Results: Results show that in less resilient young adults, nightmares prior to COVID-19 (β=.79, p<.001) and increase in negative emotions (β=.21, p=.033) significantly predicted nightmares during the pandemic and explained 67.0% of their variance. In resilient young adults, nightmares prior to COVID-19 (β=.56, p<.001) and gender (β=-.15, p=.04) significantly predicted nightmares during the pandemic and explained 52.0% of the variance.
Conclusion: Our results show that increase in negative emotions during the pandemic is associated with an increase in nightmares in less resilient young adults, but not in resilient young adults. Furthermore, our results show that in resilient young adults, being a woman is associated with an increase in nightmares during the pandemic. These results suggest that resilience may be a protective factor in managing the impact of negative emotions on nightmares, but only in men.
Support (if any):

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CHANGES IN CHILDHOOD SLEEP PATTERNS IN AN INTERVENTION STUDY PRIOR TO AND DURING COVID19 RESTRICTIONS

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Introduction: We conducted a childhood sleep promotion study between March 2019 and December 2020 in Philadelphia. COVID19 was first detected in Pennsylvania in March 2020 and non-essential services were strictly curtailed (including school closures), with easing of curtailments by the fall 2020 (including hybrid schooling in some districts). We determined if changes in sleep duration were consistent during pre-, earlier, and later COVID19 periods.
Methods: Typically developing children (9-12y) with sleep duration <8.5 hours per weeknight were enrolled. Sleep was measured using Fitbit devices during a baseline week and a 7-week intervention period. A factorial design was used to test five candidate intervention components: 1) sleep goal; 2) electronic device reduction messaging; 3) daily routine messaging; 4) child-directed financial incentive; and 5) parent-directed financial incentive. Sleep data were transmitted to a mobile health platform that automated delivery of the intervention components. We categorized participants when they completed the study: 1) Spring-Fall 2019 semesters (pre-COVID19); 2) Spring 2020 semester (started pre-COVID19, with strict restrictions impacting intervention periods); or 3) Fall 2020 semester (easing of COVID19 restrictions). Mixed effect modelling determined sleep changes.
Results: Mean age of participants was 11.6y (51% female and 29% Black participants). Pre-COVID19 (N=59), average sleep duration increased from baseline by 21 (95% CI: 10, 30) minutes per weeknight during the intervention. In spring 2020 (N=18), the average sleep duration increase was two times larger in magnitude at 41 (95% CI: 25, 59) minutes per weeknight. For fall 2020 (N=20), the average sleep duration increase was 24 (95% CI: 7, 40) minutes per weeknight. Changes in sleep timing from baseline during the intervention were consistent pre-COVID19 and in the fall 2020 (e.g., ≈15 minutes earlier sleep onset throughout the intervention period), whereas sleep timing changes were dynamic in the spring 2020 (e.g., 41 minutes earlier for week 1, and 44 minutes later for week 7).
Conclusion: This sleep intervention demonstrated increases in sleep duration pre-COVID19, with marked duration increases and dynamic timing changes coinciding with COVID19 restrictions during earlier (Spring 2020), but not later (Fall 2020), weeks of the COVID19 pandemic in Pennsylvania.
Support (if any): K0 1 HL1 2 3 6 1 2 and CHOP

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Social media for students sleep health promotion: A health intervention report during COVID -19

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Introduction: The COVID-19 pandemic affected sleep health. Students' sleep health requires cognitive processes, mental and physical balance. We assume that the pandemic COVID-19 has modified some sleep habits by eliciting environmental and social interaction changes. According to the perspective that the students need health education interventions on sleep hygiene, we aimed to promote sleep health education based on social media in students using Instagram.
Methods: Students participated by answering an online questionnaire in Instagram platform. The sample was 300 students with internet access between two weeks of March/2020. This period refers to the second and third week of the social isolation policy enacted due COVID-19. The Snowball strategy was the dissemination method, a non-probabilistic sampling technique in which the participants invited new participants from their network of acquaintances.
Results: The valid responses were from students among 18–24 y.o. The sample was mostly female (61,7%), between 18 and 22 y.o., and they sleeped less than 8 hours. Also, 76,3% of the surveyed reported somnolence during the day, 70,2% anxiety and 87,8% worse sleep associated to stress and/or anxiety, which indicated the variables for an educational health intervention design in this context. Most of the sample did stipulate a schedule to wake up on the weekdays (96,6%), and 24,4% of the sample didn't stipulate a fixed schedule for bedtime during the weekdays. More than 150 people (53,2%) didn't make any effort to avoid screens before sleeping. The responses' distribution showed that an average number of people (73,9%) try to avoid using the bed for work or watch television, and 83,1% seek to avoid heavy foods before sleeping.
Conclusion: The Instagram profile focused on the main sleep issues seen in the survey. The posts were created using subjects about sleep process, sleep hygiene practices for students; sleep stages, function and regulation; sleep-wake circadian rhythms. The creation of the @ comodormimos profile on Instagram was based on the need for a subject understanding by the researched public. Coronavirus' pandemic increased the harmful sleep behavior of students. Further studies should be done to understand the impact of COVID-19 pandemic in the student's sleep health.
Support (if any):

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COVID-19 ANXIETY AND SLEEP IN MIDDLE-AGED AND OLDER ADULTS: IMPACT OF AGE AND SEX

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Introduction: COVID-19 is an infectious respiratory illness that was declared a pandemic in March 2020. During the course of COVID-19,

studies have demonstrated worsening sleep quality and anxiety. No studies have examined age-related and sex-specific associations between COVID-19 anxiety and sleep in aging populations. We examined associations between COVID-19 anxiety and sleep, and evaluated age and sex as moderators, in middle-aged/older adults.

Methods: Two hundred and seventy-seven middle-aged/older adults aged 50+ (Mage=64.68, SD=7.83; 44% women) living in the United States who were cognitively healthy (no cognitive impairment/dementia/neurological disorders) completed an online Qualtrics survey in July/August 2020 measuring sleep (Pittsburgh Sleep Quality Index; PSQI) and COVID-19 anxiety (Coronavirus Anxiety Scale; CAS). Multiple regressions examined whether CAS was independently associated with or interacted with age or sex in its associations with PSQI total score/subscores (sleep quality, sleep duration, sleep efficiency, daytime dysfunction), controlling for age, education, number of medical conditions, sleep/pain medication use, and COVID-19 status.

Results: CAS interacted with age (B=-.008, SE=.003 p=.02, R-squared=.02), not sex (p=.31), in its association with sleep duration. Higher CAS was associated with shorter sleep duration in oldest-older adults (~73 years old; B=.12, SE=.05, p=.01) and younger-older adults (~65 years old; B=.07, SE=.03, p=.02), not middle-aged adults (~57 years old, p=.47). CAS interacted with age (B=.01, SE=.004, p=.02), not sex (p=.56), in its association with sleep efficiency. Higher CAS was associated with worse sleep efficiency in oldest-older adults (B=.14, SE=.05, p=.009) and younger-older adults (B=.08, SE=.04, p=.03), not middle-aged adults (p=.60). Higher CAS was associated with greater daytime dysfunction (B=.26, SE=.07, p<.001) and higher PSQI total score (B=.82, SE=.33, p=.01), and did not interact with age or sex (ps>.05).

Conclusion: Increased COVID-19 anxiety is associated with several aspects of worse sleep (shorter sleep duration, sleep efficiency) in older adults but not middle-aged adults. Generally, in middle-aged/older adults, higher COVID-19 anxiety is associated with worse daytime dysfunction and overall sleep quality. Sex does not moderate these associations. Increased COVID-19 morbidity and mortality in aging populations may translate to increased anxiety and subsequent sleep disruptions. Interventions aimed at mitigating negative pandemic-related psychological and sleep outcomes may be particularly relevant for older adults.

Support (if any):

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DID THE COVID-19 PANDEMIC INCREASE INSOMNIA?

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Introduction: COVID-19 has been an unprecedented health event with far-reaching health and economic consequences. There have been numerous surveys published that have suggested that insomnia has increased during the pandemic. However, there have been no comparisons of data from the pandemic with that from other years. Here we present baseline data from people signing up to an online CBTi course to investigate the impact of COVID-19 on sleep.

Methods: We investigated the difference in age; diary-reported Sleep Efficiency (SE%) and Total Sleep Time (TST); sleep quality and disturbances as measured by the Pittsburgh Sleep Quality Index (PSQI) and daytime sleepiness using the Epworth Sleepiness Scale (ESS); between the first wave of COVID-19 in the UK (1st March -31st July 2020) as compared to the same period in 2019.

Results: In 2019 n=2231 patients were assessed as compared to n=6173 in 2020. There were no significant differences in the age of the two cohorts (47.1 years v 46.3 years, NS). SE% was significantly lower in the 2019 cohort (66% v 67.6, p <0.001) as was their total sleep time (5.71 hrs v 6.05 hrs, p<0.0001). PSQI scores were also higher in 2019 (13.13 v 12.72. p<0.0001). The level of daytime sleepiness was lower in the 2019 cohort (5.4 v 5.6 p <0.001)

Conclusion: Our results show that there was no evidence of an increase in the severity of sleep disturbance during the 1st wave of the COVID-19 pandemic in the UK in contrast to what numerous surveys have suggested. Indeed, we found that people signing up to Sleepstation's online dCBTi course during the 1st wave of the pandemic had statistically significant better subjective sleep, although they had a higher level of daytime sleepiness than those in the same period a year previously. Although statistically significant, our results do not demonstrate a clinically relevant difference between the two cohorts. It is also interesting that despite the age-related impact of COVID-19, there was no significant difference in the age of the patients. Thus, in contrast to the survey data, we found no evidence for a worsening of sleep during the 1st wave of the pandemic.

Support (if any):

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CHANGES IN OBJECTIVELY-MEASURED ADOLESCENT SLEEP AND LIGHT EXPOSURE DURING THE COVID-19 PANDEMIC

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Introduction: U.S. adolescents have high rates of insufficient sleep. School closures and stay-at-home orders were implemented to mitigate disease spread during the Coronavirus 2019 (COVID-19) pandemic. Without the restriction of imposed early school start times, we hypothesized that adolescents would have longer, later, and less variable sleep compared to pre-COVID-19. We further hypothesized these changes would be associated with increased and later light exposure.

Methods: High school students age 14–19 years with <7h sleep on school nights completed two weeks of at-home monitoring. The Pre-COVID-19 week took place between October 2018-February 2020 and the COVID-19 week occurred in May 2020 during statewide stay-at-home orders. Participants wore an accelerometer to assess sleep and light exposure while completing a concurrent sleep log. Paired-samples t-tests examined differences in sleep and light between Pre-COVID-19 and COVID-19. Pearson correlations assessed associations between change in sleep and change in light.

Results: Participants (N=16) were 16.5 ±1.2-years-old at Pre-COVID-19, 70.6% female, 68.8% White, and 25.1% Hispanic. Youth were participating in online learning due to in-person school closures and only 2 participants (14.3%) had a set start time, while the remainder reported learning per their own schedule. Youth obtained approximately one hour more weekday sleep per night during the COVID-19 week compared to Pre-COVID-19 (p<0.001). Bed and waketimes were significantly delayed on weekdays and weekends during COVID-19 compared to Pre-COVID-19 (p< 0.01). The greatest change was a delay in weekday waketime of 2.9□0.9h (p<0.001). Social jetlag during COVID-19 was reduced by 1/3 compared to Pre-COVID-19 (p=0.02). Average 24h lux levels were 2.5x higher during the COVID-19 week compared to Pre- COVID-19 (p=0.008). Change in average lux and timing of light were not significantly associated with change in sleep duration or timing.