

# Study sheds light on link between sleep disorder, behavior issues in kids

April 9 2008

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A new study by researchers at Hasbro Children's Hospital offers a closer look at the association between childhood sleep-disordered breathing (SDB), including snoring and sleep apnea, and behavioral problems like hyperactivity and anxiety.

Published in the April issue of the *Archives of Pediatric and Adolescent Medicine*, the study revealed that children with SDB who are also overweight, sleep for short periods of time, or have another sleep disorder like insomnia are more likely to have behavior issues.

"It's important for clinicians to consider the contributions of these risk factors when screening, triaging, evaluating and designing treatments for children with SDB, particularly since they can help identify those patients who are in need of aggressive interventions and close follow-up," says lead author Judith A. Owens, M.D., M.P.H., director of the pediatric sleep disorders clinic at Hasbro Children's Hospital and an associate professor of medicine at The Warren Alpert Medical School of Brown University.

Owens and colleagues analyzed the charts of more than 230 children and adolescents between the ages of 3 and 18 years with SDB symptoms who were referred for sleep testing. They relied on each participant's history of behavioral, emotional and academic problems as well as Child Behavior Checklist (CBCL) scores – a devise used to measure child behavior problems based on parents' observations. Participants were also divided into three weight groups based on sex and age-adjusted norms

for body mass index.

More than half of the study sample was overweight or at risk for overweight, and at least one-third (36 percent) were identified as being short sleepers. Almost half of all children had at least one additional sleep diagnosis. Forty-seven percent had a history of behavioral problems and 23 percent had a reported diagnosis of attention deficit hyperactivity disorder (ADHD).

Somewhat surprisingly, the strongest predictor of adverse behavioral outcomes and CBCL scores was the presence of at least one additional sleep diagnosis, especially insomnia – not the measure of SDB disease severity, which researchers thought would play a more significant role.

However, researchers note that the lack of association between SDB severity and behavioral outcomes does not imply that SDB doesn't adversely affect children's behavior. "Our results may be interpreted as suggesting that, within the spectrum of patients in this study, severity may have a relatively weaker influence on behavioral outcomes," Owens says.

The weight group also appeared to be closely associated with poor behavioral outcomes, with the most consistent differences between the overweight and average weight groups. And as researchers predicted, a shorter mean sleep duration was associated with worse behavioral outcomes, particularly externalizing concerns.

"What we now need is a more sophisticated understanding of the nature and relative contribution of the various causes of sleep disruption that occur both as a result of, and in association with, SDB," Owens says.

In particular, she notes that the role these risk factors play in compromising daytime alertness, and the subsequent link between

decreased alertness and behavior, deserve additional research.

Source: Lifespan

Citation: Study sheds light on link between sleep disorder, behavior issues in kids (2008, April 9)  
retrieved 5 May 2024 from

<https://medicalxpress.com/news/2008-04-link-disorder-behavior-issues-kids.html>

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