



# Variable sleep schedules might put preschoolers at risk of academic difficulties

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New data suggest that internalizing problems are associated with sleep variability and that cognitive ability is associated with sleep timing.

The study, conducted by researchers in the USA, involved 119 children who were longitudinally assessed from 30 months up to 54 months-of-age. Sleep was measured objectively using actigraphy and then various sleep parameters (including duration, timing, variability and activity) were correlated across behavioural adjustment, socioemotional, cognitive and academic domains.

Contrary to the researcher's predictions, few associations were found between child sleep and externalizing problems. In addition, no associations emerged between any of the sleep parameters and the children's socioemotional abilities. However, there was an association between sleep variability and internalizing problems: children with more variable sleep at 30 months had higher teacher-reported internalizing problems (including anxious, depressed and withdrawn behaviours) in preschool. Despite this, longitudinal changes in sleep from 30 to 54 months were not associated with internalizing or externalizing problems. The most robust association was between sleep and academic/cognitive abilities. Here, those with later sleep schedules in early childhood (30 months-of-age) had poorer cognitive and academic abilities at 54 months.

Overall, it seems that several traditionally examined indexes of sleep (including sleep duration) are not reliably associated with behavioural adjustment outcomes across domains. As such, the researchers explain that future studies should examine a comprehensive range of sleep variables, as using only one or two actigraphy indexes might not be sufficient to identify significant patterns. As this study included a relatively small and highly educated sample (86% primary caregivers had a college degree), replication is now necessary in a larger and more diverse sample. Nevertheless, the preliminary data suggest that interventions to address child sleep schedules and habits (i.e., sleep timing and variability), might help reduce internalizing problems and academic/cognitive difficulties in early childhood.

## Referring to:

Hoyniak, C.P., Bates, J.E., McQuillan, M.E., Staples, A.D., Petersen, I.T., Rudasill, K.M. & Molfese, V.J. (2020), *Sleep across early childhood: implications for internalizing and externalizing problems, socioemotional skills, and cognitive and academic abilities in preschool*. *J. Child Psychol. Psychiatr.* doi: 10.1111/jcpp.13225.

## Glossary:

**Internalizing problems:** individuals with internalizing problems typically attempt to conceal their maladaptive emotions and cognitions. This internalizing approach can manifest as depression, withdrawal, low self-esteem, anxiety and/or loneliness. Some affected individuals might also exhibit suicidal behaviours.

**Externalizing problems:** individuals with externalizing problems exhibit their maladaptive thoughts and emotions externally. Characteristic behaviours include impulsivity, and antisocial or aggressive behaviours. Adult manifestations of externalizing problems can include alcohol-related or substance-related disorders.