between ADHD and anxiety-disordered children.
The strong inter-group difference in the hyperactivity index may suggest that ADHD individuals are more prone to rule-breaking than anxious counterparts. Hyperactivity index, by showing execution of hitting an alternative key on keyboard, or hitting the desired key multiple times may be seen as a measure of engaging in unwanted behavior. This is in line with our clinical observation that ADHD subjects were getting easily bored and did engage in behaviors to mock the test and the clinician due to boredom or fatigue. This index may be seen as an index of similar behavior in the classroom and home; engaging in seemingly unsolicited behavior, such as limit-testing, although not universally disruptive. Our results suggest that ADHD medications are helpful with attention (including reaction time) and impulsivity symptoms, but not with the hyperactivity index. It can be argued that the hyperactivity index of this test may be measuring these “limit-testing” behaviors rather than true hyperactivity, which is expected to show strong clinical response to ADHD treatment.

In summary, children with ADHD and Anxiety Disorders had significant differences in the d-CPT test, especially when presented with concurrent visual distractor stimuli, proving our hypothesis. ADHD medications have a clear effect in correcting these differences and closing the gap between groups. Errors of omission are more closely linked to “pure ADHD” symptoms than commission errors, which may tap into symptoms that may also be present in Anxiety Disorders. Hyperactivity index of d-CPT may be measuring a tendency to “go against the norm,” or limit-testing behavior instead of true hyperactivity.

This study has several limitations such as small number of participants (especially when broken down into subgroups) and voluntary participation, which may affect generalizability of the results. The results should be confirmed with larger samples.

**Keywords:** ADHD, anxiety disorders, children, distractors

**References:**

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**[Abstract:0483] Anxiety, stress, and adjustment disorders**

**Vitamin D deficiency in depressive, anxiety and adjustment disorder**

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**INTRODUCTION:** Depression and anxiety are associated with significant disability, mortality, and health care costs. Depressive disorder, anxiety disorder and adjustment disorder are mostly diagnosed in outpatient clinic. Although the development of depression and anxiety are a complex and multifactorial process, there is evidence that dysfunctions in various endocrine axes may be independent risk factors in the development of depression and anxiety. The importance of the vitamin D endocrine system in relation to bone health has been recognized, but recent findings suggests that vitamin D may have neurological functions. The function of vitamin D in the brain is not completely understood, but the vitamin D receptor is found in many areas of the brain, including the cingulate cortex and hippocampus, which have been implicated in the pathophysiology of depression

Low levels of vitamin D have been associated with development of cardiovascular disease, hypertension, neurodegenerative disease, diabetes, metabolic syndrome, and cancer. Low levels of vitamin D either at birth or during postnatal periods have been indirectly implicated in a number of developmental brain disorders such as multiple sclerosis, autism, and schizophrenia. Several studies have investigated the relationship between depression and vitamin D, but with conflicting results. Some of them have found an association between low levels of serum 25-(OH)D and depressive symptoms, whereas other studies have found no associations. Low serum 25-hydroxyvitamin D (25(OH)D) and elevated PTH levels have been linked with various psychiatric disorders including depression, eating disorder and schizophrenia. Lee et al. found that among community-dwelling middle aged and older European men depression severity was associated with lower 25(OH)D levels.
In this study, we have measured serum 25(OH)D levels in patients who had been diagnosed with anxiety, depressive and adjustment disorder to assess if low level of vitamin D was associated with quality of life, severity of depression, and anxiety symptoms. **METHOD:** The study population consisted of 63 outpatients aged between 18 and 60 years with a diagnosis of major depressive disorder, adjustment disorder and anxiety disorder without PTSD (Posttraumatic stress disorder) and OCD (Obsessive–compulsive disorder) based on DSM5 criteria, who were followed at the outpatient unit of the Psychiatry Clinic of Şişli Hamidiye Etfal Research and Teaching Hospital between October and December 2014. Patients were evaluated with Structured Clinical Interview for DSM-4 (SCID-I), sociodemographic form, Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI) and 36-Item Short Form Health Survey (SF-36). Substance abuse, pregnancy, lactation, significant medical or neurological disorder, psychotic and bipolar disorders were excluded. Hemogram, folate, vitamin B12 and thyroid function tests and vitamin D levels were measured in order to discern general medical illness. Vitamin D deficiency is defined with 25(OH)D below 20 ng/ml, and vitamin D insufficiency is defined with a 25(OH)D of 21–29 ng/ml; levels of 30ng/ml or above are normal. The data was analyzed using SPSS version 20.0. All data were first analyzed for normality of distribution using the Kolmogorov–Smirnov test of normality. When comparing differences between groups, the Mann–Whitney nonparametric test was used for non-normally distributed continuous variables and unpaired t test was used for normally distributed variables. The one-way ANOVA was used to compare three or more unmatched groups. Correlation analysis was performed by Pearson or Spearman correlation test. One-sample t test is used to test whether the average of a sample differs significantly from a population mean. Results were considered statistically significant at p<0.05. **RESULTS:** In our population, 82.5% (n=52) of the patients were female, 17.5% (n=11) were male. The average age was found 31.5±10.2. 46% (n=29) of the patients were single, 41.3 % (n=26) were married, 7.9% (n=5) were divorced and 4.8% (n=3) were widowed. The mean duration of education was 9.5±3.9 years. 41.3% (n=26) of the patients were employed, 46% (n=29) were unemployed and 12.7% were students. Only 19% (n=12) of the patients had a physical illness. 81% (n=51) of the patients did not use medication. 46% (n=29) were current smokers, 22.2% (n=14) were diagnosed with adjustment disorder, 60.3% (n=38) of the patients were diagnosed with major depressive disorder and 17.5% (n=11) with anxiety disorder. Of the participants, 15.9% (n=10) had a mild depression episode, 31.7% (n=20 a moderate depression and 52.4% (n=33) had a severe depression according to BDI. The blood tests were normal except vitamin D levels. The means of BDI, BAI scores and vitamin D levels were, respectively, 24.2±8.2, 26.6±14.1, and 13.2±7.1. 98.5% (n=62) of the patients had low vitamin D levels defined as less than 30ng/mL. The quality of life was determined significantly lower in eight sections of SF-36 (vitality, physical functioning, bodily pain, general health perceptions, emotional role functioning, physical role functioning, social role functioning, mental health) compared to Turkish reference data. Physical, social, emotional, and physical role functioning were found significantly higher in men than in women (p=0.004, p=0.016, p=0.032, p=0.092, respectively). No association was found between vitamin D levels and severity of depression and anxiety scale and all domains of SF-36 scale. There were no significant differences in vitamin D levels among the three diagnoses. **DISCUSSION:** In the present study, we have found that 98.5% of the patients had low vitamin D levels; 81% of the patients had vitamin D levels below the sufficient range. This finding showed that prevalence of vitamin D deficiency is higher in our population than in recent study1. Vitamin D levels also vary seasonally, with low values during the winter months because of the reduced sun light. In our population, vitamin D levels may be affected because the present study was conducted during October and December. We did not find an association between vitamin D levels and severity of depression and anxiety scale. Recently, several studies have investigated the possible link between depression and vitamin D levels. Inconsistent with our findings, Hoogendijk et al. reported that among community-dwelling older people depression status and severity was associated with lower 25(OH)D levels2. Similar to our findings, Pan et al. reported no association between depressive symptoms and 25(OH)D levels in middle-aged and elderly Chinese3. These apparently conflicting results may be due to the fact that these studies were either small in sample size or conducted in specific populations such as fibromyalgia, Alzheimer's disease, secondary hyperparathyroidism. It is well known that major depression and depressive symptoms have an impairing effect on health-related quality of life. Depression has a significant effect on perceived physical functioning and bodily pain, and even on general health perceptions. Similarly, we found that all domains of SF-36 were lower in our population than Turkish reference data. In the present study, there were no significant differences in vitamin D levels between major depressive disorder, adjustment disorder, and anxiety disorder. Schneider et al. found that although 25(OH)D levels were significantly lower in people with schizophrenia, alcohol addiction, or major depression than in controls, there were no differences in 25(OH)D levels between the three diagnoses4. In conclusion, this study has determined low levels of vitamin D in patients, although there were no associations between vitamin D levels and severity of depressive symptoms. Additionally, healthy controls are needed to compare with patients for vitamin D levels. Further studies are required to investigate whether vitamin D supplementation has an effect on treatment and prevention of depression. **Keywords:** major depressive disorder, vitamin D, anxiety

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INTRODUCTION: Recent epidemiological and longitudinal studies indicate that attachment relationships may be a significant predictor of physical health in adulthood. Empirical studies have found that insecure attachment orientations are associated with higher physical and psychological symptom reporting both in non-clinical and clinical samples. Recurrent aphthous stomatitis (RAS) is one of the most common oral mucosal diseases. It is diagnosed clinically with painful, recurrent, yellowish white or grey, single or multiple, round or oval ulcers with erythematous margins, mainly confined to non-keratinized oral mucosa. Despite its worldwide occurrence and the extensive amount of research that has been devoted to the subject, the etiology of the disease is not well understood. Psychological-emotional factors are considered as one of the major predisposing factors. We hypothesized that RAS patients' physical status would be negatively associated with scores on adult attachment. As far as we know, this is the first study to compare the parental bonding of the RAS patients with healthy controls, also taking into consideration their state of anxiety and depression.

METHODS: The study subjects were recruited from the Ear, Nose and Throat (ENT) Department of Kahramanmaras City State Hospital. All of the study subjects signed an informed consent form according to the Helsinki II Declaration, obtained from the Ethical Committee of the University of Kahramanmaras, Turkey, prior to the launch of the study. All the patients and the individuals of the control group were aged 18 or above, ensuring that they could understand and score the questionnaires correctly. Included in this study were 34 patients with RAS who were not undergoing any psychiatric and medical treatment, as well as 34 age- and gender-matched healthy individuals as the control group. Both the experimental and the control groups were resident in the same geographic area and had the same socioeconomic status. Patients were evaluated with sociodemographic form, Beck Depression Inventory, State-Trait Anxiety Inventory-State form (STAI-S), State-Trait Anxiety Inventory-Trait form (STAI-T), Short Form of Inventory of Parent and Peer Attachment (IPPA-Armsden ve Greenberg 1987) which was developed by Raja, McGee & Stanton (1992). The IPPA short form is composed of "trust," "communication" and "alienation" factors, and each one of them contain 4 sub-items which were completed for mother and father separately. Anxiety levels were measured using Spielberger's STAI (1983), which evaluates both trait anxiety as a general aspect of personality (STAI-T) and state anxiety as a response to a specific situation (STAI-S). The sensitivity of the STAI-S and STAI-T scale to general stress has been shown consistently in research of emotional reactions. STAI is unique in its measurement of anxiety independently of depression and includes 40 questions for the assessment of both trait anxiety (20 questions) and state anxiety (20 questions). Each item is scored on a four-point scale, with response categories varying according to the nature of the question. For both levels, the range of values falls between 20 and 80, with a high score indicating a higher level of anxiety. Beck Depression Inventory is in common use as a self-report scale to assess the severity of depression. The BDI was developed to determine the type and the degree of depression based on symptoms and takes the form of a questionnaire containing 21 items rating emotional, cognitive, motivational and physiological symptoms, among others. The data were analyzed using SPSS version 20.0. All data were first analyzed for normality of distribution using the Kolmogorov–Smirnov test of normality. When comparing differences between groups, unpaired t test was used for normally distributed variables. Correlation analysis was performed by Pearson or Spearman correlation test. Results were considered statistically significant at p<0.05.

RESULTS: The mean age of the patient group was 35.68±13.5. 53% (n=18) were women, 47% (n=16) were men. STAI-S scores were significantly higher in the RAS patients when compared to the healthy controls (p=0.023). In contrast, the scores of STAI-T of the patients did not significantly differ from the control group. Patients with a Beck-D score of higher than 16 were regarded as depressive. Accordingly, 35.2% (n=12) of the patient group were depressive and 64.7% (n=22) were not. There was no significant difference between the patients...