Sleep characteristics predict cannabis use, binge drinking in teens and young adults

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A recent study of teens and young adults found that several factors related to sleep timing and sleep duration are associated with an increased risk of cannabis use and binge drinking of alcohol during the

following year.

Results show that a greater late-night preference predicted a greater likelihood of any cannabis use the following year. Greater late-night preference, greater daytime sleepiness, later sleep timing on the weekend, and shorter sleep duration during weekdays and on the weekend, all predicted an increased risk for more severe binge drinking the following year.

For further analysis, the sample was stratified into two groups: middle school/high school students (age 12-18) and high school graduates (age 18-27). Results show that sleep variables predicted marijuana use only in the middle school and high school students, while different patterns of sleep characteristics predicted binge drinking in the two stratified samples.

"Overall, the results suggest that teens in middle and high school may be more vulnerable to sleep-related risk for substance use," said lead author Brant P. Hasler, who has a doctorate in clinical psychology and is an associate professor of psychiatry, psychology, and clinical and translational science in the Center for Sleep and Circadian Science at the University of Pittsburgh. "The particular pattern of sleep predictors in the middle school and high school sample is consistent with the 'circadian misalignment' caused by early school start times."

Multiple years of data were analyzed from the National Consortium on Alcohol and Neurodevelopment in Adolescence. The sample comprised 831 participants, including 423 females. Participants were between 12 and 21 years of age at baseline. Results were controlled for factors such as age, sex, race, parental education, and previous year's substance use.

"Sleep is modifiable behavior, and perhaps easier to modify than going after substance use directly," said Hasler. "Furthermore, other studies

show college-age teens are more willing to hear about changing their sleep than changing their substance use. Thus, focusing on improving teen sleep—including through delaying school start times—may be an underutilized but effective approach to reducing risk for problematic substance use."

CDC data show that only 25% of students in grades 9 through 12 get sufficient sleep on an average school night, and early school start times are one factor associated with insufficient sleep in teens. The American Academy of Sleep Medicine recommends that middle school and high school start times should be 8:30 a.m. or later to support an adequate opportunity for adolescents to obtain sufficient sleep on school nights. Sleep problems such as insufficient sleep duration, irregular sleep timing, and insomnia also are common among college students, and these problems are associated with anxiety and depression symptoms.

The research abstract was published recently in an online supplement of the journal Sleep and will be presented as an oral presentation on Friday, June 11, during Virtual SLEEP 2021.

  More information: Brant Hasler et al, 610 Self-Reported Sleep and Circadian Characteristics Predict Future Substance Use: A Longitudinal Analysis from the NCANDA Study, *Sleep* (2021). DOI: 10.1093/sleep/zsab072.608

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