

DOES YOUR CHILD HAVE A LEARNING PROBLEM... OR IS HE JUST TIRED?

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There is mounting evidence that sleep deprivation can cause serious problems with learning and behaviour, the emotional well-being of children, and on family functioning. In fact, some researchers believe that rising rates of behavioral and emotional problems in children result from kids having more sleep problems overall. Unlike teens or adults, young children typically don't yawn or seem sleepy when they are tired. Instead, they often become irritable, easily frustrated, hyperactive, accident-prone, and show concentration troubles. Parents often don't consider the possibility that signs like these are a result of sleep deprivation, especially if the troubles have been going on for a long time or seem mild. What follows are some findings from recent research into connections between poor sleep and kids' learning and behaviour.

Children with sleep disorders may show some of the same behavioral signs as children with attention deficit hyperactivity disorder (ADHD). A team led by Dr. David Gozal of the University of Louisville conducted sleep studies in children aged five to seven with reported ADHD symptoms. Gozal found that more than a quarter of children with mild ADHD-like symptoms snored or suffered from sleep apnea—a sleep disorder in which breathing is interrupted. In some cases, when a child's sleep apnea was diagnosed and treated, there was a marked improvement or complete disappearance of hyperactivity symptoms, and the child could stop taking medication for ADHD. Although children with more severe hyperactivity symptoms did not suffer from sleep-disturbed breathing more than children without ADHD, they did show disturbed REM (rapid eye movement) sleep which apparently affected daytime behavior. Parents of children with mild to moderate ADHD-like symptoms tended to over-estimate their children's sleep problems.

Italian and American researchers have independently reported that the incidence of inattention, hyperactivity, and behavioural problems is greater in kids with sleep disorders than in same-aged children without sleep disorders. They note that sleep problems interfere with executive functioning in both children and adults. Executive functions are the cognitive processes that facilitate flexible, future-oriented and organized behaviours.

Kids with sleep disordered breathing showed the most serious impairment of daytime functioning, but when children with night-time breathing difficulties had their adenoids



removed and their sleep improved, their cognitive scores did too. Another study evaluated 42 children with obstructive sleep apnea who were scheduled to have their tonsils or adenoids removed. The children with OSAS showed a much higher rate of emotional and behavioral problems than children who were scheduled for other kinds of elective surgery but who had no history of snoring. Surveys completed by parents before their child's surgery and three months afterward showed that behavioral and emotional difficulties improved with treatment.

Research led by Dr. Marsha Luginbuehl last year at the University of South Florida strongly suggested that sleep problems were related to reduced academic and behavioural performance in children and teens. Researchers found that the greater the sleep problem, the lower a child's reading, math, and writing scores. Also, the more severe the sleep problem, the more irritable, depressed, and moody, aggressive, defiant, and distractible the child or teen appeared. The picture worsened as children became teens, but improved with treatment of the sleep problem.

"The improvements we are seeing in student performance and behaviors are very exciting and promising," Luginbuehl told The Rooftop. "No medication or special education program can begin to bring about the immediate and significant improvements in student performance that correcting the student's sleep disorder can make."

Sleep loss has been blamed in childhood

injuries such as falls, pedestrian accidents, and bicycling accidents. Children who experience sleep loss are more likely to have accidents during the following 24 hours than kids who get enough sleep, and the more hours children are continuously awake, the higher the risk for injury.

None of this should suggest that a child diagnosed with ADHD or another disorder who also sleeps poorly, has been diagnosed incorrectly. Although sleep loss affects a child's ability to learn, behave appropriately, and feel good about himself, the reverse also appears to be true. Kids diagnosed with ADHD sleep less overall and have more sleep problems than kids without ADHD. Also, children with learning disabilities or disorders



may sleep poorly because they are demoralized or worried about their school work.

However, all of this research does highlight the importance of educators, physicians, psychologists, and parents learning more about sleep disorders and their effect on learning and behaviour. Professionals should ask good questions about a child's sleep when they investigate suspected learning and behaviour problems or offer diagnoses. Parents should tell their kids' health care providers about their child's sleep. Whether or not a child has a primary learning or behavioural problem, correct diagnosis and treatment of a sleep disorder can help him or her to do better. In the event that the original diagnosis of ADHD (for example) is correct, developing good sleep hygiene might improve the child's performance much more than the interventions for the ADHD ever did. □

