

Results: Sleep disturbance was prevalent among adolescents (89% above average, T-score >50); about two-thirds (64.4%) reported greater stress due to the pandemic. Compared to White (88.5%) adolescents, sleep disturbance was more common in Black (91.2%), Hispanic (90.5%), American Indian/Alaska native (95.1%), and Mixed (92.3%) and less common in Asian (83.9%) adolescents. Chi-square analysis indicated that both race/ethnicity ($\chi^2 = 14.96, p < .05$) and SVI ($\chi^2 = 8.34, p < .05$) had an effect on sleep disturbance. HBLR analysis indicated that compared to pre-pandemic, adolescents reporting “little stress” (OR=.70, 95% CI=.49-.99, $p=.04$) or “the same amount of stress” (OR=.64, 95% CI=.47-.89, $p=.007$) had lower odds of sleep disturbance. Higher depression (OR=1.06, 95% CI=1.04-1.07, $p < .001$) and anxiety (OR=1.05, 95% CI=1.04-1.07, $p < .001$) symptoms increased odds of sleep disturbance, while male gender lowered odds of sleep disturbance (OR=.11, 95% CI=.015-.86, $p < .05$). Overall, race/ethnicity ($p=.44$) and SVI ($p=.45$) did not independently predict sleep disturbance. Race/ethnicity stratified analyses indicated that for Black and Hispanic adolescents, being in grades 11/12 and depression predicted sleep disturbance; and for Asian adolescents SVI and anxiety predicted sleep disturbance.

Conclusion: COVID-related stress and symptoms of depression and anxiety are associated with sleep disturbance. We observed differences in sleep disturbance across racial/ethnic groups and neighborhood social vulnerability strata, for specific racial/ethnic groups.

Support (if any): AS was supported by funding from the NIH (K01HL135452, R01HL152453)

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COVID-19 RELATED WORRIES AND SLEEP DISTURBANCES IN PATIENTS PREVIOUSLY HOSPITALIZED WITH COVID-19 ILLNESS

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Introduction: In patients hospitalized for COVID-19 illness, sleep disturbances after discharge may impact quality of life and prognosis. We examined the relationship of COVID-19-related worries with sleep disturbances in patients three months after COVID-19 hospitalization. **Methods:** Patients hospitalized for COVID-19 illness completed a survey three months post-discharge ($n=153$). We measured COVID-19-related worry along two domains: worry directly related to the disease (COVID-illness worry) and worry related to the socioeconomic impact of the pandemic (COVID-impact worry). COVID-illness worry included worry regarding: 1) getting COVID again, 2) dying from COVID, 3) family members getting COVID, 4) losing a loved one to COVID, 5) unknowingly infecting others with COVID, 6) having significant financial burdens because of COVID. COVID-impact included worry regarding: 1) employment loss, 2) not having enough food, 3) not having access to medical care/medications, 4) not having access to mental health care/medications, 5) reduction in interactions with other people, 6) separation from family members, 7) being lonely. Patients rated how much they worried about each item on a 4-point scale (not at all, a little, moderately, extremely). Scores on each domain were summed to reflect overall severity. Past month sleep was assessed for insomnia symptoms (none, mild, moderate, severe, very severe) and self-reported sleep duration. Binary logistic regression was used to evaluate the association of COVID-illness worry and COVID-impact worry, separately, with sleep measures, adjusting for age, sex, race/ethnicity, and presence of persistent COVID-related symptoms.

Results: The prevalence of insomnia (moderate, severe, or very severe symptoms) and short sleep duration (<6 h/day) was 47.0% and

39.2%, respectively. COVID-illness worry severity was significantly associated with presence of insomnia (OR: 1.91, 95% CI: 1.13-3.23, $p=0.016$) and short sleep (OR: 2.20, 95% CI: 1.25-3.86, $p=0.006$). In a separate model, COVID-impact worry severity was significantly associated with presence of insomnia (OR: 1.98, 95% CI: 1.23-3.19, $p=0.005$) and short sleep (OR: 2.11, 95% CI: 1.26-3.55, $p=0.005$).

Conclusion: Sleep disturbances are common among patients previously hospitalized with COVID-19 illness, and COVID-19 related worries are associated with insomnia and short sleep. Additional research is needed to determine whether addressing COVID-19 related worries reduces sleep disturbance, which in turn may promote post-COVID recovery.

Support (if any):

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SLEEP QUALITY DURING THE CORONAVIRUS PANDEMIC IN A BRAZILIAN FAMILY-BASED COHORT

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Introduction: Early in the COVID-19 pandemic, Brazil adopted measures to minimize the spread of the virus, including quarantine orders where people only left home for essential business. This practice could negatively impact sleep by reducing exposure to daylight and physical activity. We examined subjective sleep quality in Baependi, a small rural town in Brazil during the COVID-19 quarantine order.

Methods: This sample is from the Baependi Heart Study, a family-based cohort of adults. Participants ($n=800$, 71% women, mean age 51.6 ± 15.6 years) completed the Pittsburgh Sleep Quality Index (PSQI) early in the COVID pandemic (April-May, 2020). They were also asked about their compliance to the quarantine order (yes/no). We compared sleep between quarantined (QT) and not-quarantined individuals (NQT). Longitudinal data was obtained from a subsample of 417 individuals who also completed a pre-COVID PSQI between January, 2010 and September, 2014.

Results: Individuals compliant with the quarantine had worse sleep quality than non-quarantined individuals [QT PSQI= 6.1 (± 3.9), NQT PSQI= 5.0 (± 3.5), $p < 0.01$]. Stratified analysis showed that differences in PSQI scores between QT and NQT was greater for women [QT = 6.4 (± 4), NQT = 5.2 (± 3.7), $p < 0.01$] and older people [QT = 6.6 (± 0.1), NQT = 5.5 (± 3.3), $p=0.02$]. Associations were attenuated after adjusting for age and gender. PSQI components demonstrated a higher sleep latency for the QT group in the full sample ($p=0.02$), women ($p < 0.01$) and young (<50 years, $p=0.03$). Sleep duration was shorter in the QT young subsample ($p=0.03$). QT women also reported lower sleep efficiency ($p=0.01$) and greater use of sleep medication than NQT women ($p < 0.01$). In the longitudinal subsample, PSQI scores were significantly higher during COVID than pre-pandemic [COVID= 5.7 (± 3.8), pre-COVID= 5 (± 3.3), $p < 0.01$]. The significant change in PSQI was only observed in the QT participants [COVID= 5.9 (± 3.7), pre-COVID= 5.2 (± 3.4), $p < 0.01$] and not NQT [COVID= 5 (± 3.7), pre-COVID= 4.5 (± 3), $p=0.12$].

Conclusion: Individuals who quarantined during COVID-19 had worse sleep quality than individuals who did not quarantine. Longitudinal comparison demonstrated that participants who quarantined had worse sleep quality during COVID compared to before to the pandemic.

Support (if any): NIH 1R01HL141881