Chronotype and its relationship with sleep disorders in children with attention deficit hyperactivity disorder.

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Abstract

Chronotype can be classified as morningness types, people who prefer morning hours for their physical and mental activities; eveningness types, people who prefer the afternoon or evening hours; and intermediate types, those who show characteristics of both morningness and eveningness types. Attention deficit hyperactivity disorder (ADHD) has been linked with disturbances in chronotype, particularly increased eveningness. Despite the possibility of an association between chronotypes, sleep disturbances and ADHD symptoms, there is little evidence of this association considering the child population. The purpose of this study was to examine chronotype preferences in children aged between 7 and 12 years who were diagnosed as having ADHD in the context of sleep disturbances. The Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version, Conner’s Rating Scales, Children's Sleep Habit Questionnaire and Children's Chronotype Questionnaire were used for the evaluation of children with ADHD and healthy controls. The ADHD group was 73% combined-type, and the eveningness scores of the ADHD group (n = 52) were significantly higher than the control group (n = 52) (p < 0.01). There was a positive correlation between the higher scores of eveningness and total scores on resistance to sleep time (p < 0.09), respiratory problems during sleep and daytime sleepiness in the ADHD group. CSHQ total score was found to be a predictive factor for eveningness among children with ADHD (p < 0.01). These findings highlight possible reciprocal links between ADHD symptoms, sleep disturbances and chronotype in children aged 7-12 years, which might lead to individualized treatment options.