

Toronto Star

Poor sleep tied to kids' lower academic performance

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By: Reuters, Published on Tue Aug 20 2013

Children who have trouble sleeping tend to do worse in school than their peers who get a good night's sleep, a new study suggests.

Researchers in Brazil looked at children age 7 to 10 who attended Sao Paulo public schools. They found kids with symptoms of sleep disorders or sleep breathing disorders earned lower grades than those without problems sleeping, on average.

Thirteen per cent of children with difficulty sleeping had failing grades in Portuguese, compared to nine per cent of those without sleep problems. Likewise, 25 per cent of kids with disrupted sleep had failing math grades, versus eight percent of children without trouble sleeping.

“Because (symptoms of sleep disorders) and particularly (sleep breathing disorders) are highly prevalent, we suggest that all health professionals and educators become aware of this striking effect and take appropriate actions to solve or mitigate what could very well constitute a public health issue,” researchers led by Luciane Bizari Coin de Carvalho from the Universidade Federal de Sao Paulo wrote.

Experts estimate that roughly one-quarter of U.S. children have disrupted sleep at some point during childhood. Erratic bedtime hours and anxiety, either at school or at home, may contribute.

Other children may have unrecognized sleep disorders, such as sleep walking, nightmares or insomnia, or sleep breathing disorders, like sleep apnea. Some medications, including those for asthma or attention-deficit/hyperactivity disorder, can affect sleep. The underlying medical problems may also cause sleep disturbances.

Poor sleep among children has been tied to obesity, which over the long term increases the risk of heart disease and diabetes. And poor school performance has been linked to early dropout rates — so the new findings may have implications beyond getting a good night's sleep, researchers said.

From 1999 to 2001, the researchers distributed 5,400 questionnaires asking about symptoms of sleep disorders and sleep breathing disorders to children in Sao Paulo public schools.

Then they looked at the Portuguese and Math grades of 2,384 children whose parents filled out and returned the questionnaire.

The study team found about 31 per cent of the children had symptoms of sleep disorders — such as difficulty falling or staying asleep, or feeling sleepy all the time — and close to 27 per cent had sleep breathing disorders. Those students' grades were significantly lower than the grades of kids without sleep disorder symptoms.

In Brazil, grades are based on a scale of 0 to 10, with 5 considered passing. Average Portuguese grades were 6.6 for kids with sleep problems, compared to 7.1 among those with no sleeping trouble.

Likewise, children with symptoms of sleep disorders or sleep breathing disorders earned an average grade of 6.3 in Math, compared to 7.1 for other children, according to findings published in the journal *Sleep Medicine*.

Dr. Carl Bazil, a neurologist and director of the division of epilepsy and sleep at New York Presbyterian/Columbia University Medical Center in New York City noted that this study fills a research void.

“There’s growing information, mainly in adults, that you need good quality sleep to process and learn new information,” Bazil told Reuters Health.

“It stands to reason that, if anything, sleep would be more important in children, but there’s very little information in children about sleep disturbance and learning.”

Research has shown that sleep deprivation might affect certain parts of the brain, especially the frontal lobes. The frontal lobes control executive function, which is the ability to make decisions, form memories, plan for the future and inhibit socially undesirable behaviour — like fighting with a classmate.

However, the new study can’t say definitively that sleep problems were to blame for poor grades, researchers said.

“This study doesn’t prove that a sleep disturbance causes decreased academic performance,” Bazil said, “but it shows an association. Basically every category of sleep disturbance the authors looked at correlated with decreased academic performance.”

The researchers relied on parents’ reports of their children’s sleep, rather than bringing kids into a sleep lab overnight, for example.

The study is “far from perfect,” Bazil said. But, “It’s a first step in emphasizing that sleep in children is something that’s important, not only to prevent them from being sleepy but to make sure that they learn. I think this study will help raise awareness that sleep is particularly important in children.”