

Sleep patterns and screen time in US school children during the first 6 months of the COVID-19 pandemic

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Abstract

Objective: This study compared sleep duration, screen exposure and sleep quality in school-aged children before COVID-19 to that during school closures and again when schools re-opened in fall 2020. **Study design:** Cross-sectional anonymous, online survey of parents of children 5-13 years old. **Methods:** Questions elicited information about sleep timing and quality, screen time, and schooling at three distinct periods: before the pandemic, when schools first closed in March 2020 and then re-opened in the fall. **Results:** Respondents described 101 children who were an average of 8.5 years old and 51% male. In lockdown, children slept an average of 25 minutes more (95%CI 00:13-00:38) due to delays in bedtime by 29 minutes (95%CI 0:00-0:58) and wake time by 75 minutes (95% CI 0:57-1:34). When schools re-opened, sleep duration returned to pre-pandemic levels, but sleep onset and offset times remained later. Despite more sleep, sleep quality and habits (e.g. bedtime refusal) worsened during lockdown and did not normalize in fall 2020. During lockdown, screen time increased in 65% of all children, and 96% of those in private schools. When school reopened in the fall, 78% of children in hybrid/virtual learning had screen time over 4 hours daily. Less daily screen time was associated with 2-fold higher odds of better sleep (OR 2.66, 95%CI 1.15-6.14). **Conclusions:** Although, school-aged children had an increase in sleep time when schools were closed, sleep quality and habits worsened. Upon return to school, sleep times and sleep quality did not normalize and were related to increased screen time.

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