

Sleep problems more prevalent than expected in urban minority children

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Sleep problems among urban minority children, including resistance to going to bed, shortened sleep duration, and daytime sleepiness are much more common than previously thought, according to a study conducted by researchers in New York.

The results of the study will be presented at the ATS 2011 International Conference in Denver.

"Although studies have shown that [children from minority populations](#) take more daytime naps and have shorter nighttime [sleep](#) durations than their non-minority peers, no studies to date have focused on [sleep patterns](#) and objectively measured [sleep duration](#) in early school-aged African-American and [Latino children](#) living in urban, economically disadvantaged communities," said study author Beverley J. Sheares, MD, associate professor of clinical pediatrics at Columbia University. "We studied this high-risk population because at age 5 and 6 years, children are starting school and thus may have less time available for sleep at night or for daytime naps, thereby reducing the amount of sleep at a time when the effect of shortened sleep on learning, behavior and health is critically important.

"The results of this study will be of significance to healthcare providers, researchers, parents and educational professionals, and will have significant public health implications for a highly vulnerable population of early school-aged children," she said.

Researchers randomly enrolled 160 parents of healthy 5- and 6-year-old children. Data were obtained using parental sleep log records and through face-to-face interviews using the Children's Sleep Habits Questionnaire (CSHQ), a validated tool commonly used to screen for childhood sleep problems. CHSQ data were used to identify and characterize the nature of the [sleep disturbances](#). In addition, researchers were able to obtain data from 30 children who underwent sleep monitoring at home for five to seven days using

actigraphy, an objective method of continuous, direct-motion monitoring used to measure sleep and awake time. The monitors were worn 24-hours a day during the monitoring period.

"To our knowledge, neither the CHSQ nor actigraphy has been used extensively in this population of early school-aged children to examine sleep," Dr. Sheares noted.

Evaluating the results of the sleep questionnaire, researchers found that 147 of the 160 children, or 92 percent, had scores indicating the presence of a sleep problem. In addition, parents reported the following behaviors were the specific sleep problems for their children: parasomnias, a group of sleep events that includes nightmares, sleepwalking and other events (51 percent); bedtime resistance (50 percent); shortened sleep duration (50 percent); [daytime sleepiness](#) (47 percent); night waking (41 percent); sleep-onset delay (27 percent); sleep anxiety (19 percent); and sleep-disordered breathing (11 percent).

All children who completed actigraphy monitoring had shortened sleep duration, with a mean sleep duration of seven hours 45 minutes per night on average, significantly less than the 10 to 11 hours recommended by the National Sleep Foundation for children in this age group.

"We expected to find behavioral sleep problems in this population, but we did not expect over 90 percent of the children in this community sample to have a behavioral sleep problem as indicated by the CSHQ," Dr. Sheares said. "While studies consistently show that 20 percent to 43 percent of school-aged children experience a range of sleep problems, there is mounting evidence, and our study supports this, suggesting that children from minority groups have significantly shorter sleep durations and increased sleep disruptions."

"Our study also demonstrates the need to use

objective measures of sleep in urban populations of young children," she said. "While parental reports of children's sleep behaviors have been widely used in both clinical practice and in pediatric sleep research, our findings suggest that parental reports of sleep duration are not reliable because parents in our study consistently overestimated sleep duration."

"Although previous studies have shown that parental reports are closely correlated with sleep schedule variables such as bedtime, wake time and sleep duration, they are less sensitive in assessing sleep quality variables such as sleep fragmentation as a result of night awakening," she explained. "Parents may not have been aware of time spent awake during the night which could have led to an overestimation of sleep duration."

Dr. Sheares said future studies will focus on developing intervention programs aimed at improving children's sleep disorders.

"The study's results may have significant implications for this group of children because while pediatric sleep problems are universal and exist across all cultures, the impact of poor sleep is magnified in vulnerable children," she said.

"Inadequate sleep is a major health problem of childhood that often fails to receive attention until significant health problems are noted, such as inattentiveness, memory loss and impaired learning," Dr. Sheares added. "The next step of this research is to carry out and evaluate the efficacy of a tailored, interactive, educational and behavioral intervention that utilizes trained sleep counselors to assist parents in improving their children's sleep hygiene and reducing risk factors for poor sleep, thereby increasing sleep duration over a 12-month period in a randomized controlled trial of children identified with [sleep problems](#)."

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