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Neuropsychological effects of pediatric obstructive sleep apnea.

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Obstructive sleep apnea (OSA) is a fairly common nocturnal breathing disorder, affecting 2-4% of individuals. Although OSA is associated with medical morbidity, its most functionally disruptive effects in adults appear to be neuropsychological in nature. Research on the neuropsychological effects of pediatric OSA has been limited. This study compared the neuropsychological functioning of school-aged children with OSA to that of healthy children. The primary goal was to clarify the presence and pattern of neuropsychological morbidity associated with pediatric OSA. Sleep was assessed with parent-report questionnaires and laboratory sleep studies. Neuropsychological functioning was assessed by formal tests and parent- and teacher-report questionnaires. Data indicated OSA-related cognitive and behavioral impairment that was particularly marked on measures of behavior regulation and some aspects of attention and executive functioning. Minimal effects were observed on measures of intelligence, verbal memory, or processing speed. Exploratory analyses failed to indicate any clear relationship between neuropsychological functioning and objective indexes of hypoxia or sleep disruption, though the sample was small. These data add to a growing literature which suggests that significant neuropsychological deficits are associated with pediatric OSA. Findings suggest a pattern of neuropsychological morbidity that is similar but not identical to that seen in adult OSA.

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