

Sleep disturbance was significantly associated with social isolation ($r=0.251$, $p<0.001$), poor global physical health ($r=-0.186$, $p<0.001$) and mental health ($r=-0.376$, $p<0.001$), and lower GPA ($r=-0.167$, $p=0.004$). Additionally, seven focus groups were conducted in a total of 32 students, suggesting that the increase in free time from the COVID-19 pandemic led to greater digital media use, compromising sleep duration and quality. With the increase of screen time also came feeling of guilt and anxiety which often led to greater awareness and self-control around media use.

Conclusion: Nighttime digital media use during the challenging pandemic time has a significant impact on poor sleep, which may lead to decreased academic performance, greater social isolation, and poor physical and mental health in college students. Effective interventions targeting digital media use are needed to improve sleep in this population.

Support (if any):

225

SLEEP TIMING AND CHRONOTYPE IN MOTHERS: LONGITUDINAL CHANGES AND ASSOCIATIONS WITH WELLBEING FROM PREGNANCY TO 2 YEARS POSTPARTUM

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Introduction: Women experience significant changes to sleep during perinatal periods. Existing research focuses on sleep duration and quality, but not sleep timing or chronotype (i.e., preferred timing for activity and sleep). This study investigated change trajectories of sleep timing and chronotype from late pregnancy to two years postpartum, and examined longitudinal associations between chronotype and insomnia, sleep-related daytime impairment, and mood.

Methods: Data were from a 2-arm randomized controlled trial testing behavioral sleep and diet interventions. A community sample of nulliparous women without severe sleep/mental health conditions participated. Women self-reported bedtime, risetime, chronotype (reduced Morningness-Eveningness Questionnaire), Insomnia Severity Index, and PROMIS Depression, Anxiety, and Sleep-Related Impairment over 7 time points: 30 and 35 weeks' gestation, and postpartum months 1.5, 3, 6, 12 and 24.

Results: 163 women (mean age 33.35 ± 3.42 years) took part. Mixed effects models controlling for age and group allocation showed that both bed- and risetimes became progressively earlier over time by approximately 20-30 minutes on average ($p < .001$); chronotype also shifted progressively towards morningness ($p < .01$). After controlling for covariates (sleep duration and efficiency, mental health history, social support, age, group allocation), greater morningness was significantly associated with lower symptoms of insomnia and sleep-related impairment over time (p -values $< .001$); longitudinal associations between chronotype and symptoms of depression and anxiety were non-significant (p -values $> .65$).

Conclusion: This is one of the first studies to examine longitudinal changes in sleep timing and chronotype from pregnancy to two years postpartum. Sleep timing and chronotype became progressively earlier over the first two postpartum years. The magnitude of changes is beyond what is expected with increasing age. Greater morningness was associated with lower sleep complaints and sleep-related daytime impairment during the postpartum period. The mechanisms underlying these associations require further research.

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226

CHANGES IN SLEEP AMOUNT AND SLEEP QUALITY DUE TO THE COVID-19 PANDEMIC CONFINEMENT ASSOCIATE WITH RATINGS OF HEALTH AND STRESS

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Introduction: In March 2020, an unprecedented number of individuals were confined to their homes in an effort to stem the spread of the novel Coronavirus (Covid-19), however the impact of this confinement on health and behavior is unknown. Long-duration confinement studies have found effects on homeostatic biology and neurobehavioral functions, including reduced sleep durations. This study evaluated how confinement due to Covid-19 has impacted health and stress through changes in sleep.

Methods: The Anonymous Survey on Confinement during the COVID-19 Pandemic was available online to any individual ≥ 18 years of age through the Penn Medicine Clinical Research webpage on May 14, 2020 and the data presented are through October 24, 2020. The survey collected self-reported information on demographics, the amount and quality of sleep, as well as ratings of health and stress. To determine the impact of confinement on these domains, participants were asked to answer questions relative to pre-confinement levels. To test associations between sleep amounts and sleep quality on health and stress, generalized linear models were used and adjusted for age, sex, and race.

Results: $N=228$ participants ($n=180$ female [79.0%]) were on average 45.0 ± 17.1 years of age. During confinement relative to pre-confinement, 41.7% of participants reported sleeping more, 37.3% reported sleeping the same amount, and 21.0% reported less sleep, while 14.0% reported better sleep quality, 47.4% the same, and 38.6% worse quality of sleep relative to pre-confinement. Ratings of worse health during confinement were associated with both reduced sleep amount ($\beta=0.695$; $P<0.0001$) and worse sleep quality ($\beta=0.532$; $P=0.0002$). Lower stress ratings were associated with increased sleep amount ($\beta=0.734$; $P=0.034$), better sleep quality ($\beta=1.396$; $P=0.0002$), better health ratings ($\beta=-0.079$; $P=0.0045$). Conversely, worse sleep quality was associated with higher stress ratings ($\beta=-1.086$; $P=0.0007$).

Conclusion: The confinement resulting from the COVID-19 pandemic has impacted the amount and quality of sleep and good sleep may help to reduce stress and maintain health. These findings highlight the need to further examine how long-term confinement influences human health and behavior and warrant examining what factors or life-style behaviors promote resilience to the negative effects of confinement.

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227

POOR SLEEP AS A PREDICTOR OF COVID-19 RELATED STRESS, FEAR AND SADNESS IN YOUNG ADOLESCENTS: A LONGITUDINAL STUDY

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Introduction: Adolescence is a transitional life-stage accompanied by large biopsychosocial changes and greater psychophysiological vulnerability. Global events like the COVID-19 pandemic may increase vulnerability to depression and anxiety in this population. Poor sleep is often associated with depression, and both sleep and mood