Children's Hospital of Philadelphia PolicyLab

Changes in Sleep Duration and Timing During the Middle-to-High School Transition

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The purpose of the study was to quantify changes in sleep during the middle-to-high school transition and determine if changes in sleep differ by sociodemographic characteristics. Adolescents were enrolled in eighth grade and followed into ninth grade (N = 110; 2,470 nights observed). The outcomes were actigraphy-estimated sleep duration, sleep onset, sleep offset, and sleep sufficiency (?8 hours of sleep). The exposures were school grade (eighth or ninth), school night status (school or nonschool), sex (female or male), and race (white, black, or other). On school nights, sleep duration declined by 25.8 minutes per night ($p < .001$) from eighth to ninth grade. There was no change in sleep duration on nonschool nights. Timing of sleep onset was 22.2 minutes later on school nights ($p < .001$) and 17.4 minutes later on nonschool nights ($p < .001$) in ninth grade. Timing of sleep offset did not change on school mornings but was 22.2 minutes later on nonschool mornings ($p < .001$) in ninth grade. The proportion of school nights (and nonschool nights) with sleep duration ?8 hours was 9.4% (38.3%) in eighth grade and 5.7% (35.9%) in ninth grade. The odds of sleeping ?8 hours per night was 42% lower in ninth grade, compared toeighth grade (odds ratio = .58; 95% confidence interval: .37, .91). Males were 59% less likely to sleep ?8 hours per night. Black adolescents were 51% less likely to sleep ?8 hours per night. Insufficient sleep is highly prevalent, especially on school nights and among male and black adolescents, and this problem worsens with the transition to high school.

Journal:

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