2014. The study sample consisted of 50 children aged 7-12 years who presented to outpatient clinic with inattention, hyperactivity and impulsivity for the first time and were diagnosed as combined type ADHD based on DSM-IV criteria by using KSADS-PL interview but had not received pharmacological therapy, and 50 age- and sex-matched, healthy children who had no neurological or psychiatric disorder and were not on medication. WISC-R score<80 was an exclusion criterion in both study and control group. All subjects completed Children Sleep Habit Questionnaire (CSHQ), which was then assessed statistically.

**Results:** Mean age was 9.46±1.51 in study population, and 78% of study population were male. No significant difference was found in WISC-R scores and socioeconomic status between groups.

In the study, Cronbach's alpha coefficient of the scale was found to be 0.78. Of 11 items addressed by the scale, significant differences were found between ADHD and control groups regarding awakening (longer time to be alert, awakening in negative mood and tired), sleep-disordered breathing (snoring and gasp), parasomnia (irritability during sleep, bruxism, talking during sleep), sleep duration, sleep latency (sleep onset time). It was seen that 78% of the ADHD group (n=39) and 58% of control group (n=29) achieved >=42 points in the total score of the scale, which is considered to be clinically significant, and there was significant difference between groups (p<0.001). Moreover, it was found that there was a difference in bedtime resistance, which was eliminated in factor analysis. No significant differences were found in sleep disruption, sleep anxiety (being afraid of sleeping in the dark, afraid of sleeping alone, awakening patterns, need for sleeping with another person, daytime sleepiness, and enuresis. No significant differences were found in total sleep duration, bedtime and time to fall asleep in case of night awakenings.

**Conclusion:** This study revealed that children have significantly higher degrees of sleep disorders regardless of any drug therapy. In addition, it should be kept in mind that attention and learning issues that can be seen in sleep disorders can exacerbate existing ADHD symptoms and higher rates of parasomnia can cause increased behavioral problems in children with ADHD. In these children, assessment and management of sleep disorders at diagnosis can significantly reduce behavioral symptoms and may improve quality of life for children and families.

**Keywords:** ADHD, parasomnia, sleep habits

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**Evaluation of iron and iron-related parameters in children and adolescents with attention deficit hyperactivity disorder**

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**Objective:** This study aimed to compare parameters of iron deficiency in patients with attention deficit hyperactivity disorder (ADHD) and healthy controls, investigate the differences among subtypes of ADHD, and assess the relationship between level of ferritin and severity of ADHD symptoms.

**Methods:** The study included 200 patients with ADHD and 100 healthy controls. The ADHD group consisted of 100 patients with ADHD-Combined subtype and 100 patients with ADHD-Predominantly Inattentive subtype. The diagnosis was made using the Schedule for Affective Disorders and Schizophrenia for School-Age Children - Present and Lifetime Version, a semi-structured interview. Levels of intelligence were assessed using a short form of the Wechsler Intelligence Scale for Children. The patients with a history of using atomoxetine or stimulants or any psychotropic agents or iron preparations, those with a comorbid psychiatric disorder or any acute/chronic systemic disease, and those with a history of infection in the last one month were not included in the study. Clinical evaluations were made using socio-demographic data form, DSM-IV Based Attention Deficit and Disruptive Behavior Disorder Screening and Rating Scale (Parent-Teacher) and Conners' Rating Scale – Revised: Long Form (Parent-Teacher) (CPRS-R: L, CTRS-R: L).

**Results:** No meaningful difference was found between patients with ADHD and healthy controls in serum ferritin, serum iron, iron binding capacity, hemoglobin, hematocrit, mean corpuscular volume, red blood cell count, and red cell distribution width parameters; and ADHD subtypes also did not differ from each other in these parameters. A negative correlation was observed between CPRS-R: L Hyperactivity and CTRS-R: L Hyperactivity scores and serum ferritin levels in the ADHD group.

**Conclusion:** As can be seen, the results of studies on ADHD and serum ferritin levels are still inconsistent. Clarification of findings is considered to be of importance for the etiology and treatment of ADHD. Our study included pure ADHD patients, and ADHD subtypes
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were very well defined. Examining the literature, it is seen that our study includes the largest number of patients in identification of ADHD subtypes. There is a need for further studies on this subject with a greater number of cases. For further studies, we recommend the analysis of molecules involved in the regulation of iron homeostasis besides peripheral iron parameters.

**Keywords:** ADHD, ferritin, subtypes

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[Abstract:0426] **ADHD**

**Evaluation of anger and aggression level in parents of children with attention deficit hyperactivity disorder**

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**Objective:** Attention deficit hyperactivity disorder (ADHD) is one of the most common neuropsychiatric disorders of childhood which is characterized by hyperactivity, attention deficit and impulsivity. Children diagnosed with ADHD have academic problems, difficulties in peer relationship and frequent problems with their parents. In this study we aimed to assess the aggression and trait anger-anger expression levels in parents of children with ADHD and to investigate the relationship between symptoms of ADHD/oppositional defiant disorder and aggression and anger levels of parents.

**Method:** The study sample consisted of parents of 58 children between 6-14 ages diagnosed with ADHD. The healthy control group consisted of 54 healthy children's parents. Both ADHD and healthy control group were assessed with sociodemographic data form, Buss-Perry aggression questionnaire and trait anger expression inventory. Symptoms of ADHD in children were evaluated with the DSM-IV Based Behavior Disorders Screening and Rating Scale.

**Results:** The study group included parents of 45 boys and 13 girls. The healthy control group included parents of 36 boys and 14 girls. Maternal age (p<0.001), paternal age (p<0.001), maternal education level (p<0.001) had statistically significant difference; gender (p=0.093) and education level (p=0.16) of child and paternal education level (p=0.17) were statistically similar. Trait anger level in mothers of children with ADHD group (19.4±5.2) was found higher than in mothers of the control group (17.8±2.7). Anger control level of parents in children with ADHD (20.7±5.3, 21.6±4.5) was found lower than in the control group (23.8±4.6, 24.1±4.6) (p=0.003, p=0.016). Total aggression scores (p=0.04) and hostility subscale scores (p=0.02) of mothers in the study group obtained through the Buss-Perry aggression questionnaire were found higher than in mothers of healthy children. There were statistically significant positive correlations between physical and verbal aggression, anger and total aggression subscale scores of mothers in the ADHD group and Behavior Disorders Screening and Rating Scale attention subscale scores, verbal aggression and total aggression subscale scores and opposition defiance subscale scores. There were statistically negative correlations between physical and indirect aggression, anger and total aggression scores of fathers in ADHD group and behavior disorders screening and rating scale attention subscale scores; verbal aggression scores and behavior disorders screening and rating scale hyperactivity subscale scores. There were positive correlations only between trait anger level of mothers of children with ADHD and behavior disorders screening and rating scale attention deficit subscale scores.

**Conclusion:** In our study, for the ADHD group, trait anger and anger control levels of mothers, anger control levels of fathers and total aggression level of mothers were found to be higher than in the healthy group. Parents of children with ADHD should be aware of their emotion and behavior related to anger and aggression during the treatment of child.

**Keywords:** attention deficit hyperactivity disorder, aggression and anger expression, parent

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