

negative mood ( $r(91)=-.433$ ,  $p<.001$ ). Participants with poorer sleep quality reported less success regulating their emotions that day ( $r(90)=.292$ ,  $p=.005$ ) and greater suppression of emotions (rather than cognitive reappraisals to regulate them) ( $r(91)=-.260$ ,  $p=.012$ ). Social Isolation: Subjective sleep quality was not predicted by social distancing behaviors ( $r(88)=.069$ ,  $p>.05$ ); however, poorer sleep quality was significantly predicted by greater daily feelings of social isolation ( $r(91)=-.264$ ,  $p=.005$ ) and lower feelings of social life satisfaction ( $r(91)=-.338$ ,  $p<.001$ ). COVID-related media: Sleep quality was not significantly related to COVID-media consumption for all participants; however, moderation analyses showed that participants with low avoidance coping, low neuroticism, and high emotional well-being did experience poorer sleep quality associated with greater COVID media consumption (all  $p$ 's<.05).

**Conclusion:** That mood and social isolation are associated with sleep quality replicates previous findings. The pandemic, however, provided a unique opportunity to observe these relationships in individuals not normally socially isolated because of confounding variables (e.g., health issues, depression, anxiety) with known relationships to sleep quality. That COVID-related media was only related to sleep quality for more well-adjusted participants (low avoidance coping, low neuroticism, high emotional well-being) was surprising, suggesting some may find COVID-19 information anxiety-relieving rather than anxiety-provoking.

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## 0048

### THE ASSOCIATION BETWEEN SLEEP HEALTH AND WORK- AND HEALTH-RELATED QUALITY OF LIFE IN DESK WORKERS AND DIFFERENCES IN ASSOCIATIONS PRE- AND POST-COVID-19 EMERGENCE

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**Introduction:** COVID-19 resulted in many office workers switching to remote work. Emerging studies report working from home has negatively affected sleep health (SH) and psychological well-being. Our aim was to evaluate the relationship between SH and health- and work-related quality of life and explore whether these associations differed pre- and post-COVID-19 emergence.

**Methods:** Baseline data from 125 adults enrolled pre- ( $n=59$ ) and post-COVID-19 emergence ( $n=66$ ) in a clinical trial with desk jobs were included in this analysis (86.4% White; 49.6% female;  $43.9\pm 10.7$  y). Health-related quality of life (HRQoL) was assessed using the SF-36 questionnaire, which addresses eight health concepts (physical, social, and role functioning; mental health; health perceptions; energy or fatigue; pain; general health) and yields 2 summary scales (mental component summary, physical component summary). Workplace productivity and worker health was measured using the Health and Work Questionnaire (HWQ). Six SH dimensions were assessed using questionnaires (satisfaction, alertness) and 7 nights of actigraphy (regularity, timing, efficiency, duration). Each dimension was categorized as "good" or "poor"; a composite score was created based on the sum of good SH dimensions. Multiple linear regression models were adjusted for gender and age and stratified by enrollment pre- or post-COVID-19

emergence. Data are presented as standardized coefficients ( $\beta$ ) and  $p$ -values ( $p$ ).

**Results:** Compared to participants enrolled prior to COVID-19, those enrolled post-COVID-19 had worse SF-36 emotional, social, and general health and greater HWQ-assessed impatience (all  $p<.05$ ); however, SH did not differ between those enrolled pre- and post-COVID. Prior to COVID-19, greater SH was associated with higher SF-36 physical component scores ( $\beta=.389$ ,  $p=.003$ ); however, no association was observed post-COVID ( $\beta=.137$ ,  $p=.271$ ). In contrast, no association was observed pre-COVID between SH and SF-36 mental component scores ( $\beta=.181$ ,  $p=.160$ ), but greater SH was associated with greater mental component scores post-COVID ( $\beta=.308$ ,  $p=.004$ ). Furthermore, better SH was associated with lower stress post-COVID ( $\beta=-.423$ ,  $p<.001$ ).

**Conclusion:** SH was associated with HRQoL and workplace and worker health, though these associations sometimes differed between pre- and post-COVID emergence. Research should explore whether promoting SH in employees impacts their personal and workplace-related quality of life.

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## 0049

### SCREEN TIME AND SLEEP IN YOUNG ADOLESCENTS BEFORE AND ACROSS THE FIRST YEAR OF THE COVID-19 PANDEMIC.

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**Introduction:** The COVID-19 pandemic has been associated with profound biopsychosocial changes for children, potentially affecting their health and wellbeing. Among these changes are altered sleep patterns and screen time use, however, no work has examined interactions between these two behaviors in the context of the pandemic. Here, we used longitudinal data from the Adolescent Brain Cognitive Development (ABCD) Study® to investigate changes in both sleep and screen time, and their relationship, from before and across the first year of the COVID-19 pandemic in young adolescents.

**Methods:** More than 5000 adolescents (11-14 years; 48% girls) completed digital surveys about their sleep and daily screen time use before the pandemic and across six timepoints during 2020-2021, as part of the ongoing ABCD Study®. Random intercept linear mixed effect models (LMMs) were used to examine longitudinal associations between bedtime, wake-up time, and daily screen time use (social media, gaming), considering age, sex, and school effects.

**Results:** Adolescents' wake up time was delayed ( $R^2 = 0.51$ ;  $\sim 1.5$  hour) during May-August 2020 relative to the pre-pandemic assessment ( $p<.01$ ), which was partially related to the summer break ( $p<.01$ ), before advancing to earlier times in October 2020. Bedtimes also delayed at all pandemic assessments ( $R^2=0.62$ ;  $\sim 1$  hour), even after starting the new school year ( $p<.01$ ), particularly in older adolescents ( $p<.01$ ) and girls ( $p<.01$ ). Recreational screen time was dramatically higher across the first year of the pandemic, relative to pre-pandemic ( $p<.01$ ;  $\sim 45$ min social media,  $\sim 20$ min video gaming). More time spent with screen related activities was associated with later bedtimes and wake up times

( $p < 0.01$ ), across the pandemic, with effects being evident in male and female adolescents.

**Conclusion:** Our findings show profound changes in sleep timing and screen time use across the pandemic in young adolescents, and critically, that excessive screen time negatively impacts sleep. As adolescents increasingly turn to more screen usage, these data highlight the need to promote their balanced and informed use of social media platforms, video games, and other digital technology to ensure adequate opportunity to sleep and maintain other healthy behaviors during this critical period of developmental change.

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## 0050

### THE ROLE OF POVERTY AND PERCEIVED STRESS ON INSOMNIA SYMPTOM SEVERITY DURING THE COVID-19 PANDEMIC

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**Introduction:** In 2020, poverty in the United States increased as the COVID-19 pandemic led to the loss of work and/or income. Recent research has also shown that stress caused by the pandemic has led to increased rates of poor sleep. While insomnia rates have increased nationwide, it is not yet known if those living in poverty experienced insomnia symptoms at disproportionate rates. This study examined the effect poverty has had on insomnia symptom severity, as well as whether perceived stress mediated this association.

**Methods:** Survey data was collected from 3,775 U.S. adults (83.1% White, 78.6% female, age = 18–86 years old) during the initial months of the COVID-19 pandemic (April–June 2020). These data were used for a secondary analysis. Participants completed an online survey aimed to assess basic demographics, sleep, physical activity, social engagement, and overall stress levels. Poverty was defined using the poverty guidelines provided by the Department of Health and Human Services (i.e., based on self-reported income and family/household size). The Insomnia Severity Index (ISI) was used to assess insomnia symptoms. Perceived stress was assessed using the Perceived Stress Scale (PSS).

**Results:** 316 participants (8.4%) met criteria to be considered living below the poverty threshold. Those below the poverty threshold had a mean ISI of 10.20 (95% CI: 9.54, 10.86), while those above the poverty threshold had a mean ISI of 8.33 (95% CI: 8.13, 8.53). Put differently, 26.6% of those below the poverty threshold met criteria for clinical insomnia (i.e., ISI > 14), whereas 15.9% of those above the poverty threshold met criteria for clinical insomnia. Finally, a mediation test (with bootstrapping) confirmed that the association between poverty and insomnia was partially mediated by perceived stress (indirect effect = 1.15, 95% CI: 0.76, 1.55).

**Conclusion:** While poverty guidelines vary by state, these data generally support that there are notable disparities in sleep and insomnia based on family/household income, and that these differences are, in part, due to greater perceived stress. This may be due to increased stress related to loss of work or income. Future studies examining the impact of pandemic stress on insomnia should consider the role of socio-economic status.

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## 0051

### THE ROLE OF PERCEIVED CONTROL IN BUFFERING AGAINST POOR SLEEP IN ESSENTIAL WORKERS DURING COVID-19

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**Introduction:** The COVID-19 pandemic has impacted sleep, with some populations such as essential workers reporting insomnia and poor sleep health. Prior research has suggested (but not tested) that this worsening of sleep may be tied to a lack of control over one's health or safety during the pandemic. This study tests this prediction and examines the role of perceived control as a protective factor against poor sleep in essential workers.

**Methods:** This study uses data from the NDSU National COVID Study, which has followed 301 nationally-representative American adults across four waves of data collection since April 2020. The current analysis includes data from wave 1 (April 2020) in 279 participants who had complete demographic, essential worker, perceived control (including domain general perceived control as well as health, COVID, work-specific control), and sleep health (RUSATED) data. Using t-tests and correlations, we hypothesized: (1) sleep health would be worse in essential workers compared with others; (2) perceived control would relate to better sleep health; and (3) perceived control would be a stronger predictor of sleep health in essential workers relative to others.

**Results:** There were no significant differences in sleep health between essential workers ( $N=44$ ,  $M=8.27$ ,  $SD=2.72$ ) and others ( $N=235$ ,  $M=8.46$ ,  $SD=2.54$ ;  $t=-0.44$ ,  $p=.66$ ). In the full sample, all indices of perceived control were significantly related to better sleep health ( $r_s=.17-.31$ ,  $p < .004$ ). Associations were stronger in essential workers ( $N=44$ ,  $r_s=.30-.56$ ,  $p_s < .05$ ) than in others ( $N=235$ ,  $r_s=.13-.31$ ,  $p_s < .04$ ). In sensitivity analyses that excluded participants not working for pay (e.g., people who were unemployed, retired, or receiving disability) from the other category, moderation effects were stronger; only COVID-related perceived control was significantly related to sleep health ( $N=110$ ;  $r=.24$ ,  $p=.01$ ) in non-essential workers.

**Conclusion:** This is the first study to demonstrate links between perceived control and sleep. Although sleep health was not significantly different between essential and non-essential workers, we found that perceived control was especially beneficial for essential workers' sleep. Our results suggest interventions to improve perceived control, a modifiable psychosocial resource, might improve sleep health for essential workers.

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## 0052

### A MIXED-METHODS EXAMINATION OF PERCEIVED CHALLENGES DURING THE COVID-19 PANDEMIC: ASSOCIATIONS WITH SLEEP HEALTH AND NIGHTMARES AMONG HEALTHCARE WORKERS

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**Introduction:** The emergence of CoVID-19 has created an immense burden on healthcare systems across the world, placing healthcare workers (HCWs) under significant, additional stress while they also confront multiple personal, family and sociopolitical challenges