**Prevalence of sleep disorders and their relationship with core symptoms of inattention and hyperactivity in children with attention-deficit/hyperactivity disorder.**


**Abstract**

**OBJECTIVES:**
To determine the prevalence of sleep disorders in children with attention-deficit/hyperactivity disorder (ADHD) and in a control population. To examine the relationship between sleep disorders and symptoms of inattention, hyperactivity/impulsiveness and executive dysfunction.

**MATERIALS AND METHODS:**
We studied 126 children with ADHD and 1036 control children aged between 5 and 18 years old. Caregivers completed the Pediatric Sleep Questionnaire and the ADHD Rating Scale (ADHD-RS). Children with ADHD were subsequently assessed for executive function with the Conner's Continuous Performance Test (CPT) or with AULA Nesplora.

**RESULTS:**
Children with ADHD slept less at night and were more likely to display sleep-related rhythmic movements. Children in the ADHD group who were under 12 years old and who had total ADHD-RS scores over the 90th percentile had more difficulty falling asleep than other children; there was also a relationship between total ADHD-RS scores over the 90th percentile and certain parasomnias in the control population. There was a correlation between shorter duration of night-time sleep and omission errors in children who were 12 or older and who were under pharmacological treatment for ADHD. Bedtime resistance and difficulty falling sleep were more frequent in children with ADHD whose symptoms were not treated pharmacologically, than in children receiving treatment.

**INTERPRETATION:**
Symptoms of inattention and hyperactivity are correlated with impaired sleep duration and quality; specifically, there is an association between ADHD symptoms and problems falling asleep and parasomnias, however, the current study does not address the nature and direction of causality. Children with ADHD and receiving methylphenidate had fewer sleep disorders, suggesting that, at least in some children, stimulant treatment is associated with improvement of some aspects of sleep. Shorter sleep duration in adolescents under pharmacological treatment for ADHD tended to result in more errors of omission, suggesting that it is important to promote good sleep habits in this population.