the period of September, 2011 to February,

2013. Totally, parents of 55 children with SAD (24 female, 31 male) and 55 healthy children (24 female, 31 male) aged 5-16 years participated in the study. The study group was consisted of children who referred to Child Psychiatry outpatient clinic and diagnosed with SAD according to meeting the DSM-IV diagnostic criterias. The control group was randomized from the parents of age and sex appropriate children without any identifiable medical and mental health issue. The socio-demographic data form, Separation Anxiety Symptom Inventory (SASI) and Adult Separation Anxiety Questionnaire (ASAQ) were administered to the participants.

**RESULTS:** There were no significant statistical differences for the variables like age, sex, parental educational status, occupation, family structure (nucleus or large family), parental consanguinity and family psychiatric history between the two groups ( $p>0.05$ ). The ASAQ scores of both mothers and fathers in the study group were higher than those of the control group ( $p=0.006$ ,  $p=0.001$ , respectively). Mothers of children in the study group had higher SASI scores than the control group whereas no significant difference was detected between the SASI scores of the fathers for both groups ( $p=0.068$ ).

**CONCLUSION:** The data of this study demonstrated the higher levels of ASA in the parents of children with SAD. It is asserted that mothers with high levels of anxiety convey this negative emotion to their children by being model for them. In addition to this, parental anxiety leads to reinforce the unfavorable behavior of the child by behaving in a hypersensitive and overprotective manner during the first separation. We also observed the mothers of children with SAD to have higher rates of separation anxiety during their childhood than the control group. However, the result was not the same for the fathers so, this condition could be thought as a result of genetic transmission, especially inherited from maternal component. Also, the fathers of children with SAD had higher 'ASA scores' even they had no increased rates of childhood SAD ratios. This result supported the idea that late-onset separation anxiety could manifest first signs beginning from the adulthood period.

**Keywords:** childhood, separation anxiety, adult separation anxiety

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**[Abstract:0227][Psychosomatic medicine-Liaison psychiatry]**

## The Evaluation of psychiatric comorbidity, self-injurious behavior, suicide probability, and other associated psychiatric factors in adolescents with acne: a case control study

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**OBJECTIVE:** The aim of this study was to assess psychiatric comorbidity and levels of self-injurious behavior, suicide probability, life-satisfaction, self-esteem, and loneliness in adolescents with acne as compared with a control group.

**METHOD:** The study was conducted with 104 adolescents with acne who were admitted to the Dermatology Outpatient Clinic of the Suleyman Demirel University Medical Faculty during a one-year period and with 102 age- and sex-matched healthy controls. The Rosenberg Self-Esteem Scale, Suicide Probability Scale (SPS), Life Satisfaction Inventory, Short-form of the UCLA Loneliness Scale, and Inventory of Statements About Self-Injury (ISAS) were administered to the case and control groups. Both groups were assessed according to the Schedule for Affective Disorders and Schizophrenia for School Age Children-Present and Lifetime Version-Turkish Version. Additionally, the Acne Quality of Life Scale, Global Acne Grading System, and Visual Analog Scale were administered to the case group.

**RESULTS:** Adolescents with acne were found to have lower levels of self-esteem and life satisfaction and higher levels of loneliness compared to controls. In the case group, self-esteem levels were found to be significantly reduced when the acne was longer in duration. The mean scores of SPS and its hostility and negative self-evaluation subscales were found to be significantly higher in adolescents with acne. The presence of self-injurious behavior and psychiatric comorbidity were shown to be significantly higher in the case group than the control group, and this difference was statistically significant. The most common diagnosis in adolescents with acne was generalized anxiety disorder, and psychological diagnoses such as post-traumatic stress disorder, generalized anxiety disorder, depression, and bulimia nervosa were significantly more common in adolescents with acne compared to the control group.

**CONCLUSION:** The presence of higher levels of psychiatric comorbidity, suicide probability, and self-injurious behavior in adolescents with acne in our study suggests that psychiatric evaluation should be included in acne treatment plans. Our study demonstrates the importance of a multi-disciplinary approach for acne treatment.

**Keywords:** acne vulgaris, adolescent, self-injurious behavior

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[Abstract:0230][Dependencies]

## Lucid dreaming in alcohol and substance use: Preliminary results

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**OBJECTIVE:** Lucid dreaming is the experience of being aware of dreaming while asleep and continuing to dream. Although it is widely accepted as a REM sleep phenomenon, it may also exist during NREM sleep. Lucid dreaming might be a hybrid state between non-lucid dreaming and wakefulness that is proposed as an intermediate stage between psychotic like non-lucid dreaming and non-psychotic wakefulness. The prevalence of lucid dreaming in healthy population has been informed between 26-51% in several countries. However, there is no lucid dreaming study in patients with alcohol and substance use. Thus, we aimed to examine the lucid dreaming features with a questionnaire based design in patients presenting with alcohol and substance use.

**METHODS:** Ninety two patients with alcohol and substance use (52 alcohol, 40 illicit substances) from Bakirkoy Training and Research Hospital for Psychiatry, Neurology and Neurosurgery were included in this study. Participants filled out the lucid dreaming questionnaire.

**RESULTS:** There were 52 patients with alcohol use and 40 patients with substance use whose average age was  $43.94 \pm 10.64$  and  $26.6 \pm 6.78$  years respectively. The patients with alcohol use were significantly older than with substance use ( $p < 0.05$ ). In addition, the rate of marriage in patients with substance use was significantly lower than in patients with alcohol use ( $p < 0.05$ ). Twenty two (55%) of the patients with substance use had some lucid dreaming features while the rest were non-lucid dreaming ( $n=18$ , 45%) according to lucid dreaming questionnaire. Twenty two (42.3%) of the patients with alcohol use had some lucid dreaming features while the others were non-lucid dreaming ( $n=30$ , 57.7%). There was no statistically significant difference between patients with alcohol and substance use for lucid dreaming.

**CONCLUSION:** In this study, for the first time, we examined the frequency of lucid dreaming in patients with alcohol and substance use. Namely, patients have some features as insight, thought, control, and dissociation in lucid dreaming which may help our understandings of nightmares, dissociation in patients who are alcohol and substance use.

**Keywords:** alcohol, lucid dream, substance

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[Abstract:0238][Schizophrenia and other psychotic disorders]

## Psychotropic use pattern in schizophrenia outpatients: Turkey, 2015

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**OBJECTIVE:** The type and number of antipsychotics used is increasing every day, and new indications are being added to the existing ones for antipsychotics in updated guidelines. The treatment of schizophrenia and pharmacotherapy for schizophrenia is a dynamic process that can change over time. Standard antipsychotics were widely used after the 1950s, while atypical antipsychotics are now also common.

Although there are several guidelines for use of antipsychotics in schizophrenia in clinical practice, applications differs in the real world. For example, antipsychotic polypharmacy (APP) is widely used in clinical practice; it is commonly used for schizophrenia despite the lack of robust evidence for this approach, the increased risk of side effects and the cost implications. APP prevalence rates vary widely from 2–70% depending on study design, patient population, diagnosis and geographical region. Guidelines recommend specific uses of

psychotropics, but clinical applications may differ from guidelines recommendations. Also, doctors prescribe antipsychotics and other psychotropic drugs, but patients may fail to follow the original prescription and/ or use different kinds or doses of drugs in their daily lives. This study examines the antipsychotic use patterns of patients with schizophrenia and their correlations on the basis of patients' daily-life drug use patterns.

**METHODS:** This study was conducted with 280 patients with schizophrenia whose treatment and rehabilitation programs were being conducted by the Sakarya Community Counselling Center (Sakarya TRSM) and Derince Community Counselling Center (Derince TRSM), in 2015. Patients diagnosed with schizophrenia at least one year previously were included in the study. Their medications and socio-demographical data were recorded by face-to-face interview, and supportive information about the drug use patterns of patients was obtained from their relatives. Also Clinical Global Impression (severity of illness subscale) and General Assessment of Functionality scales were administered.

**RESULTS:** One hundred forty-nine patients from Sakarya TRSM and 131 patients from Derince TRSM were included in the study. The mean age of the patients was  $40.99 \pm 9.95$  (range 19-70). The patients used  $2.0 \pm 0.81$  different antipsychotics, the total daily psychotropic use averaged  $2.61 \pm 1.07$  (range 0-7) pills, while the total number of all pills patients took in one day averaged  $3.52 \pm 2.55$  (0-18). The proportion of patients using two or more drugs (psychotropic or otherwise) was 70.7%. The proportion for use of at least one atypical antipsychotic was 96.9% and for at least one typical antipsychotic 17.2%. The long term use of antipsychotics (depot) was 56.8%. The most frequently used atypical antipsychotic was quetiapin (35.5% of patients), and the most frequently used standard antipsychotic was haloperidol (2.5%). Patients with a higher severity of clinical impression and lower functionality had significantly higher polypharmacy rates.

**CONCLUSIONS:** This study showed that atypical antipsychotics are used at very high rates, with quetiapine being the most frequently used. Higher rates of polypharmacy use is an important subject to discuss in future studies.

**Keywords:** antipsychotic, outpatient, polypharmacy, schizophrenia

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[Abstract:0244][Dependencies]

## Neutrophil-To-Lymphosit and platelet-to-lymphosit ratios in heroin/opiate addicts: a preliminary study

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**OBJECTIVE:** The long-term use of opiates has effects on homeostasis of the blood. Discovering the impacts of opiates on haematological parameters may be helpful in recognizing the body's homeostasis condition leading to indications for useful treatment.

The neutrophil-to-lymphocyte and platelet-to-lymphocyte ratios (NLR and PLR, respectively) have recently been shown to be related to chronic illness and psychiatric disorders. The immunological effects of opiates have been examined in few studies, and, to the best of our knowledge, there have been no studies on the PLR and NLR values of patients with heroin/opiate use disorder. The aim of the present study, therefore, was to assess the effects of heroin addiction on haematological factors, looking specifically at NLR and PLR in heroin/opiate dependent patients

**METHODS:** This study was conducted at the Sakarya University Training and Research Hospital Alcohol and Substance Treatment and Training Center inpatient clinic (SEAH\_AMATEM). A total of 37 in patients with heroin-opiate use disorder, comprising the heroin group (HG), and 40 healthy controls, the control group (CG), enrolled in the study. The haematological factors of heroin dependent groups and control groups were compared. The heroin/opiate addicted group was constituted by abusers of opiates and/or heroin for more than one year. Patients were interviewed by an experienced psychiatrist and evaluated according to the DSM-5 criteria for heroin/ opiate use disorder. On the first day of their hospitalization, hemograms were obtained as a routine procedure. All of the patients had positive scores for 6 acetyl morphine and/or opiates in urine screening. Then, the linear variables of the HG and CG haematological parameters were compared using a student t test. Also, the NLRs and PLRs of the two groups were compared.

**RESULTS:** The HG mean age was  $35.35 \pm 8.72$  years and the CG  $33.05 \pm 9.21$ ; there was no statistically significant difference between the gender as well as the ages of the groups. HG and CG patients' haematological parameters' mean and standard deviation values were as follows: WBC was  $8.98 \pm 2.86$  and  $7.59 \pm 1.53$ , respectively, RBC  $4.84 \pm 0.50$  and  $5.13 \pm 0.34$ , HGB  $14.65 \pm 1.30$  and  $15.35 \pm 0.88$ , HCT  $43.08 \pm 3.91$

and  $45.69 \pm 2.59$ ,  $PLT 257.14 \pm 72.59$  and  $229.92 \pm 45.01$ ,  $NLR 2.64 \pm 1.11$  and  $1.91 \pm 0.94$ , and  $PLR 121.89 \pm 53.66$  and  $101.01 \pm 33.72$ .

There was a statistically significant difference among the groups' WBC, RBC, HGB, HCT, PLT, PLR and NLR parameters ( $p < 0.05$ ). The RBC, HGB and HCT parameters were significantly lower in HG than CG, while WBC, PLT and NLR and PLR parameters were significantly higher in HG than CG ( $p < 0.05$ ).

**CONCLUSIONS:** Heroin/opiate use disorder is related to increases in both NLR and PLR. Immunity and other related factors with PLR should be examined in patients with heroin/ opiate use disorders. Also, given the differences between use disorder and control groups for other haematological parameters, the haematological effects of heroin and opiates in heroin use disorders seem to be candidates for investigation in further studies.

**Keywords:** haematological, lymphosit, neutrophil, opiate addict

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[Abstract:0251][Specific learning disabilities]

## Quality of life and self esteem in children with spesific learning disability

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**OBJECTIVE:** Specific learning disability (SLD), is a disorder defined as demonstrate academic skills and learning significantly below according to the person's chronological age and education. SLD is a significant reason of academic failures during school age and it can impair the personal, social and familial functionality Reading, math and writing problems are restricting to academic skills, and cause problems in other areas, such as low grade or failure, low self-esteem, hopelessness, social skills problems, dropping out of school and finding a job. The aim of this research is to determine how SLD has disturbing effects on quality of life.

**METHODS:** Our research was cross-sectional. Case group, clinical comparison group, and healthy comparison group were composed of 66, 30 and 55 children respectively. Sociodemographic Data Form, Schedule for Affective Disorders and Schizophrenia for School Aged Children-Present and Lifetime Version (SADS-PL), The Pediatric Quality of Life Inventory (PedsQL), Coopersmith Self-Esteem Inventory (CSEI), The Bender Visual Motor Gestalt Test and SLD diagnosis battery were used. The data were evaluated by using Pearson chi square test, Fisher-Freeman-Halton test, Fisher's Exact test and Yates' Continuity Correction test.

**RESULTS:** In our research the minimum age was 7 and maximum age was 12. In the case group self-esteem score and the child-reported emotional functioning, social functioning, school functioning, psychosocial health, total scale score and family-reported physical health, emotional functioning, social functioning, school functioning, psychosocial health, total scale score were lower than the healthy comparison group. The other result of this research is SLD group and clinical comparison group do not differ in child-reported functionality areas. On the other hand family-reported emotional functioning scores in clinical comparison group were lower than SLD group and family-reported school and social functioning scores in SLD group were lower than clinical comparison group. The self-esteem scores in case group were lower than clinical comparison group.

**CONCLUSIONS:** Chronic school failure, leads to emotional difficulties such as social isolation, peer rejection and loneliness; in addition, academic life challenges such as poor motivation, high dropout rates in children with SLD. In previous studies it is reported that academic, emotional, psychosocial functioning in children with SLD were lower than their peers. Additionally, we've found that whether there was a comorbidity or not, when compared to healthy group, life quality and self esteem of children with SLD were lower. Families of children with SLD refer to emotional difficulties less than the clinical comparison group. In addition, SLD patients and clinical comparison groups show no difference in terms of quality of life among children, which makes us think that LD has negative impact on the quality of life as much as the other psychiatric disorders in the eyes of the children. Also, this is suggesting that the families of these children might care about academic performance and emotional needs of children can be overlooked. In another study it was reported that the least concordance between child and family forms were in the school and social functioning. Findings in this study also support this report.

**Keywords:** quality of life, learning disability, self-esteem

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**[Abstract:0265][Others]****Report on 7 years' experience in electroconvulsive therapy in Haydarpasa Numune Training and Research Hospital for psychiatric diseases: 2008–2015.**

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**OBJECTIVE:** Electroconvulsive therapy (ECT) is an effective treatment method that is used to cure severe psychiatric disorders. The standards and the practice of ECT vary markedly between and within countries, and even within individual centers. The aim of this study was to examine and share experiences of Electroconvulsive therapy (ECT) in the Haydarpasa Numune Training and Research Hospital, from 2008 to 2015.

**METHODS:** The sociodemographic and diagnostic features of 173 inpatients who underwent ECT in our hospital between 2008 to 2015 were examined retrospectively. We look at them in this study: energy dose in the first session, age of patient, gender of the patients, the number of times a patient administered ECT procedure, diagnosis, and the total number of sessions they receive patient records of patients. Also among the patients who took ECT, women/men ratio, variance of diagnoses, average of patients' ages and average number of ECT sessions they took are checked. 65% of the patient were women, 35% of them were men. It is found that, 16% of them took more than one ECT sessions.

**RESULTS:** In our study, it was found that ECT was implemented to 173 inpatients in 211 sessions as a result of retrospective review. 144 patients received ECT once; among the rest, 29 patients; 2 patients received 4 times, 3 of them received 3 times, lastly 24 of them received 2 times.

**CONCLUSION:** Although today ECT is one of the most effective treatment as well as psychotropic medications, it is rarely chosen as the first option treatment. A wealth of evidence supports the use of ECT in many psychiatric conditions such as major depressive disorder, bipolar disorder, schizoaffective disorder, and schizophrenia. Diagnosis of patient and answer of the prior treatment, disease severity, rapid return requirement of treatment, patient's preference are effective on using ECT. As our clinical data demonstrates that ECT treatment has been one of the most robust somatic treatment methods in psychiatric clinics and has maintained its power among the other treatment methods.

**Keywords:** electroconvulsive therapy, epidemiology, psychotic disorders

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**[Abstract:0269][Neuroscience: Neuroimaging-Genetic Biomarkers]****Attachment styles, childhood trauma, and sympathetic skin responses relations with panic disorder**

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**OBJECTIVE:** The main target of our research is to compare adult panic disorder patients and healthy controls who are matched by gender and age in terms of childhood trauma, attachment styles, and sympathetic skin responses. Additionally, if any state/ trait marker were to be found different in panic disorder group, we tried to elaborate which factors would predict this possible marker.

**METHOD:** We included 39 panic disorder patients according to DSM -5 diagnosis criteria and compared them with 39 healthy controls matched for age and sex. The researchers used SCID-I, measured sympathetic skin responses (amplitude and latency) and administered Hospital Anxiety and depression scale (HADS), Childhood Trauma Scale (CTS), Attachment Styles Scale for Adult (ASS) in both groups. Researchers also administered Hamilton Depression Scale (HAMD), Hamilton Anxiety Scale (HAS), and Panic Agarophobia Scale (PAS).

**RESULTS:** We found difference in physical and emotional neglect during childhood in panic disorder patients compared to healthy controls. there were no differences in terms of attachment styles and sympathetic skin responses between the two groups. But there were statistically significant negative correlations between anxiety, depression scale scores (HADS-A, HADS-D), and secure attachment styles and moderate positive correlations between avoidant and anxious attachment styles. There were positive correlations between

sympathetic skin responses and anxious and avoidant attachment styles and negative correlations with secure attachment styles in the panic group. The main predictor was avoidant attachment style for sympathetic skin response amplitude.

**CONCLUSION:** This is the first study in Turkish population comparing childhood trauma, attachment styles and sympathetic skin response relationships in panic disorder. The close relationship was reported between anxiety and depression scale scores and childhood trauma and the relationship between clinical phenomenology and attachment styles. But in our study, additionally, as a possible state marker, sympathetic skin response, was found to be moderately correlated with avoidant attachment style. These results may show that autonomic behaviors like sympathetic skin responses could be established via childhood experiences in early time of life, and this might give an important opportunity to predict the development of these disorders before clinical phenomenology sets in and give another way of frame for the therapeutic follow-up of these disorders. But these results should be confirmed with studies with larger sample sizes and different designs.

**Keywords:** attachment styles, panic disorder, skin conductance

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**[Abstract:0275][Mood disorders]**

## Efficiency and side effect profile of long acting methylphenidate: case series in natural clinic setting

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**OBJECTIVE:** Attention deficit hyperactivity disorder (ADHD) is a heterogeneous neurodevelopmental disorder affecting approximately 5% of children worldwide that is characterized by the core symptoms of difficulty in regulating attention, general motor restlessness, and lack of control of impulses. Academic failure, and troublesome peer and family relationships are associated with ADHD and patients are often diagnosed with one or more co-morbid psychiatric disorders. There are several medication options that have proved efficacy on ADHD symptoms as well as co-morbid conditions. Methylphenidate is the most frequently used and best studied medication in ADHD treatment. Owing to the short half-life and the issues associated with multiple daily dosing of immediate-release MPH formulations, long-acting MPH formulations has emerged. Worldwide different kind of long-acting MPH formulations are available in different regions and countries. These long-acting MPH formulations vary according to their modified-release technology, immediate-release (IR); modified-release (MR) ratios and duration of actions. There were just two kind of MPH formulation in Turkey, short-acting/ immediate-release (Ritalin) and long-acting/ modified-release (Concerta) which is using OROS (Osmotic Release Oral System) modified-release technology with 22 to 78% ratio of immediate-release: extended-release MPH and 12 hours duration of action. Recently new long-acting MPH preparation (Medikinet Retard) started marketing in Turkey. Medikinet retard contains equal proportions of IR and MR MPH. This once daily extended-release formulation have a duration of action about 8 hours with efficacy corresponding to twice-daily administration of IR MPH. Dopfner et al. claimed in their clinical trial that Medikinet retard with a higher IR component than Concerta and an equivalent daily dose is superior to Concerta in the morning and that children and adolescents may also be treated with a lower daily dose of Medikinet retard without resulting in a clinically relevant adverse effects during school time. The objective of this naturalistic study was to examine efficacy and side effect profile of Medikinet Retard in our outpatient clinic patients previously on other MPH preparations and needed to change Medikinet Retard for different reasons.

**METHOD:** As preliminary data: At Ege University Department of Child and Adolescent Psychiatry outpatient clinic, 163 patient with ADHD were screened in a natural settings in three months (n=163). 8% of screened patient are treated with Medikinet Retard as second or third choice (n=13).

**RESULTS:** Mean CGIS-S score before medikinet therapy (while using other methylphenidate therapy) was 3.46, mean CGIS-S score after the medikinet therapy was 2.46. The most common side effects were appetite reduction (n=3, 23.07%), retardation (n=2, 15.3%), irritability (n=1, 7.6%), dizziness (n=1, 7.6%).

**CONCLUSION:** It is demonstrated that a carefully monitored and titrated stimulant therapy reduces not only the core symptoms but also the associated behavioral problems while increasing psychosocial functioning in ADHD patients. Due to the different pharmacokinetic profiles of the various MR MPH products, different time courses of action throughout the day are expected and this might be significant for some patients with regards to side effects and efficacy. Pharmacokinetically different preparation of methylphenidate may help coping with side effects and better efficacy.

**Keywords:** ADHD, long acting methylphenidate

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[Abstract:0284][Schizophrenia and other psychotic disorders]

## Evaluation and treatment of first episode psychotic male inpatients in military hospital in Turkey

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**OBJECTIVE:** In this study we aim to present the profile of the patients diagnosed as first episode psychosis in one year.

**METHOD:** We assessed inpatients diagnosed with schizophrenia like psychotic disorder who were admitted to GATA Haydarpasa Training Hospital from June 2014 to May 2015. Eighty-one patients were considered as the first episode psychosis during their admission to treatment. They were all drug-naïve. Complete blood count, comprehensive metabolic panel, urine screen for drugs of abuse, magnetic resonance imaging (MRI) of the brain without contrast, hormone panel, sexually transmitted disease and other infectious disease like Treponema screening, autoimmune markers like RF and ANA, electroencephalography, and vitamin B12 and folate levels were tested in all patients for differential diagnosis. To evaluate positive and negative symptoms in patients with schizophrenia, as well as general psychopathology associated with schizophrenia, the Turkish version of Positive and Negative Syndrome Scale (PANSS) was used.

**RESULTS:** Twenty-three patients were diagnosed as Substance-Induced Psychotic Disorder, one patient was diagnosed as Psychotic Disorder due to Multiple Sclerosis, one patient had comorbid diagnosis of Diabetes Mellitus Type 1. Mean time of hospitalization was 19 days (15 days min., 48 days max). All patients were followed up for 6 months. During the course, four patients were diagnosed as Bipolar Disorder, six patients were diagnosed as Intellectual Development Disorders, and three patients were diagnosed as Dissociative Disorders. Seven patients discontinued their visits. At the end of six months, the remaining thirty-seven patients were diagnosed as schizophrenia.

**CONCLUSION:** Both typical antipsychotics (mostly haloperidol) and atypical antipsychotics (mostly aripiprazole and olanzapine) were used for medication. During six month follow-up, two patients had more than one antipsychotic medication. One patient had clozapine treatment as he was considered as treatment resistant. In fact his father was also diagnosed with schizophrenia and benefited from clozapine medication use. Four patients had electroconvulsive therapy because of their psychotic excitation state.

**Keywords:** first episode psychosis, differential diagnosis, treatment response

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[Abstract:0294][ADHD]

## The relationship between attachment styles of ADHD diagnosed adolescents and their mothers

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**OBJECTIVE:** ADHD is the most common psychiatric disorder in childhood. Some studies have shown an association between insecure attachment and development of ADHD, and it is also attachment problems contribute to the development of ADHD are reported. In the literature there are limited number of studies examining relationship between ADHD and attachment styles of adolescents and their mothers. In our study, we aimed to examine the relationship between attachment styles of parents and attachment styles of adolescents diagnosed with ADHD, also the anxiety levels of mother and adolescence and how ADHD diagnosis in adolescence have influences on attachment.

**METHODS:** This study included adolescents that were being followed in the Kocaeli University Child Psychiatry ADHD outpatient clinic between the ages of 13 and 17 and presented to the pediatric outpatient clinic during a three-month period. The ADHD group consisted of 53 adolescents, and the control group consisted of 53 adolescents. Diagnosis of ADHD of the participants in the study group was made using the K-SADS-PL-T. Adolescents and mothers in the both groups were asked to fill the relationships scales questionnaire, state trait anxiety inventory and also mothers in the both groups were asked to fill social-demographic information form and Weiss functional impairment rating scale-parent report. In the ADHD group, ADHD comorbid psychotic disorders, conduct disorders, anxiety disorders, mood disorders, pervasive developmental disorder, participants scoring below 80 in the Wechsler scale, history of head trauma and

presence of chronic physical illness have been exclusion criteria from the study.

**RESULTS:** No difference was identified between the attachment styles of the adolescents in the ADHD and control groups, or between the attachment styles of their mothers ( $p>0.05$ ). Additionally, when the effect of the mother's attachment style on the adolescent's attachment style was examined, no significant difference was identified between secure and insecure attachment styles among the ADHD and control groups ( $p>0.05$ ). The insecure attachment style was more common among the girls in the ADHD group than it was in the boys ( $p<0.05$ ). No difference was identified between the attachment styles of the adolescents in the ADHD group and their mothers ( $p>0.05$ ). The trait anxiety scores of the insecurely attached adolescents in the ADHD group were higher than the scores of securely attached adolescents ( $p>0.05$ ). In the ADHD group, no difference was identified between the functional impairments of the securely and insecurely attached adolescents. No negative correlation was identified between the mean adolescent secure attachment style scores and mean trait anxiety scores, and no positive correlation was identified between the mean adolescent preoccupied attachment style scores and the trait anxiety scores ( $p<0.05$ ).

**CONCLUSION:** Unlike the current literature, in our study, it was determined that the distribution of attachment styles is similar among the adolescents in the ADHD group and the control group. Also there was no relationship between the distribution of the attachment styles among the adolescents diagnosed with ADHD and their mothers. It has been concluded that to assess attachment in future studies, semi-structured methods should be used and patients newly diagnosed with ADHD should be evaluated.

**Keywords:** adolescent, anxiety, attachment, attention deficit hyperactivity disorder

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[Abstract:0306][Autism]

## Malonyledialdehyde levels, superoxide dismutase and catalase enzyme activities in autism spectrum disorders

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**OBJECTIVES:** Autism spectrum disorders (ASD) are neurodevelopmental disorders characterized by social and language deficits, communication skills, and the presence of restricted interests and repetitive behaviors. The underlying etiology of ASD is yet unclear. ASD is considered to be a multi-factorial disorder that is influenced by genetic, immunological, and environmental factors, including oxidative stress. Oxidative stress has been implicated in the pathogenesis of diverse disease states, and may be a common pathogenic mechanism underlying many major psychiatric disorders, as the brain has comparatively greater vulnerability to oxidative damage. In previous study, oxidative stress have been reported in ASD. The aim of this study was to evaluate levels of antioxidant enzymes, superoxide dismutase (SOD) and catalase (CAT) and levels of malondialdehyde (MDA), a marker of lipid peroxidation, in children with ASD children.

**METHODS:** The present study included 52 children with ASD diagnosed by DSM-IV-TR criteria and severity of ASD was evaluated with the Childhood Autism Rating Scale (CARS) scores. Controls included 48 age-matched healthy children. We compared levels of MDA, activities of SOD and CAT enzyme in children with ASD and controls. SOD and CAT enzyme activities in erythrocyte, MDA levels in plasma were determined spectrophotometrically.

**RESULTS:** There was no significant difference between the groups in terms of age and sex ( $p>0.05$ ). MDA was significantly higher in children with ASD compared with their controls ( $p<0.001$ ). Activities of SOD and CAT enzyme were significantly higher among patients than controls ( $p<0.001$ ). There were positive correlations between MDA, SOD, CAT levels and CARS score in the subjects with ASD.

**CONCLUSION:** This study suggests that increased lipid peroxidation might have an importance in the pathophysiology of ASD. Increased antioxidant enzyme activities may reflect a preceding cellular oxidative stress or serve as a compensatory mechanism in autism. Early assessment of antioxidant status would have better prognosis as it may decrease the oxidative stress before inducing more irreversible brain damage.

**Keywords:** malonyledialdehyde, superoxide dismutase, catalase, oxidative stress, autism spectrum disorders

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**[Abstract:0310][Psychosomatic medicine-Liaison psychiatry]****Temperament and character traits in psoriasis patients**Hilal Yigit<sup>1</sup>, Ertac Sertac Orsel<sup>1</sup>, Esra Yazici<sup>1</sup>, Rabia Oztas Kara<sup>2</sup>, Nur Cihan Cosansu<sup>2</sup>, Berna Solak<sup>2</sup>, Teoman Erdem<sup>2</sup>, Atila Eroglu<sup>1</sup><sup>1</sup>Department of Psychiatry, Sakarya University Research and Treatment Hospital, Sakarya, Turkey<sup>2</sup>Department of Dermatology, Sakarya University Research and Treatment Hospital, Sakarya, Turkey

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**OBJECTIVE:** Psychological factors have traditionally been associated with the onset, development, persistence and exacerbation of skin disease. Recent longitudinal studies of the general hospital population show the involvement of psychological factors, such as stress, depression, and anxiety in individuals who present skin disease. The high percentage of dermatological patients who need psychiatric care is also striking. Personality traits are important in a person's perception and interpretation of psychological factors. The several studies conducted examining the personality structure of skin diseases demonstrate conflicting results. In this study, the aim was to examine the personality structure of using Cloninger's temperament-character inventory which helps to understand the multiple levels of personality by examining the genetic, behavioral neurobiological, cognitive and emotional structure, the behavioral responses of individual differences, and the developmental factors that lead to susceptibility to psychiatric disorders.

**METHODS:** Patients diagnosed with psoriasis in the dermatology clinic (n=43) and presented to the psychiatric clinic (n=43) at Sakarya University Training and Research Hospital and healthy control group were included in the study. Patients were assessed using the SCID interview. The Turkish version of Temperament and Character Inventory (Turkish TCI) was administered on both groups. The average of the Turkish TCI scores groups were compared using the Student's t test and Mann-Whitney tests. For data analyses, the SPSS version 16.0 software package was used.

**RESULTS:** The mean age of the patients and the controls was 35.3 (SDM±13.1) and 30.2 (SDM±7.7) respectively. No statistically significant differences were found in terms of gender and marital status between the groups but the patients had lower educational levels than the controls. A comorbid psychiatric disorder was present in 67% of patients (n=29). When patients with and without a comorbid psychiatric disorder were compared and no statistically significant difference was found in terms of temperament-character traits however when the temperament and character traits in patients and controls were compared in terms of subscales (novelty seeking, harm avoidance, reward dependence, persistence, self-directedness, cooperativeness, self-transcendence) statistically significant differences were found.

**CONCLUSIONS:** There have been conflicting results in the literature on the temperament-character properties of psoriasis patients. These findings suggest that the temperament and character traits of patients with psoriasis are outside normal range. The higher scores in all subscales of temperament-character traits of psoriasis patients were evaluated as possibly serving a coping attitude against the formidable personality traits.

**Keywords:** character, psoriasis, temperament

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**[Abstract:0317][OCD]****Are patients with obsessive compulsive disorder impulsive?**

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**OBJECTIVE:** The aim of the present study were to examine whether OCD patients have higher impulsiveness scores than healthy control. Also, we examined the association between levels of impulsiveness and sociodemographic and clinical features, phenotype and illness severity in our sample.

**METHODS:** We recruited 57 outpatients with OCD (age range 18 and 65 years old). The severity of OCD was assessed by The Yale Brown Obsessive Compulsive Scale (Y-BOCS). All participants completed Maudsley Obsessive Compulsive Inventory (MOCI) and The Barratt Impulsiveness Scale-11 (BIS-11). BIS-11 was used for the assessment of impulsivity. BIS-11, a 30-item self-report questionnaire examining three main areas of impulsivity: attentional, motor, and non-planning.

**RESULTS:** Patients with OCD consisted of 42 females and 15 males, with a mean age of 36.49±11.11 years. Healthy controls consisted of 19

females and 11 males, with a mean age of  $35.73 \pm 9.32$  years. There were no significant differences between two groups in age and gender ( $p=0.75$ ,  $p=0.33$ , respectively). BIS-11 attentional impulsiveness score of OCD patients was significantly higher compared to controls. ( $t:2.17$ ;  $p=0.032$ ) Total score, motor and non-planning impulsiveness sub-scale scores showed no significant difference between patients and controls. ( $p=0.27$ ,  $p=0.66$ ,  $p=0.85$ ). Correlational analyses among clinical variables and impulsivity measures were performed for OCD patients. The Y-BOCS scores were not significantly correlated with the BIS-11 scores. On the other hand, total and sub-scores of the MOCI and BIS-11 demonstrated significant correlations.

**CONCLUSION:** this study sought to characterize the nature of impulsivity in OCD patients using both self-report. Present results showed that OCD patients with the symptom dimensions of checking, slowness, and rumination were more impulsive, particularly in attentional area. In addition, these findings suggest that cognitive impulsivity may be associated with OCD symptom dimension. Further studies are necessary to clarify the real impact of impulsivity in OCD and examine the possible relationship between attentional impulsivity and neurocognitive impairments.

**Keywords:** BIS-11, Impulsiveness, MOCI, obsessive-compulsive disorder

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[Abstract:0324][Mood disorders]

## Oxidative stress parameters in patients with manic episode

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**OBJECTIVE:** Oxidative metabolism is impaired in several medical conditions including psychiatric disorders, and this imbalance may be involved in the etiology of manic episode. In our study, we aimed to evaluate oxidative stress parameters in patients with bipolar manic episode.

**METHOD:** Sixteen patients (11 women, 5 men) diagnosed with bipolar manic episode according to DSM-5 criteria and sixteen healthy controls (10 women, 6 men) were included in the study. Blood samples were taken from 16 patients and 16 controls enrolled in the study. The total antioxidant status (TAS), total oxidant status (TOS), and oxidative stress index (OSI) were measured in blood samples. The severity of mania was evaluated with the Young Mania Rating Scale (YMRS). Results were compared between the groups.

**RESULTS:** There was no statistically significant difference in TAS, TOS, and OSI between patient and control groups ( $p>0.05$ ). The oxidative stress parameters did not show any correlations with YMRS scores in the patient and control groups.

**CONCLUSION:** These findings suggest that TAS, TOS, and OSI levels are unchanged in untreated bipolar manic episode. Our results did not support that oxidative stress parameters were associated with bipolar manic episode.

**Keywords:** bipolar disorder, mania, oxidative stress

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**[Abstract:0333][ADHD]****Relationship between ADHD symptoms and sleep-wake cycle in medication free children with ADHD? A preliminary study in Turkish children under twelve years old**

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**OBJECTIVE:** Studies suggest that up to 70% of children with ADHD have sleep problems. The sleep problems reported by parents and children include difficulties in falling asleep and maintaining sleep, tiredness when waking up, daytime sleepiness, bedtime resistance, delayed sleep onset, frequent night waking, frequent motor movements during sleep and morning/ daytime fatigue, snoring, head banging, restlessness, and nighttime awakening problems in ADHD. The aim of our study is to examine the relative contributions of circadian preferences and ADHD symptoms in relation to sleep onset issues, specifically – sleep onset insomnia and bedtime resistance – experienced by children with ADHD.

**METHODS:** Sleep onset insomnia and bedtime resistance – experienced by children with ADHD (n=53) and in controls (n=38) were recruited into the study. Our hypothesis is that evening preferences among children with ADHD are associated with more inattention. Another important issue of our study was firstly examine circadian preferences of children with ADHD in Turkish population as far as known. Parents completed Conners' Parent Rating Scale-Revised, The Children's Chronotype Questionnaire (CCTQ), and Children's Sleep Habits Questionnaire (CSHQ) to assess sleep variables.

**RESULTS:** Results indicated that ADHD patients had more sleep onset problems, parasomnias in CSHQ compared to the controls. However, circadian preferences did not differ in CCTQ. Another important finding was mild to moderate correlation between parasomnia, bedtime to sleep in scheduled days, and ADHD symptoms.

**CONCLUSION:** Our study showed that children with ADHD had more waking-up difficulties and more resistance to bed than controls in school days. However, in contrast to our hypothesis, morningness/ eveningness preference did not differ between ADHD and controls.

**Keywords:** ADHD, sleep habits, sleep-wake cycle, circadian preference

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**[Abstract:0341][Dependencies]****Reliability and validity of the Turkish version of substance abuse self-stigma scale, preliminary results**

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**OBJECTIVE:** In general terms, stigma is the status loss and discrimination triggered by negative stereotypes about people labeled as having mental illness. Stigma impedes recovery by eroding individuals' social status, social network and self-esteem, all of which contribute to poor outcomes, including unemployment, isolation, delayed treatment-seeking, treatment-refractory symptoms, prolonged course, and avoidable hospitalizations. There are two types of stigma: public stigma and self-stigma. Self-stigma is accompanied by low self-esteem and self-efficacy. It is acquired in three steps: awareness of the stereotype, agreement with it and applying it to one's self. It results in the build-up of a barrier which prevents the individual from seeking medical help and hinders adherence to treatment. Mental health professionals can address self-stigma with individual clients directly. It means an opportunity to reduce the negative effects of stigmatization during treatment sessions. It is necessary to provide a self-stigma scale specifically developed for substance misuse in order to encourage the clinicians who are giving health service to drug misusers so that these clinicians include stigma reduction in their treatment goals. The aim of this study is to examine the validity and reliability of the Turkish version of Substance Abuse Self-Stigma Scale (SASSS). The preliminary results of the study are given in this presentation.

**METHOD:** The Substance Abuse Self-Stigma Scale was translated and back-translated by the researchers. Psychometric properties of the translated version were examined in a cross-sectional study of individuals (n=82) receiving treatment for alcohol or substance use disorder. Construct validity was examined by correlation with the Turkish versions of Internalized Stigma of Mental Illness Scale (ISMI), Beck Depression Inventory (BDI) and the Acceptance and Action Questionnaire II (AAQ-II). As the preliminary data sample size was not large enough, only subscale correlations were computed.

**RESULTS:** The results indicated good internal consistency for Turkish version of SASSS ( $\alpha=0.90$ ) and each subscale; self devaluation ( $\alpha=0.91$ ), fear of enacted stigma ( $\alpha=0.84$ ), stigma avoidance ( $\alpha=0.69$ ), and values disengagement ( $\alpha=0.87$ ).

A correlation analysis was conducted among BDI, AAQ-II, ISMI subscales and SASSS subscales. A statistically significant relationship was found among self-devaluation, fear of enacted stigma, stigma avoidance subscales and AAQ-II, BDI, alienation, stereotype endorsement, perceived discrimination, social withdrawal subscales of ISMI (r was between 0.67 and 0.47;  $p<0.01$ ). Values disengagement as the last subscale of SASSS showed a significant relationship with perceived discrimination subscale of ISMI ( $r=0.26$  and  $p<0.05$ ). There was a significant relationship among SASSS and AAQ-II, BDI, ISMI (r was between 0.67 and 0.51;  $p<0.01$ )

**CONCLUSION:** The Turkish version of SASSS has a good reliability. Self-devaluation, fear of enacted stigma, and stigma avoidance subscales all showed good construct validity. The disengagement subscale, which is known to have poor psychometric properties, should encompass a correlation analysis of a larger sample size than used in this study. Preliminary data demonstrated that the Turkish version of the SASSS can be one of the measurement tools for self-stigma for substance use disorders.

**Keywords:** stigmatization, validation studies, substance-related disorders

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[Abstract:0368][Mood disorders]

## Relationship of internalized stigma with coping strategies and functioning in patients with bipolar disorder

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**OBJECTIVE:** This study is designed to examine the relationship between sociodemographic variables and clinical features with internalized stigma in patients with bipolar disorder (BD) in remission. It is aimed to examine the impact of self stigmatization on psychosocial functioning dimensions and to determine the relationship between internalized stigma and coping strategies. As far as we know, there is no study on the relationship of internalized stigma with coping strategies and functioning in patients with BD so this study may contribute for the literature about this issue.

**METHODS:** The study was conducted in Karadeniz Technical University, School of Medicine, Psychiatry Outpatient Clinic with bipolar outpatients whose treatment were ongoing. 77 patients with BD were included in this study. The diagnosis of BD was made with DSM-IV Axis I Disorders for the Structured Clinical Interview (SCID-I). The euthymia criteria were determined by Young's Mania Rating Scale and the Hamilton Depression Rating Scale. All patients were evaluated with sociodemographic questionnaire, Functioning Assessment Short Test (FAST), self-report scale of Internalized Stigma of Mental Illness Scale (ISMI), and the Coping Orientations to Problems Experienced scale (COPE).

**RESULTS:** The patients with primary level of education have higher level of self-stigmatization than the patient with higher school education. Total number of episodes, number of depressive episodes and history of depression with psychotic features were significantly correlated with internalized stigma. Functionality was significantly lower for patients with high internalized stigma. While internalized stigma scores were lower but scores of stigma resistance were higher in patients using coping strategies including active coping, planning, seeking social support, positive reinterpretation and growth coping attitudes, internalized stigmatization is higher and scores of stigma resistance is lower in patients using behavioral disengagement coping attitudes.

**CONCLUSIONS:** Supporting active coping, planning, seeking social support, positive reinterpretation and growth coping attitudes and decreasing attitudes towards behavioral disengagement in cognitive behavioral interventions may be targeted for reducing internalized stigma and increasing the stigma resistance. Thus, psychosocial functioning can be increased by reducing internalized stigma.

**Keywords:** bipolar disorder, coping strategies, functionality, internalized stigma

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**[Abstract:0369][Psychopharmacology]****Effects of chronic haloperidol, clozapine, and aripiprazole treatment on mice isolated vas deferens**Mehmet Hanifi Tanyeri<sup>1</sup>, Mehmet Emin Buyukokuroglu<sup>2</sup>, Pelin Tanyeri<sup>2</sup>, Oguz Mutlu<sup>3</sup>, Furuzan Akar<sup>3</sup>, Guner Ulak<sup>3</sup>, Bekir Faruk Erden<sup>3</sup><sup>1</sup>Department of Urology, Yenikent Government Hospital, Sakarya, Turkey<sup>2</sup>Department of Pharmacology, Sakarya University, School of Medicine, Sakarya, Turkey<sup>3</sup>Department of Pharmacology, Kocaeli University, School of Medicine, Kocaeli, Turkey

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**OBJECTIVE:** Sexual dysfunction is a common condition in patients taking antipsychotics, and is the most bothersome symptom and adverse drug effect, resulting in a negative effect on treatment compliance. Pharmacology research into human ejaculatory disorders is limited to clinical studies with registered drugs affecting the ejaculation process; therefore animal research has become the need. We aimed to examine the effects of haloperidol, clozapine and aripiprazole on serotonin, adenosine triphosphate (ATP) and potassium chloride (KCl)-induced contractions of the vas deferens in order to evaluate the effect of haloperidol, clozapine, and aripiprazole on the contraction of the vas deferens.

**METHODS:** Male inbred BALB/c ByJ mice aged 7 weeks upon arrival to the laboratory were used in this study. Haloperidol, clozapine, aripiprazole, serotonin, adenosine triphosphate (ATP) and KCl were dissolved in 0.9 % physiological saline. The mice were randomly divided into experimental groups as follows: saline; haloperidol 0.125 mg/kg; haloperidol 0.25 mg/kg; clozapine 1.25 mg/kg; clozapine 2.5 mg/kg; aripiprazole 3 mg/kg; aripiprazole 6 mg/kg. Mice were treated by ip injection of drugs during 21 days. Rats receiving only the vehicle ip (0.9% saline) during 21 days served as control group (n=7). Each experimental group consisted of 7 mice. After 21 days of treatment, epididymal and prostatic portions of vas deferens were surgically dissected free and immersed in 20 mL organ baths containing Krebs' solution. The effects of chronic treatment with haloperidol (0.125 and 0.25 mg/kg), clozapine (1.25 and 2.5 mg/kg) and aripiprazole (3 and 6 mg/kg) were examined on serotonin (10<sup>-8</sup> to 10<sup>-4</sup> M), ATP (10<sup>-8</sup> to 10<sup>-4</sup> M) and 80 mM KCl-induced contractile responses in the epididymal and prostatic portions of mice isolated vas deferens strips. Statistical comparison between the groups was performed using ANOVA supported by Dunnett's post hoc test.

**RESULTS:** Serotonin-induced contractile responses were significantly increased in the epididymal and prostatic portion of the vas deferens obtained from the haloperidol-treated group and clozapine-treated group. The Emax value for serotonin was significantly higher in prostatic and epididymal portions of the rat vas deferens obtained from haloperidol-treated group and clozapine-treated group than in the control group. However, aripiprazole treatment had no effect on serotonin responses in both epididymal and prostatic portions of mice vas deferens. Both haloperidole and clozapine treatments significantly inhibited ATP-induced contractions of the prostatic and epididymal portions of the rat vas deferens, but had no effect on KCl-induced contractions of the vas deferens in both portions. There were no significant differences in pD<sub>2</sub> values obtained in all portions of the vas deferens among any of the experimental groups. There were no significant differences in KCl-induced contractile responses among the groups.

**CONCLUSION:** These results revealed that induced contractions of vas deferens were affected after chronic treatment with haloperidol and clozapine but not aripiprazole. Serotonergic and purinergic receptors may, at least in part, contribute to changes in vas deferens contractions in mice with chronic treatment of haloperidol and clozapine but not aripiprazole.

**Keywords:** aripiprazole, clozapine, haloperidol, organ bath

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**[Abstract:0371][Psychopharmacology]****Effects of amibegron on learning and memory in naive and MK-801 injected mice in the elevated plus maze and passive avoidance tests**Mehmet Emin Buyukokuroglu<sup>1</sup>, Pelin Tanyeri<sup>1</sup>, Oguz Mutlu<sup>2</sup>, Guner Ulak<sup>2</sup>, Furuzan Akar<sup>2</sup>, Bekir Faruk Erden<sup>2</sup><sup>1</sup>Department of Pharmacology, Sakarya University, School of Medicine, Sakarya, Turkey<sup>2</sup>Department of Pharmacology, Kocaeli University, School of Medicine, Kocaeli, Turkey

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**OBJECTIVE:** Beta-3 adrenoceptors has an important role in the consolidation of memory mediated by effects in the ventral striatum (nucleus accumbens) which is a major part of basal ganglia. The effects on memory consolidation of specific agonists at these receptors can be discriminated pharmacologically. A highly specific non-competitive NMDA receptor antagonist MK-801 (dizocilpine) impairs learning and memory functions that depend on the hippocampus and the amygdala. The aim of this study was to examine the effects of amibegron on emotional and spatial memory functions in naive and MK-801 treated mice in the passive avoidance (PA) and elevated plus maze (EPM) tests. Besides the effects of amibegron on locomotion was also evaluated in open field test.

**METHODS:** Male inbred BALB/c ByJ mice aged 7 weeks were used in this study. Amibegron was dissolved in physiological saline containing 10% dimethyl sulfoxide (DMSO) while other drugs were dissolved in 0.9% physiological saline. Saline and 10% DMSO with saline were used as the vehicle controls. Saline, saline+DMSO, Amibegron (5 and 10 mg/kg) were injected intraperitoneally 60 min. before the acquisition session of the tests and MK-801 (0.2 mg/kg) were injected intraperitoneally 30 min. before the acquisition session of the tests.

**RESULTS:** There was no significant difference between the first day latency of all groups when the drugs were given before the acquisition session of the EPM test. There was no significant difference between the second day latency of saline, saline+DMSO and amibegron (5 and 10 mg/kg) groups. On the other hand MK-801 prolonged the second day latency but concurrent administration of MK-801 and amibegron (10 mg/kg) shortened the second day latency compared to MK-801 group. (2) In the PA test, there was no significant difference between the first day latency of all groups. There was no significant difference between the second day latency of saline, saline+DMSO and amibegron (5 and 10 mg/kg) while MK-801 significantly prolonged the second day latency. Concurrent administration of amibegron (10 mg/kg) and MK-801 partially shortened the second day latency compared to MK-801 group. (3) In the open field test, total distance traveled was significantly different between amibegron-treated groups. MK-801 significantly increased the total distance moved. Amibegron (5 and 10 mg/kg) had no effect on the total distance traveled in naive mice. Amibegron (10 mg/kg) significantly decreased the total distance traveled in MK-801-treated mice.

Results of our study revealed that MK-801 had impaired the memory in the EPM and PA tests and amibegron reversed MK-801-induced effects. In the open field test, MK-801 increased the locomotion of animals and amibegron reversed this effect.

**CONCLUSION:** Our study revealed that amibegron enhanced spatial memory in EPM and emotional memory in the PA test. Our results confirm that amibegron had improving effects on learning and memory in MK-801 treated mice by acting beta 3 receptors. Future studies using different beta 3 agonists with different cognition methods should be performed to verify our findings.

**Keywords:** amibegron, memory, MK-801

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**[Abstract:0373][ADHD]****Cognitive computer training in children with attention deficit hyperactivity disorder**Sumeyye Bozkurt<sup>1</sup>, Sule Kocas<sup>1</sup>, Ilyas Kaya<sup>1</sup>, Cynthia Rush<sup>3</sup>, Kevser Akyuz<sup>2</sup>, Suleyman Salih Zoroglu<sup>1</sup><sup>1</sup>Department of Child and Adolescent Psychiatry, Istanbul University, Istanbul School of Medicine, Istanbul, Turkey<sup>2</sup>Istanbul University, Cerrahpasa School of Medicine, Istanbul, Turkey<sup>3</sup>Department of Statistics, Yale University, New Haven, Connecticut- USA

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**OBJECTIVE:** Attention deficit hyperactivity disorder (ADHD) symptoms can be difficult to treat. Pharmacological treatment is commonly used to reduce ADHD symptoms. Whereas, non-pharmacologic treatment methods would be preferred by parents, children and

psychiatrists in some cases. Recently, several trials have shown promising results for cognitive computer training. Children with ADHD have a variety of cognitive dysfunctions, and it is important that cognitive training target multiple cognitive functions. The primary aim of this study is to examine if cognitive computer training would improve attention, executive functions, and working memory in children with ADHD.

**METHOD:** This study aims to examine the effect of "ACTIVATE™" a computer program designed to improve a range of cognitive skills and ADHD symptoms. A total of 41 children with ADHD, aged 6 to 12 years. The intervention group (n=22) was asked to use ACTIVATE™ at home 20 minutes 4 days per week for 16 weeks. Ten of them did not use medication for ADHD (Activate Alone). Control group (Medication only n:19) received treatment as usual. Outcome measures assessed cognitive functions and symptoms measures before and after the 8 weeks of training and end of training with NIH Toolbox Tests and conners parent rating scale.

**RESULT:** The study sample as a whole showed significant improvement on all three tests of cognition following treatment: Reaction Time on Flanker Correct Incongruent trials,  $p < 0.001$ ; Percent Correct No-Go trials,  $p < 0.01$ ; Working Memory,  $p < 0.05$ . Relative improvement on different tests varied as a function of the type treatment. The Activate alone and the Combined treatment groups showed greater improvement than the Medication only group on the Flanker test of focused attention (373 msec improvement vs. 195 msec). The Medication only and the Combined groups showed greater improvement than the Activate alone group in Working Memory (5.2 points vs. 1.4). However, due to limited sample size and high variability these differences were not significant. The groups showed similar improvement in response inhibition. There was no significant improvement in the conners parent rating scale measures.

**CONCLUSION:** Few studies have examined the effects of these interventions in children with ADHD, and although these studies generally show promising results (e.g., improvement of ADHD behavior as rated by parents and/ or a significant other, e.g., the teacher; an increase of neural activity and gray matter volume in ADHD affected brain areas), none of these studies are placebo-controlled. To date, most evidence has been found for the trainability of WM. Our study also supports this evidence. 'Cognitive computer training' is not to be considered a stand-alone treatment module, but one that should be added, combined, or integrated with existing, empirically supported treatments for ADHD, to fully have its therapeutic impact.

**Keywords:** ADHD, computer training, complementary treatment

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[Abstract:0377][Others]

## Clinical characteristics of suicide and its associated sociodemographic factors in adolescent patients

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**OBJECTIVE:** In many countries suicide is one of the leading causes of death among children and adolescents. Study of the global patterns of mortality in young people has shown that suicide is the second leading cause of death in the 15–19 years age group. Understanding the prevalence of suicide and its correlates is of great importance in planning programs to reduce the risk in different societies.

The present study was conducted to assess risk factors in adolescent patients who presented to Emergency Service and consulted to Child and Adolescent Psychiatry Department in Cukurova University Medical Faculty Hospital.

**METHODS:** We examined a total of 302 suicide cases admitted to the Emergency Service of Cukurova University hospital between January 2010 and September 2015. However, 22 cases were excluded from the analysis because of missing of information and 2 of them were exitus. Data was collected from the files records of Child and Adolescent Psychiatry Department using hospital's medical record system. The data were entered and analyzed using SPSS version 15 for Windows,. Cross tabs and chi-square tests were used to identify the categorical variables.

**RESULTS:** A greater proportion of the study subjects (84.4%) were females and they were more likely to have interparental conflict as a precipitating cause (62.0%,  $p < 0.0001$ ). Adolescents with disruptive behavior disorder diagnosis were more like to have a precipitating cause other than mood disorders and anxiety disorders. A history of physical abuse was related to increasing likelihood of developing post-traumatic stress disorder (PTSD) and an organized attempt. Rate of low education level, familial history of suicide and abuse were significantly increased in individuals with PTSD. According to the analyses, the risk factors for all suicidal behaviors among our patients were the female gender, domestic violence, low family income, previous suicidal attempts, disruptive behavior disorders, childhood abuse, low level of education.

**CONCLUSIONS:** Suicide is a multi-factorial public health problem affected by interaction between a wide range of demographic, social,

and cultural factors. This study examined the rate of suicide attempts and relevant variables and identified risk factors for suicide attempts among Turkish adolescents. Our results may shed light on the development of preventive programs and assesses the effectiveness of current interventions.

**Keywords:** adolescent, sociodemographic, suicide

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**[Abstract:0382][Impulse control disorders]**

## The relationship of self mutilation behavioral features in substance users with anxiety, depression, aggression, impulsivity, childhood trauma, and dissociative life

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**OBJECTIVE:** Self-mutilation behavior is associated with several comorbid psychonic picture. Furthermore, it is state that substance abuse is often seen in people who show repetitive self-mutilation behavior. Also, it is reported that, substance abuse is widespread in comorbid personality pathology. The aim of this study is to examine of the relationship of self mutilation behavioral features in substance users with impulsivity, childhood trauma, and dissociative life.

**METHODS:** Sixty five young male, whose age between 18-25 years old, participated in the study. All subjects are substance users and exhibit self-mutilation behavior. Participants were assessed with semi-structured Socidemographic Questionnaire, Barret Impulsivity Scale, Buss-Perry Aggression Scale (BPAS), Childhood Trauma Questionnaire, Beck Anxiety, and Depression Inventory and Dissociative Experiences scale (DES).

**RESULTS:** In this group of patients, there is significant relationship between depression scores and whether the suicide attempt and there is also significant relationship between increase in the number of suicide attempt and depression scores. In addition, in the group describing family problems, significant relationship was identified between BPAS scores. Anxiety scores were significantly higher in the group which harms by cutting themselves with razor blade. DES scores were significantly higher in the group cutting themselves with razor blade in the longer way. However, it was not reached any consequences between number of razor blade and its depth in the overall scales.

**CONCLUSION:** In people who exhibit repetitive self-mutilation behavior are often seen substance abuse and it is related with childhood trauma. Also, detection and treatment of psychopathology is needed to be studied.

**Keywords:** substance abuse, self-mutilation, impulsivity, childhood trauma

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**[Abstract:0396][Autism]**

## Retinoic acid, vitamin D and cortisol levels regulating gene expression via nuclear receptors in children with autism spectrum disorders

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**OBJECTIVES:** Retinoic acid, vitamin D and cortisol are molecules in the steroid structure, and have a role in the regulation of a series of gene expressions. Autism spectrum disorders (ASD) are group of neurodevelopmental disorders characterized by stereotyped and rigid patterns of behavior and interests, impaired verbal and non-verbal communication, and impaired social interaction. Although the

pathogenesis of ASD is not clearly known, it is claimed that epigenetic regulation is important in the emergence of the disease. The current study examined whether there is a difference between children with ASD and healthy control group in terms of retinoic acid, vitamin D and cortisol levels.

**METHODS:** Forty-three patients, aged between 2-9 years old and diagnosed with an ASD according to DSM-IV criteria, and age and gender matched 41 healthy controls were included in the study. Children who had mental retardation, history of head trauma and hearing loss, and received psychotropic, previous or current cortisol therapy, vitamins, chronic systemic disorders and clinically active infection were excluded in order to prevent interference with biochemical parameters. The patients, who have dysmorphic appearance, Fragile X, Rett syndrome were also excluded from the study. The Autism Behaviour Checklist (ABC) was used to evaluate the symptom severity of ASD. Peripheral venous blood samples were collected between 9 AM and 12 PM. The samples were stored at room temperature for 15 minutes for coagulation. Then, blood samples were centrifuged to separate serum from clot at 1000 g for 10 minutes. The sera were stored at -80°C until the time of analysis. Serum retinoic acid, 25-hydroxyvitamin D [25-(OH) D], and cortisol levels were measured using an enzyme-linked immunosorbent assay.

**RESULTS:** The mean age of the patient group was 42.4±20.5 months-old, and the mean age of the control group was 48.3±15.9 months-old in our study. There is no statistically significant difference between groups in terms of age, gender, age of the parents, education level of parents, number of siblings, siblings rankings, feeding with breast milk (months) and the rate of consanguinity between parents ( $p>0.05$ ). Gastrointestinal complaints (diarrhoea and constipation) and imbalanced nutrition were significantly higher in the patient group than those of controls ( $p=0.03$ ,  $p=0.01$ , respectively). Retinoic acid and cortisol levels in the ASD group were statistically significantly higher. There was no difference between groups for the 25-(OH) D levels. There was a positive correlation between retinoic acid and cortisol. No correlation was found between the ABC scores and biochemical parameters. There were no differences between regression and non-regression ASD children in terms of biochemical parameters.

**CONCLUSIONS:** In the present study, retinoic acid regulating the expression of several genes via nuclear receptors in children with ASD and cortisol levels was higher. In addition, a positive correlation was found between retinoic acid and cortisol levels. These two molecules may play an important role in the pathogenesis of the disease. However, the studies with larger sample sizes are needed.

**Keywords:** autism spectrum disorders, retinoic acid, vitamin d, cortisol, nuclear receptors, epigenetic regulation

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**[Abstract:0398][Stress and related conditions]**

## Serum levels of c-reactive protein, leptin and neuropeptide y and body mass index values in children with or without depression after sustaining sexual abuse

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**OBJECTIVES:** Depression and overweight/ obesity are significant public health problems. It is important to know potential predictors of obesity in adolescence, because childhood and adolescent obesity is highly predictive of adult obesity. In adolescents, pathophysiology and relationship between childhood sexual abuse (CSA) and overweight/ obesity were not completely understood. In this study, it was aimed to examine body mass index (BMI) and serum levels of C-reactive protein (CRP), leptin and neuropeptide Y (NPY) in sexually abused adolescents with or without depression.

**METHODS:** The study was conducted in the Department of Child and Adolescent Psychiatry at Dicle University. The study included 57 children aged between 10 and 17 years, who experienced CSA and presented to the Child Psychiatry Outpatient Clinic of and 31 healthy age- and gender-matched children as the control group. Children who had mental retardation, chronic systemic disorders, and clinically active infection and those who received oral contraceptives, psychotropic drugs, and previous or current steroid therapy were excluded, in order to prevent interference with biochemical parameters and BMI. Furthermore, cases with a psychopathology different from posttraumatic stress disorder (PTSD) and depression were excluded from the study. The patients were divided into two groups based on absence or existence of depression according to the Children's Depression Inventory (CDI). BMI z-scores and percentiles were calculated depending on height and weight and age and gender. Serum CRP, leptin and NPY were measured using enzyme-linked immunosorbent assay.

**RESULTS:** There were 24 CSA children (M/F: 10/14; mean age: 14.7±2.2 years) in depression group, 33 CSA children (M/F: 12/21; mean age: 13.6±2.5 years) in non-depression group and 31 healthy (M/F: 13/18; mean age: 13.5±1.9 years) matched control subjects. There were no significant differences between groups in terms of age, gender, education duration, mean age of parents, smoking, age at menarche and menstrual cycle for children ( $p>0.05$ ). Significantly higher age and gender adjusted BMI z-scores and percentiles were found in depressed patients compared with non-depressed and healthy subjects ( $p<0.05$ ). There was no significant difference between groups in terms of CRP levels. Significantly lower serum leptin and NPY levels were found in sexually abused children compared with the healthy subjects; however, no significant differences were found in serum leptin and NPY levels between depression and non-depression subgroups of sexually abused children. There was a positive correlation between CDI scores and BMI percentiles.

**CONCLUSIONS:** Depressed adolescents with a history of CSA have higher BMI values. Additionally, leptin and NPY levels were significantly lower in adolescents with history of CSA, while CRP levels of adolescents with history of CSA were similar to the control group. To our knowledge, our research is the first study of adolescents with a history of CSA. Future studies needs to be done with broad participants. Moreover, treatment of existing depression and weight control is important to prevent the development of obesity in children and adolescents experiencing depression after sexual abuse. It must be kept in mind that in medical treatment of depression, medication having no effect on weight gain should be chosen.

**Keywords:** abuse, depression, overweight, obesity, c-reactive protein, leptin

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[Abstract:0419][Others]

## Detailed evaluation of the relationship between prenatal testosterone and stuttering

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**OBJECTIVE:** Stuttering is a multifactorial speech disorder which is characterized by the repetition of sounds, syllables and words; prolongation or interrupting (blocks) of sounds or syllables in the beginning and/ or the smooth flow of the speech. Although its incidence in pre-school and school age children is around 4%. In all age groups, it is more common in male than in female. While the ratio of male/ female is 2 in early childhood, this ratio is 4 in adolescents and adults. Although the cause of being more common of the stuttering in males has not been fully clarified yet, sex hormones including androgens are thought to cause this situation. In this study, it is aimed a detailed evaluation of the effect of the prenatal testosterone on stuttering comparing 2D:4D rates (the ratio of second finger length/fourth finger length) of the children with stuttering and healthy children with several variables.

**METHOD:** The study was performed by clinics of Inonu University and Necmettin Erbakan University Child Psychiatry. Children with stuttering (98) and healthy children (98) included in the study. It was determined as the age range of children who are included in the study was 2-12. In assessing the severity of stuttering, CGI (Clinical Global Impressions Scale) scoring was used. 2D:4D ratios of both hands were calculated. As a result of the obtained data, right 2D:4D and left 2D:4D ratios of group with stuttering compared with the control group.

**RESULTS:** As a result of the evaluation; it was determined significant differences between right hand 2D:4D ratio of children who have stuttering in only first-degree relatives and right hand 2D:4D ratio of control group ( $p=0.038$ ). There were no significant differences when compared generally according to gender, additional psychiatric disorders, duration of the stuttering and the severity of stuttering.

**CONCLUSION:** Etiology of the developmental stuttering has not been fully clarified, there are several factors that cause arising of this condition. According to the GBG hypothesis, exposure of high level prenatal testosterone cause delaying in the left hemisphere development and deterioration in the early language development. While carefully analyzing the study's results, it was seen that right hand 2D:4D ratios of children who have stuttering in their first-degree relatives are significantly low compared to healthy children, however the significant differences were not observed in the general assessment between groups. It can be said that only prenatal testosterone exposure is not effective in developmental stuttering but many other factors also can take place in the etiology, however, in individuals with a genetic predisposition, this can be play an important role in the stuttering etiology of prenatal testosterone. Consequently, we believe that prenatal testosterone as one of the causes of stuttering etiology can be evaluated by only genetic factors and there is a need for comprehensive studies to be conducted in this regard.

**Keywords:** stuttering, testosterone, children

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**[Abstract:0423][Anxiety disorders]****Validity and reliability of the Turkish version of DSM-5 specific phobia severity scale-child form**

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**OBJECTIVE:** This study aimed to assess the validity and reliability of the Turkish version of DSM-5 Specific Phobia Severity Scale- Child Form. Specific Phobia Severity Scale- Child Form is a scale with 10 items that determines the severity of specific phobia in children and adolescents aged between 11–17 years. The scale was designed to be used in the first assessment and follow-up of children and adolescents with specific phobia (or have severe clinical specific phobia symptoms). With each item, the individual is asked to rate the severity of specific phobia within the last 7 days. Total scores vary between 0 and 40, with higher score reflecting a much more severe specific phobia present.

**METHOD:** The scale was prepared by carrying out the translation and back-translation of DSM-5 Specific Phobia Severity Scale- Child Form. Study group consisted of 48 patients that have been treated in a child psychiatry unit and diagnosed with any anxiety disorders and 99 healthy volunteers that were attending middle or high school during the study period. For the assessment, Screen for Childhood Anxiety and Related Emotional Disorders was used along with DSM-5 Specific Phobia Severity Scale-Child Form.

**RESULTS:** Regarding reliability analyses, Cronbach alpha internal consistency coefficient was calculated as 0,945 while item- total score correlation coefficients were measured between 0.589 and 0.845. Test-retest correlation coefficient was calculated as  $r=0.746$ . As for construct validity, a factor that could explain 66.8% of the variance was obtained and was consistent with the original structure of the scale. As for concurrent validity, the scale showed a medium correlation with Screen for Childhood Anxiety and Related Emotional Disorders.

**CONCLUSION:** It was concluded that Turkish version of DSM-5 Specific Phobia Severity Scale-Child Form could be utilized as a valid and reliable tool both in clinical practice and for research purposes.

**Keywords:** DSM-5, specific phobia severity scale, reliability, validity

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**[Abstract:0424][Anxiety disorders]****Validity and reliability of the Turkish version of DSM-5 social anxiety disorder severity scale-child form**

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**OBJECTIVE:** This study aimed to assess the validity and reliability of the Turkish version of DSM-5 Social Anxiety Disorder Severity Scale-Child Form. DSM-5 Social Anxiety Disorder Severity Scale- Child Form 11–17 is a 10-item measure that assesses the severity of symptoms of social anxiety (social phobia) in children and adolescents. The measure was designed to be completed by the child upon receiving a diagnosis of social anxiety disorder (or clinically significant social anxiety symptoms) and thereafter, prior to follow-up visits with the

clinician. Each item asks the childreceiving care to rate the severity of his or her social anxiety disorder (social phobia) during the past 7 days. The total score can range from 0 to 40, with higher scores indicating greater severity of social anxiety disorder (social phobia).

**METHOD:** The scale was prepared by carrying out the translation and back-translation of DSM-5 Social Anxiety Disorder Severity Scale-Child Form. Study group consisted of 48 patients that have been treated in a child psychiatry unit and diagnosed with any anxiety disorder and 99 healthy volunteers that were attending middle or high school during the study period. As for reliability analyses, internal consistency coefficient and item-total score correlation analysis, test-retest reliability; and for validity analyses, explanatory factor analysis and for concurrent validity, correlation analysis with Screen for Child Anxiety and Related Emotional Disorders (SCARED) and DSM-5 Social Anxiety Disorder Severity Scale - Child Form were made.

**RESULTS:** Mean age of the study group was  $15.1 \pm 1.7$  and 51% (n=75) male. 98.6 percent of the group was attending school. 100% of the patient group has been followed up since 1-6 month in child psychiatry unit of CBU. Regarding reliability analyses, Cronbach alpha internal consistency coefficient was calculated as 0,935 while item- total score correlation coefficients were measured between 0.625 and 0.848. Test-retest correlation coefficient was calculated as  $r = 0.711$  ( $p < 0.0001$ ). Before the application of explanatory factor analysis, Kaiser-Meyer-Olkin analysis to assess whether sample was in congruity indicated a coefficient value of 0.914. By using Bartlett test, chi-square value was calculated as 1071.153 ( $p < 0,0001$ ). In factor analysis, one factor with eigenvalue above 1 was maintained. The eigenfactor value was 6.356 and explained 63.6% of the total variance. Factor loads of scale items were found between 0.690-0.885. As for concurrent validity, the scale showed a high correlation ( $r = 0.668$   $p < 0.0001$ ) with Screen For Child Anxiety and Related Emotional Disorders (SCARED).

**CONCLUSION:** It was concluded that Turkish version of DSM-5 Social Anxiety Disorder Severity Scale-Child Form could be utilized as a valid and reliable tool both in clinical practice and for research purposes.

**Keywords:** DSM-5, social anxiety disorder severity scale, reliability, validity

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**[Abstract:0425][Psychopharmacology]**

## Would you prefer 15 minutes or 15 days?

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**OBJECTIVE:** As it is known to psychiatrists that it takes longer to interview and diagnosis with adolescents than adults. A psychiatric diagnosis is taken after a careful history and examining the patients. Sometimes the diagnosis may be proved by special investigations such as psychological tests, interviews with psychologists, consultations with other department etc. Patient-physician communication starts when patients are referred to a physician. The patients expect from the doctor for treatment and diagnosis of the disease. And some patients want to achieve results quickly. To know understanding makes patients motivating to collaborate with doctors. We aim to examine the effects of patient preferences on psychiatric treatment.

**METHODS:** The sample consisted of 203 adolescents (117 girls and 86 boys,  $17.05 \pm 2.3$  year-old) that were assessed in a psychiatry outpatient unit serves for the patients between 15-21 years old, from February to August in 1995 were included in the study. Patients were presented with two options that "I would like to end the interview and assessment in 15 minutes" and "I would like to interview and assessment included psychological tests that can last 15 days". Patients were divided into two groups according to their preferences; Short Interview group (SIG) (n=146, 61% girls, 39% boys,  $17.16 \pm 2.31$  year-old) and Long Interview group (LIG) (n=57, %49.1 girls, %59.1 boys,  $16.75 \pm 2.27$  year-old). Occupation of the patients, how many years they went to school and the number of their psychiatric admission were learned at psychiatric assessment. Psychiatric diagnoses were identified based on DSM-IV by an adult psychiatrist and patients' treatment were performed regardless their choices. The diagnoses were learned retrospectively from patients' documents. Treatment were identified as counseling, pharmacotherapy, and psychotherapy. Statistical analyses was performed with SPSS Version 18 for Windows.  $p < 0.05$  was considered statistically significant.

**RESULTS:** There was no significant difference about occupation in groups (SIG; 19.2% working, 34.9% not working, 45.9% student and LIG; 14% working, 35.1% not working, 50.9% student). 74% (n=108) of children in SIG were diagnosed a psychiatric diagnosis based on DSM-IV and 21.9% (n=32) of children in this group were diagnosed no psychiatric diagnosis. On the otherhand 71.9% (n=41) of children in SIG were diagnosed a psychiatric diagnosis based on DSM-IV and 17.5% (n=10) of children in this group were diagnosed with no psychiatric

diagnoses. There was not any significant differences on diagnoses between groups. There was significant difference on treatment types between groups. In SIG group, pharmacotherapy was given more than the other group ( $p<0.05$ ). In LIG group, advisory was given more than the other group ( $p<0.05$ ).

**CONCLUSIONS:** Pharmacotherapy was performed to patients who want a short interview, counseling was given to patients who want more long interview. Patients' short interview requests that can effects doctors' treatment choices.

**Keywords:** adolescent, interview, duration

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[Abstract:0436][Sleep disorders]

## DSM-5 level 2 sleep disorders scale Turkish validity and reliability study

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**OBJECTIVE:** This study aimed to assess the validity and reliability of Turkish version of DSM-5 Level 2 Sleep Disorders Scale. DSM-5 Level 2 Sleep Disorders Scale- Child Form: is an 8-item measure that assesses the severity of sleep problems in children and adolescents. The measure was designed to be completed by the child diagnosed with a sleep disorder (or clinically significant sleep disorder symptoms). Each item asks the child to rate the severity of his/her sleep problems during past 7 days. The scale provides a five point likert type assessment. Total score ranges from 8 to 40, with higher scores indicating greater severity of sleep problems. 2.DSM-5 Level 2 Sleep Disorders Scale-Parent Form: consists of 8 items. Each item asks parent of the child to rate the severity of his/ her child's sleep problems during past 7 days. The scale provides a five point likert type assessment. Total score ranges from 8 to 40, with higher scores indicating greater severity of sleep problems.

**METHOD:** Scale was prepared by translation and back-translation of DSM-5 Level 2 Sleep Disorders Scale. Study group consisted of clinical sample containing cases with sleep related problems being followed in a child psychiatry unit and also a community sample. In the assessment process, child and parent forms of DSM-5 Level 2 Sleep Disorders Scale, Children's Sleep Habits Questionnaire- Turkish version (CSHQ) and Pittsburgh Sleep Quality Index (PSQI) were used. As for reliability analyses, internal consistency coefficient and item-total score correlation analysis, test-retest reliability; and for validity analyses,explanatory factor analysis and for concurrent validity, correlation analyses with CSHQ and PSQI were made.

**RESULTS:** Mean age of study group was  $15.8\pm 0.9$  and 86.7% ( $n=26$ ) were female. In reliability analyses, Cronbach alpha internal consistency coefficient values were found to be very high for child and parent forms (0.905 and 0.839, respectively) while item- total score correlation coefficients were found to be between 0.528- 0.810 for child form and 0.481-0.751 for parent form. Test-retest correlation coefficient was calculated as  $r=0.711$  ( $p<0.0001$ ). Before the application of explanatory factor analysis, Kaiser- Meyer-Olkin analysis to assess whether sample was in congruity indicated a coefficient value of 0.848 for child form and 0.810 for parent form. By using Bartlett test, chi-square value was calculated 447.728 ( $p<0.0001$ ) for child form and 302.783 ( $p<0.0001$ ) for parent form. In factor analysis, two factor with eigenvalues above 1 were maintained. The first eigenfactor value was 4.869 and explained 60.86% of the total variance for child form while eigenfactor values 3.290 and 1.431 and explaining 48.99% and 17.89% of the variance, respectively for parent form. As for concurrent validity, scale showed high correlation ( $r=0.650$   $p<0.0001$ ) with PSQI and also high correlation ( $r=0.717$   $p<0.0001$ ) with CSHQ.

**CONCLUSION:** Turkish version of DSM-5 Level 2 Sleep Disorders Scale could be utilized as a valid and reliable tool both in clinical practice and for research purposes.

**Keywords:** DSM-5, sleep disorders scale, reliability, validity

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**[Abstract:0450][Psychosomatic medicine-Liaison psychiatry]****Investigation of risk factors associated with suicidal ideation and suicide attempt in patients with physical illnesses**Hasan Mervan Aytac, [Cicek Hocaoglu](#)Department of Psychiatry, Recep Tayyip Erdogan University, School of Medicine, Rize, Turkey  
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**OBJECTIVE:** Mostly the patients who have psychiatric illness or treated in psychiatry ward, mentioned in the suicide related studies. Whereas, suicide behavior can be seen in individuals with the general medical disorders; but, the risk factors associated with suicidal behavior have not been fully laid out in patients with general medical disorders. The investigation of the presence of suicidal thoughts and the risk factors associated with suicide attempts were aimed in this study.

**METHOD:** This study was applied 110 patients who were hospitalized in the surgical and internal medicine branch wards of Rize Education and Research Hospital, requested psychiatric consultation between the dates of January 1<sup>st</sup>, 2015 and October 1<sup>st</sup>, 2015. All patients who are participating in this study, informed about the study and written approval were received. The patients who had neurological disorders, mental retardation, dementia, psychotic disorders due to general medical conditions or substance abuse, electroconvulsive therapy history, still using mood stabilizers or has stopped yet, were excluded. They were administered by Sociodemographic and Clinical Data Form, Scale for Suicide Ideation, Beck Depression Inventory and Beck Hopelessness Scale.

**RESULTS:** 57.7% of the patients were female (n=58), 42.2% of the patients were male (n=52). The patients who were ranged between 17–92 years old and the average age was 56.9. 11 females and 3 males had suicide attempts in the past (n=14). Individuals who have attempted suicide, accounted for 12.7% of cases. The most common method that 64.2% (n=9) of individuals had used for suicide, was drugs. 59.1% of the study group (n=65) were without suicidal ideation and 40.9% (n=45) of them had suicidal thoughts. There were statistically significant difference about "total score of Beck Hopelessness Scale (BHS)", "feelings and expectations about the future", "loss of motivation and hope" (subscales of Beck Hopelessness Scale) between suicidal ideation and non-suicidal ideation group (p<0.05). The patients with suicidal thoughts have higher subscale scores than the patients without suicidal thoughts.

**CONCLUSIONS:** Suicide is a condition that can be seen in other areas of medicine as seen in psychiatric disorders. It was shown to be associated between many physical disorders and increased suicide rates. Our results which also support the other ones, will shed light on the relevant literature and we believe it will help in the prevention of suicide and understanding of suicidal behavior in people with physical illnesses.

**Keywords:** physical illness, suicidal ideation, suicide attempts, hopelessness

**Bulletin of Clinical Psychopharmacology 2016;26(Suppl. 1):S135**

**[Abstract:0466][Schizophrenia and other psychotic disorders]****Drug use patterns of inpatients with schizophrenia: a preliminary study**Ozlem Akcay<sup>1</sup>, Esra Yazici<sup>2</sup>, Ali Savas Cilli<sup>2</sup>, Ahmet Bulent Yazici<sup>1</sup>, Atila Erol<sup>2</sup><sup>1</sup>Department of Psychiatry, Sakarya University Training and Research Hospital, Sakarya, Turkey<sup>2</sup>Department of Psychiatry, Sakarya University, School of Medicine, Sakarya, Turkey  
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**OBJECTIVE:** Various guidelines and recommendations exist for the treatment of schizophrenia. These differ according to country, region and, most importantly, the year they were published. Treatment options constantly change due to the frequent introduction of new drugs, which have new indications. Additionally, different governmental and insurance policies may influence the treatment patterns prescribed for patients diagnosed with schizophrenia. Noting the type of antipsychotic is important in describing antipsychotic use patterns. Antipsychotics are classified into two main groups according to their chemical characteristics, effects on psychotic symptoms and adverse effect profiles. The two groups include first-generation antipsychotics, or typical antipsychotics (TAP), and second-generation antipsychotics, or atypical antipsychotics. Treatments for inpatients and outpatients differ according to their symptoms' severity, clinical observations, side effects, tolerability and other parameters. Polypharmacy rates for inpatients are reported to be relatively higher than

those of outpatients. In general, antipsychotic polypharmacy rates have been reported in a wide range, from 4.1% to 77.3%, with a median of 19.6%. In this study, antipsychotic patterns of schizophrenia inpatients were examined. This study presents the preliminary results from an ongoing project.

**METHODS:** This study's population consisted of 60 patients diagnosed with schizophrenia, who were treated at the inpatient clinic at the Sakarya University Education and Research Hospital. The final prescriptions for the patients who were treated at the inpatient clinic and externalized at the end of the treatment were recorded. A socio-demographic data form was prepared by the researchers to evaluate the correlates in antipsychotic use patterns. Use of more than two drugs was accepted as polypharmacy. All of the data were transformed into a SPSS Version 17 for Windows, and statistical analysis was conducted with that data.

**RESULTS:** Thirty female and 30 male patients with schizophrenia were included in the study. The mean age of the patients was  $40.96 \pm 10.61$  (21–61) years, the mean duration of illness was  $14.64 \pm 10.06$  (0–40) years and the mean number of hospitalizations was  $4.45 \pm 4.64$  (0–23). The use of 'at least one type of atypical antipsychotic' rate was 98.3%, and the 'use of at least one type of typical antipsychotic' rate was 28.3%. The most frequently used atypical antipsychotic was Quetiapine, with a rate of 60.0%, and the most frequently used typical antipsychotic was Haloperidol, with a rate of 23.3%. The rate of Biperiden HCL use was 10.0%, the rate of augmentation with a mood regulator was 3.3%, the rate of long-term antipsychotics (depot preparat) was 56.7% and the rate of Clozapine use was 25.0%. The rate of monotherapy was 25%; therefore, the rate of polypharmacy was 75%.

**CONCLUSION:** This study concluded that there are high rates of use of antipsychotic polypharmacy, clozapine and typical antipsychotics. In general, all rates seemed higher than the recommended guidelines and suggestions from the literature. Substantial differences exist between everyday clinical practice and recommendations of practice guidelines for schizophrenia. Further study, which evaluates genetic, regional and cultural impacts on antipsychotic use patterns, may help explain the differences and costs.

**Keywords:** inpatients, polypharmacy, schizophrenia

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[Abstract:0471][Forensic psychiatry]

## Comorbid psychiatric diagnoses and clinical features in adolescent prisoners: a penal institution experience

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**OBJECTIVE:** The aims of this study are to determine comorbid psychiatric diagnoses in adolescent prisoners according to DSM-IV and to examine clinical and socio demographic characteristics that may predispose to delinquency.

**METHOD:** The study conducted in Ankara Sincan Penal Institution, the study group consisted of 39 imprisoned male adolescents. Kiddie Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version carried out to all adolescent prisoners in the study. Additionally, all subjects were evaluated by a semi-structured socio-demographic information questionnaire form.

**RESULTS:** The mean age of the adolescent prisoners was  $16.6 \pm 0.6$  years (range 15-17 year old). The distribution of the crimes that the subjects were involved was as the following; 25% extortion, 25% slanging, 16% sexual offences, 13% robbery, 8% murder, 8% attempted murder, 5% being a member of terrorist organization. Families of 87% of the cases had low socio economic status, 90% of the subjects could not continue to their education. Only 46% of them had both parents living together. The remainder's parents were divorced or died. Family members of 62% of them had jailed because of a crime. Co morbid psychiatric diagnoses were seen in 97% of the subjects. None of them had any treatment for psychiatric disorders. The diagnoses were as following, 95% conduct disorder (CD), 70% oppositional defiant disorder (ODD), 67% attention deficit hyperactivity disorder (ADHD), 64% depression, 26% substance addiction, 23% anxiety disorders, 21% posttraumatic stress disorder, 3% bipolar disorder. Besides, 62% of them had a history of substance use, 70% had self mutilations, and 62% had tattoos.

**CONCLUSION:** Psychiatric disorders, low socio economic status, family disorganizations, and interruption of education were frequent in prisoner adolescents in this study. Especially, attention deficit hyperactivity disorder, conduct disorder, oppositional defiant disorder, depression and substance abuse were the most frequent psychiatric disorders. The prevalence of ADHD is between 5% and 10% among children and adolescents according to the population based studies but 67% of the prisoner adolescents had ADHD in this study. None of them had any psychiatric assistance according to themselves. ADHD could cause clinically significant deterioration in social, academic, or

occupational functioning. Especially, uncured ADHD have been reported to have poor outcomes in a wide range of areas of life, including social functions, education, criminality, alcohol and substance abuse. Diagnosing and intervening the ADHD and ODD in early childhood and continuity to education may decrease the tendency of delinquency.

**Keywords:** prisoners, adolescent, psychiatric diagnoses

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**[Abstract:0482][Schizophrenia and other psychotic disorders]**

## Depressive temperament in relatives of patients with schizophrenia is associated with suicidality in patients with schizophrenia

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**OBJECTIVE:** Suicidal thoughts occur frequently in patients with schizophrenia, reported to be at rates as high as 42 percent. Suicide is a major cause of death in patients with schizophrenia; thus, predicting and preventing suicide in patients with schizophrenia is examined in various studies. Affective disorders in the relatives of patients with schizophrenia are reported to have an association with the progress of schizophrenia. Several studies have shown that affective temperaments which are accepted as precursors of mood disorders may be an important factor in predicting suicidality. It is shown that the anxious temperament plays a strong role in predicting suicide attempts in the community. Also, depressive and irritable temperaments are shown to be associated with an increased risk for suicidality. Affective temperaments in relatives of schizophrenics and their correlates have not been studied yet. In this study, patients with schizophrenia and their first-degree relatives with affective temperament characteristics were evaluated.

**METHOD:** This study was conducted with 101 schizophrenic patients and their first-degree relatives. Their treatment and rehabilitation programmes are conducted by the Sakarya University Training and Research Hospital Community Counselling Centre (Sakarya TRSM). Patients with schizophrenia and their first-degree relatives were evaluated with the Temperament Evaluation of Memphis, Pisa, Paris and San Diego-Autoquestionnaire (TEMPS-A). In addition, the Positive and Negative Symptoms Scale, Clinical Global Impression Scale and General Assessment of Functioning Scale were administered for the assessment of the patient's functionality and severity of illness. Relatives of patients were assessed with SCID-I, and the ones who were not diagnosed with psychiatric disorders were included in the study.

**RESULTS:** The study included 101 patients from Sakarya TRSM. The mean age of the patients was 41.63±9.18 (ages ranged from 24 to 65). Seventy of the patients were male (69.3%), and 58 of the first-degree relatives of the patients were female (57.4%). There was no relationship between affective temperaments of the parents and the clinical severity of the symptoms and functionality of the patient. Depressive temperament scores of relatives of the patients were 6.21±3.71 (0 to 16), and six subjects (5.9 percent) from the relatives of the patients had a diagnosis of depressive mood. Anxious mood was correlated with frequency of hospitalisation ( $r=0.200$ ,  $p<0.05$ ), and hyperthymic mood was negatively correlated with the total duration of the patient's hospitalisation ( $r=-0.202$ ;  $p=0.05$ ).

There was a positive correlation between the suicide attempts of patients and depressive mood ( $r=0.221$ ;  $p<0.05$ ). Depressive temperament scores were higher in the relatives of schizophrenic patients having suicidal thoughts ( $p<0.05$ ). Also, in regression analysis, depressed mood scores were associated with the number of suicide attempts.

**CONCLUSION:** Affective temperament characteristics of relatives of patients with schizophrenia are associated with the course of the disease. The association is with the general progress of the schizophrenia, rather than its cross-sectional severity. The relationship between suicidal thoughts and depressive mood are highlighted in this presentation.

**Keywords:** affective temperament, schizophrenia, suicidality, TEMPS-A

**Bulletin of Clinical Psychopharmacology 2016;26(Suppl. 1):S137**

**[Abstract:0495][Psychosomatic medicine-Liaison psychiatry]****The relationship between attachment styles and temperament of psoriatic patients**Erşin Aydın<sup>1</sup>, İlknur Kivanc Altunay<sup>2</sup>, Cigdem Aydın<sup>2</sup>, Abdullah Bolu<sup>3</sup>, Gonul Kenyul Salaeva<sup>2</sup>, Selime Celik<sup>4</sup><sup>1</sup>Department of Dermatology, Kasimpasa Military Hospital, Istanbul, Turkey<sup>2</sup>Department of Dermatology, Sisli Hamidiye Etfal Training and Research Hospital, Istanbul, Turkey<sup>3</sup>Department of Psychiatry, GATA, Ankara-Turkey<sup>4</sup>Department of Psychiatry, Sisli Hamidiye Etfal Training and Research Hospital, Istanbul, Turkey

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**OBJECTIVE:** Although psoriasis has been defined among the auto-immune diseases, roles of emotional stress and psychological factors makes the disease to be considered as a psychosomatic disease. It is believed that the temperament of the patients have an effect on the attachment styles. The temperament of mother and child shape the style of attachment of a child to mother. Consequently, this interaction affects one's ability to solve problems and deal with troubles.

**METHODS:** The patient group of this study included 50 patients older than 18 years of age, diagnosed with psoriasis and not having a systemic or psychiatric disease who consulted the dermatology polyclinic. In control group, there were volunteers (n=50) who have no chronic dermatosis, no systemic/psychiatric disease. TEMPS-A (Temperament Evaluation of Memphis, Pisa, Paris and San Diego Autoquestionnaire) was used.

**RESULTS:** When groups were compared in terms of temperament, it was found that psoriasis patients had higher anxiety scores and lower cyclothymic temperament scores compared to the control group. Difference between the groups was statistically significant. Furthermore, there was statistically significant relation between anxious/hyperthymic temperament scores and concern-related attachment scores of psoriatic group. Psoriatic patients with anxious/hyperthymic temperament had attachment profiles with more concern.

**CONCLUSION:** In a study examining the effects of temperament on severity of psoriasis and quality of life, that people with easy-going temperament are much less affected than others. Litaem et. al. (2003) found that the female psoriatic patients have more anxious and depressive traits and they consider stressful life events as a factor for initiation or exacerbation of disease. So the psoriatic patients might have inconvenient strategies when dealing with stress. Consequently, Gupta et.al. has shown that alcohol abuse among psoriatic patients is high. Altunay et.al. have conducted a study researching the methods for dealing with stress of psoriatic patients and found that distrustful approach scores are in correlation, "social support seeking scores" among smokers were significantly lower, and also it was very likely for smokers to use smoking as a stress reliever just like in the alcohol abuse. In another study it has been proven that psoriatic patients are unlikely to develop effectual strategies against stressful conditions and impulsive behavior. Some researchers claim that psoriatic patients feel much despair which makes it much harder for them to deal with stress. In our study, lower cyclothymic temperament scores than control group suggests that psoriatic patients have problems demonstrating adaptability when faced with different conditions. According to those results, having difficulties in dealing with stress and being resilient might play a triggering role in initiating or impairing.

**Keywords:** attachment, psoriasis, temperament

**Bulletin of Clinical Psychopharmacology 2016;26(Suppl. 1):S138**

**[Abstract:0503][Psychopharmacology]****Comparison of lipid levels in patient groups which are diagnosed recently or using single antipsychotic drug or using combined antipsychotic drugs**Seyma Gul Boke<sup>1</sup>, Faruk Uguz<sup>1</sup>, Mehmet Er<sup>2</sup>, Seda Yildirim Ozbek<sup>2</sup>, Keziban Turgut<sup>1</sup><sup>1</sup>Department of Psychiatry, Necmettin Erbakan University, Konya, Turkey<sup>2</sup>Department of Psychiatry, Konya Education and Research Hospital, Beyhekim Psychiatry Clinic, Konya, Turkey

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**OBJECTIVE:** Although there are many studies related the effects of psychopharmacological treatment on lipid profile in schizophrenia patients, they involved mostly the use of a single drug. Theoretically, number of studies which test the idea that use of multiple medications may increase the likelihood of side effects is insufficient.

**METHOD:** Patients presented to Konya Education and Research Hospital, Beyhekim Psychiatry Clinic and Necmettin Erbakan University

Meram School of Medicine Psychiatry Clinic (inpatient or outpatient) between 2010-2013 years are involved. Patients, with diagnoses of schizophrenia and related disorders are categorized to three groups as using combined antipsychotic treatment, using single antipsychotic treatment and diagnosed recently (with any antipsychotic treatment). LDL, HDL, triglycerides, total cholesterol levels were compared in these patient groups.

**RESULTS:** Two hundred and four patients who met the criteria involved in the study. Number of patients in recently diagnosed group was 75 (36.8%), using combined antipsychotic treatment group was 66 (32.4%) and using single antipsychotic treatment group was 63 (32.4%). When we compare the lipid profiles of the three study groups categorically; there was a significant difference in LDL ( $p=0.013$ ), total cholesterol ( $p=0.003$ ), and triglyceride ( $p=0.000$ ) levels. Comparison of numerical averages of lipid profile in these three groups were made by Kruskal-Wallis analysis; and total cholesterol ( $p=0.015$ ), and triglycerides ( $p=0.001$ ) were found to be significantly different in terms of values. Bonferroni correction with a Mann-Whitney U test were performed with a binary comparison of LDL, total cholesterol and triglycerides. In comparison of recently diagnosed group and combined antipsychotic treatment group, triglycerides ( $p=0.000$ ) and total cholesterol ( $p=0.009$ ) values were found to be significantly higher in combined antipsychotic treatment group. In comparison of single antipsychotic treatment group and combined antipsychotic treatment group, only triglyceride levels ( $p=0.015$ ) were significantly higher in the combined antipsychotic treatment group. In comparison of recently diagnosed group single antipsychotic group there were no significant differences.

**CONCLUSION:** Low levels of HDL is an another important parameter which is regarded as a major risk factor for heart disease. However, in our study there were no significant differences between the groups in terms of decreased HDL. Correl and friends compared 364 hospitalized patient charts in groups of using single antipsychotic and using combined antipsychotic treatment, in terms of triglyceride, LDL, HDL and total cholesterol levels. Only significant difference was decreased HDL level between groups. The results of this study are different from our study. These differences may be related to limited number of patients in our study, the area inhabited by the patients participating in the study may be related to eating habits. Our findings suggest that combined use of antipsychotics in clinical practice is quite common and combined antipsychotic treatment use has negative effects on the lipid profile as in other metabolic parameters.

**Keywords:** antipsychotic drug, cholesterol, LDL triglyceride

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[Abstract:0505][Mood disorders]

## Identification of early psychopathology in bipolar disorders

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**OBJECTIVE:** Genetic influences have been well studied for psychopathology of bipolar disorders. Early identification of bipolar disorder (BD) symptomatology is critical for improving the prognosis of this illness. Focusing offspring's of patients with BD can be a valuable step for early detection of illness. To clarify this issue, this study examined the prevalence of psychopathology and it's parts in offspring of BD parents and offspring of healthy controls.

**METHODS:** Thirty-one BP offspring of 21 BD parents, 30 healthy or non-BD offspring of 22 BD parents were administered with Schedule for Affective Disorders and Schizophrenia for School Aged Children (K-SADS-PL), Child Behavioral Checklist (CBCL), and Sleep Questionnaire. Sociodemographics and developmental history also were evaluated with semistructured interviews.

**RESULTS:** The two groups were matched for age (mean 126 months $\pm$ 39) and gender (32 Female, 29 Male). Having sleep problems and mean duration of daily sleep was not different across the groups (77.4% vs. 89.7%,  $\chi^2=0.20$ ). Having at least any diagnosis on K-SADS-PL was higher in bipolar off springs than controls but it was not statistically significant (54.8% vs. 33.3%,  $\chi^2=0.09$ ). However there was a significant difference in most subitems of CBCL such as attention problems ( $p=0.05$ ), thought problems ( $p=0.003$ ), social problems ( $p=0.003$ ), anxious/ depressed subitem ( $p=0.02$ ), aggressive behavior ( $p=0.01$ ).

**CONCLUSION:** Even offspring's of BD were not different in having serious mental illness than healthy controls, they have significant behavioral problems in attention, thought, social, anxious/ depressed, aggressive behaviors. This cohort should be followed up for development and early detection of BP.

**Keywords:** bipolar disorder, child, offspring, prodromal

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**[Abstract:0508][Others]**

## Clinical and sociodemographic characteristics of the patients committed suicide during hospitalization

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**OBJECTIVE:** Suicide is knowingly and intentionally taking one's own life. The risk of suicide in patients with psychiatric disorders is 3–12 times higher than those without psychiatric disorders. Suicide attempts are the most significant risk factor for completed suicides. It has been reported that the presence of suicide attempts before hospitalization, higher education, comorbidity of personality disorder, and receiving psychiatric treatment during the past year were some of the predictors of psychiatric inpatient suicide attempts.

**METHODS:** In this study, medical records of inpatients who were hospitalized at Bakirkoy Training and Research Hospital for Psychiatry, Neurology and Neurosurgery and Disorders between January 2006 and December 2012 were examined.

**RESULTS:** As the medical records of inpatients who were dead due to suicide during hospitalization were evaluated; 7 of 130 deaths (5.3%) were found as a result of suicide, all cases were male, mean age was 33.4±8.2 years. It was determined that, six cases were single, six of them committed suicide by hanging and one by self-inflicted stabbing. Six of seven suicide occurred in Forensic Psychiatry Clinic and three of them had a history of suicide attempt immediately before hospitalization. It was noted that, 2 suicides occurred within the first week, 2 suicides occurred within the 1<sup>st</sup> and 3<sup>rd</sup> weeks and 3 suicides occurred after the 3<sup>rd</sup> week of hospitalization. Four of the seven patients were diagnosed with schizophrenia, 3 of them were diagnosed with mood disorders (depressive episode).

**CONCLUSIONS:** It has been reported that some clinical characteristics predicting suicide attempt during inpatient treatment. In this patient population, being young, single, and of male gender have been found as to increase the risk of suicide. In our study, it is noteworthy that patients who committed suicide were in middle ages. It has been reported that the first period of hospitalization was associated with higher risk of suicide. Madsen et al. found that 50% of completed suicides were in the first 18 days of hospitalization. Similarly in our study, 57.1% of patients attempted suicide in the first 17 days of hospitalization. Diagnosis of schizophrenia, mood disorders, and personality disorders were reported as to increase the risk of suicide in inpatients. In our study, 57.1% of patients were diagnosed with schizophrenia, 42.9% with mood disorders (depressive episode). Having previous history of suicide attempts was reported as another risk factor. Hospitalization for suicide attempt and/ or having suicidal thoughts during hospitalization were also reported as to increase the risk. In our study, there were 4 cases with suicide attempt history and 3 of them had been hospitalized for suicidal thoughts or attempts. It should be considered that patients with a history of suicide attempts, hospitalized for suicide attempt and/ or suicidal thoughts, and history of criminal records were risk factors in terms of suicide attempt during hospitalization especially in the early stages.

**Keywords:** suicide, psychiatric disorders, inpatients, risk factors

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**[Abstract:0515][Psychosomatic medicine-Liaison psychiatry]****Relationship of sleep quality and depression in young adults with unilateral sensorineural hearing loss**Tahsin Etlı<sup>1</sup>, Okan Er<sup>2</sup>, Mustafa Celik<sup>3</sup>, Fatih Arslan<sup>3</sup><sup>1</sup>Department of Psychiatry, Gata Haydarpaşa Training Hospital-Naval Academy Outpatient Clinic, Istanbul, Turkey<sup>2</sup>Department of Psychiatry, Etimesgut Military Hospital, Ankara, Turkey<sup>3</sup>Department of Otolaryngology, Etimesgut Military Hospital, Ankara, Turkey

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**OBJECTIVE:** This study aimed to examine sleep qualities and the impact of comorbid depression on this quality in patients with sensorineural hearing loss who have common characteristics of age and gender.

**METHOD:** Twenty five male subjects were recruited for this study who presented to the Department of Otolaryngology at Etimesgut Military Hospital and diagnosed with total unilateral sensorineural hearing loss. Exclusion criteria were determined as fluctuating hearing loss, using hearing aid actively, noise-induced hearing loss, chronic tinnitus and vertigo, presence of any major medical disease, and having a diagnosis of mental retardation. Pittsburgh Sleep Quality Index (PSQI) and Hospital Anxiety and Depression Scale (HADS) were administered to the patients. Turkish version of both scales were found to be valid and reliable previously. Chi square tests were performed in comparison analyses.

**RESULTS:** All subjects were male whose median (25-75%) age was 22.2 (22-25). The rate of married patients were 32.0% and the sum of secondary school, college or university graduates were 70.0% of total participants. 68.0% were smokers, 20.0% were alcohol users and 80.0% were employed. The rate of those living in the countryside and urban areas were 32.0% and 68.0% respectively. The mean score of PSQI was 5.4 (SD=3.3) and 44.0% had poor sleep quality according to the cut-off point. Median (25-75 percentile) age was 22.2 (22-25). The median (25-75 percentile) depression score of HADS was 6.0 (5.0-9.0). The mean anxiety score of HADS was 6.7 (SD=3.9). 52.0% of subjects were identified as depressed according to the cut-off point determined in the study of Turkish validity and reliability of the HADS. Depressed patients that identified with HADS showed poorer sleep quality in PSQI as compared with non-depressed patients in a statistically significant manner ( $\chi^2=9.000$   $p=0.003$ ).

**CONCLUSION:** In a recent study, a relationship of sleep disturbance and disrupted circadian rhythm in sudden sensorineural hearing loss was pointed out using a simple insomnia sleep questionnaire. Rather than a more biological approach as in that study, ours had more versatile approach on assessing sleep quality with the PSQI. Furthermore, the confounding effect of a possible depression was as shown. Evaluating sleep quality in a specific patient group with common characteristics of age and gender were unique aspects of our study.

**Keywords:** sleep, depression, sensorineural hearing loss

**Bulletin of Clinical Psychopharmacology 2016;26(Suppl. 1):S141**

**[Abstract:0518][Psychosomatic medicine-Liaison psychiatry]****Psychopathology in patients with unilateral sensorineural hearing loss**Tahsin Etlı<sup>1</sup>, Okan Er<sup>2</sup>, Fatih Arslan<sup>3</sup>, Mustafa Celik<sup>3</sup><sup>1</sup>Department of Psychiatry, Gata Haydarpaşa Training Hospital-Naval Academy Outpatient Clinic, Istanbul, Turkey<sup>2</sup>Department of Psychiatry, Etimesgut Military Hospital, Ankara, Turkey<sup>3</sup>Department of Otolaryngology, Etimesgut Military Hospital, Ankara, Turkey

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**OBJECTIVE:** Unilateral deafness may result with various difficulties such as deterioration in interpersonal communication. Also this sensory impairment and associated disability is a reason for avoidance from socially challenging situations of those patients with unilateral sensorineural hearing loss. In such an isolation, individuals may develop depression, irritability and the sense of worthlessness. In this study, we aimed to examine the most likely associated psychopathologies in patients with unilateral sensorineural hearing loss.

**METHOD:** Twenty five male subjects were included in this study who were admitted to the Department of Otolaryngology at Etimesgut Military Hospital and diagnosed with total unilateral sensorineural hearing loss. For a wide assessment of psychiatric symptoms in terms of severity and variety, Symptom Check List-90 Revised (SCL-90 R), Hospital Anxiety and Depression Scale (HADS) and State and Trait Anxiety

Inventory (STAI) which were found to be valid and reliable in Turkish were administered to all participants. Spearman's correlation analysis were performed for numerical data of psychopathology screening scales.

**RESULTS:** All subjects were male with median (25-75 percentile) age 22.2 (22-25). By 32.0% of patients were married. The sum of secondary school, college and university graduates were 70.0%. The rate of smokers were 68.0%. By 80.0% of participants were employed. The rate of those living in rural were 32.0% and urban areas 68.0%. In patients with unilateral sensorineural hearing loss, 52.0% of subjects were defined as depressed and %32.0 as anxious according to the cut-off point determined in the study of Turkish validity and reliability of HADS. When calculated the correlation between HADS subscales, STAI subscales and global severity index of SCL-90 R, both depression and anxiety scores were found to be positively correlated with trait anxiety score of STAI and global severity index of SCL-90 R.

**CONCLUSION:** In our study, the rates of depression and anxiety in male patients with with total unilateral sensorineural hearing loss according to the HADS were found higher than point prevalence of the community. Similarly a study in Denmark reported that adults with hearing loss or total deafness had mental health problems in a higher rate than general population. Another study with a larger sample size suggested that patients with postlingual acquired hearing loss were more likely to have mental health problems than general population. Further research studies with prospective design may help to clarify psychopathology in deaf population.

**Keywords:** deafness, anxiety, depression

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**[Abstract:0520][Schizophrenia and other psychotic disorders]**

## Obsessive compulsive symptoms and clozapine in schizophrenia patients: a preliminary study

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**OBJECTIVE:** Obsessive compulsive symptoms are frequently reported in schizophrenia patients. Researchers have reported the prevalence of obsessive compulsive symptoms in the schizophrenia population as 10-52%, and the diagnosis of obsessive compulsive disorder in the schizophrenia population as 7.8-26%. Neuroanatomical circuits and neurotransmitter dysfunction in schizophrenia and obsessive compulsive disorder share common properties. Also, antiserotonergic second generation antipsychotics, especially clozapine are associated with inducing and aggravating obsessive symptoms. This present study aimed to examine the relationship between obsessive compulsive symptoms and clozapine in schizophrenia patients.

**METHODS:** This study included 34 schizophrenia patients who were monitored and treated with clozapine in the Sakarya University Department of Psychiatry's Inpatient Clinic. The patients' clinical statuses were followed up with the planned addition of clozapine. The diagnosis of schizophrenia was confirmed by clinical interviews. The patients were administered several tests, including the Positive and Negative Syndrome Scale (PANNS), the Yale-Brown Obsessive Compulsive Scale (Y-BOCS), the Clinic Global Impression Scale (CGI), General Assessment of Functioning (GAF), and a sociodemographic data form at baseline, 2<sup>nd</sup>, 4<sup>th</sup>, and, 6<sup>th</sup> weeks. The regular treatment of patients continued; clozapine treatment was started according to standard protocols and titrated according to the clinical status of the patient. Dosages of clozapine were recorded simultaneously. In the fourth week, 7 of the patients were excluded from the study, followed by 19 in the sixth week. We used a correlation tests to compare obsessive compulsive symptoms observed in different weeks. Finally, we used Student's t-test, as well as Mann-Whitney U and ANOVA tests to compare scores between the weeks.

**RESULTS:** The median patient age was 37.9±9.61 (18-59), and 20 patients were male (58%), while 14 patients were female. Furthermore, 27 patients were married, 4 patients were single and 3 patients were separated. The median illness duration was 128.58±91.05 month (6-360). Among the patients, 21 had graduated primary school and 13 had a higher education level. The median clozapine dosage administered to patients was 73.5±163 (0-600) in the beginning of the study, 230±121.8 (100-600) in the second week, 342±117.4 (150-600) in the fourth week and 400±153.5 (150-600) in the 6<sup>th</sup> week. Before commencing clozapine treatment, and in the following weeks when assessed by the Y-BOCS, 29 patient (85.2%) did not demonstrate obsessive compulsive symptoms. In contrast, 5 patients (14.8%) demonstrated obsessive compulsive symptoms before starting clozapine treatment, and their Y-BOCS scores did not improve by the sixth week (p<0.005). When all patients were assessed, PANNS scores showed improvement within weeks. There were no significant correlations between the Y-BOCS and PANNS scores.

**CONCLUSIONS:** This study showed that the use of clozapine was not associated with obsessive compulsive symptoms over a short period of time in schizophrenia. Further studies with larger samples, conducted over longer periods of time, would be beneficial.

**Keywords:** clozapine, obsessive compulsive symptoms, schizophrenia

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[Abstract:0529][Dependencies]

## The sociodemographic features and treatment compliance of the addicted patients hospitalized in the alcohol and substance addiction treatment center (AMATEM) in a mental health hospital

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**OBJECTIVE:** The aim of this study is to identify sociodemographic and clinic features of the individuals who presented to Elazig State Hospital for Mental Health and Disorders AMATEM Outpatient Clinic and hospitalized for addiction related problems during the last 6 months. Also treatment compliance was evaluated.

**METHOD:** The clinical data of the patients who presented to AMATEM outpatient clinic during the last 6 months have analyzed retrospectively. Sociodemographic data, patterns of alcohol/ substance abuse, psychiatric diagnosis, treatment compliance was evaluated.

**RESULTS:** The sample of the study consists of 18 male and 47 female individuals 618 patients (3.4% women, 96.6% men) who presented to AMATEM Outpatient Clinic. The mean age of the patients was 28.86. The 24.9 percent of these patients presented from Elazig and its counties. Hospitalisation was recommended to the 35.9% of these patients. We found that 60.8% of the inpatients were graduated from primary school, 59.9% of them were single and %79.3 of them have been hospitalized with the diagnosis of opiate use disorder. Also there were no correlations between treatment compliance and living with a partner, education level, and residence (city center or not).

**CONCLUSION:** The prevalence of substance use and related disorders both in the world and in our country is increasing. A multidisciplinary preventive treatment approach that also focused on improving social functionality is necessary for substance use disorders patients in addition to pharmacological treatment. Our results may help in comprehensive evaluation of treatment procedures in Eastern Turkey.

**Keywords:** addiction, sociodemographic, treatment compliance

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[Abstract:0537][Psychosomatic medicine-Liaison psychiatry]

## Socio-demographic characteristics of geriatric patients who were presented to psychiatric emergency service of a mental health hospital

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**OBJECTIVE:** In the recent decades, the length of the average life has extended and consequently, the proportion of the individuals who are 65 years and older have risen in the community, and therefore, the distribution of the diagnosis of patients who presented to psychiatric emergency service has been changed. The aim of this study is to examine the socio-demographic characteristics of the patients who are 65 years of age and older that presented to the Psychiatric Emergency Service of Elazig State Hospital for Mental Health and Disorders.

**METHOD:** In this study, the clinical data of individuals who were aged 65 and older that presented to Psychiatric Emergency Service of Elazig State Hospital for Mental Health and Disorders between January 2015- January 2016 were analyzed retrospectively. The data analysis was performed using SPSS Version 20 for Windows.

**RESULTS:** During the research period, 185 individuals presented to the psychiatric emergency service and 38.9% (n=72) of them were

female, 61.1% (n=113) were male. The age range of the patients were as follows: 55.6% of them were within 65-74 age range (n=103), 33.5% within 75-84 age range (n=62) and 10.8% within the 85-100 age range (n=20). It was determined that 12.9% of the participants (n=24) were diagnosed as dementia, 14.5% of them (n=27) as psychotic disorder, 23.2% of them (n=43) as anxiety disorders, 27% of them (n=50) as depression and also 22.1% of the participants (n=41) presented to the psychiatric emergency service with neurological and medical problems.

**CONCLUSION:** In our study, presentation rates were particularly higher among the individuals aged 65-74 years. The early recognition, diagnosis and treatment of these individuals will improve their quality of life, and also reduce the care burden of the family. Another significant finding of our research is the relatively higher rate of admissions from individuals who have no psychiatric diagnoses. This may be the result of increased incidence of physical illnesses that accompanies psychiatric symptoms at geriatric patients. In conclusion, it is important to make a comprehensive assessment for the geriatric patients presented to the psychiatric emergency services in addition to mental status evaluation.

**Keywords:** emergency, geriatrics, socio-demographic characteristics

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**[Abstract:0539][Dependencies]**

## Internet addiction and association with external nasal deformities

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**OBJECTIVE:** We hypothesized that the cases who have external nasal deformity would have internet addiction in consequence of an effort to reduce social isolation. After rhinoplasty surgery it would be corrected. So we aimed to determine the frequency of internet addiction related to external nasal deformity in this study.

**METHODS:** A total of 61 cases were recruited for this study. 31 cases diagnosed with nasal septal deviation (NSD) who required septoplasty were recruited as the control group while 30 cases of external nasal deformity (END) who underwent aesthetic rhinoplasty were included into the study. Approval from the local ethics committee and informed consents were obtained. Internet Addiction Test (IAT), Nose Obstruction Symptom Evaluation (NOSE), and Body Cathexis Scale (BCS) were administered to the patients. Turkish version of these measurement tools were found to be valid and reliable in previous studies. A questionnaire including information about patient's age, sex, marital status, and educational background was developed for this study and administered with the above scale. Paired sample t test and Wilcoxon test were performed for comparison of two measurements in each study groups. Also Mann Whitney U and Student t tests were performed in comparison analysis of each study groups.

**RESULTS:** All subjects were male whose median age was 22.0 (21.0-22.0) in both END and NSD groups. The rate of smokers in END group was 53.3% and 51.6% in NSD group. The sum of rates in secondary school, college and university graduates was 90.0% in group END and 93.5% in group NSD participants.

**CONCLUSIONS:** In recent study we found that internet addiction is related to external nasal deformity more strongly than nasal septal deviation. The rate of this addiction may show a larger decline after esthetic rhinoplasty surgeries for external nasal deformities when compared with septoplasty for nasal septal deviation. Our further analyses would be based on a multivariate analysis of variance to clarify if there was an only role of body cathexis alone on internet addiction or a multifactorial effect with nasal speech.

**Keywords:** internet, nasal septum, aesthetics

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[Abstract:0541][Mood disorders]

## Phenomenology and psychiatric comorbidity in young subjects with bipolar disorder

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**OBJECTIVE:** Bipolar disorder (BD) is a severe and relatively frequent mood disorder affecting both young and adult populations. It is important for clinicians to be aware of possible comorbid psychiatric disorders accompanying BD. In this study, we aimed to examine phenomenology and psychiatric comorbidities in a clinical sample of youth with bipolar disorder.

**METHODS:** Young subjects who were followed up with a DSM-IV diagnosis of bipolar disorder in Istanbul Medical Faculty, Child and Adolescent Psychiatry Department were included in the study. Data regarding phenomenology and clinical characteristics of mood episodes were gathered by reviewing medical records of the subjects, clinical interviews and follow up of the subjects and parents. Psychiatric comorbidity was assessed using a semi-structured diagnostic instrument, Schedule for Affective Disorders and Schizophrenia for School Age Children–Present, and Lifetime Version-Turkish version (K-SADS-PL-T).

**RESULTS:** Subjects were 19 males (63.3%) and 11 females (36.7%) with an age range of 11 to 18 years ( $14.87 \pm 1.94$  years). Primary diagnosis were BD type I (n=22; 73.3%), BD type II (n=3; 10.0%) and BD NOS (n=5; 16.7%). The first mood episode that led to diagnosis of BD type I or II (manic, mixed or hypomanic episode) was mixed episode in 12 subjects (40.0%), manic episode in 10 subjects (33.3%) and hypomanic episode in 3 subjects (10.0%). Most common symptoms during bipolar mood episodes were in decreasing order; increased activity or energy level (n=28; 93.3%), decreased need for sleep (n=27; 90.0%), more talkative and/or pressured speech (n=24; 80.0%), inflated self-esteem or grandiosity (n=22; 73.3%), irritability (n=22; 73.3%), verbal/ physical aggression (n=21; 70.0%). All subjects received at least one comorbid diagnosis other than BD. Most common comorbid psychiatric diagnosis was anxiety disorders (n= 28; 93.3%) with special phobia (n=18, 60.0%), separation anxiety disorder (n=17; 56.7%), and social anxiety disorder (n=15; 50.0%) being most common within this group. Second most common comorbid psychiatric diagnosis was externalizing disorders (n=23, 76.6%) with attention deficit hyperactivity disorder-combined type (n=15; 50.0%), oppositional defiant disorder (n=8; 26.7%), and conduct disorder (n=2; 6.6%). Third most common diagnosis was depressive disorders with the percentage of 53.3% (n= 16), major depressive disorder-multiple episodes has the highest rates among this subgroup (n=11, 36.7%). Tic disorders (n=15; 50%), obsessive-compulsive disorder (n=13; 43.3%), substance use disorders (n=7; 23%) and elimination disorders (n=6; 20%) were other common comorbid disorders.

**CONCLUSIONS:** BD is a relatively common mood disorder in young population with a broad range of symptoms. In this study we examined many different phenomenological characteristics of pediatric BD and accompanying psychiatric diagnoses. BD type I was the most common diagnosis and mixed episode was the most common first mood episode that led to the diagnosis of BD. Various comorbid psychiatric disorders are also reported in the literature with varying rates. Consistent with the literature, we found higher rates of comorbid psychiatric disorders in this population. This co-occurrence may be stemming from shared neurobiological basis. Phenomenology of BD and comorbid conditions in young subjects are important for both differential diagnosis and treatment planning for either conditions.

**Keywords:** bipolar disorder, comorbidity, young population, phenomenology

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[Abstract:0542][Dependencies]

## Effects of cannabinoids on platelet and erythrocyte morphology in patients with cannabis use disorder: a preliminary study

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**OBJECTIVE:** Over the last 20 years, there has been considerable research involving the endocannabinoid system (ECS) and its importance in regulating a variety of physiological processes such as pain, feeding behaviour, lipid metabolism, pleasure sensation and immune

system. Marijuana (cannabis), is the one of the most widely used illicit drugs in human use. Effects of cannabinoids on immunologic systems and platelet functions are previously examined in few studies and to the best of our knowledge there have been no studies about the values of patients with cannabinoids use disorder such as Red Cell Distribution Width (RDW), Mean Platelet Volume (MPV), and Platelet Distribution Width (PDW). The aim of the present study is to assess the effects of cannabinoids addiction on hematological factors basically platelet and erythrocyte morphologies, in patients with cannabis use disorder.

**METHODS:** This study is conducted at Sakarya University Education and Research Hospital Alcohol and Substance Treatment and Education Center Inpatient Clinic (Sakarya AMATEM). 31 patients with cannabis use disorder as cannabis group (CG) and 33 healthy controls as control group (HCG) enrolled in the study. The hematological factors of CG groups and HCG were compared. Patients are interviewed by an experienced psychiatrist and evaluated according to the criteria of DSM-5 for cannabis use disorder. At the first day of their hospitalization the hemograms were obtained as a routine procedure. Only the patients who had positive synthetic cannabinoid or tetrahydrocannabinol urine metabolite scores in urine screening were included into the study. Linear variables of hematological parameters of the CG and HCG were compared with student t test. Also neutrophil/ platelet ratio and neutrophil/lymphocyte ratios were compared between the two groups.

**RESULTS:** Cannabis use disorders with 31 patients (mean age: 27.23±6.12 years) 33 healthy subjects (mean age: 28.85±4.66 years) were included in the study. There was no statistically significant difference between ages of the groups. There was statistically significant difference among groups in WBC, RDW, MPV, PDW, and NEU parameters ( $p<0.05$ ). MPV and PDW parameters were significantly lower in CG than HCG. WBC, RDW, and NEU parameters were significantly higher in CG than HCG ( $p<0.05$ ).

**CONCLUSION:** Cannabinoid ligands bind with specific G protein-coupled receptors (CB1 receptor and the CB2 receptor) and activate the endocannabinoid system. CB1 receptors influence the central nervous system and cause thermoregulation disorders, psychotic episodes, memory disorders antiemetic activity, appetite enhancer activity anxiety, and stress relieving activities. According to the literature; especially, CB2 receptors appear to influence immune function. In our study, chronic use of cannabinoids is related with increase in inflammatory cells, especially neutrophils. Also, high RDW values may show early signs of anemia. The PDW and MPV may be low in people due to a disorder affecting production by the bone marrow and may suggest disorders in megakaryocytes synthesis. Hematologic effects of chronic using cannabinoids seem to have associations with hematologic parameters. The etiology and correlates of these associations are candidates to be examined in new studies.

**Keywords:** cannabis, erythrocyte morphology, platelet, synthetic cannabinoid

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[Abstract:0546][Others]

## Quality of life in patients with unilateral sensorineural hearing loss

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**OBJECTIVE:** The single-sided deafness (SSD) may cause a measurable and disruptive impact on many aspects of cognitive functions. There is a consensus on that people with physical disabilities or with chronic diseases usually experience social constraints that limit their daily activities when compared with healthy people. These constraints confronted frequently may increase the risk of mental health problems. [SSD is not only a communication disability but can also be perceived by an individual as a handicap causing sense of insufficiency with its psychosocial effects. In this study, we suggest that single-sided deafness may have a negative influence on quality of life.

**METHOD:** Twenty five male subjects were enrolled in this study who were admitted to the Department of Otolaryngology at Etimesgut Military Hospital and diagnosed with total unilateral sensorineural hearing loss. Exclusion criteria were determined as fluctuating hearing loss, using hearing aid actively, noise-induced hearing loss, chronic tinnitus and vertigo, presence of any major medical disease, and having a diagnosis of mental retardation. We administered Short Form 36 (SF-36) to all participants after obtaining informed consent. SF-36 is a commonly used measurement tool for assessing quality of life and Turkish version of SF-36 was found to be valid and reliable in a previous study. SF-36 consists of 36 items subdivided into 8 health scales, such as general health (GH), physical functioning (PF), role-physical (RP), bodily pain (BP), vitality (V), social functioning (SF), role-emotional (RE), and mental health (MH). Each dimension is separately scored using item weighting and additive scaling. Summed data were then transformed into a 0 to 100 point scale, higher

scores indicating better quality of life.

**RESULTS:** All subjects were male with median (25–75%) age 22.2 (22–25). By 32.0% of patients were married. The sum of secondary school, college, and university graduates were 70.0%. The rate of smokers were 68.0%. By 80.0% of participants were employed. The rate of those living in rural were 32.0% and urban areas 68.0%. Patients with total unilateral sensorineural hearing loss had lower scores in terms of all 8 health scales of SF-36 when compared with adult Turkish community norms measured previously.

**CONCLUSION:** The results of our study indicated that single-sided deafness influence the quality of life more than estimated. Further studies are needed for clarifying multiple factors of this crucial interaction.

**Keywords:** single-side deafness, quality of life, social and role functioning

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**[Abstract:0550][Anxiety disorders]**

## Social phobia and nasal pathologies

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**OBJECTIVE:** The aim of our study was to assess the impact of septorhinoplasty and to identify the effect of functional condition of the nose and body cathexis on social phobia by comparing nasal septal deviation (NSD) and external nasal deformity (END).

**METHODS:** A total of 61 cases were recruited for this study. 31 cases diagnosed with NSD who required septoplasty were recruited as the control group while 30 cases of END who underwent esthetic rhinoplasty were included into the study. Approval from the local ethics committee and informed consents were obtained. Liebowitz Social Anxiety Scale (LSAS), Body Cathexis Scale (BCS), and Nose Obstruction Symptom Evaluation (NOSE) were administered to patients. A questionnaire including information about patient's age, sex, marital status, educational background was developed for this study and administered in addition to above mentioned measurements tools. Paired sample t test and Wilcoxon test were performed for comparison of two measurements in each group. Also Mann Whitney U and Student t tests were performed in comparison analysis of groups.

**RESULTS:** All subjects were male whose median age was 22.0 (21.0–22.0) in both END and NSD groups. The rate of smokers in END group was 53.3% and 51.6% in NSD group. The sum of rates in secondary school, college and university graduates was 90.0% in group END and 93.5% in group NSD participants. Comparison analysis between preoperative and postoperative measurements of END and NSD group were calculated.

**CONCLUSIONS:** In recent studies social phobia is found to be related to NSD and septoplasty surgery decreased the social anxiety and avoidance. However results indicated that END and esthetic rhinoplasty as treatment were not associated with social phobia despite sufficient improvement in nasal function and body cathexis. Improvements in cognitive aspects of social phobia after surgery should be studied further.

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**[Abstract:0552][Others]**

## Skin picking disorder

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**OBJECTIVE:** Skin picking disorder (SPD) is a clinical condition which is characterized with picking the skin in an excessive and repeating way and results in damage in the skin tissue without a dermatological problem. Unlike normal picking behaviour, skin picking disorder is repeating and it can cause severe damage, and even life threatening results in skin. Not found as a separate diagnosis category in the classification systems up to DSM-5, skin picking disorder is found as an independent diagnosis in the category of OCD and Related Disorders in DSM-5. In a non-clinical sample, we aimed to examine the frequency, characteristics, triggering factors, effects of sex and results of SPD in a university student sample in Turkey.

**METHOD:** Two hundred and thirty seven students from Karadeniz Technical University who participated in the study were administered the sociodemographic data form, skin picking inventory, skin picking effect scale, skin picking scale.

**RESULTS:** It was found that 162 students out of 237 students fully answered the scales. The age average of the students was found as 19.6±2.5 years. 90 (55.6%) of the students were female 72 (45.2%) of them were male. 146 (90.1%) of the students reported that they had skin picking. After skin picking pathological level skin change (deep craters, general malformation) was seen in 14 of the students with SPD (9.6%). 2 of the students (1.2%) among 14 students with pathological skin picking had impairment in functioning. In this case, SPD frequency was 1.2% in our student group. Upon analyzing the lesions picked, the highest rate of answer (76.1%) was 'more than one place' among the choices acne, fly bite, scab, wart, healthy skin, more than one place. The mostly used method was found as picking by scratching. The head ranked the first among the areas picked. It was learned that skin picking primarily started after a dermatological condition such as acne, eruption rather than following a life event. The age range when the first skin picking is seen most was 10–15 years. The feeling after the first skin picking was identified as relaxation at the highest rate. No difference was found between the genders in terms of the frequency of the skin picking behaviour. The rate of skin picking behaviour in the students who participated in our study was (90.1%) found quite similar to the rate of another study (87.8%) which was previously done with students in Turkey. SPD rates in the three studies which were previously done with university students were found as 2.04%, 2.2%, and 3.8%. The SPD rate found in our study, which is 1.2%, was below these rates and this difference can be explained with the fewer number of the students who participated in the study when compared to the rate previously found in our country (2.04%). The early age range in which the first skin picking behaviour started is also in conformity with the results of other studies. Finding acne as the first lesion triggering skin picking is also the same with the results of other studies.

**CONCLUSION:** The preliminary findings of our study supports that SPD have certain general characteristics. The studies which will be done with a higher number of participants from different cultures will increase knowledge about this disorder which is considered as a distinct diagnosis in the DSM-5.

**Keywords:** skin picking disorder, pathological skin picking

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[Abstract:0557][Mood disorders]

## Validity and reliability of the Turkish version of DSM-5 Depression Severity Scale-Child Form

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**OBJECTIVE:** This study aimed to assess the validity and reliability of the Turkish version of DSM-5 Depression Severity Scale-Child Form. The DSM-5 Depression Severity Scale- Child Form is a 9-item measure that assesses the severity of depressive disorders and episodes (or clinically significant symptoms of depressive disorders and episodes) in children aged 11–17. The measure is completed by the child prior to a visit with the clinician. Each item asks the child to rate the severity of his or her depression symptoms during the past 7 days. Each item on the measure is rated on a 4-point scale (0=Not at all; 1=Several days; 2=More than half the days; and 3=Nearly every day). The total score can range from 0 to 27, with higher scores indicating greater severity of depression.

**METHOD:** The scale was prepared by carrying out the translation and back-translation of DSM-5 Depression Severity Scale-Child Form. Study group consisted of 46 patients that have been treated in a child psychiatry unit and diagnosed with any anxiety disorder and 135 healthy volunteers that were attending middle or high school during the study period. For further assessment, Child Depression Inventory (CDI) was used along with DSM-5 Depression Severity Scale-Child Form.

**RESULTS:** Regarding reliability analyses, Cronbach alpha internal consistency coefficient was calculated as 0.911 while item- total score correlation coefficients were measured between 0.579 and 0.801. Test-retest correlation coefficient was calculated as  $r=0.436$ . As for construct validity, a factor that could explain 59.2% of the variance was obtained and was consistent with the original structure of the scale. In the concurrent validity analysis, the scale showed a very high correlation with Child Depression Inventory with a correlation coefficient value measured as  $r$  value of 0.847.

**CONCLUSION:** It was concluded that Turkish version of DSM-5 Depression Severity Scale- Child Form could be utilized as a valid and reliable tool both in clinical practice and for research purposes.

**Keywords:** DSM-5, depression severity scale, reliability, validity

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[Abstract:0561][Autism]

## Serum levels of glial fibrillary acidic protein and Nogo-A in children with autism spectrum disorders

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**OBJECTIVE:** Autism is a debilitating complex neurodevelopmental disorder of early childhood with both genetic and environmental origins. However, the underlying mechanism or a specific metabolic target relevant to ASD has not yet been identified. Several studies suggest that autism may have autoimmunity as one of its many possible etiologies. For instance, glial fibrillary acidic protein (GFAP) has been detected in children with autism. Nogo-A is another molecule which involved in neurodegenerative diseases (Alzheimer's disease, multiple sclerosis, or in schizophrenia). Recently, it was suggested that there may be interaction between Nogo-A and GFAP in the SVZ-OB system. As mentioned both molecules may have influence on development of the brain; however there is little knowledge about

association of Nogo-A and GFAP in autism which is obvious neurodevelopmental disorder in childhood. The aim of our study to examine the levels of Nogo-A and glial fibrillary acidic protein (GFAP) in children with ASD.

**METHODS:** A total of 49 Turkish children (22 confirmed ASD cases and 27 age- and gender-matched controls) were included in this study. Serum concentrations of GFAP and Nogo-A were determined by Enzyme-Linked ImmunoSorbent Assay.

**RESULTS:** The results indicated that the mean Serum GFAP levels were significantly ( $U=133.500$ ;  $p<0.001$ ) lower in children with ASD as compared with normal cases  $174.7\pm 115.8$  ng/ml and  $485.8\pm 133.6$  ng/ml, respectively). The mean Serum Nogo-A levels were not differed significantly ( $U=227.000$ ;  $p>0.05$ ) between children with ASD and normal cases ( $743.3\pm 397.3$  and  $516\pm 171.8$  ng/ml, respectively).

**CONCLUSION:** To the best of our knowledge, this is the first study reporting that serum Nogo-A level in autism. In this preliminary study, we found that serum Nogo-A was not found significantly different between groups, while serum GFAP levels were significantly lower in autistic children than the healthy controls. Increased GFAP levels in the autistic brains signify gliosis, reactive injury, and perturbed neuronal migration processes. Low serum GFAP in autism may result from microglial and astroglial activation leading to aggregate in intracellularly, then, limit to pass thorough plasma. On contrary, Kirkman et al. (2008) reported no significant differences were found between autism and controls. Nogo-A may play role in neurologic and psychiatric diseases degenerative diseases (Alzheimer's disease, amyotrophic lateral sclerosis, or in schizophrenia). While development of nervous system, it may have regulatory function on axon growth/ sprouting. Thus, neuronal Nogo-A expression may decrease during early postnatal development. However we did not find significant difference between the autism and the control group. This finding may be restricted because of absent data of CSF levels or histopathological specimens. Recently, GFAP-positive neural stem cells in subventricular zone (SVZ) generate neuroblasts migrating toward the olfactory bulb (OB). Moreover it was found that the plasticity inhibitors Nogo-A and Nogo receptor 1 (NgR1) are differentially expressed in the SVZ–OB system. As mentioned both molecules may have influence on development of brain. Although we did not find any associations between Nogo-A and GFAP, it will be of great value to determine other potential causes of elevated serum levels of GFAP, and whether this elevation has any phenotypic effects.

**Keywords:** autism, GFAP, Nogo-A

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[Abstract:0562][Dementia syndromes]

## Prevalance of first dementia diagnosis in elderly patients who applied to psychiatric medical board

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**OBJECTIVE:** Dementia is a common neuropsychiatric syndrome that is associated with poor outcomes for patients and caregivers. It affects anywhere from 8% to 10% of people older than 65 years and nearly 50% of those older than 85 years. In this study, we aimed to examine elderly individuals in terms of dementia at the age of 65 and older that presented to the Elazig State Hospital for Mental Health and Disorders Medical Board to receive a report for their mental status.

**METHODS:** The clinical data of the elderly individuals at the age of 65 and older that presented to the medical board to receive a report for their mental status for notary at the Elazig State Hospital for Mental Health and Disorders between the dates January 2015 and January 2016 was analyzed retrospectively. The data was analyzed by using SPSS Version 20 for Windows.

**RESULTS:** The study sample consisted of 729 individuals (female  $n=432$ , male  $n=297$ ) at the mean age 85.7% ( $n=51$ ) of them diagnosed as dementia who have not presented to psychiatry outpatient clinic before for dementia symptoms and not taking any medications. The mean age of dementia group was 81 (at the range of 66 and 96) and 62.75% ( $n=32$ ) of them were female.

**CONCLUSION:** Misinterpretation of cognitive and functional disabilities as they are natural results of senility may cause late diagnosis and treatment of dementia. Our results indicated that dementia symptoms could stay unrecognized and this could result with more disability and care burden. Effective early diagnosis and treatment strategies should be developed and also public awareness campaigns can be organized to increase knowledge about dementia.

**Keywords:** dementia, elderly, geriatric mental health

**Bulletin of Clinical Psychopharmacology 2016;26(Suppl. 1):S150**

**[Abstract:0564][Eating disorders]****The relationship between visual cognitive skills and general psychopathological features in individuals who apply for bariatric surgery**Ersin Budak<sup>1</sup>, Ibrahim Taymur<sup>2</sup>, Bilgen Bicer Kanat<sup>2</sup>, Sinay Onen<sup>2</sup>, Hacı Murat Cayci<sup>3</sup>, Evren Dilektasli<sup>3</sup><sup>1</sup>Department of Psychology, Bursa High Specialty Training and Research Hospital, Bursa, Turkey<sup>2</sup>Department of Psychiatry, Bursa High Specialty Training and Research Hospital, Bursa, Turkey<sup>3</sup>Department of General Surgery, Bursa High Specialty Training and Research Hospital, Bursa, Turkey

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**OBJECTIVE:** Visuospatial processes include the perception of space, visualization and orientation, visuospatial scanning, the speed of response, impulsivity, and focused or sustained attention. Neuropsychological studies about obese individuals were examined several cognitive features (working memory, perseveration, attention, etc.) but the visual-cognitive characteristics of these individuals were not explored enough. However, it was found that obese individuals have more psychopathological features compared to healthy subjects. But the relationship between visual cognitive abilities and psychopathological features in these individuals is unknown. In our study, we have analyzed the relationship between spatial perception, visual memory, and general psychopathological features in morbid obese individuals who have applied for bariatric surgery.

**METHODS:** 60 morbid obese patients, whose purpose of admission to the hospital was obesity surgery, were evaluated in our study. The exclusion criteria of our study were education less than five years and presence of any psychopathology of the patient that may preclude surgery. Patients were evaluated by the Rey-Osterrieth Complex Figure test (ROCF), the Judgment of Line Orientation (JLO), The Symptom Checklist (SCL- 90), Beck Depression Inventory (BDI), and Beck Anxiety Inventory (BAI).

**RESULTS:** There were fifty female and ten male participants. The average short-term visual memory of the participants was  $18.85 \pm 6.46$ . Also, to the average long-term visual memory of the participants was  $17.53 \pm 6.22$ . JLO test average scores was  $20.07 \pm 5.27$ . According to Pearson's correlation analysis results, there was no relationship between the short and long-term visual memory performance, all psychopathology subscales (somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, anger-hostility, phobic anxiety, paranoid ideation, psychoticism, additional) and General Psychopathology. In the JLO test scores, it was found that only a negative relationship with the somatization subscale ( $r = -0.36, p = 0.006$ ). In terms of Beck Depression Inventory and Beck Anxiety Inventory scores, it showed that associated with short and long-term memory performance. According to results there was a negative relationship ( $r = -0.39, p = 0.002$ ) between the JLO test and the Beck Anxiety Inventory. According to the results of regression analysis, 17.1% of the scores related to JLO test scores in morbid obese were explained by Beck Anxiety Inventory and somatization subscale scores ( $p < 0.001$ ).

**CONCLUSION:** Visual factors (the size of plates and cutlery, plates color, etc.) has been shown that influenced on amount of food consumed. Therefore, it may be necessary to examine the visual-cognitive functions and the relationship between the amount of feeding of visual cognition in obese individuals. Also, a healthy body perception can be visually different from person to person. Therefore, examine the connection between body image and spatial ability of obese individuals might be useful. It may be helpful to review the relationship between body image and spatial skills in obese individuals. Further, the processes associated with spatial perception in obese individuals need to pay attention to somatization and anxiety symptoms.

**Keywords:** obesity, psychopathology, visual memory, visual spatial perception

**Bulletin of Clinical Psychopharmacology 2016;26(Suppl. 1):S151**

**[Abstract:0565][Schizophrenia and other psychotic disorders]****A comparative study examining the relationship between Vitamin D level and cognitive functions and clinical severity of illness in patients with schizophrenia**

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**OBJECTIVE:** Cognitive deficits are accepted as an important pathological dimension in schizophrenia. These ability losses are mostly chronically and severe. In most patients, cognitive deficits can be observed with the first psychotic episode. The relation of Vitamin D with psychiatric illnesses has been revealed as a result of research. In addition, the role of Vitamin D in decreasing inflammation is one of the topics that has been prominent recently. Therefore, in our research, it has been examined the relation of vitamin D has an anti-inflammatory effect, with the cognitive processes and the severity of the illness in schizophrenia patients.

**METHODS:** Twenty two patients with schizophrenia and 14 patients with drug-naive psychosis participated in our study with using SCID-I interviews. They were all between the ages of 18–60 and did not use psychotropic medications at least for a month. The patients who had psychiatric or medical illnesses were excluded from the study. The tests that were applied to the participants were Wisconsin Card Sorting Test (WCST), Trail Making Test (TMT), Stroop Color-Word Test (SCWT), and Rey Auditory Verbal Learning Test (AVLT). All subjects provided written informed consents. Statistical analyses were made with SPSS Version 22 for Windows.

**RESULTS:** When the SANS and SAPS points were compared to Vitamin D level, it was seen that there was a significant difference between the SANS-aphathy points and Vitamin D levels. There was a limited difference in SANS total points with Vitamin D levels. When relationship between vitamin D levels with the test scores were examined; a statistically significant association was found between the time of word-color reading in the Stroop test and perseverative error number in the WCST ( $p=0.012$ ). No relationship was found between AVLT and TMT scores.

**CONCLUSION:** In people with low level of Vitamin D in infancy period, it has been reported that negative, cognitive, and mood related disorders have been revealed. In a study in which the level of Vitamin D was compared to neuropsychological functions, it was shown that low Vitamin D was associated with executive functions, mental flexibility, processing speed, and updating new information. In our study, it has been shown that low levels of Vitamin D in schizophrenia patients had negative symptoms, especially apathy. In terms of cognitive functions, patients' Vitamin D levels were correlated with processing speed and executive function related to perseveration. Similar to our findings, previous reports in the literature reported a significant relationship between low level of Vitamin D, negative symptoms, and cognitive deficits in schizophrenia patients was.

Cognitive deficits in patients with schizophrenia are one of the most important challenges that caused resistance of treatment and psychosocial burden. With this objective, association between anti-inflammatory mechanism in schizophrenia, via measuring level of Vitamin D, and cognitive deficits have been studied. As a result, supplementing patients with Vitamin D may increase their participation in social life via improving their cognitive functions. However, further study about this topic is needed.

**Keywords:** schizophrenia, cognitive function, vitamin D

**Bulletin of Clinical Psychopharmacology 2016;26(Suppl. 1):S152**

**[Abstract:0566][Eating disorders]****The relationship between perseveration, learning, and temperament in morbid obese individual**Ibrahim Taymur<sup>1</sup>, Ersin Budak<sup>2</sup>, Sinay Onen<sup>1</sup>, Bilgen Bicer Kanat<sup>1</sup>, Evren Dilektasli<sup>3</sup>, Haci Murat Cayci<sup>3</sup>

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**OBJECTIVE:** Personality problems and affective temperaments were found that more common among obese individuals. Also, it was found to show lower performance to associated with significant cognitive features (verbal memory, working memory, attention, and mental flexibility) compared to non-obese individuals of obese individuals. Many authors have indicated an integral link between a

person's personality and the functions of the prefrontal cortex. Therefore, it may be beneficial to assess the connection between the prefrontal cortex and associated cognitive abilities, and temperament features in obese individuals. In this study, we examined the relationship between perseverative response, learning, and affective temperament in morbid obese individuals.

**METHODS:** Fifty seven morbid obese patients whose purpose of admission to the hospital was obesity surgery were evaluated in our study. The exclusion criteria of our study were education less than five years and presence of any psychopathology of the patient that may preclude surgery. Patients were evaluated by the Wisconsin Card Sorting Test, Verbal Memory Processes Scale and Temperament Evaluation of Memphis, Pisa, Paris and San Diego Autoquestionnaire (TEMPS-A).

**RESULTS:** The average age of the participants was  $36.60 \pm 8.46$ . There was forty seven female and ten male participants. The mean age of the participants was  $36.60 \pm 8.46$ . The average sensation of the participants was  $5.87 \pm 1.17$ . In addition to, the average long-term verbal memory of the participants was  $12.41 \pm 1.63$ , and the average of learning scores was  $107.21 \pm 12.43$ . WCST in obese patients the average of the number of completed categories was  $3.37 \pm 1.63$ . Also, the mean scores of perseverative response was  $32.87 \pm 18.31$ , and the mean scores of perseverative errors was  $27.48 \pm 15.05$ . According to Pearson's correlation analyses, it was found that there was no relation between the with sensory scores, learning points, long-term memory and temperament characteristics subscales (depressive, cyclothymic, hyperthymic, irritable on, anxious). According to Pearson's correlation analyses, it was found that there was a positive relation between the perseverative response and depressive temperament subscale ( $r=0.30$ ,  $p=0.021$ ). Also, the total number of perseverative errors was found that a positive correlation between depressive temperament ( $r=0.33$ ,  $p=0.012$ ). Other features of temperament (cyclothymic, hyperthymic, irritable, anxious) was assessed that there was no significant relationship between the number of perseverative errors and total perseverative response. According to the results of regression analysis, 17.1% of the scores related to a total number of perseverative errors in morbid obese were explained by depressive temperament subscale scores ( $p<0.001$ ).

**CONCLUSION:** Many studies have shown that mood disorder is often accompanied by obesity. At the same time, the cognitive characteristics of obese individuals have been shown lower than the healthy individuals. Therefore, when examining depressive symptoms and perseverative responses in obese individuals may be useful to focus on depressive temperament. In order to explain the relationship between obesity, temperament, and cognitive features we need further studies.

**Keywords:** obesity, perseveration, temperament, verbal memory

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[Abstract:0567][OCD]

## Development and preliminary validation of the cognitive adaptation test in patients with obsessive-compulsive disorder

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**OBJECTIVE:** The contribution of recent neuropsychological findings of psychiatric disorders on genetic and pharmacological characteristics and additionally to the literature can lead to think that increasing alternatives might be considered beneficial in terms of cognitive evaluation and identification. In this study, we aimed to define a new aspect of the cognitive functions on obsessive-compulsive disorder (OCD) patients benefiting from their neuropsychological differences and to reach a new evaluation instrument in the literature. In addition to that, since impulse control problems were evaluated closely with OCD category in the DSM-5, we wanted to examine this new definition.

**METHODS:** Before designing the test materials in our study, we evaluated the scientific debates and neuropsychological studies on OCD conducted over the last 15 years. As a result of this examination and observation of the many patients, we have defined the term "cognitive adaptation" and referring to this term, we aimed to develop a test material that can measure characteristics of it. In this study, "cognitive adaptation" term is considered as human ability to perform his mental adaptation in the face of a clearly defined a new situation. Furthermore, to measure this, we agreed to give enough opportunity to a person in order to get used to the new situation as important. As a consequence, we designed a neuropsychological task (dual misidentification task) to measure these properties. Fifty one OCD patients and thirty one healthy control group were involved in this study to test this task.

**RESULTS:** The average age of the OCD was  $33.07 \pm 8.71$  and the average age of the healthy control was  $34.50 \pm 8.80$ . It was seen between these two groups that rate of gender ( $X^2=1.296$ ,  $p=0.523$ ) and educational status ( $X^2=1.998$ ,  $p=0.573$ ) do not differentiate significantly. According to the results of t test in OCD patients and healthy control group, it was evaluated that, first card ( $p<0.01$ ), the second card ( $p<0.003$ ), the third card ( $p<0.001$ ) and the fourth card ( $p=0.001$ ) time scores averages of OCD patients were significantly higher than the healthy control group's time scores averages. The average time scores and error points of the OCD patients was respectively  $50.91 \pm 15$  and  $3.03 \pm 3.06$ . Also, the average time scores and error points of the healthy control group was respectively  $35.96 \pm 7.17$  and  $0.64 \pm 1.19$ . According to the t-test performed on the fifth card (cognitive adaptation measures card), it was found out that, time scores ( $p<0.001$ ) and error points averages ( $p<0.001$ ) of OCD patients higher than the score averages of the healthy control group. Factor analysis revealed that the cognitive adaptation test had one component and prevalence value of this scale was 71.2.

**CONCLUSION:** The preliminary findings revealed that Cognitive Adaptation Test had satisfactory psychometric values. However, independent samples t-test results show that the scale has a distinguishing cognitive features between the OCD and the healthy control group. At the same time, this study shows that OCD patients have important problems in cognitive adaptation.

**Keywords:** cognitive adaptation, neuropsychology, obsessive compulsive disorder, validity

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[Abstract:0571][Personality disorders]

## A case control study on the temperament and psychological mood of patients with chronic hepatitis B

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**OBJECTIVES:** To evaluate the personality and temperament traits in patients with chronic hepatitis B in comparison to the healthy subjects and to determine whether there is a relationship between personality trait and level of anxiety or depression.

**METHODS:** This was a case-control study in which 67 patients who had been under follow-up with diagnosis of chronic hepatitis B (30 males, 37 females; mean age  $46.0 \pm 11.3$ ) and 103 aged-matched healthy control subjects (50 females, 53 males; mean age  $42.2 \pm 15.2$  years) were included. Study participants were asked to complete three self-report questionnaires— Temperament and Character Inventory (TCI) to define personality traits, Beck Depression Inventory (BDI) and Beck Anxiety Inventory (BAI) to evaluate presence and severity of depression and anxiety.

**RESULTS:** Total and sub-scale scores of five out of seven dimensions of TCI-reward dependence, persistence, self-directedness, cooperativeness, and self-transcendence-were significantly higher in Group 1 than Group 2 ( $p<0.05$  for all). Total BDI and BAI scores were significantly higher in Group 1 than Group 2 ( $p=0.029$  and  $p=0.001$ , respectively). Significantly more patients had a BDI score of 17 or over in Group 1 than Group 2 (28.4% vs. 1.0%, respectively,  $p<0.001$ ). There were no significant correlations between total scores of TCI dimensions and total BAI or BDI scores except for weak correlations between harm avoidance and self-directedness subscale scores and total BAI or BDI scores.

**CONCLUSION:** In terms of personality traits, patients with chronic hepatitis B exhibit higher reward dependence, persistence, self-directedness, cooperativeness, and self-transcendence compared to the healthy controls. The personality traits of patients should be considered during the management of hepatitis B in order to optimize treatment outcome and to prevent development of new mental health problems during the course of the disease.

**Keywords:** hepatitis B, personality, temperament, depression, anxiety

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[Abstract:0572][Mood disorders]

## Comparison of early maladaptive schemas in major depressive disorder patients with suicidal history and without suicidal ideation

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**OBJECTIVE:** Depression is the most risky mental disorder in terms of suicide. Reducing the high suicide rates in major depressive disorder is possible with understanding the predictive risk factors substantially. Problem-solving challenges of depressive patients with suicidal tendencies are thought to be associated with the generalization of negative personal memories from the past and adapting them to today. According to Cognitive Therapy approach, affect and behavior are determined by cognitive schemas shaping the world perception of the person. Schemas develop during childhood and adolescence. They are functional in terms of ensuring compliance with family environment/ immediate surroundings of the child. On the other hand, these schemas are rigid and resistant to change, so they can become maladaptive in the later period of life and can take a part on the basis of various psychiatric disorders. The structure containing hopelessness thoughts continued to play a central role in the cognitive model of depression. However, there is a need to define the characteristics of cognitive distortions in depressive disorder patients with a history of suicide. In this study, we aimed to determine the differences of early maladaptive schemas between patients with major depressive disorder who were admitted to the psychiatry department after suicide attempt and major depressive disorder patients without suicidal ideation.

**METHODS:** The study population consisted of 48 major depressive disorder with a history of suicide attempts and 52 major depressive disorder patients without suicidal ideation who admitted to Department of Psychiatry of Gulhane Military Medical Faculty between 2013 and 2014. Young Schema Questionnaire-Short Form-3, Beck Depression Inventory, and Suicidal Ideation Scale were administered to the patients.

**RESULTS:** The mean age in patients with suicide attempt was  $28.1 \pm 7.2$  and  $31.3 \pm 7.1$  in patients without suicidal ideation ( $p > 0.05$ ). The socio-demographic characteristics of the groups were similar. Beck depression score of patients with suicide attempt was higher than patients without suicidal ideation ( $p < 0.05$ ). All of the maladaptive schemas scores were higher in patients with suicide attempt. However, schemas with statistically significant high scores were: emotional deprivation, failure to achieve, negativity/ pessimism, social isolation/ mistrust, Dependence/incompetence, Insufficient self-control/ discipline, abandonment/ instability, defectiveness/ shame, vulnerability to harm or illness ( $p < 0.05$ ).

**CONCLUSION:** Early maladaptive schemas are described as common, comprehensive, and valid for lifetime cognitive abilities for oneself and his relationship. Although in certain cases hidden or dull, schemas became active in such similar situations with early life events which had an important role in the formation of the schemas. Significant distress revealed when the early maladaptive schemas activated. This distress can result in depression. Some schemes can be more active in major depressive disorder patients with a history of suicide. The findings obtained from this study will provide a better understanding which schemas are more active in major depressive disorder patients with a history of suicide compared to other depressive disorder patients and considered to be effective in treatment planning.

**Keywords:** schema, suicide, depression

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**[Abstract:0578][Forensic psychiatry]****Development and standardization of personal risk assessment form (BIRDEF) for children under institutional care**

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**OBJECTIVE:** The aim of this study was to develop a reliable and valid scale to determine the risk factors and the needs of children under institutional care for obtaining a common evaluation plan and an application standard which can be used in every institution. In line with this purpose, Personal Risk Assessment Form (BIRDEF) was constructed.

**METHOD:** BIRDEF includes 66 questions under 12 categories which are constructed after a needs analysis with 30 specialist working in child care institutions and a large scale literature review. Categories determined are directed to different areas of risks and needs of children such as education, economic and working status, residence, peer relations, physical condition, alcohol and substance use, mental condition, abuse, personality characteristics, behavioral problems, crime history, and family characteristics. Standardization study of the test has been made with 291 children staying in 14 institutions under the Ministry of Family and Social Policies in Turkey. After the application of BIRDEF, Youth Self Report (YSR) which is developed by Achenbach and Edelbrock in 1987 for determining mental and behavioral problems of children of age 11–18, is also administered to the same participants for determining predictive validity. 32 children were randomly selected and re-tested with BIRDEF by different interviewers for evaluating inter-rater reliability.

**RESULTS:** Cronbach alpha coefficient was found 0.81 for the whole scale and 0.53–0.89 for subscales. Inter-rater correlation is found 0.86 ( $p < 0.001$ ). In exploratory factor analysis, 9 factors was obtained explaining 57% of total variance. Significant correlation was observed between YSR subscales and related questions and categories of BIRDEF. Correlation between total scores of YSR and BIRDEF was found 0.48 ( $p < 0.001$ ).

**CONCLUSION:** In conclusion, BIRDEF was considered as a valid and reliable tool to determine the risks and the needs of children under institutional care. An important point is the importance of clinical evaluation skills for using BIRDEF, so the administrators should be well trained before using the scale. Another important point is that BIRDEF is a practical scale which can make a good measure for the areas it is intended to measure; but the administrators should be aware that it is a supplementary tool for evaluation and avoid labeling and make final decisions based on the results of the scale.

**Keywords:** children under institutional care, development of a scale, risky behavior

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**[Abstract:0595][Psychopharmacology]****Effects of lithium intake on calcium metabolism in patients with bipolar disorder**

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Lithium carbonate is a widely used in the treatment and prophylaxis of bipolar disorder. Along with its side effects, clinicians should be careful in recommending lithium in case of osteoporosis or osteomalacia. There are studies suggesting an association between chronic lithium intake and hyperparathyroidism, hypercalcemia and urinary calcium output, and prevalence of hyperparathyroidism was detected

up to 40% in patients under lithium treatment (1, 2, 3). In the present study, we aimed to examine the changes in calcium metabolism while using lithium therapy.

**Keywords:** bipolar disorder, calcium metabolism, lithium

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**[Abstract:0601][Psychosomatic medicine-Liaison psychiatry]**

## The possible role of circumcision age on adult sexual life

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**OBJECTIVE:** We aimed to evaluate the psychological impact of circumcision as a traumatic event on cases who had been circumcised between 2 and 5 years of age, and evaluate their sexual function.

**METHOD:** Fifty four subjects were enrolled into the study group (group 1) who had been circumcised in the vulnerable age interval and 56 control subjects matched in terms of age who had been circumcised in the other ages (group 2). Any drug usage that may effect sexual function, ejaculation and mood; and having any disease such as penile, neurological, psychiatric, or endocrine were defined as exclusion criteria. Impact of Event Scale-Revised (IES-R), Premature Ejaculation Diagnostic Tool (PEDT), International Index of Erectile Function (IIEF) assessment tools were administered to all participants in both groups.

**RESULTS:** There were no significant differences in the comparisons of ages and marital status ( $p>0.05$ ) between the two groups. However the mean age of circumcision was significantly higher in group 2 ( $p<0.001$ ). PEDT and IIEF scores showed no statistical differences between two groups ( $p>0.05$ ); whereas mean IES-R total score was found higher in group 1 with the high level of significance ( $p<0.001$ ).

**CONCLUSIONS:** As the imagination of complete loss of genitalia, the castration anxiety is the main cause of psychological trauma in phallic stage that corresponding to ages 2 to 5. In Turkey, the circumcision is performed between 0 to 12 years of age. 15% of male population are circumcised before 1, 8% are circumcised between 1 to 3, 35% are circumcised 3 to 6, and 41% are circumcised after 6 years of age. Despite many speculations of the psychoanalytic literature, there is no evidence based knowledge about circumcision performed in phallic stage to develop any sexual dysfunctions as a long term consequence. However, increased satisfaction with sexual functioning have been frequently reported and most of them point out penile sensitivity, better erectile functioning, and other non-psychological mechanisms. A domestic study noted that when researchers assessed sexual function with Golombok-Rust Inventory of Sexual Satisfaction (GRISS) of healthy males in a prospective method, they found that subjects had higher avoidance subscale score and lower avoidance subscale score who had been circumcised between 3 and 5 years of age. In our study, IES-R total scores found higher in subjects who have been circumcised between 2 and 5 years of age. On the other hand, in terms of sexual dysfunction measurements with PEDT and IIEF, we determined no relationship with phallic stage circumcision. So, we can estimate that circumcision in the vulnerable age interval might result in cognitive processes and some attitudes without any somatic symptoms. Our study suggests that unresolved traumatic experiences about circumcision may not lead to a pure sexual dysfunctions. However, further studies are required to clarify the association between trauma and sexual dysfunctions.

**Keywords:** circumcision, trauma, adult

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[Abstract:0610][Psychosomatic medicine-Liaison psychiatry]

## Major depression in long term oxygen therapy dependent chronic obstructive pulmonary disease

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**OBJECTIVE:** Depression frequently affects patients with chronic obstructive pulmonary disease (COPD) and is a risk factor for increased COPD exacerbation, hospitalization, and mortality. We aimed to examine the frequency of major depression in long term oxygen therapy (LTOT) dependent COPD patients and the effect of depression on patient's compliance with the treatment.

**METHODS:** The study had a cross-sectional design. Fifty four consecutive patients were enrolled in the study and diagnosed as stage 4 COPD according to Global Initiative for Chronic Obstructive Lung Disease guideline. After physical examination, spirometric measurement, and arterial blood gas measurement, each patient was referred to psychiatry clinic. Major depressive disorder was diagnosed with the Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition/ Clinician Version (SCID-I-CV). Patients with less than oxygen consumption of 15 hours/day has been classified as incompliant to treatment.

**RESULTS:** Thirty-four (63.0%) patients had major depression. MDD frequency was significantly higher in patients who were non-compliant with LTOT compared to compliant patients. Both the number of hospitalizations and number of emergency applications were greater in patients with major depression compared to those without it. Number of emergency applications was higher in patients who were not compliant with LTOT. Multivariate regression analysis indicated major depression was an independent risk factor for compliance with LTOT.

**CONCLUSION:** Major depression is a common psychiatric disorder in COPD patients receiving LTOT and appears to be an independent risk factor for non-compliance with LTOT.

**Keywords:** depression, chronic obstructive pulmonary disease, long term oxygen therapy

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[Abstract:0626][Psychosomatic medicine-Liaison psychiatry]

## Psychiatric comorbidity in children with chronic dermatological disorders

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**OBJECTIVE:** A healthy and normal functioning skin is important for physical and psychological well-being. Skin diseases may result in psychiatric disorders and a reduction in quality of life due to their effect on the body image, self-esteem, and social stigmatization. Vitiligo, psoriasis, and alopecia areata are chronic skin diseases often beginning in childhood or adolescence that affect the external appearance significantly. This study aimed to evaluate psychiatric comorbidities in children and adolescents with chronic dermatological disorders.

**METHOD:** The study sample consisted of 28 patients between 9–17 years of age, diagnosed with psoriasis, vitiligo or alopecia areata who have been followed up at the Department of Dermatology. Sociodemographic characteristics of the participants were assessed by a detailed form. Clinical psychiatric diagnoses were established by using the Kiddie Schedule for Affective Disorders and Schizophrenia, Present and Lifetime Version.

**RESULTS:** Twenty eight patients were included in this study, 18 patients (64.3%) were girls and 10 patients (35.7%) were boys. The age range was 9-17 years with a mean of  $12.64 \pm 2.76$  years. The number of patients who had psychopathology was 15 (53.5%), and they received the following diagnoses; Attention-Deficit Hyperactivity Disorder (21.4%), Generalized Anxiety Disorder (21.4%), Depressive Disorder (17.9%), Obsessive- Compulsive Disorder (10.7%), Specific Phobia (10.7%), Social Anxiety Disorder (7.1%), Tic Disorders

(7.1%), Separation Anxiety Disorder (3.6%), and Enuresis Nocturna (3.6%).

**CONCLUSION:** Determining the psychiatric comorbidity and degree of impairment in patients with chronic dermatological diseases will help to obtain optimum psychosocial function and overall well-being.

**Keywords:** comorbidity, dermatology, psychiatry

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[Abstract:0628][Others]

## Validity and reliability of DSM-5 Level 1 Cross-cutting Symptom Scale Turkish version (Child Form for 11–17 years and Parent Form for 6–17 years)

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**OBJECTIVE:** This study aimed to assess the validity and reliability of the Turkish version of DSM-5 Level 1 Cross-Cutting Symptom Scale's child and parent forms.

The DSM-5 Parent Rated Level 1 Cross-Cutting Symptom Measure-Child Age 6–17 assesses mental health domains that are important across psychiatric diagnoses. It is intended to help clinicians to identify additional areas of inquiry that may have significant impact on the child's treatment and prognosis. The measure consists of 25 questions that assess 12 psychiatric domains, including depression, anger, irritability, mania, anxiety, somatic symptoms, inattention, suicidal ideation/attempt, psychosis, sleep disturbance, repetitive thoughts and behaviors, and substance use. Each item asks the parent or guardian to rate how much (or how often) his or her child has been bothered by the specific symptom during the past 2 weeks.

The DSM-5 Level 1 Cross-Cutting Symptom Measure is a self-rated measure that assesses mental health domains and is intended to help in identifying additional areas that might impact the child's treatment similar to parent form of the same scale.

**METHOD:** The scale was prepared by carrying out the translation and back translation of DSM 5 Level 1 Cross-Cutting Symptom Scale's child and parent forms. Study group consisted of community and clinical samples. The scale was administered to 244 parents and 320 adolescents that represented the clinical and community sample. For the assessment, Strengths and Difficulties Questionnaire (SDQ) was used along with Level 1 Cross-Cutting Symptom Scale. For reliability analyses, internal consistency coefficient and item- total score correlation analysis, test and re-test analysis, inter-rater reliability and as for validity analyses; exploratory factor analysis and correlation analysis with Strengths and Difficulties Questionnaire for concurrent validity were carried out.

**RESULTS:** Cronbach alpha values for DSM-5 Level 1 Cross-Cutting Symptom Scale's child form was 0.893 while 0.90 for parent form. Correlation coefficient of DSM 5 Level 1 Cross-Cutting Symptom Scale as a result of its correlation with Strengths and Difficulties Questionnaire was 0.698 for child form and 0.706 for parent form which were both statistically significant. Correlation coefficient in test-retest application was  $r=0.965$  ( $p<0.0001$ ) for child form and  $r=0.919$  ( $p<0.0001$ ) for parent form. As for construct validity, 6 factors were maintained that would explain 59.3% of the variance in child form. Attention, depression, anger, irritability, and anxiety items were weighed by the 1<sup>st</sup> factor, while obsessive compulsive symptoms by the 2<sup>nd</sup> factor, mania and psychosis items by the 3<sup>rd</sup>, items related to alcohol and drugs by 4<sup>th</sup>, somatic symptoms by the 5<sup>th</sup>, suicide- related items by the 6<sup>th</sup> factor, respectively. In the parent form, 5 factors were maintained that would explain 60.3% of the total variance. Sleep, attention, depression, anger, irritability, anxiety items were weighed by the 1<sup>st</sup> factor while alcohol-drugs and suicide related items by the 2<sup>nd</sup>, obsessive- compulsive and psychotic items by the 3<sup>rd</sup>, somatic symptoms by the 4<sup>th</sup> and mania-psychotic items by the 5<sup>th</sup> factor, respectively.

**CONCLUSION:** It was shown that the Turkish version of DSM-5 Level 1 Cross-Cutting Symptom Scale could be used as a valid and reliable tool both in clinical practice and for research purposes.

**Keywords:** DSM-5 level 1 cross-cutting symptom scale, reliability, validity

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**[Abstract:0654][Schizophrenia and other psychotic disorders]****A clinical representative data from a bipolar disorder-psychosis outpatient unit**

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**OBJECTIVE:** In current operational classification systems, DSM-5 and ICD-10, Bipolar Disorder and Schizophrenia are separately classified disorders. However, some authors have argued for a continuum approach to psychosis. Due to the underlying polygenic etiology and similar genetic insults, in some aspects, the two disorders are considered to share a common neurodevelopmental etiological model with a typical onset in late adolescence or early adulthood. In addition, the two disorders may show overlapping symptom profiles especially in early onset cases during the adolescence. On the other hand, many atypical antipsychotic agents have mood regulatory and stabilizing effects besides their antipsychotic actions. In the present study, we aimed to report sociodemographics and several clinical characteristics of patients of the Bipolar Disorder-Psychosis Unit.

**METHOD:** The patients being followed up in the Bipolar Disorder-Psychosis Unit of a child and adolescent psychiatry outpatient clinic, constituted our sample. Besides the demographic characteristics, we examined the complaints of patients in the first admission, their symptom profiles, the diagnoses established, and the pharmacological interventions carried on during the follow up. The data were analyzed by using SPSS for Windows 20.0.

**RESULTS:** Our sample consisted of 28 cases (12 males, 16 females). The age range was 11–17 years (median=15, mean=14.39±1.52 years). The most common complaints were aggressivity (39%) and disorganized speech (39%), followed by sadness (29%), behavioral problems (29%), self-destructive behavior (25%), and repetitive behaviors (7%). Eleven patients (39%) had a previous diagnosis of attention deficit hyperactivity disorder (ADHD). The mean follow-up period for the sample was 9.71±12.25 months (min=1, max=58, median=5). During the follow-up majority of the patients (n=17, 61%) had a diagnosis of Bipolar Disorder and the remaining 39% (n=11) had a diagnosis of Psychotic Disorder. Among 16 females 14 had a diagnosis of Bipolar Disorder whereas majority of the males (9/12) had a diagnosis of Psychotic Disorder. This difference between two diagnostic groups was found to be significant ( $p<0.05$ ). However, no significant differences were found with respect to mean age, mean follow-up period, previous ADHD diagnosis or psychiatric complaints at the first admission. All of the patients were on atypical antipsychotics. In 60% of the cases an additional mood stabilizer (32%), a selective serotonin reuptake inhibitor (21%) and a typical antipsychotic (7%) were included in the treatment regimen. During the follow up 5 patients needed hospitalization, all with Bipolar Disorder diagnosis.

**CONCLUSIONS:** The so-called positive psychotic symptoms, such as hallucinations, delusions, disorganized speech and disorganized behavior, are components of the official diagnostic criteria for "Psychotic Episode". However, it is not uncommon that some of the adolescent patients with psychotic features will eventually have a Bipolar Disorder diagnosis after a considerable follow-up. The differentiation should be based on a thorough evaluation, including a detailed psychiatric history and mental status examination, as well as type of the symptoms and the course of the illness. The accurate diagnosis can be established during the clinical follow-up.

**Keywords:** adolescence, bipolar disorder, psychosis

**Bulletin of Clinical Psychopharmacology 2016;26(Suppl. 1):S160**

**[Abstract:0655][Autism]****Evaluation of S100B protein levels in children with autism spectrum disorder**Ayse Nihal Eraslan<sup>1</sup>, Ibrahim Durukan<sup>1</sup>, Sahin Bodur<sup>2</sup><sup>1</sup>Department of Child and Adolescent Psychiatry, Gulhane Military Medical School, Ankara, Turkey<sup>2</sup>Department of Child and Adolescent Psychiatry, Dr. Sami Ulus Children's Hospital, Ankara, Turkey  
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**OBJECTIVE:** Autism spectrum disorder (ASD) is one of the neuropsychiatric disorders of childhood that presents in first three years of life and characterized with restrictive interest, noticeable delays, and diversions at social communication and interaction areas. The etiology of ASD is not clear. Recent data show the crucial role of the immune system and glial cells in normal brain development. Studies revealed deteriorations of neural connections in ASD patients. The purpose of our study is to compare the S100B protein levels of ASD patients with

healthy control group and to determine whether there is an association between severity of disease and S100B levels.

**METHOD:** Twenty five boys with ASD between 2-5 ages and 27 healthy boys between 2-5 ages were included to sample group. After the initial evaluation of the patients, a semi-structured sociodemographic information form that builds for determining the patients' sociodemographical properties was used. CARS was performed in an attempt to evaluate the severity of patient's clinical picture and to determine the level of autistic signs of the patients ABC was performed by the family. To measure patients' serum S100B levels a tube of blood sample was collected, stored at -80 degrees Celcius and S100B levels measured by ELISA.

**RESULTS:** No statistically significant difference was found between ASD group's and control group's serum S100B levels ( $p>0.05$ ). Also no statistically significant difference was found between boy ASD patients' serum S100B levels and ABC sensory behaviour, social relating, body and object use, language skills, social self-care subdimension scores, total scores and CARS scores ( $p>0.05$ ). No statistically significant difference was found between boys with ASD's ABC subdimension scores, total scores and CARS scores, serum S100B levels with regards to autistic regression status ( $p>0.05$ ).

**CONCLUSION:** There are a few articles examining S100B protein levels in ASD. Although no statistically significant difference in S100B protein levels and no correlation between S100B protein level and autistic symptoms was found between the ASD patients and the healthy control group, it will be helpful to perform similar studies with larger sample groups on the purpose of elucidating the etiopathogenesis of ASD.

**Keywords:** S100B protein, autism spectrum disorder, symptom severity

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**[Abstract:0656][Schizophrenia and other psychotic disorders]**

## Frequency of menstrual cycle related psychiatric disorders in inpatients

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Menstrual cycles are related to a number of mental status changes as fluctuations in mood, increased anxiety or alterations in behavior. It has even been reported that some patients may suffer from 'menstrual psychosis', which is characterized by sudden onset and episodes of recurrent confusion, stupor, mutism, delirium, hallucinations or manic syndromes, that last for a short period and result in complete remission. In this study, we aimed to detect the frequency of menstrual psychosis and also to search for the menstrual cycle related psychiatric disorders in female adult inpatients. We also questioned if menstrual mental status changes were related to psychiatric diagnostic category, increased number of hospitalization, suicide attempts, earlier age of illness onset, and cigarette smoking.

**METHODS:** Forty consecutive patients that were hospitalized in acute patient ward. The diagnosis of the patients were as follows: schizophrenia (n=12), bipolar disorder (n=14), depression (n=2), psychosis NOS (n=1), schizoaffective disorder (n=1), delusional disorder (n=1), PTSD (n=1), adjustment disorder (n=1), and dissociative disorder (n=2). A questionnaire form, asking about the socio-demographic characteristics, educational status, smoking, alcohol-drug habits, medical diagnosis, current medications, family history and pregnancy history as well a semi-structured form questioning the relationship between emergence or worsening of psychiatric symptoms during a menstrual cycle, duration of the symptoms and patients' menstrual cycle characteristics were administered to each patient. In order to ease the comparison of the variables, patients' diagnosis was grouped under 3 categories: psychotic spectrum disorders (schizophrenia, delusional disorder, schizoaffective disorder, psychosis NOS), bipolar disorder, and depressive disorders (major depression, adjustment disorder with depressed mood, depression comorbid with PTSD, depression comorbid with dissociative disorder). Data was analyzed using SPSS version 20 for Windows.

**RESULTS:** None of the patients reported the symptoms of menstrual psychosis, however 5 patients (12.5%) reported Mental Status Changes (MSC-occurrence or worsening of psychiatric complaints) related with menstrual cycle. Four of these patients were grouped in depressive disorders category, whereas one patient was grouped in psychotic spectrum disorder category. Two of them suffered from irritability and others suffered from decreased psychomotor activity and depressive mood. One patient reported suicidal ideas. Their complaints started in the premenstrual stage and ceased with menstruation. Patients categorized in depressive disorders category were significantly more likely to report MSC compared to the other categories ( $p=0.017$ ). Patients with MSC had lower number of hospitalizations (mean number of hospitalizations for non-MS 3.9 and MS 0.75,  $p<0.000$ ) and lower age of first psychiatric treatment (mean age of first treatment for non-MS 27.8 and MS 21.3,  $p=0.005$ ). Other socio-demographic, psychiatric disorder specific variables were not significantly different between the study groups.

**CONCLUSIONS:** This study supports the fact that menstrual psychosis is a rare disorder and that among the psychiatric disorder categories, depressive disorders are more likely to be influenced by menstrual periods even though literature suggest a high risk for psychotic disorders as well. Since this study is a cross-sectional study and only inpatients are involved, the results might be affected by recall biases. Longitudinal studies with larger sample sizes and hormonal-neurobiological markers are needed for further studies.

**Keywords:** menstrual psychosis, menstruation, psychosis

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**[Abstract:0666][Schizophrenia and other psychotic disorders]**

## Stability of toxoplasma gondii: Antibody levels over one year

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**OBJECTIVE:** In recent years there have been reports of a possible association between T.gondii and some psychiatric disorders, especially schizophrenia. Some antipsychotic medication used to treat schizophrenia have been shown in vitro studies to inhibit to growth of T.gondii in cell culture, raising the possibility that the antipsychotics might affect antibodies to T.gondii in treated individuals. We therefore decided to examine the stability of antibodies to T.gondii in patients diagnosed with schizophrenia who were taking antipsychotic medications.

**METHODS:** Serum was collected every three months for one year from 60 individuals diagnosed with schizophrenia who were inpatients or outpatients in the psychiatric facilities associated with Istanbul University and Bakirkoy Training and Research Hospital for Psychiatry, Neurology and Neurosurgery. The patients included 23 males and 37 females and ranged in age from 19 to 54. All were taking antipsychotic medications. The study was carried out in Turkey where the adult seropositivity rate is approximately 50 percent. Four samples were available from 54 patients and three samples from the other 6. IgG and IgM class antibodies to Toxoplasma gondii were measured by commercially available assays (IBL America) following the manufacturers recommendations.

**RESULTS:** Using the cut-off 0.5, the IgG and IgM were both consistently positive for 20 patients; the IgG and IgM were both negative for 8 patients; and the IgG was positive and IgM negative for 12 patients. Hence, for two-thirds of patients the antibody level fluctuated very little over one year. For the remaining 20 patients there was some fluctuations in their IgG levels (n=3), IgM levels (n=12), or both IgG and IgM levels (n=5). In most cases this was simply because the levels fluctuated around 0.5, thus changing from positive to negative or vice-versa with only slight changes in levels. In two patients the changes suggested a new infection, since their IgG was negative but on the final sample collected their IgM became positive

**CONCLUSION:** Regarding any possible effects of the antipsychotic on the antibody levels, there were no significant group X time interactions as measured by repeated measures analysis of variance

**Keywords:** toxoplasma gondii, schizophrenia, antipsychotic medication

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**[Abstract:0668][Others]**

## Anxiety, depression, guilt, and shame in infertile women

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**OBJECTIVE:** Infertility is seen at rates ranging from 5 to 30% in different parts of the world and it is stated that one of every ten couples is infertile. The infertility issue is a chronic stress process that affects the vast majority of couples in various aspects of psychological, sociological, economic, and interpersonal ways. The majority of infertile patients, especially women, define infertility evaluation and

treatment process as the saddest experience of their lives. Studies suggest that infertile women had higher tendency to anxiety and depression and they reported more physical complaints compared to average. In this study, it was aimed to evaluate depression, anxiety, and relationship between shame and guilt in infertile women and women who had healthy children as the control group.

**METHOD:** Seventy-one consecutive outpatients of Research and Training Hospital Outpatient Obstetrics and Gynecology Clinic, School of Medicine, Mustafa Kemal University and Mersin University who had been diagnosed with infertility were included in the study group. Control group were included 71 healthy women, age matched and who have not previously received treatment due to infertility. Hamilton Depression Rating Scale (HDRS), Hamilton Anxiety Scale (HAM-A), Guilt-Shame Scale, Multidimensional Perceived Social Support Scale (MSPSS), and Perceived Family Support Scale (PFSS) were administered to all participants.

**RESULTS:** In the infertile group, perceived family support and anxiety were significantly lower; guilt, shame and perceived social support scores were significantly higher compared to the control group scores. When HDRS score 14 and above were considered as "depression", 14.1% of the infertile group (n=10) and 9.9% of the control group (n=7) were considered as depressed. But there was no statistically significant difference between groups in terms of depression. In infertile patients, statistically significant negative correlation was found between the total score of shame guilt scale and treatment duration of infertility. There was statistically significant positive correlation between duration of infertility and anxiety but not with depression.

**CONCLUSION:** The most original finding of our study was significantly higher levels of shame in infertile women. This is the first study that examines guilt and shame in the infertile women. According to correlation analyses there was negative correlation between duration of infertility and shame and guilt. In the literature there are many studies that report higher anxiety and depression levels in infertile women but in some studies, one of which is from Turkey, no correlations were found between anxiety and depression levels in infertile women. In our study we found higher anxiety levels in infertile group but there was no significant difference between groups in terms of depression.

**Keywords:** woman infertility, anxiety, depression, guilt and shame

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[Abstract:0669][ADHD]

## Effects of methylphenidate on growth and bone turnover in prepubertal male children

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**OBJECTIVE:** Effects of methylphenidate on child growth has been a subject to many studies up to date but their results are away from being definite and consistent yet. In this study, we examined the effects of methylphenidate on children's growths.

**METHODS:** male children between 6 and 8 years old diagnosed as Attention Deficite Hyperactivity Disorder and who are candidates for methylphenidate treatment at the Child Psychiatry Clinics of Antalya Training Research Hospital between January and March 2015 t were included as the study sample and the children whose parents provided informed consents were included into the study subjects. Before and after six months of the methylphenidate treatment, all were examined for their current health status, height, weight, body mass index, pubertal signs. Height-standard deviation score (H-SDS), weight-standart deviation score (W-SDS) and BMI-standart deviation score (BMI-SDS) were recalculated according to Turkey norms based on gender and age-matched peers. Blood samples were drawn before and after six months of treatment to measure hemogram, total biochemical parameters, parathormone, osteocalcine, bone specific alkalene phosphatase, vitamine D, P1NP (procollagen type 1 N-propeptide, bone formation marker, ng/mL) and NTx (type I collagen cross-linked N-telopeptide, bone resorption marker, pg/mL). Exclusion criteria were any neuropsychiatric diagnoses other than ADHD, any current or past systemic disease, familial systemic diseases, drug treatments, and obesity. The data were analyzed using SPSS Version 20 for Windows. Pretreatment and sixth months' values were compared with paired t-tests and p was set as significant at 0.05 level (2-tailed). Pearson's product-moment correlation coefficients were calculated to see the correlations of the pretreatment and sixth months' variables, separately; correlation was significant at 0.01 level (2-tailed) for P1NP and NTx but at 0.05 level (2-tailed) for others.

**RESULTS:** Of the 98 prepubertal male children; parents of 74 participated into the study and 30 subjects (n=100) were completers. Mean (M) of ages was 87.73 months (n=30.74-104, med: 87). Extended released methylphenidate or its equivalent dose of immediate released methylphenidate were used.

For H-SDS measurements; any significant difference was not seen between the pretreatment (M=0.29; SD=0.88) and sixth month's values

( $M=0.37$ ;  $SD=0.99$ ;  $t(29)=-1.05$ ) but sixth months' values of W-SDS ( $M=0.03$ ;  $SD=0.97$ ) and BMI-SDS ( $M=-0.23$ ;  $SD=1.18$ ) were significantly below the expected [( $M=0.41$ ;  $SD=1.05$ ;  $t(29)=7.19$ ) and ( $M=0.30$ ;  $SD=1.17$ ;  $t(29)=7.17$ ); respectively].

Sixth months' values of glucose ( $M=87.76$ ;  $SD=6.71$ ), creatinine ( $M=0.60$ ;  $SD=0.06$ ), vitamin D ( $M=27.62$ ;  $SD=6.97$ ) were significantly higher than their pretreatment values [( $M=82.36$ ;  $SD=6.15$ ;  $t(29)=-4.13$ ), ( $M=0.56$ ;  $SD=0.08$ ;  $t(29)=-3.56$ ), ( $M=18.50$ ;  $SD=7.34$ ;  $t(27)=-5.24$ )] and sixth months' level of alkaline phosphatase ( $M=219.46$ ;  $SD=51.37$ ) was lower than the pretreatment one ( $M=245.82$ ;  $SD=53.25$ ;  $t(27)=3.36$ ). Pretreatment P1NP values ( $M=447.44$ ;  $SD=254.85$ ) significantly increased ( $M=666.85$ ;  $SD=515.69$ ;  $t(29)=-2.15$ ). Significant correlations were found between P1NP and NTx( $r=0.88$ ), glucose and creatinine ( $r=0.42$ ), glucose and vitamin D ( $r=0.37$ ) for their pretreatment values and between P1NP and NTx ( $r=0.65$ ), also between P1NP and glucose ( $r=-0.36$ ) for their sixth months' values.

**CONCLUSION:** Our results displayed that weights and body mass indexes of the prepubertal male children were below the expected but height measures were not different from Turkey norms (2) after 6 months of methylphenidate treatment. Glucose, creatinine, vitamin D, P1NP increased; alkalene phosphatase decreased significantly. Our results revealed that methylphenidate has considerable effects on children's growth and its mechanism should be examined in more structured studies with wide scopes including growth percentiles, bone metabolism, biochemical parameters etc.

**Keywords:** bone markers, growth, methylphenidate, NTx, P1NP

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**[Abstract:0671][Mood disorders]**

## The use of traditional and complementary medicine in adults with depressive disorders. a cross-sectional study in Adana, Turkey

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**OBJECTIVE:** Traditional medicine has been utilized since ancient times, long before conventional pharmacological practices took the predominance in medicine. It is the sum total of the knowledge, skill, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness. This study was aimed to provide current and reliable data on the prevalence of traditional and complementary medicine (TCM) applications and associated socio-demographic characteristics in patients with major depressive disorders in the southern regions of Turkey.

**METHOD:** This cross-sectional study has been conducted at the psychiatry units of Adana Çukurova Aşkim Tüfekçi, Ceyhan and Kozan Public Hospitals in the time period of six months between June and November 2015. Among the patients diagnosed with depression at the aforementioned outpatient clinics, 534 participants fulfilled the inclusion criteria for the study protocol and signed consent forms. The questionnaire used in this study was prepared by the review of relevant literature. To determine the limitations of this questionnaire, 25 volunteer participants were tested as part of a pilot testing. Some improvements were applied to the questionnaire form so that it would render beneficial for the study objectives. The questionnaire was administered by a psychiatrist in a face-to-face clinical interview. The patients enrolled for psychiatric visit and signed the informed consent were consecutively enrolled to the study. The questionnaire was formed of two parts. The first one was patients' sociodemographic variables (age, gender, education, employment status, income, insurance, and location) and clinical features (main complaint, previous psychiatry outpatient visits, duration of symptoms, hospitalizations, psychiatric diagnosis, type of TCM, reason and reference for TCM application, and perceived efficacy of TCM). The second part was composed of descriptive features of TCM and they follow as; whole medical system practices, mind-body medicine, energy medicine, manipulative and body-based practices, and biologically based practices.

Statistical Analysis SPSS Version 22.0 for Windows was used for data analysis. Sociodemographic variables, characteristics and types of TCM use in depressive patients are determined by frequency and descriptive analysis. Comparison of characteristics of TCM use and sociodemographic variables was demonstrated in crosstabs constituted via chi-square test results. Due to very small number of high income group participants, high and middle income groups were joined as a single group for facilitated statistical analysis.

**RESULTS:** Out of 534 major depression patients in our study, female and male ratios were 77.7% and 22.3%, respectively. Education level of 52.2% of participants was primary school or less. Rural inhabitants were constituting 14.1% of the participants. Low income group was a notable size of the total number (46.8%). In our study, most frequently chosen TCM applications were found to be in order of; herbal therapy (12.7%), spiritual healing (10.1%), and food supplements (6%).

**CONCLUSION:** This study provides current and reliable data on the prevalence of TCM applications and associated socio-demographic characteristics in patients with major depressive disorders in the Southern part of Turkey

**Keywords:** depression, traditional and complementary medicine, traditional practices, modern medicine

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[Abstract:0673][Epidemiology]

## The consumption of antidepressant medicines in Turkey

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**OBJECTIVE:** Pharmaceutical industry is one of the largest industries of the world and the size of this industry is growing year by year. On the other hand, Turkey is one of the developing countries in the market. Health Transformation Program, which started in 2003, and Social Security Reform, which performed in 2006, increased access to medicines in Turkey. Medicine box sales have increased by 21.8% between the years 2008 and 2013 in Turkey. Consumption of antidepressant medicines has increased in most of the Organisation for Economic Co-operation and Development (OECD) countries and there is a significant variation between antidepressant medicines consumption of these countries. The average of The Defined Daily Dose (DDD) is a unit of measurement of medicine consumption, was 58 in OECD countries for antidepressant medicines in 2013. In this study, we aimed to characterize antidepressant medicine consumption in Turkey by years and to compare with other OECD countries.

**METHODS:** The DDD is a statistical measure of drug consumption, defined by the World Health Organization (WHO) and used to standardize the comparison of different medicines or medicine use in different health care environment. A DDD assignee for drugs that already have an Anatomical Therapeutic Chemical (ATC) classification system code. The DDD of antidepressant medicines calculated according to the WHO definitions.

In this study, the DDD of antidepressant medicines between the years of 2008 and 2013 in Turkey calculated according to the WHO definitions. The DDD value of antidepressant medicines in 2013 compared with OECD average level and other OECD countries DDD value of antidepressant medicines in 2013. The DDD of OECD average level and other OECD countries obtained from Health at a Glance 2015. Medicine sales obtained from IMS-Health Turkey and Turkish Pharmaceutical Track and Trace System (ITS) databases while DDDs were calculating.

**RESULTS:** The DDD of antidepressant medicines between the years of 2008 and 2013 in Turkey are 27.77, 29.09, 32.71, 36.97, 37.33, and 36.27, respectively.

**CONCLUSION:** The consumption of antidepressant medicine of Turkey [DDI: 36 (per 1000 people per day)] is lower than OECD average level [DDI: 58 (per 1000 people per day)] and many OECD countries (19 countries) in 2013. While Iceland [DDI: 118 (per 1000 people per day)] reported the highest level of consumption of antidepressants in 2013, Estonia [DDI: 21.4 (per 1000 people per day)] reported low consumption. In addition, Korea, Hungary and Slovak Republic reported lower DDDs than Turkey in 2013. While the consumption of antidepressant medicine of Turkey have been increased between the years 2008 and 2011 by years, the DDD of antidepressant medicines did not alter in 2011, 2012, and 2013 remarkably. It should be noted that, the DDD did not necessarily reflect the recommended or prescribed daily dose. It is the assumed average maintenance dose per day for a drug used for its main indication in adults and a statistical measure of medicine consumption.

**Keywords:** antidepressant medicines, consumption, the defined daily dose

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**[Abstract:0676][Epidemiology]****The consumption of psychiatric medicines in Turkey**

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**OBJECTIVE:** Pharmaceutical industry is one of the largest industries of the world and the size of this industry is growing year by year. On the other hand, Turkey is one of the developing countries in the market. In general, pharmaceutical consumption continues to increase in the whole of the world. Health Transformation Program, which started in 2003, and Social Security Reform, which performed in 2006, increased access to medicines in Turkey. Medicine box sales have increased by 21.8% between the years 2008 and 2013 in Turkey. Consumption of antidepressant medicines, a subgroup of psychoanalytic medicines, has increased in most of the Organisation for Economic Co-operation and Development (OECD) countries by years. In this study, we aimed to characterize psychiatric medicines consumption in Turkey by generally between the years 2009 and 2013.

**METHODS:** The Defined Daily Dose (DDD) is a statistical measure of drug consumption, defined by the World Health Organization (WHO) and used to standardize the comparison of different medicines or medicine use in different health care environment. A DDD assignee for drugs that already have an Anatomical Therapeutic Chemical (ATC) classification system code. The DDD of psychiatric medicines calculated according to the WHO definitions. DDD of psychiatric medicines between the years 2009 and 2013 in Turkey compared in this study. The DDD of psychiatric medicines were calculated in two Anatomical Therapeutic Chemical (ATC) groups N05 Psycholeptics (N05A Antipsychotics, N05B Anxiolytics And N05C Hypnotics And Sedatives) and N06 Psychoanalytics (N06A Antidepressants, N06B Psychostimulants, Agents Used For ADHD and Nootropics, N06C Psycholeptics and Psychoanalytics In Combination And N06D Anti-Dementia Drugs). The ATC groups defined by WHO used in this study. Medicine sales obtained from IMS-Health Turkey and Turkish Pharmaceutical Track and Trace System (ITS) databases while DDDs were calculating.

**RESULTS:** The DDD of psycholeptic medicines (N05; including antipsychotics, anxiolytics and hypnotics and sedatives) between the years of 2008 and 2013 in Turkey are 8.86, 9.23, 9.82, 10.38, 10.63. and 10.71 respectively. The DDD of psychoanalytic medicines (N06; including antidepressant, psychostimulants, agents used for ADHD and nootropics, psycholeptics and psychoanalytics in combination and anti-dementia drugs) between the years of 2008 and 2013 in Turkey are 31.44, 33.09, 37.32, 42.22, 43.44. and 42.47. respectively.

**CONCLUSION:** While the consumption of both psycholeptic and psychoanalytic medicines of Turkey have been increased between the years 2008 and 2011 by years, the consumption of psycholeptic and psychoanalytic medicines did not alter in 2011, 2012, and 2013 as remarkably. In future studies, the reasons of changes in trend should be explain. It should be noted that, the DDD did not necessarily reflect the recommended or prescribed daily dose. It is the assumed average maintenance dose per day for a drug used for its main indication in adults and only a statistical measure of medicine consumption .

**Keywords:** psychiatric medicines, consumption, the defined daily dose

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**[Abstract:0678][ADHD]****The relationship between maternal impulsivity state and symptom variability and severity of children with attention deficit hyperactivity disorder**

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**OBJECTIVE:** Attention Deficit Hyperactivity Disorder (ADHD) is one of the most common neurodevelopmental disorder in childhood that is characterized with attention, hyperactivity and impulsivity. Twin and adoption studies showed that heritability of ADHD is around 60–90%. The aim of this study was to examine whether maternal impulsivity was associated with symptom variability and severity of children with ADHD.

**METHOD:** The study sample consisted of 37 male children diagnosed ADHD-mixt subtype according to DSM-IV-TR and their biological mothers. In order to assess the symptom variability and severity of ADHD, the Conner's Teacher Rating Scale/ Revised Long Form, the

Conner's Parent Rating Scale/ Revised Long Form, the DSM-IV Based Screening and Rating Scale for Children and Adolescents with Attention Deficit and Disruptive Behavior Disorders were used. To evaluate maternal impulsivity Adult Self Report Scale (ASRS), and Barratt Impulsivity Scale were used and researchers administered mothers Iowa Gambling Task (IGT), Cued Go/ No-go Task, and Structured Clinical Interview for DSM-IV Clinical Version.

**RESULTS:** No significant correlations were found between ASRS points of mothers and the tasks used to evaluate ADHD symptom variability and severity of children with ADHD. There was also no significant correlation between IGT points of mothers and the tasks evaluating ADHD symptoms of children in the study group. There was a negative correlation between mean reaction time in cued Go/ No-go task of mothers and oppositional defiance scale points of children. Presence of old major depression and generalized anxiety disorders in mothers did not cause statistically significant difference in symptom pattern and severity in children with ADHD. We determined that as mothers' mean reaction time increases, children's ADHD symptom severity decreases for mother's assessment. The study also suggests that maternal impulsivity is associated with children's ADHD symptom variability and severity.

**CONCLUSION:** Including fathers, sisters, and brothers of children with ADHD to this study would help us to understand the effects of familial genetic transmission better in ADHD. The boundaries of impulsivity should be determined better. These findings need to be supported with further studies using larger samples.

**Keywords:** ADHD, impulsivity, familial transmission

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**[Abstract:0679][Forensic psychiatry]**

## Analysis of forensic cases admitted to psychiatry department of Karadeniz Technical University

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**OBJECTIVE:** Forensic psychiatry evaluates the person not only for the state of mind in crime cases but also for the capability to use the civil rights. Hence an expertise may be asked in the field of criminal law and civil law. The required expertises concerning those issues create practices of criminal psychiatry. For criminal capacity under the law and the use his/ her civil rights he/ she must be mentally capable. In this study, reports arranged about criminal law, civil law, and health status asked from different courts and the reports from security directorate showing the disease periods have been evaluated under different titles in the outpatients admitted to Karadeniz Technical University's psychiatry Outpatient Clinic; and the aim was to examine the distribution of those titles according to sociodemographic characteristics and clinical diagnosis

**METHOD:** Four hundred and fifty-six cases which were referred to the Karadeniz Technical University Medical Faculty Psychiatry polyclinic from forensic institutions have been studied retrospectively. Criminal law, civil law, health status reports asked by different courts and the reports from security directorate showing the disease periods have been studied under different titles; sociodemographic features (age, sex, education level and civil status), clinical diagnosis and any other issue wished to be interpreted have been examined. The data was evaluated using SPSS program and the findings are presented in simple charts (as number and percentage).

**RESULTS:** Of 456 cases which were included in our study, 34.4% were female (n=157), 65.6% were male (n=299) and mean age was 38.33±17.2. 48.5% of the cases were single (n=221), 41.4% were married (n=189), 4.8% (n=22) were widowed and 5% were divorced. 56.8% of the reports were from criminal law (n=259), 12.3% were from civil law (n=149), 12.3% were health status reports (n=56) and 1.8% were the reports from security directorate showing the disease periods. 31.1% of the cases were graduated from primary school (n=142), 21.1% from secondary school (n=96), 17.5% from high school, 7.7% from university and 16.4% were nonliterate (n=75), 6.1% were literate (28). The most common subject to be evaluated in criminal law was criminal capacity. 80.1% of the cases have been diagnosed a psychiatric disease and most of the diagnosis, with 17.1%, was mental retardation (n=25). Most of the cases included in the civil law were asked to be evaluated according to the tutelage. 79.1% of the cases had a psychiatric diagnosis and mental retardation was the most common diagnosis with 28.8% (n=40).

**CONCLUSION:** The relationship between psychiatric disorders and crime should be examined due to its sociological, economical, and medical impacts and attempts to prevent those impacts should be undertaken. The studies which will be done in this area may contribute the coordination of judiciary and healthcare system.

**Keywords:** civil law, criminal law, forensic psychiatry

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**[Abstract:0681][Schizophrenia and other psychotic disorders]****Childhood trauma and coping strategies in first degree relatives of patient with psychosis**Akif Tasdemir<sup>1</sup>, Evrim Erten<sup>2</sup>, Tevfik Kalelioglu<sup>2</sup>, Abdullah Genc<sup>3</sup>, Nesrin Karamustafalioglu<sup>2</sup><sup>1</sup>Samsun Mental Health Hospital, Samsun, Turkey<sup>2</sup>Bakirkoy Training and Research Hospital for Psychiatry, Neurology and Neurosurgery, Istanbul, Turkey<sup>3</sup>Sisli Hamidiye Etfal Training and Research Hospital, Istanbul, Turkey

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**OBJECTIVE:** Coping strategies are personal. Many various factors, e.g., sex, age, culture and illness, affect the decision of which coping strategies are going to be used. We aimed to examine the effects of childhood traumas to the coping strategies that are used by relatives of patients with schizophrenia and other psychotic disorders.

**METHODS:** The study was conducted in Bakirkoy Psychiatric and Neurological Diseases Hospital between March 2012 and June 2013. Either a hundred parents or first degree relatives of inpatients or outpatients with schizophrenia or other psychotic disorders (atypical psychosis and psychotic mania), who are responsible for looking after them, were included in this study. After getting approval from all participants, Sociodemographical Data Form, Evaluation Metric of Cope With, and Childhood Traumas Questionnaire were administered.

**RESULTS:** It was observed that, when the number of emotional abuse of participants in their childhood increases, the usage of "problem oriented" coping strategies decreases ( $p=0.001$ ), and the usage of "non-functional" coping strategies increases ( $p=0.001$ ). On the other hand, when the number of physical neglect increases, the usage of non-functional coping strategies also increase ( $p=0.002$ ). It was also observed that, when the number of emotional neglect increases, both the usage of "problem oriented" ( $p=0.027$ ) and "emotional oriented" coping strategies decreases ( $p=0.044$ ), and when the number of sexual abuse increases, the usage of non-functional coping strategies increases ( $p=0.002$ ). And also, when total score of CTQ-28 increases, the usage of non-functional coping strategies decrease ( $p=0.002$ ), the usage of "problem oriented" ( $p=0.017$ ) and "emotional oriented" ( $p=0.032$ ) coping strategies increases. It was analyzed that, these increases and decreases of the usage of coping strategies were not statically significant when the number of physical abuse increases, and also minimizing traumas of childhood did not cause any significant changes about coping strategies.

**CONCLUSION:** It is accepted that the stressful experiences happened especially in childhood and adolescent periods results in emotionally oriented and non-functional coping strategies. Our study did not support that "generally accepted" childhood traumas led to serious psychological adaptation problems. Because, according to the evaluation of CTQ-28 total scores, our findings point out an increase in the usage of problem oriented coping strategies which are generally accepted as functional strategies with the increase in the number of childhood traumas. It is defined that the variety of traumas experienced in childhood lead to more serious psychological adaptation problems than single-typed traumatic experiences. Since the participants of our study have been exposed to single typed traumatic experience, this could be the reason for the usage of problem oriented coping strategies which are generally accepted as functional strategies.

**Keywords:** childhood trauma, cope with, psychosis

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**[Abstract:0683][Mood disorders]****Neutrophil lymphocyte ratio and platelet lymphocyte ratio in early onset bipolar disorder**

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**OBJECTIVE:** Bipolar disorder (BD) is a lifelong condition that highly impairs functioning and quality of life and increases the risk of psychiatric and somatic comorbidities. Studies have shown that approximately 30%–60% of individuals diagnosed with BD as adults retrospectively report an onset of illness prior to 20 years of age. Furthermore, 16%–27% of bipolar adults report that their first mood episode occurred prior to 13 years of age. There has been a noteworthy increase in the understanding of the pathophysiology of BD. New studies support growing evidence on the role of the inflammatory systems in BD. Immune and inflammatory responses such as increased acute phase reactants, abnormal levels of inflammatory cytokines and activated lymphocyte cell subsets have been observed in different stages of patients with BD. NLR has been examined in neuropsychiatric disorders such as Alzheimer's Disease and schizophrenia to

determine the systemic inflammation in these disorders. To our knowledge only one study has been conducted about the NLR and PLR in patients with BD. The inflammation markers of NLR and PLR were found significantly higher in the adult BD patients than the controls. There is no study about inflammatory markers in EOBD (early onset bipolar disorder). Adult BD usually consists of separate episodes whereas EOBD, especially in prepubertal period, commonly emerges with symptoms of mixed episode, has rapid cycling features. In this study we aimed to examine NLR and PLR in adolescent patients with EOBD and in healthy controls (HC).

**METHODS:** This is a retrospective study that enrolled physically healthy 14 adolescents from 13 to 19 years of age who were diagnosed with bipolar disorder between 2010 and 2015 in Ege University, department of child and adolescent psychiatry. 16 HC (with no chronic and/ or inflammatory disease) adolescents of 13 to 19 years of age were included to the study. The data was derived from clinical files of BD patients who were diagnosed according to the criteria of ICD-10 by experienced clinicians. BD patients were all on medication. Timeline of the course of illness (such as duration of illness, number of hospitalization), informations on the following components; age, gender, neutrophile, platelet, lymphocyte count, height and weight for body mass index (BMI) were recorded. N/L and P/L ratios were calculated. Same data was calculated from age and gender matched HC. **RESULTS:** There were not any significant differences between PLR and NLR of BD patients and HC. P values for NLR and PLR were 0.53 and 0.13 respectively.

**CONCLUSION:** Although there is one study in literature reporting that NLR and PLR values were significantly higher in adult BD patients relative to controls, in our study these inflammatory markers were not significantly different in adolescent BD patients than controls. The limitations of our study were difficulty in diagnosing BD in our sample, having trouble with finding medication free patients due to ethical reasons and high BMI of BD patients due to high dose antipsychotics usage.

**Keywords:** adolescent, bipolar disorder, inflammatory markers

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[Abstract:0685][Others]

## Increase in synaptic catecholamine level contributes to the antihyperalgesic effect of agomelatine in diabetic rats

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**OBJECTIVE:** Agomelatine is a novel antidepressant with an agonistic effect on melatonin receptors (MT1 and MT2) as well as an antagonistic effect on serotonin 5-HT<sub>2C</sub> receptors. Recently, our research group have reported the anti-hyperalgesic effect of this drug on diabetes induced neuropathic pain. In effort to clarify possible underlying mechanisms, we have examined and reported the contribution of opioid mechanisms to the beneficial effect of agomelatine on neuropathic pain. For providing a further mechanistic approach, we aimed to examine possible involvement of noradrenergic and serotonergic systems, in this study.

**METHODS:** Male Sprague-Dawley rats of the same age (weight, 250-350 g) were used for the experiments. Diabetes was induced by a single 50 mg/kg dose of intravenous streptozotocin administration. Agomelatine (40 mg/kg, p.o) administration was initiated 4 weeks after the induction of diabetes to permit development of nociceptive perception deficits in rats. Mechanical hyperalgesia, occurring due to peripheral diabetic neuropathy were examined using Randall-Selitto test. In addition, thermal hyperalgesia induced by nociceptive hot- and cold-stimulus were evaluated by Hargreaves and cold-plate tests, respectively. The potential contribution of the serotonergic system to the pharmacological effect of agomelatine was examined using p-chlorophenylalanine methyl ester (PCPA; an inhibitor of serotonin synthesis), whereas the possible involvement of the catecholaminergic systems was examined using  $\alpha$ -methyl-para-tyrosine methyl ester (AMPT, an inhibitor of catecholamine synthesis). PCPA, at 600 mg/kg, was administered (i.p.) two consecutive days, 48 h and 24 h before the agomelatine or saline treatments. In a separate group, AMPT, at 200 mg/kg, was injected (i.p.) 24 h and 1 h before the administration of agomelatine or saline. Obtained data were evaluated by two-way ANOVA followed by the Bonferroni post hoc test. A value of  $p < 0.05$  was considered as significant. The experimental protocol was approved by the Anadolu University Animal Experiments Local Ethics Committee.

**RESULTS:** Subacute administration of agomelatine significantly increased the declined paw-withdrawal thresholds of diabetic rats in the Randall-Selitto tests. Moreover, shortened paw-withdrawal latency of diabetic rats observed in the plantar and cold plate tests were prolonged. The observed anti-hyperalgesic effect of agomelatine was reversed by AMPT pre-treatments, in all of the tests. However, PCPA treatment was ineffective.

**CONCLUSION:** The obtained results suggest that the beneficial effect of agomelatine on diabetic neuropathic hyperalgesia is mediated

through an increase in catecholamine levels in the synaptic cleft. This anti-hyperalgesic effect, however, seem to be unrelated to the synaptic level of 5-HT. To the best of our knowledge, this is the first study reporting the contribution of catecholaminergic neurotransmission to the anti-hyperalgesic effect of agomelatine. On the other hand, possible role of other systems (such as GABAergic, glutaminergic, and nitroergic systems) should also be examined with further studies.

Considering that agomelatine exhibits simultaneous antidepressant and anti-hyperalgesic effects, this drug could provide a good alternative for treating the pain associated with diabetic neuropathy and the mood disorders caused directly by diabetes.

**Keywords:** agomelatine, diabetes mellitus, hyperalgesia, streptozotocin

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**[Abstract:0686][Schizophrenia and other psychotic disorders]**

## Neutrophile lymphocyte ratio and platelet lymphocyte ratio in early onset psychotic disorders

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**OBJECTIVE:** Early-onset schizophrenia is diagnosed using the same criteria as in adults, and it appears to be continuous with the adult form of the disorder. Noted characteristics of youths with schizophrenia include predominance in males, high rates of premorbid abnormalities, and often poor outcome. Differential diagnosis includes psychotic mood disorders, developmental disorders, organic conditions, and nonpsychotic emotional/behavioral disorders. Treatment strategies incorporate antipsychotic medications with psychoeducational, psychotherapeutic, and social and educational support programs. The advent of atypical antipsychotic agents has enhanced the potential for effective treatment. The neutrophile to lymphocyte ratio (NLR) and Platelet to lymphocyte ratio (PLR) are new simple and inexpensive markers of the systemic inflammatory response. There is an increasing number of clinical, epidemiological, and experimental studies have shown links between psychotic disorders and inflammatory conditions. There are few studies that have examined the relationship between neuropsychiatric disorders and NLR and PLR; also no studies have examined the relationship between early onset psychosis (EOP; onset 13-17 years of age) and NLR and/ or PLR. In this study we aimed to examine NLR and PLR in EOP patients and in healthy controls (HC) matched for age and gender.

**METHODS:** This is a retrospective study that enrolled physically healthy 15 adolescents from 13 to 19 years of age who were diagnosed with EOP between 2010 and 2015 in Ege University, Department of Child and Adolescent Psychiatry. 16 HC (with no chronic and/ or inflammatory disease) adolescents of 13 to 19 years of age were included to the study. The data was derived from clinical files of EOP patients who were diagnosed according to the criteria of ICD-10 by experienced clinicians. The data of the patients who had alcohol and/ or substance dependence or other axis I disorder and other medical disease (acute or chronic endocrinological, inflammatory, autoimmune diseases) were not included. Blood samples are drawn in outpatient and inpatient clinics around 8–10 AM from a forearm vein of the participants at the end of an overnight fasting period for at least 8 hours. EOP patients were all on medication. Timeline of the course of illness (such as duration of illness, number of hospitalization), informations on the following components; age, gender, neutrophile, platelet, lymphocyte count, height and weight for body mass index (BMI) were recorded. N/L and P/L ratios were calculated. Same data was calculated from age and gender matched HC.

**RESULTS:** There were not any significant differences between PLR and NLR of psychotic patients and HC. P values for NLR and PLR were 0.61 and 0.24 respectively.

**CONCLUSION:** Although there are few studies in literature finding NLR and PLR values are significantly higher in adult psychotic disorder patients relative to controls, in our study these inflammatory markers are not significantly different in EOP patients than controls. The limitations of our study were having trouble with finding medication free patients due to ethical reasons and high BMI of EOP patients due to high dose antipsychotic usage.

**Keywords:** schizophrenia, psychotic disorders, adolescent, inflammatory markers

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[Abstract:0689][Mood disorders]

## Antidepressant-like effects of chlorogenic acid: possible underlying mechanisms

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**OBJECTIVE:** Chlorogenic acid, is a phenolic acid, present in the chemical structures of numerous fruits and vegetables. Various pharmacological activities of this compound such as antioxidant, antihypertensive, anti-inflammatory, anti-edemagenic, anticarcinogenic, antiulcerogenic, wound healing, radioprotective, and hepatoprotective effects, have been reported previously. Moreover, several research groups have also displayed some central nervous system (CNS) related activities such as neuroprotective, anxiolytic and antinociceptive effects. Based on the activity potential of chlorogenic acid on CNS, in this study, we planned to examine possible antidepressant-like effect of this phenolic acid with probable underlying mechanisms.

**METHOD:** Adult BALB/c female mice, weighing 30–35 g, were used for the experiments. Putative antidepressant-like effect of chlorogenic acid was examined using modified forced swimming test (MFST), a predictive method for screening antidepressant effect. Potential contribution of the serotonergic and catecholaminergic systems in the pharmacological effect of the chlorogenic acid were conducted using PCPA (an inhibitor of serotonin synthesis) and AMPT (an inhibitor of catecholamine synthesis), respectively. Further, motor coordination of animals was evaluated by Rota-rod tests. Comparisons between experimental groups were performed by one-way ANOVA followed by Tukey's test or two-way ANOVA (for PCPA and AMPT experiments) followed by Bonferroni test as post hoc. Differences between data sets were considered as significant when P value was less than 0.05. The experimental protocol was approved by the Local Ethical Committee on Animal Experimentation of Anadolu University, Eskişehir, Turkey.

**RESULTS:** Obtained data demonstrated that chlorogenic acid, administered at 10 mg/kg dose, decreased the number of immobility behavior in MFST, with respect to the control values. On the other hand, number of swimming and climbing behaviors increased following chlorogenic acid administrations. Chlorogenic acid did not induce any significant alteration in the falling latency of mice, when assessed in the Rota-rod tests. The anti-immobility effect of chlorogenic acid in the MFST was reversed with the pre-treatments with  $\alpha$ -methyl-para-tyrosine methyl ester (AMPT, an inhibitor of catecholamine synthesis, 100 mg/kg, i.p.) and with p-chlorophenylalanine methyl ester (PCPA; an inhibitor of serotonin synthesis 100 mg/kg, i.p., administered for 4 consecutive days).

**CONCLUSION:** In this study, a reduction in the number of immobility behavior pointed out antidepressant-like effect of chlorogenic acid. This is a specific antidepressant-like effect, since falling latencies of mice in the Rota-rod test did not change upon the administration of chlorogenic acid. Results of the mechanistic studies indicated that, the observed antidepressant-like effect is mediated through an increase in not only serotonin but also catecholamine levels in the synaptic cleft. However, other mechanisms, for example mechanisms involving the opioidergic, GABAergic, glutaminergic, and nitrenergic systems, may have also contributed to the anti-depressant-like action observed in the present study. Therefore, other possible mechanisms should also be examined with further studies.

To our knowledge, this is the first study to showing the antidepressant-like effect of chlorogenic acid. This phenolic acid may become a new antidepressant drug candidate with a dual mechanism of action, if clinical studies validate its therapeutic effect in humans.

**Keywords:** antidepressant, chlorogenic acid, immobility, mechanism of action

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[Abstract:0697][Anxiety disorders]

## Investigation of death and separation anxiety elderly: preliminary findings

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**OBJECTIVE:** Separation anxiety is a new entity for adult patients. This new entity separates from childhood separation anxiety in some aspects. Despite gender differences are more apparent in childhood separation anxiety and it is more prevalent in girls however, gender differences are not common in adult separation anxiety disorder. Adult's daily routine, work and social life are affected by adult separation anxiety disorder. There is not enough evidence about its relationship with death anxiety. In the literature there are many studies about

death anxiety and age but the results are contradictory. Literature shows that, there is a negative relationship between death anxiety and age. On the other hand, few research which emphasize that older people's death anxiety is higher than younger. The aim of this study was to determine whether there is a relationship between separation anxiety and death anxiety among elder adults.

**METHOD:** Fifty-six subjects over 65-year-old admitted to the psychiatry clinic were enrolled into the study. There are 22 male and 43 female patients in this research. Adult Separation Anxiety Questionnaire, Templer Death Anxiety, Socio-demographic Form, and Mini-mental State Examination were administered to each participant with face to face interview.

**RESULTS:** Average age of the subjects was  $75.26 \pm 6.92$  years old. 43.10% of subjects were married, 47.70% were widowed and 9.20% were single or divorced. Average number of children was  $2.31 \pm 1.27$ . Average year of education was  $9.22 \pm 4.40$ . 36.9% of subjects were living alone. 72.3% had retirement pension. 87.7% of subjects had one or more medical disorder and average number of medical disorder was  $1.85 \pm 1.30$ . There was a strong correlation between Adult Separation Anxiety Questionnaire and Templer Death Anxiety Scale scores ( $r=0.39$   $p<0.01$ ).

**CONCLUSION:** The aim of this study was to examine the relationship between death and separation anxiety among older age patients. Previous studies evaluated death, fear, anxiety, depression and many variables about elderly patients. In addition, previous research has indicated that older age people may have undetermined emotions and attitudes related to death. On the other hand, we examined that the relationship between death anxiety and separation anxiety in elderly. These preliminary findings demonstrate that there is a high relationship between death and separation anxiety. It is not clear whether the death anxiety is cause or the reason of separation anxiety or vice versa. These relationship should be examined with larger samples in further studies.

**Keywords:** adult separation anxiety, death anxiety, elderly

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

## Researching the therapeutic effects of sodium nitroprusside with MK-801 induced schizophrenia rat models

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**OBJECTIVE:** Schizophrenia is a clinical syndrome which have devastating psychological effects on mind, emotion and behavior. It is thought that neurotransmitters have a major role in the pathophysiology of schizophrenia. Nitric Oxide seems as a new and remarkable molecule. In some studies, it has been shown to be statistically significant improvement in symptoms of schizophrenia models with the use of NO donors. Especially the studies with Sodium Nitroprusside conclude that the molecule prevents the psychosis like behavior such as hyperactivity, ataxia and stereotypes observed in rats after application of glutamate antagonists.

**METHODS:** Our study has been designed as a animal model trial. The study performed in the Experimental Practice and Research Laboratory of the Gülhane Haydarpasa Training Hospital. Experimental Practice and Research Laboratory with 16 Wistar-Hannover female rats. We model subchronic schizophrenia with MK-801 and observe the effect of Na Nitroprusside on cognitive functions of the rats which administered MK-801.

**RESULTS:** In our study, we reached the conclusion that Sodium nitroprusside have positive effects on cognitive function of schizophrenia model. Especially Na Nitroprusside have significant positive effects on working memory and referans memory.

**CONCLUSIONS:** Our study take attention to the role of NO in the pathophysiology of Schizophrenia. At the same time it emphasizes that Na Nitroprusside can be an alternative therapeutic agent for treatment of Schizophrenia. In our study we could examine blood and brain tissues of rats and achieve valuable information about the mechanism of SNP. Further studies must pay attention to these issues.

**Keywords:** cognitive functions, MK-801, rat, schizophrenia, sodium nitroprusside, treatment

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**[Abstract:0699][Impulse control disorders]****Relationship of hematological variables and comorbidity to symptom ratings of children with attention deficit hyperactivity disorder**[Hesna Gul<sup>1</sup>](#), [Ahmet Gul<sup>2</sup>](#), [Esra Yurumez Solmaz<sup>3</sup>](#)<sup>1</sup>Department of Child and Adolescent Psychiatry, Necip Fazil State Hospital, Kahramanmaraş, Turkey<sup>2</sup>Department of Psychiatry, Necip Fazil State Hospital, Kahramanmaraş, Turkey<sup>3</sup>Department of Psychiatry, Ufuk University, Ankara, Turkey

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**OBJECTIVE:** Attention deficit hyperactivity disorder (ADHD) is a common neuropsychiatric disorder with the mean prevalence of 5.9%. Its etiology is still unclear but most commonly it is considered to develop as a result of interactions between genetic and environmental risk factors. ADHD is also observed with comorbid conditions such as iron and other micronutrient deficiencies, depressive disorders, and learning disabilities. Many hematological variables have been reported as a potential predictor in the etiology and treatment activity of ADHD but thus far, results regarding this issue have been contradictory. Our aim was to examine the relation between behavioral symptoms and hematological variables which are related with iron deficiency, Vitamin B12 deficiency, anemia, ferritin, hemoglobin, mean corpuscular volume (MCV), and reticulocyte distribution width (RDW) in children and adolescents with pure Attention Deficit Hyperactivity Disorder (ADHD) or ADHD comorbid with other psychiatric disorders.

**METHOD:** The sample consisted of 49 subjects with ADHD, 10 of these subjects had other comorbid conditions. The Schedule for Affective Disorders and Schizophrenia for School Age Children-Present and Lifetime Version was performed in a semi-structured interview during the diagnosis. Conners Parent (CPRS) and Teacher Rating Scales (CTRS) were obtained. Hemogram, serum iron, iron binding capacity, serum ferritin levels, T3, T4, TSH, Vitamin B12 and folate were assessed. Iron deficiency was defined as ferritin < 12 ng/ml or MCV < 70 fL and RDW > 14.5, vitamin B12 was defined as < 191, hypothyroidy was defined as TSH < 4.3, T4 < 0.9, T3 < 2.5. Anemia was defined as serum hemoglobin < 11.0 g/dl. All patients were diagnosed for the first time and had never been evaluated for psychiatric disorders or treated with psychotropics.

**RESULTS:** We found that 6.1% of subjects were hypothyroidic, 34.7% of them had Vitamin B12 deficiency, and 22.4% were anemic. There were no significant differences between the pure ADHD patients and the ADHD and comorbid disorders group in terms of parameters mentioned above. In the ADHD group in general, CPRS and CTRS Total scores were significantly negatively correlated with ferritin and Vitamin B12 levels.

**CONCLUSION:** To our knowledge, our current study is one of the first studies to compare serum ferritin, T3, T4, TSH, Vitamin B12 and other hematological variables, in ADHD and ADHD and comorbid disorders group. Findings is important for both the etiology, treatment, and clinical views of ADHD.

**Keywords:** attention deficit hyperactivity disorder, hematological variables, comorbidity

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**[Abstract:0700][Mood disorders]****Clinical features of adolescents with major depressive disorder and evaluation of severity of disorder and their treatment options: a retrospective cross-sectional study**[Ebru Sekmen](#), [Zeynep Goker](#), [Ozden Sukran Uneri](#)

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**OBJECTIVE:** The aim of this study was to evaluate clinical features of the adolescents with major depressive disorder (MDD), the severity of disease, MDD's treatment options and examine relationship between these factors and the clinical features.

**METHOD:** Between January 2015 and June 2015, data related to the adolescents who were admitted to the Ankara Pediatric Hematology Oncology Training and Research Hospital and diagnosed with MDD were selected retrospectively and evaluated. Statistical analyses were carried out by using SPSS Version 17.0 for Windows. Student-t, Chi-square and Fisher's exact test were performed where appropriate. p<0.05 was accepted as significant.

**RESULTS:** Total of 143 adolescents' mean age was 15.6. 80.4% of them (n=115) were female. 12–14 years was accepted as early adolescence, 15–16 years of age as middle adolescence and 17 years and above as late adolescence. Mostly they were in the middle and late age group (both 41.3%). 76.2% of them were first diagnosed ones, 23.8% of them had already diagnosed with MDD. 76.2% of them had nuclear family and 94.4% of them (n=109) were continuing to go to their schools. There were no differences between gender and mean age, family type, birth order, family history of MDD, and going to school variables. Most adolescence had moderate severity of MDD (76.2%, n=109). There were not found any differences between MDD severity groups and family type, birth order and going to school variables. Significantly higher proportion of having positive family history of MDD was found in moderate severity group. In severe MDD group, comorbidity rates had significantly lower than that of the other MDD groups.

It was noticed that 39.9% of all cases with MDD did not follow their controls after the first examination and it was not associated with the severity of MDD. Pharmacotherapy was the firstly preferred option for 88.1% of the cases (n=126), followed by psychotherapy (7%, n=10) and combined of them (4.9%, n=7). Gender did not found significant in terms of preferring treatment option in MDD cases. 8.4% of all cases pointed an adverse effect due to medication use and 4.9% of them needed to change in dosage or switch to another medication and there was no difference between gender in adverse effect or changing/switching of medication. There was also no difference between pharmacotherapy classes (as they were grouped SSRI/ SNRI, atypical antipsychotics and combination of them) and gender.

**CONCLUSION:** Female and male adolescents had a similar proportion of having MDD, and they have used similar rate of treatment options. Adverse effects were found in a small proportion of adolescents and there were a small rate of changes in dosage or agent itself because of adverse effect emerged, pointing that medications were tolerated well by adolescents. One in two adolescents with major depressive disorder had another psychiatric disorder; mostly of them were anxiety disorders. Positive family history of MDD was found significant higher in adolescents with moderate depression and there is a need to further studies to be generalized of these findings.

**Keywords:** major depressive disorder, severity, pharmacotherapy, adverse effect, adolescent

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[Abstract:0707][ADHD]

## Temperament characteristics in attention deficit and hyperactivity disorder

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**OBJECTIVE:** Attention Deficit Hyperactivity Disorder (ADHD) is a chronic, developmental psychiatric disorder beginning in childhood and continuing into adulthood with symptoms of inattention, impulsivity, and hyperactivity. In addition, ADHD patients often experience emotional problems, such as irritability, irritable temper, frequent shifts in mood, and difficulties in regulating behaviour in response to emotional activation. There is no much studies based on the affective temperamental characteristics of adults diagnosed with ADHD. The aim of this study was to determine if adults diagnosed with ADHD would show any specific temperamental characteristics when compared to the healthy controls.

**METHODS:** We recruited 49 outpatients with ADHD from psychiatry clinic of the Pamukkale University (age range 16 and 65 years old). Participants were diagnosed DSM-IV-TR criteria using the Structured Clinical Interview for DSM-IV Axis-I Disorders (SCID-I). We enrolled 40 healthy controls matched for age and education level, with an age between 18 and 65 years, without a history of any mental disorders or neurological disease. All participants completed Wender-Utah Rating Scale (WURS), The Temperament Evaluation of Memphis, Pisa, Paris and San Diego-Autoquestionnaire (TEMPS-A) and Adult Attention Deficit Hyperactivity Disorder Diagnosis and Evaluation Scale. Adults for Attention Deficit Hyperactivity Disorder with a subset of 25 questions associated with that diagnosis. Wender-Utah Rating Scale (WURS) was developed by Ward and Wender in 1993. Adult ADD/ADHD DSM IV-Based Diagnostic Screening and Rating Scale Adult Attention Deficit Hyperactivity Disorder Diagnosis and Evaluation Scale were developed by Turgay in 1995.

The TEMPS-A developed by Akiskal et al. is a yes-or-no type self-report questionnaire designed to measure affective temperamental traits, present over the course of a person's entire life. The Turkish version inquires about lifelong behavior patterns and consists of 99 items to define 5 temperament subtypes: depressive, hyperthymic, irritable, cyclothymic and anxious.

**RESULTS:** Patients with ADHD that mean age of  $29.04 \pm 7.48$  years, while control group's was  $32.68 \pm 8.48$ . Anxious, irritable, cyclothymic temperament scores were statistically significantly higher in the ADHD group than in the control group ( $p=0.0001$ ;  $p=0.0001$ ;  $p=0.0001$ , respectively). In group patients of ADHD, irritable temperament compared to the control group was significantly dominant ( $p=0.043$ ).

**CONCLUSION:** In this study, our aim was to identify the temperamental characteristics of adults diagnosed with ADHD. The most common dominant temperament was irritable temperament for the ADHD group. In studies conducted previously, it was found results

similar to ours. In one study, it was found that in particular were higher in cyclothymic temperament ADHD. These results were indicated to be associated with more childhood and adult ADHD symptoms, lower educational and occupational achievements and increased psychiatric comorbidity. In sum, ADHD group's anxious, irritable, cyclothymic temperament scores is higher than normal population and further research in this field should be continued and the relationship between psychiatric comorbidity and sub-groups of ADHD should be analyzed.

**Keywords:** adult, attention deficit-hyperactivity disorder, temperament

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**[Abstract:0711][Schizophrenia and other psychotic disorders]**

## Factors associated with antipsychotic polypharmacy use in patients with schizophrenia and other psychotic disorders

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**OBJECTIVE:** Antipsychotic polypharmacy use in clinical practice is common and may be associated with multiple factors. This study aims to assess factors associated with antipsychotic polypharmacy use in a sample of outpatient diagnosed as schizophrenia.

**METHODS:** A total of 250 patients diagnosed as schizophrenia or other psychotic disorders were included into the study. Antipsychotic polypharmacy use, hospitalization and treatment history, antipsychotic side effects are evaluated. SPSS statistical package programme was used for statistical analyses.

**RESULTS:** One hundred twenty six (50.4%) of patients were on single antipsychotic while 124 (49.6%) of them were using more than one antipsychotic. Antipsychotic polypharmacy use was significantly lower in females ( $p < 0.05$ ). Mean number of hospitalization and number of days hospitalised were significantly high in the group of polypharmacy.

**Keywords:** antipsychotic, polypharmacy, schizophrenia

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**[Abstract:0713][Autism]**

## A study of toxoplasmosis antibodies seropositivity in children suffering autism spectrum disorder

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**OBJECTIVE:** Autism spectrum disorders (ASD) are disorders characterized by communication disorders such as lack of face-to-face speaking, lack of sharing of interests and emotions, not entering social interaction, insufficient verbal and non-verbal communication, not regulating behavior according to social environment, and lack of friends and repeated motor actions, resistance about uniformity, limited and obsessive interests, and standard reactions to emotional input like stereotypical behavior. Considered a multifactorial disorder formed by the interaction of neurological, immunological, environmental and genetic factors, the definite cause of autistic disorder is not known. *Toxoplasma gondii* is an intracellular parasite and affects 30–60% of the population. *T. Gondii* has high affinity for the brain tissue. Toxoplasmosis had been examined in many neurological and psychiatric disorders such as depression and anxiety disorders, bipolar disorder, schizophrenia, autism, suicide attempts, obsessive compulsive disorder, and personality changes. Postmortem brain tissues of patients with ASD and rat studies have found similarities between neuropathological changes and clinical appearance between ASD and chronic latent toxoplasmosis. We aimed to examine the hypothesis that toxoplasma would play a role in the etiopathogenesis of ASD. With this aim, pediatric and adolescents with ASD history were examined in hospital records and seropositivity was retrospectively evaluated in patients where toxoplasma antibodies were examined.

**METHOD:** This case-control study was completed on 3–18 year old children and adolescents applying to the psychiatric clinic of Ordu University, School of Medicine Education and Research Hospital. The study received permission from Ordu University School of Medicine Ethics Committee. The study included 92 Extended Scope Autism disorder patients according to DSM-5 criteria and 50 healthy samples. For each case, a Childhood Autism Rating Scale (CARS) and sociodemographic form created by the researchers including demographic information, birth and development history, start of disease, medical history, medications used, height, weight, duration of breastfeeding, and education were administered. Each case gave blood samples under sterile conditions between 08.00-11.00 with toxoplasma IgM and IgG antibody levels in addition to routine laboratory tests. Antibody levels were tested with the ELISA method. Data analysis was performed by using SPSS Version 22 for Windows. In addition to descriptive statistics, antibody values were evaluated with chi-square tests.

**RESULTS:** The autistic group included 15 girls (16.3%) and 77 boys (83.7%). Mean age was 7.6 and the range was 3–16.5 years. Mean CARS points were 47 and the interval was 30-60.5. The healthy control group included 12 girls (24%) and 38 boys (76%). The mean age was 7.5 years with the range from 3.5–14 years. None of the cases showed any autistic findings, receiving 15 points. All cases in the autistic group were negative for IgM. Only three cases in the group (3.26%) were positive for IgG. In the control group, all cases were negative for IgM with only 1 positive (2%) for IgG.

**CONCLUSION:** There was no statistically significant difference between the two study groups in terms of toxoplasma seropositivity. According to these results, no correlation was identified between toxoplasmosis and autism spectrum disorder. However, broader scale studies on this topic are required.

**Keywords:** autism spectrum disorders, toxoplasma gondii, antibodies seropositivity

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[Abstract:0718][Mental retardation]

## Suicidal behaviors in children and adolescents with intellectual disability and risk factors

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**OBJECTIVE:** Suicidal behavior in children and adolescents with intellectual disability (ID) is quite often, and it is often skipped by the clinicians mostly. In our study, we aimed to determine the prevalence and risk factors of suicidal thoughts and attempts in this risk group.

**METHOD:** Two hundred seven children and adolescents between the ages 8–18 with borderline intelligence, mild and moderate ID were included in this research. The research was carried out in between December 2014 and February 2015 at the Inonu University Turgut Ozal Medical Center Child and Adolescent Psychiatry Department. WISC-R was administered to all patients by our clinical psychologist. The exclusion criteria were determined as the presence of autism spectrum disorders, inability to administer the WISC-R because of severe ID, existence of total hearing loss, and vision loss. Parents completed the sociodemographic questionnaire and the Turkish form of the Aberrant Behavior Checklist (ABC). Suicidal thoughts and attempts during the life of patient were asked to parents and patients respectively.

**RESULTS:** The research group consisted of 43.5% (n=90) female and 56.5% (n=117) male. The mean age of the patients was 12:32±2.48 (Min: 8, Max: 17.5). 23.2% (n=48) of the patients were border intelligence, 55.1% (n=114) of the patients were mild ID and 21.7% (n=45) of the patients were moderate ID. It was determined that 22.7% (n=47) of the patients had suicidal thoughts and 8.2% (n=17) of the patients had suicidal attempts. There were multiple suicide attempts in 2.4% (n=5) of patients. Suicidal ideation was found statistically significantly higher in adolescents than in children. Psychiatric illness history of family, substance abuse of family, sexual abuse, limited social support, hospitalization, the presence of any mental illness, mood disorder, psychotic disorders, enuresis, encopresis, using antipsychotics, selective serotonin reuptake inhibitor (SSRI), mood stabilizers, benzodiazepines, high ABC-destructive behavior, ABC-the other behavior, and ABC-total points were found to be statistically significant effects on the suicide attempts of patients. Physical abuse, any neglect, physical neglect, emotional neglect, challenges in family, the presence of any mental illness, mood disorder, enuresis, encopresis, using antipsychotics, SSRI, and multiple psychotropic drug, high ABC-destructive behavior, ABC-the other behavior and ABC-total points were found to be statistically significant effects on the suicide thoughts of patients.

**CONCLUSION:** This research highlights the prevalence and risk factors of suicidal behavior in this population.

**Keywords:** children and adolescents, intellectual disability, suicidal behaviour

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**[Abstract:0720][Schizophrenia and other psychotic disorders]****Evaluation of symptomatology and functionality according to polypharmacy use in patients with schizophrenia**

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**OBJECTIVE:** Patients with schizophrenia may have serious difficulties in daily living activities, social interactions and communication with others. These difficulties increase disease burden on caregivers and general society. Reintegration to community and working life is very crucial in decreasing care costs and disease burden. Functionality is closely related with positive, negative and cognitive symptoms. Antipsychotic polypharmacy is widely used for controlling psychotic symptoms. Number of studies on relation of antipsychotic polypharmacy and functionality are limited in our country. This study aims to compare functionality of patient groups using single or multiple antipsychotic agents.

**METHOD:** A total of 250 patients diagnosed as schizophrenia or other psychotic disorders were included into the study. SANS, SAPS and GAF were used to evaluate clinical symptomatology and functionality. SPSS statistical package programme was used for statistical analyses.

**RESULTS:** 126 (50.4%) of patients were on single antipsychotic while 124 (49.6%) of them were using more than one antipsychotic. GAF scores were statistically lower in polypharmacy group ( $t=6.045$ ,  $df=248$ ,  $p=0.000$ ).

**Keywords:** functionality, polypharmacy, schizophrenia

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**[Abstract:0726][PTSD]****Pituitary volume in patients with posttraumatic stress disorder**Sukru Kartalci<sup>1</sup>, Okan Yildirim<sup>2</sup>, Esra Porgali Zayman<sup>3</sup>, Serdal Ozdemir<sup>4</sup>, Lale Gonenir Erbay<sup>1</sup><sup>1</sup>Department of Psychiatry, Inonu University, Malatya, Turkey<sup>2</sup>Department of Radiology, Inonu University, Malatya, Turkey<sup>3</sup>Department of Psychiatry, Elazig State Hospital for Mental Health and Disorders, Elazig, Turkey<sup>4</sup>Department of Psychiatry, State Hospital of Malatya, Malatya, Turkey

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**OBJECTIVE:** The purpose of the present study was to determine pituitary volume and the levels of anxiety, depression and worry in PTSD patients by comparing the results with those in controls.

**METHODS:** The patients have been referred from the Psychiatry Outpatient Clinic of the Department of Psychiatry, Inonu University School of Medicine. The Turkish version of the Structured Clinical Interview for the DSM-IV (SCID-I) was used to diagnose PTSD. Clinician administered posttraumatic stress disorder rating scale (CAPS), Hamilton Depression Rating Scale (HDRS), Hamilton Anxiety Scale (HAS), State-Trait Anxiety Inventory (STAI) have been administered to the patients group. Control group have been evaluated with SCID by a psychiatrist and the ones who did not have axis I psychiatric diagnosis have been enrolled. All magnetic resonance imaging was performed at the Inonu University School of Medicine on a 1.5-T magnet (Gyrosan Intera Master, Philips). Comfortable head positioning was provided.

**RESULTS:** Fifteen outpatients with PTSD and 16 healthy comparison subjects participated in this study. There were 10 males and 5 females with a mean age of  $39.26 \pm 8.60$  in the PTSD group and 6 males and 10 females with a mean age of  $39.06 \pm 9.44$  in the control group. There was no statistically significant difference in terms of pituitary, brain volume and pituitary volume/ brain volume between the groups (respectively  $p=0.142$ ,  $p=0.778$ ,  $p=0.206$ ). In patient group, there wasn't a significant relationship statistically in correlation analysis between trauma period, inventory points, and the pituitary and the brain volume ( $p>0.005$ ).

**CONCLUSION:** Our findings are also inconsistent with other previous studies showing reduced pituitary volumes in patients with obsessive-compulsive spectrum disorders, which are classified as an anxiety disorder. However; among the patients with PTSD there have not been enough studies done with the pituitary volume. The studies on PTSD may help us better understand the pathophysiology underlying PTSD.

**Keywords:** magnetic resonance imaging, posttraumatic stress disorder, pituitary

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**[Abstract:0734][Neuroscience: Neuroimaging-Genetic Biomarkers]****The investigation of urotensin 2 level oxidative metabolism and oxidative DNA damage in schizoaffective patients in symptomatic remission and not in symptomatic remission**

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**OBJECTIVE:** In this study we aimed to examine oxidative metabolism, oxidative DNA damage, and level of Urotensin 2 in patients with schizoaffective disorders in relation with clinical status whether they are in symptomatic remission or not.

**METHOD:** Fifty four patients with schizoaffective disorder according to DSM-IV-TR and 27 healthy volunteers were included. 27 of these schizoaffective disorder patients were in symptomatic remission and 27 of them were not. Serum 8-hydroxideoxiguanosine (8-OHdG), Total Antioxidant Level (TAS), Total Oxidant Level (TOS), Urotensin 2 Level (UTS-2) evaluation, and Oxidative Stress Index (OSI) calculation were conducted in Gaziantep University's Biochemical Laboratory.

**RESULTS:** There were no significant differences between patient and control groups in terms of TOS, OSI and 8-OHdG levels. TAS and UTS-2 levels of schizoaffective disorder patients were found to be significant lower than controls. In addition, TAS and UTS-2 levels were found to be lower in schizoaffective disorder patients who were both in symptomatic remission and not in symptomatic remission than the control group. There were no significant differences between patients in symptomatic remission and not in symptomatic remission in terms of TOS, OSI, TAS, UTS-2, and 8-OHdG levels.

**CONCLUSION:** There is a defect in the antioxidant systems in schizoaffective disorder patients. UTS-2 which is important in immunological, endocrinological, and oxidative systems and a deficiency in antioxidant system might take a place in the etiopathogenesis of schizoaffective disorder.

**Keywords:** schizoaffective disorder, urotensin 2, oxidative dna damage, oxidative stress

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**[Abstract:0739][Anxiety disorders]****Dissociative symptoms in adolescents with anxiety disorders**

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**OBJECTIVE:** Dissociative disorders include a range of symptoms and manifestations like derealization, depersonalization, psychogenic amnesia, and confusion about one's own identity. In recent studies, it was showed that dissociative symptoms are highly present in patients with mood and anxiety disorders and correlate with the severity of depressive symptoms in adults. Although many clinical and empirical evidences indicating that dissociative tendencies are at their peak during childhood and adolescence, there is not enough evidence in this age group. The aim of this study was to determine the relationship between dissociative symptoms and anxiety level among adolescent psychiatric outpatients with anxiety disorder.

**METHOD:** A total of 43 adolescents between 14 and 18 years of age who were admitted to the child and adolescent psychiatry clinic of a state hospital for the first time and diagnosed as anxiety disorder, were evaluated using the Adolescent Dissociative Experiences Scale (ADES), Childhood Trauma Questionnaire (CTQ), and Beck Anxiety Inventory (BAI).

**RESULTS:** The mean DES score in the overall sample was 6.8. Anxiety scores were positively correlated with the ADES total scores but not with the CTQ total scores. Dissociator adolescents presented some significantly different characteristics in comparison with non-dissociator adolescents including female gender and older age.

**CONCLUSIONS:** Dissociative symptoms are highly present in adolescents with anxiety disorders and correlate with the severity of anxiety symptoms except trauma scores. We believe that future research should focus on an age and diagnosis-sensitive clinical evaluation staging to screen children and adolescents.

**Keywords:** anxiety disorders, adolescents, dissociation, dissociative symptoms

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**[Abstract:0746][Autism]**

## Psychotropic drugs use among autistic spectrum disorders in an outpatient clinic

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**OBJECTIVE:** Autism spectrum disorders (ASD) is a complex neurodevelopmental disorders are defined by impairments in communication and social interaction and the presence of restrictive and repetitive interests and behaviors. Although psychotropic drugs do not alter the core deficits of autism, they are often used for behavioral/ emotional symptoms such as hyperactivity, aggression or stereotypies and comorbid psychiatric conditions. The aim of this study was to determine the frequency of psychotropic medication use, distribution, and associated variables in children with ASD.

**METHOD:** Medical records of patients with ASD in Cukurova University Department of Child and Adolescent Psychiatry between January 2014 and January 2016 were reviewed retrospectively.

**RESULTS:** A total 129 patients were participated in this present study. The sample was predominantly male (n=99; 76.7%) and mean age was 47.9±31.3 months. Rate of used psychotropic medication was 39.5% (n=51). In the psychotropic drug group, 9 (7.0%) patients were currently receiving treatment that was approved for ADHD treatment and 44 (34.1%) patients were receiving antipsychotics. There were not significant differences between the genders in terms of current rates of any psychotropic and antipsychotics medications (p>0.05). The most preferred antipsychotic was risperidone (n=26; 59.1%) and second was aripiprazole (n=14, 31.8%). Patients that receiving psychotropic medications were significantly older than other patients (p<0.0001). Comorbidity rate was 44.2%. There were significant differences between the comorbidity rates in terms of current rates of any psychotropic medication use (p<0.0001). **CONCLUSION:** Our findings indicated approximately one-third of ASD patients have received psychotropic medications. Studies that were conducted in our country revealed the rate of psychotropic medication in ASD changed between 37.5-56.3%. In our study, the rate of patients taking psychotropic medications was similar but the mean age of our sample was lower than previous studies. Although the core deficits of autism are not altered by antipsychotic treatment, antipsychotics are often used for the reduction of several target symptoms, including stereotypies, temper tantrums, aggression, self-injury, and hyperactivity. In the last years, second generation antipsychotics and particularly risperidone have become common in the treatment of children with autism. In addition, the efficacy of aripiprazole on irritability associated with ASD has been showed. Our study findings about the most preferred antipsychotics (risperidone and aripiprazole) were consistent with the literature. However, there were limited numbers of approved drugs for these ages and diagnosis group in our country might also be responsible for this finding. There is a need for further studies examining the factors affecting the drug of choice.

**Keywords:** autism spectrum disorders, psychotropic medications, antipsychotics

**Bulletin of Clinical Psychopharmacology 2016;26(Suppl. 1):S179**

**[Abstract:0751][Epidemiology]****Prevalence and characteristics of complementary medicine utilization in outpatient psychiatry population in Eastern Mediterranean Region of Turkey**Ufuk Bal<sup>1</sup>, Cengiz Cengiz<sup>2</sup>, Ertan Yılmaz<sup>3</sup>, Mahmut Onur Karaytuğ<sup>4</sup>, Lut Tamam<sup>5</sup><sup>1</sup>Department of Psychiatry, Askim Tufekci State Hospital, Adana, Turkey<sup>2</sup>Department of Psychiatry, Kozan State Hospital, Adana, Turkey<sup>3</sup>Department of Psychiatry, Ceyhan State Hospital, Adana, Turkey<sup>4</sup>Department of Psychiatry, Islahiye State Hospital, Gaziantep, Turkey<sup>5</sup>Department of Psychiatry, Cukurova University, Adana, Turkey

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**OBJECTIVE:** Traditional and Complementary medicine (TCM) is a term often accepted to be a part of traditional medicine, but refused by the orthodox medicine approach. In a study, conducted in Eastern Anatolia region of Turkey to demonstrate the purpose and prevalence of complementary medicine, 70% of the patients are found to be using TCM as a method to cure their illnesses. However, 70% of American people chose TCM practices to alleviate pain and feel better. S- Adenosylmethionine, omega-3 fatty acids and St. John's Wort are the most frequently used TCM products which are used in the treatment of depression; whereas kava, melatonin, ginkgo biloba, valeriana officinalis, passion flower are the TCM products of choice for the treatment of anxiety, sleep disorders, and memory problems. In attention deficit hyperactivity disorder, the role of TCM practices is somewhat limited due to lack of evidence for efficacy and reliability. But psychosocial interventions, essential fatty acids and exercise are recommended in combination with routine drug treatment and caused encouraging results. In bipolar disorder, aminoacids and omega-3 fatty acids are found to be slightly effective in depressive period of the illness, but not so in manic elevations. In a similar manner, herbal treatments were more effective in depressive periods. Magnesium supplement was reported to reduce the severity of manic symptoms and relapses.

**METHOD:** This cross-sectional study was conducted at the psychiatry units of Adana Çukurova Aşkim Tüfekçi, Ceyhan and Kozan Public Hospitals in the time period of six months between June and November 2015. 1,768 participants fulfilled the inclusion criteria for the study and signed a consent form. The participants were given detailed information on the aim of the study, voluntariness, and privacy principles. The participants provided informed consents. Diagnosis of the psychiatric disorders were established by using DSM-5 based diagnostic interviews. Inclusion criteria were:

- (1) To be between the ages of 18 and 65,
- (2) To be diagnosed with a psychiatric disorder through DSM-5 based diagnostic interview,
- (3) To be informed about the study and having a signed consent,
- (4) No cognitive deficit which could hinder the participation to the study.

**RESULTS:** Female and male participants ratios were 69.9% and 31.1%, respectively. In terms of income, high/ middle income combined group and low-income group were respectively constituting 51.4% and 48.6% of the total. 44.1% of the participants have had an elementary education level or less. 61.6% of them were rural area inhabitants. 39.7% of the participants were identified as using at least one of the TCM modalities. Spiritual healing 16%, herbal products 10.1% and food supplements 7.1% were the most frequently encountered TCM types.

**CONCLUSION:** Alternative healing methods are widely used and clinicians should be aware of them.

**Keywords:** complementary medicine, herbal medicine, integrative medicine, psychiatry

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**[Abstract:0753][Forensic psychiatry]****Suicidal behaviour in adolescents association between breastfeeding duration**Berna Polat<sup>1</sup>, Veli Yildirim<sup>1</sup>, Merve Turkegun<sup>2</sup>, Fevziye Toros<sup>1</sup><sup>1</sup>Department of Child and Adolescent Mental Health and Diseases, Mersin University, Mersin, Turkey<sup>2</sup>Department of Biostatistics, Mersin University, Mersin, Turkey

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**OBJECTIVE:** Suicidal behaviour becomes a serious issue between mother adolescent relationships. Breastfeeding is one of the factors, which affects maternal bonding in the first periods of life. This also affects during both the building mother-child attachment and the adolescent psychiatric behaviours in the next years.

The relationship between breastfeeding, suicidal behaviour, maternal bonding, and attachment have not yet been studied. The relationship between breastfeeding time and suicidal behaviours were compared. We hypothesized that the time of breastfeeding would be shorter in adolescents with suicidal behaviour.

**METHODS:** One hundred fifty six adolescents were evaluated. There were adolescents with suicide idea (n=40) and suicide attempts (n=72), and healthy control group (n=44). The ANOVA and descriptive analyses were carried out for age, sex, education status, and the time of breastfeeding data. Statistical significance was set at  $P < 0.05$ . All analyses were carried out using the SPSS for Windows.

**RESULTS:** The age average was  $15.28 \pm 1.35$  in the suicide attempt group,  $15.25 \pm 1.62$  in the suicide idea group and  $14.02 \pm 1.98$  in the healthy control group. Gender distribution in suicide attempt group was 90.3% female (n=65), 9.7% male (n=7); in suicide idea group it was 82.5% female (n=33), 17.5% male (n=7); and it was 68.2% female (n=30), 31.8% male (n=14) healthy control group. In these three groups mothers' educational status was low. The average of breastfeeding time were compared between these three groups and no statistical differences were found.

**CONCLUSION:** We could not find any statistical difference at the average of breastfeeding time among the groups in our finding. Suicidal behaviour might be determined multifactorially and includes genetic, neurobiological, psychosocial, and environmental factors that interact at various levels.

In another study, it was reported that the time of breastfeeding has nothing to do with the childhood period, executive functions, behaviours and social-emotional development. It is considered to be helpful and important sample longitudinal studies examining the factors in the first periods of adolescents' lives, their mothers' having some kind of psychopathology like depression, long-term break-up from mothers, the reasons why a mother stops showing her feelings or the reasons which a mother refrain from providing basic needs to their children.

**Keywords:** adolescent, suicidal behavior, breast-feed

**Bulletin of Clinical Psychopharmacology 2016;26(Suppl. 1):S181**

**[Abstract:0754][Dependencies]****Is psychological flexibility a good target for reducing self-stigma: preliminary results**Meral Akbiyik<sup>1</sup>, Rabia Bilici<sup>2</sup>, Gamze Akcay<sup>2</sup>, Seda Boyacioglu<sup>2</sup>, Elif Cinka<sup>2</sup><sup>1</sup>Fulya Acibadem Hospital, Istanbul, Turkey<sup>2</sup>Erenkoy Training and Research Hospital for Psychiatry and Neurology, Istanbul, Turkey

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**OBJECTIVE:** Self-stigma consists of shame, evaluative thoughts, and fear of enacted stigma which result from individuals' identification with a stigmatized group. It is accompanied by limited help seeking behavior and treatment adherence. Internalized stigma is another concept which refers to inner psychological harm resulting from stigma. Since the idea of internalized stigma is quite similar to that of self-stigma, past studies used internalized stigma scale when there was no valid instruments to assess self-stigma directly. Psychological flexibility is a key concept of acceptance and commitment therapy (ACT). Experiential avoidance, which is one aspect of psychological inflexibility, is particularly apparent in substance abuse. What is more, literature suggests that psychological flexibility model and ACT are promising avenues for reducing self-stigma. The purpose of our study is to examine the mediator role of psychological inflexibility, which

effects interactions between self-stigma and addiction severity in a Turkish sample. This poster presentation shows the preliminary data analysis of an ongoing research.

**METHOD:** Participants were 82 inpatients and outpatients who were receiving treatment for alcohol or substance use problems at Erenkoy Alcohol and Substance Dependence Treatment and Education Center. Participants were asked to complete Turkish versions of Internalized Stigma of Mental Illness Scale (ISMI), Acceptance and Action Questionnaire II (AAQ-II), Addiction Profile Index- Short Form, Perceived Available Support Scale (PASS), Beck Depression Inventory (BDI), and Beck Anxiety Inventory (BAI) in addition to sociodemographic form. Since there is no valid self-stigma scale in Turkish we assessed internalized stigma. We have used Spearman's Rho correlation coefficients for exploring the relations between scales. Internal consistency was checked by Cronbach's Alpha (CA) values. The CA values of all scales were higher than 78.0%.

**RESULTS:** In this study, 96.3% of the participants were male, 22% of them were married and 64.2% of them had regular jobs. Anxiety level of participants was low (mean BAI score was 11, SD=14) and they had mild mood disturbance (mean BDI score was 11, SD=11.6). The highest correlation was shown between internalized stigma and psychological inflexibility ( $r=0.65$ ,  $p<0.001$ ). The moderate correlation shown between internalized stigma and level of anxiety ( $r=0.58$ ,  $p<0.001$ ) and depression ( $r=0.62$ ,  $p<0.001$ ) emphasized that comorbidity is an important dimension while working on self-stigma. Internalized stigma and addiction severity showed low correlation ( $r=0.47$ ,  $p<0.001$ ) and the correlation between ISMI and Perceived Available Support Scale was low, negative and significant ( $r=-0.25$ ,  $p<0.005$ ). The results showed that internalized-stigma is related to psychological inflexibility, addiction severity, social support, and level of anxiety and depression.

**CONCLUSION:** Our preliminary results were consistent with the limited literature and showed that internalized stigma is related to psychological inflexibility and addiction severity. We need to reach the desired sample size to compute partial correlations for predictive assessments and perform more sophisticated methods such as multiple regression and factor analyses. A better understanding of self-stigma may help guide future research and intervention efforts aimed at reducing the impact of stigma on help-seeking behaviors and treatment adherence.

**Keywords:** stigmatization, substance use disorders, acceptance and commitment therapy

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[Abstract:0780][Psychopharmacology]

## Chronic intermittent administration of ketamine inhibited depressive symptoms in chronic unpredictable mild stress model in rats

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**OBJECTIVE:** Major depressive disorder is a complex and devastating disorder which one-third of patients still do not respond to current treatments. Ketamine, a noncompetitive glutamatergic NMDA receptor antagonist, has recently been proposed to have rapid antidepressant effect when administered in acute sub-anesthetic dose. The aim of the present study was to examine the possible differences in behavioral manifestations in terms of antidepressant-like state induced by acute and chronic administration of ketamine in chronic unpredictable mild stress (CUMS) model in rats.

**METHODS:** Male Wistar Albino rats (290-360 g) were divided into Control (saline), CUMS, CUMS+Acute Ketamine (10 mg/kg), CUMS+Chronic Ketamine (10 mg/kg) groups (n=10-12 in each). In CUMS model, various stressors were applied such as cage tilting for 24 h, wet bedding for 24 h, swimming in cold water for 5 min, swimming in hot water for 5 min, pairing with another stressed animal for 48 h, level shaking for 10 min, nip tail for 1 min, and inversion of the light/dark cycle for 24 h for 40 days. Rats received one of these stressors per day and the same stressor was not applied continuously in 2 days so that animals could not predict the occurrence of stimulation. Ketamine administered either on 3rd week, once a week for 3 weeks or at the end of 6th week as single dose. At the end of the experiment, sucrose preference test and forced swim test were performed in order to assess anhedonia and despair-like state of the animals, respectively. Rats' locomotor activities and body weights were further recorded. One-way analysis of variance (ANOVA) was used for statistical analysis followed by Tukey's test.

**RESULTS:** The time of immobility in forced swimming test was significantly reduced in chronically ketamine treated group but not when administered acutely compared to CUMS group. Sucrose preference was reduced in CUMS group compared to control group. Chronic

intermittent ketamine but not acute ketamine treated groups demonstrated significantly higher sucrose preference than CUMS group. Total locomotor activity and body weights were found significantly lower in CUMS group compared to control and chronic intermittent ketamine administration reversed these effects back to control values which were not the case with acute ketamine treated group.

**CONCLUSION:** The results of the present study clearly show that chronic intermittent but not acute ketamine administration demonstrates antidepressant-like activity in chronic stress model of depression. Therefore, it would be of interest utilizing such a design with ketamine for its potent antidepressant effects in a well-validated animal model as in chronic intermittent treatment in CUMS model presented in our study. According to the proposed potent antidepressant-like effects induced by chronic intermittent ketamine here, this findings would allow further studies constructed this potent effect of ketamine perhaps by targeting glutamatergic dysregulation and therefore modulating ketamine's effect with the aim of highlighting molecular basis beyond known.

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**Keywords:** depression, glutamatergic, ketamine, NMDA

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[Abstract:0781][Psychopharmacology]

## Chronic blockade of P2X7 receptors by brilliant blue G inhibited depressive symptoms in rats

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**OBJECTIVE:** Purinergic 2X7 receptor (P2X7R) activation has recently been considered to be involved in depression by possibly resulting in excessive glutamatergic neurotransmission and triggering microglial activation. In recent studies, PPADS and iso-PPADS, non-selective P2R and P2XR antagonists respectively, are shown to have acute antidepressant-like effects and genetic deletion of P2X7R reduces depressive-like state in mice. Therefore, the aim of the present study was to examine whether the chronic administration of Brilliant Blue G (BBG), a highly selective P2X7R antagonist, has antidepressant-like effects in chronic unpredictable mild stress (CUMS) model in rats.

**METHODS:** Male Wistar Albino rats (290-360 g) were divided into Control (saline), CUMS, CUMS+Imipramine (20 mg/kg), CUMS+BBG25 (25 mg/kg), CUMS+BBG50 (50 mg/kg) groups (n=10-12 in each). In CUMS model, various stressors were applied such as cage tilting for 24 h, wet bedding for 24 h, swimming in cold water for 5 min, swimming in hot water for 5 min, pairing with another stressed animal for 48 h, level shaking for 10 min, nip tail for 1 min, and inversion of the light/dark cycle for 24 h for 40 days. Rats received one of these stressors per day and the same stressor was not applied continuously in 2 days so that animals could not predict the occurrence of stimulation. On the 20th day of stressor application, the treatment of BBG was started for 20 days. At the end of the experiment, sucrose preference test and forced swimming test were performed in order to assess anhedonia and despair-like state of the animals, respectively. Rats' locomotor activities and body weights were further recorded. One-way analysis of variance (ANOVA) was used for statistical analysis followed by Tukey's test.

**RESULTS:** The time of immobility in forced swim test was significantly reduced in Imipramine and CUMS+BBG50 groups compared to control and CUMS groups respectively. Sucrose preference was reduced in CUMS group compared to control group. Imipramine and BBG50 but not BBG25 treated group demonstrated significantly higher sucrose preference than CUMS group. Total locomotor activity and body weights were found significantly low in CUMS group compared to control and both Imipramine and BBG50 reversed these effects back to control values but not BBG25.

**CONCLUSION:** Our present results suggest that chronic administration of BBG, a potent P2X7R antagonist, in higher dose results in antidepressant-like activity demonstrated in two distinct tests (sucrose preference and forced swim test) in chronic stress model of depression. It is noteworthy to indicate that high dose of BBG reversed all symptoms of depression in CUMS model even better than imipramine. These results strongly support the notion of P2X7 receptors involvement in depression. Therefore, further studies are needed to examine the mechanism behind P2X7 receptor activation in stress-mediated chronic pathologies as seen in depression.

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**Keywords:** brilliant blue G, depression, purinergic, P2X7

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**[Abstract:0782][Psychopharmacology]****Agmatine potentiates the antidepressant effect of ketamine in forced swimming test of rats**Rumeysa Keles<sup>1,2</sup>, Ayse Nur Hazar<sup>2</sup>, Ceren Sahin<sup>2</sup>, Gokhan Unal<sup>2</sup>, [Feyza Aricioglu<sup>2</sup>](mailto:feyza.aricioglu@gmail.com)<sup>1</sup>Department of Pharmacology, Sakarya University, School of Medicine, Sakarya, Turkey<sup>2</sup>Department of Pharmacology and Psychopharmacology Research Unit, Marmara University, Faculty of Pharmacy, Istanbul, Turkey

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**OBJECTIVE:** Glutamatergic system is widely implicated in the pathophysiology of depression. It is now well recognized by preclinical and clinical studies that reducing N-methyl-D- aspartate (NMDA) receptor function by ketamine leads to rapid and long-lasting antidepressant effects (1). However, due to the certain restrictive psychotomimetic characteristic of this compound, the potential therapeutic effect would almost hardly be mentioned in the clinic at a certain point. This disadvantage therefore leads us to the novel perspectives with the aim of utilizing potential combinations with low doses of glutamatergic agents such as ketamine. Agmatine [4- (amino butyl) guanidine], an endogenous amine, inhibits NMDA receptors and competitively inhibits nitric oxide synthase (NOS). Apart from the mentioned effects, agmatine also binds to imidizoline binding sites and alpha adrenergic receptors, blocks other several ionic receptors. Although the physiological role of agmatine in normal brain is not well known, the exogenous agmatine has been ascribed by its roles in several biological processes, especially including depression. Agmatine has been repeatedly shown to exert antidepressant effects in several animal depression models. Therefore, we aimed to evaluate the possible value of using ketamine and agmatine combination at sub-effective doses in forced swimming test as an acute despair model.

**METHODS:** Female Sprague Dawley rats (180-200 g) were divided into Control (saline), Agmatine (10 mg/kg), Ketamine (3 mg/kg), Agmatine+Ketamine (10 mg/kg+3 mg/kg) groups (n=10 in each). Forced swimming test (FST) was conducted 30 min after single i.p. drug administrations and 24 hr later of 15 min training. Rats subjected to FST were allowed to swim for 5 min (temperature remained at 23-25°C). The time of immobility was video recorded. One-way analysis of variance (ANOVA) was used for statistical analysis followed by Tukey's test.

**RESULTS:** The time of immobility was not statistically different between agmatine group at sub-effective acute dose (10 mg/kg) and control group while ketamine (3 mg/kg) treated rats were significantly less immobile ( $p<0.05$ ) compared to control group. When ketamine was combined with sub-effective dose of agmatine, the immobility time was further reduced than ketamine alone group compared to control group ( $p<0.01$ ).

**CONCLUSIONS:** According to the present results, even administered at sub-effective dose, ketamine demonstrated anti-depressive like behavior in our experimental design unlike the previous report still showing potent antidepressant action of ketamine. However, we confirmed the previous findings that agmatine is sub-effective in terms of reducing depressive like symptoms. When adding agmatine with ketamine at sub-effective doses again, the depressive-like behaviors were further decreased than ketamine alone, which could be interpreted as a potentiation of the anti-depressive like effect of ketamine by agmatine.

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**Keywords:** agmatine, depression, ketamine

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[Abstract:0783][Psychopharmacology]

## Famotidine reverses learning and memory deficits induced by acute ketamine model of schizophrenia in novel object recognition test in rats

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**OBJECTIVE:** Noncompetitive antagonists of the N-methyl-D-aspartate receptor (NMDAR), such as ketamine are commonly used to mimic schizophrenia-like state in humans and laboratory animals. Acute administration of NMDAR antagonists results in schizophrenia-like symptoms, including cognitive deficits. Several clinical studies show that famotidine, histamine-2 receptor antagonist, may be beneficial in schizophrenia-like symptoms and it could be a potential adjunctive pharmacological approach for the treatment of schizophrenia. The aim of our study is to examine the effect of famotidine on learning and memory deficits induced by acute ketamine model of schizophrenia in novel object recognition test (NORT).

**METHODS:** Female Sprague Dawley rats (150-210 g) were assigned to; Control, Ketamine and Ketamine+Famotidine groups (n=8; in each). Famotidine (4.4 mg/kg; i.p.) was administered 15 min prior to ketamine (15 mg/kg; s.c.). 45 min after ketamine injection rats underwent NORT. 24 h before testing, rats were habituated to the arena without any object for 30 minutes. The test consisted of two three-minute trials separated by an intertrial interval of one hour. During the first trial two identical objects were located in opposite corners. In the second trial one of the objects was replaced by a novel one. The height of the objects was comparable (~12 cm) and they were heavy enough not to be displaced by the animals. Exploration of an object was defined if rats licked, sniffed or touched the object. Based on the exploration time of the two objects, the discrimination index was calculated. Data for time spent exploring the objects in each trial were analyzed using paired Student's t-test. Discrimination index of groups was compared by one-way ANOVA followed by Dunnett's test.

**RESULTS:** In NORT paradigm, control rats spent more time exploring the novel object compared to familiar object in the retention trial ( $p < 0.05$ ). There were no significant differences between time spent exploring the familiar and novel object in the retention trial in ketamine treated group. However, when pre-treated with famotidine, rats spend significantly more time exploring the novel object compared to familiar one ( $p < 0.01$ ). There were no significant differences in the discrimination index in the retention trial between groups.

**CONCLUSIONS:** According to the present results of our study ketamine treated group was not able to recognize the novel object from the familiar object after one hour of inter-trial interval. Whereas, famotidine pre-treatment resulted in increased time spent exploring the novel object compared to familiar object meaning that rats treated with famotidine were able to recognize the novel object following one hour in contrast with the ketamine alone group. Overall, acute famotidine administration does seem to have an improving effect on learning and memory deficits in the NORT paradigm induced by acute ketamine model of schizophrenia. The present results could be of interest for further studies aimed to examine the effect of famotidine on relevant behavioral deficits seen in schizophrenia in accordance with the efforts for highlighting the molecular mechanisms driven this effect.

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**Keywords:** famotidine, ketamine, learning-memory

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**[Abstract:0784][Psychopharmacology]****Possible neuroprotective effects of agmatine via GSK3 $\beta$  protein expression in SH SY5Y cell line**Alim Huseyin Dokumaci<sup>1</sup>, Gokhan Unal<sup>2</sup>, M. Betul Yerer Aycan<sup>1</sup>, Ceren Sahin<sup>2</sup>, Feyza Aricioglu<sup>2</sup><sup>1</sup>Department of Pharmacology, Erciyes University, Faculty of Pharmacy, Kayseri, Turkey<sup>2</sup>Department of Pharmacology and Psychopharmacology Research Unit, Marmara University, Faculty of Pharmacy, Istanbul, Turkey

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**OBJECTIVES:** Glutamatergic N-methyl-D-aspartate (NMDA) receptor antagonists such as phencyclidine and MK-801 are now being used in vitro experimental schizophrenia models. Agmatine is an endogenous amine neurotransmitter/neuromodulator having a complex pharmacological profile such as binding alpha adrenergic and imidazoline receptors, blocking nicotinic, cholinergic and NMDA receptors and inhibiting nitric oxide synthase. At present there are contradicting reports regarding agmatine on whether it is a molecule having a possible therapeutic value for treating schizophrenia or it is one of the contributing factors for disease development. Glycogen Synthase Kinase 3 beta (GSK-3 $\beta$ ) is an intracellular constitutional enzyme that is thought to be linked to schizophrenia. It has been shown that increased activity of GSK-3 $\beta$  accompanied with schizophrenic manifestations and some antipsychotics are shown to decrease the enzyme activity. Herein, the aim of our study was to examine the effect of agmatine on GSK-3 $\beta$  activity in MK-801 treated SH SY5Y human neuroblastoma cell culture.

**METHODS:** Western blot analysis was carried out using crude lysates of 1x10<sup>6</sup>/ml SH SY5Y (neuroblastoma) cells. The effects of MK-801 (100  $\mu$ M), MK-801+ Agmatine (100  $\mu$ M) and MK-801+Aripiprazole (10  $\mu$ M) on phosphorylated GSK-3 $\beta$  (p-GSK-3 $\beta$ ) and total GSK-3 $\beta$  protein levels were examined by western blot analysis. Medium was used for control group and MK-801 was administered 1 hour after treatments. The ratio of total GSK-3 $\beta$  protein level to p-GSK-3 $\beta$  protein level was defined as GSK-3 $\beta$  enzyme activity. Cells were lysed in commercial lysis buffer. The lysate was centrifuged at 4°C for 30 min at 12000 rpm. The clear supernatant was collected and the total protein amount was determined by Lowry method. 30  $\mu$ g proteins lysates were resolved on 10% sodium dodecyl sulphate (SDS)-polyacrylamide gels. Then electro-transferred onto polyvinylidenedifluoride membrane after blocking with 5% non-fat milk in Tris-buffered saline (TBS, 0.1 M, pH 7.4). Membranes were incubated with anti-GSK-3 $\beta$  (1:1000 dilution, Cell Signaling Technology, CST), and anti-tubulin (1:4000 dilution, CST).

**RESULTS:** Our results showed that MK-801 administration increased GSK-3 $\beta$  enzyme activity 3.5 fold compared with control. Aripiprazole pretreatment before MK-801 administration markedly decreased the activity to 0.6 fold of control. Agmatine pretreatment was slightly decreased the increment in the enzyme activity caused by MK-801 to 2.5 fold of control.

**CONCLUSION:** In our study, we showed that NMDA receptor antagonist MK-801 increases GSK-3 $\beta$  protein expression. Antipsychotic like effect of agmatine might be related to its GSK-3 $\beta$  protein downregulation effect. However, it is noteworthy to indicate that the present results belong to the higher dose of agmatine which was also used in our cell survival experiments in which we have established that the lower dose of agmatine were more effective on neurodegeneration and cell survival. Therefore, the modest decreasing effect of agmatine on GSK-3 $\beta$  activity presented in this study could be attributable to its higher dose used in the present set up. Therefore, lower doses of agmatine are required to taken into consideration for assessing the possible decreasing effect of agmatine on GSK-3 $\beta$  activity which our team has been currently addressing to.

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**Keywords:** agmatine, GSK-3, MK-801

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**[Abstract:0785][Psychopharmacology]****Agmatine treatment prevents MK-801 induced neurodegeneration in cell culture**Gokhan Unal<sup>1</sup>, Alim Huseyin Dokumaci<sup>2</sup>, M. Betul Yerer Aycan<sup>2</sup>, Ceren Sahin<sup>1</sup>, Feyza Aricioglu<sup>1</sup><sup>1</sup>Department of Pharmacology and Psychopharmacology Research Unit, Marmara University, Faculty of Pharmacy, Istanbul, Turkey<sup>2</sup>Department of Pharmacology, Erciyes University, Faculty of Pharmacy, Kayseri, Turkey

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**OBJECTIVES:** It has been known that neurodegeneration and neuronal survival is important in both of neurodegenerative and neurodevelopmental hypothesis of schizophrenia. Also it has been proved that glutamatergic N-methyl-D-aspartate (NMDA) receptor

antagonists such as phencyclidine, MK-801 and ketamine cause schizophrenia like symptoms in human and rodents in accordance with cell death in vitro cell culture. Agmatine, a novel neurotransmitter/neuromodulator, that inhibits both neuronal and inducible nitric oxide synthase, binds to alfa adrenergic and imidazoline receptors, and blocks nicotinic, cholinergic and NMDA receptors, has been repeatedly shown to demonstrate certain ameliorating effects in several psychiatric conditions. At present, there is an ongoing debate on agmatine's possible involvement in schizophrenia by distinguished findings from different studies. Among which agmatine at high dose is proposed to induces schizophrenic-like effect while it is also suggested to have improving effects on reducing schizophrenic-like effect induced by phencyclidine. Herein, the aim of our study was to examine how different concentrations of agmatine would affect cell survival of MK-801 induced neurodegeneration on SH SY5Y neuroblastoma cell lines at in vitro cell culture.

**METHODS:** SH SY5Y human neuroblastoma cell line purchased from American Type Culture Collection was cultured with DMEM-F12 medium that added 10% Fetal Bovine Serum, 100 U/ml penisiline, 100 g/ml streptomisine. When the cell level reached to 80% of flask, the cells were planted to 96 well plate as 12,500 cells/100  $\mu$ L in a well. MK-801 (100  $\mu$ M), MK-801+ Agmatine (50  $\mu$ M, 100  $\mu$ M, 250  $\mu$ M), MK-801+ Aripiprazole (10  $\mu$ M) or medium was added to wells (four wells per group). Medium was used for control group and MK-801 was administered 1 hour after treatments. Xcelligence Real Time Cell Analyzer with golden plate was used for observation the cell proliferation and cell index was measured every 15 minutes for 24 hours. Statistical analysis was performed by one way ANOVA with  $p < 0,05$  value as significance.

**RESULTS:** Our results showed that MK-801 (100  $\mu$ M) significantly decreased cell proliferation from 100% to 59.6% compared with control group at 24 hours after administration. Agmatine treatment at 50  $\mu$ M, 100  $\mu$ M, 250  $\mu$ M concentrations prevented neurodegeneration caused by MK-801 and increased the cell survival to 120.6, 107.0, 106.6% respectively. Aripiprazole also inhibited MK-801 induced cell death and promoted cell survival to 104.6% compared with control group.

**CONCLUSION:** Our present results suggest that administration of agmatine prevents MK-801 induced neurodegeneration in SH SY5Y cell lines at all doses used in our study. However, the protective effect of low dose agmatine was more succesfull than the higher doses. The present results are compatible with the notion that the lower doses of agmatine may show more beneficial effects for schizophrenia treatment which certainly requires further in vivo studies examining the effects of different doses of agmatine on certain behavioral aspects in schizophrenia models especially using glutamatergic hypofunction hypothesis.

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**Keywords:** agmatine, MK-801, neurodegeneration

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[Abstract:0843][Others]

## Carboxylesterase1, alpha 2a adrenergic receptor and noradrenalin transporter gene polymorphisms and their clinical presentations in attention deficit hyperactivity disorder

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**OBJECTIVE:** The role of genetic factors in pathogenesis of ADHD is proven in multiple studies. Dopaminergic pathways are studied in detail because of the fact that MPH is a DAT inhibitor. Recently, due to efficient use of ATX in treatment, which is a NET inhibitor, and the definition of noradrenalin's effect on attention functions, researchers are focused more on the adrenergic pathways. Also, after understanding the fact that polymorphisms in the CES1 gene, which codes the carboxylesterase 1 enzyme that breaks down MPH, change the enzyme activity, studies are focused more on the metabolic pathways. The objective of this study was to examine the association between ADHD and G1287A polymorphism in the NET1 gene, C1291G polymorphism in the ADRA2A gene on the adrenergic pathway and Gly143Glu polymorphism in the CES1 gene on the metabolic pathway, and their clinical effects.

**METHOD:** The study population included 114 patients who presented to the Gazi University Child and Adolescent Psychiatric Department and are diagnosed with ADHD according to DSM IV-TR and 83 healthy controls aged between 6 and 16. Subsequent were evaluated by clinical examination and Conner's Comprehensive Behavior Rating Scale-Teacher (CRS-T), venous blood sample is taken and gene analysis is made. 103 patients are followed for 6 months (at the 2<sup>nd</sup>, 4<sup>th</sup>, and 6<sup>th</sup> months), their scale points are recorded and side effects are questioned in each interview.

**RESULTS:** Every patient in both control and ADHD group are found to have GG genotype when Gly143Glu polymorphism in the CES1 gene is examined, thus we came to a conclusion that Turkish population is homozygote in the mentioned polymorphism. No significant association between NET1 gene G1287A polymorphism genotypes and ADHD was found. It was found that ADRA2A C1291G polymorphism C allele and CC genotype is a risk factor for ADHD ( $p=0.003$ , OR:2.17, CI:12.8-37.0) and the risk is higher in males ( $p=0.013$ , OR:2.43, CI: 12.0-49.5). There was no significant relation between ADRA2A C1291G polymorphism and clinical parameters but it was found that individuals with NET1 G1287A polymorphism AA genotype have less concurrent Oppositional Defiant Disorder diagnosis (18.8% vs. 81.2%,  $p=0.039$ ), their initial CTRS-attention deficit points are higher ( $17.47\pm 3.73$  vs.  $16.15\pm 4.58$ ,  $p=0.045$ ) and their response to treatment is weak according to CTRS-behavior problem points (25.0% vs. %75.0,  $p=0.023$ ).

**CONCLUSION:** In conclusion, the present study showed that the ADRA2A C1291G polymorphism C allele and CC genotype is susceptibility factor in the etiology of ADHD. NET1 G1287A polymorphism AA genotype is associated with clinical response to ADHD treatment. Further studies on genetic variants of adrenergic/ metabolic pathways will focus on its role in specific subtypes of ADHD, their response to pharmacotherapy, and also the role of sex effect.

**Keywords:** attention deficit hyperactivity disorder, carboxylesterase 1, NET1, ADRA2A

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