Nightmare content during the COVID-19 pandemic: Influence of COVID-related stress and sleep disruption

Kathryn Kennedy, Célyne Bastien, Perrine Ruby, William Killgore, Chloe Wills, Michael Grandner

Introduction: Nightmares are often associated with psychiatric disorders, though acute stress can also induce them. This study explores how the COVID-19 pandemic may have influenced the frequency and content of nightmares.

Methods: A sample of N=419 US adults completed online surveys about sleep and COVID-19 experiences. Participants were asked the degree to which they agree with statements including that due to the COVID-19 pandemic, they have greater general stress, worse overall sleep, and more middle-of-the-night insomnia. They were also asked if they experienced nightmares during the pandemic on a range of topics, including confinement, claustrophobia, suffocation, oppression, drowning, failure, helplessness, natural disasters, anxiety, evil forces, war, domestic abuse, separation from loved ones, totalitarian regimes, being chased, dangerous animals, sickness, death, COVID-19, and apocalypse. Logistic regression analyses examined each nightmare content as outcome and increased stress, worse sleep, and more middle-of-the-night insomnia. They were also asked about sleep and COVID-19 experiences. Participants were asked if they experienced nightmares about COVID-19 may result in more adverse impact on sleep than potential infection itself.

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Chloe Wills, Kathryn Kennedy, Célyne Bastien, Perrine Ruby, William D.S. Killgore, Michael Grandner

University of Arizona, Universite Laval, Lyon Neuroscience Research Center

Introduction: During the COVID-19 pandemic, individuals have faced unprecedented events, which are often stressful. Stress has an important impact on dreams, and stress-induced sleep difficulties may also impact dream recall. The present study evaluated associations between sleep, stress, and dream content on dream recall during the pandemic.

Methods: A sample of N=419 US adults completed online surveys about sleep and COVID-19 experiences. Participants were asked if they remember more, fewer, or about the same amount of dreams as before the pandemic. They were also asked whether the pandemic was associated with more stress, a more regular schedule, improved sleep, worse sleep, more early insomnia, more middle-of-the-night insomnia, more sleepiness, and more naps. They also completed the Insomnia Severity Index, Fatigue Severity Scale, Epworth Sleepiness Scale, Brief Index of Sleep Control, Assessment of Sleep Environment, GAD-7 anxiety scale, and PHQ depression scale. Multinomial logistic regressions examined correlates of increased or decreased recall (versus same), adjusted for age, sex, and race/ethnicity.

Results: Those who experienced greater schedule regularity were less likely to report decreased recall (RRR=0.50,p<0.0005), as were those who reported sleep improvement (RRR=0.48,p<0.006). Those whose sleep worsened were more likely to report both increased (RRR=1.64,p<0.003) and decreased (RRR=2.16,p<0.0005) recall. Those suffering maintenance insomnia were more likely to report both increased (RRR=1.70,p<0.001) and decreased (RRR=2.68,p<0.0005) recall, as did those who reported more daytime sleepiness (Increased RRR=1.57,p<0.006; Decreased RRR=1.94,p<0.001). Those whose sleep content was more negative were more likely to report both increased (RRR=4.20,p<0.0005; Decreased RRR=5.05,p<0.0005). Similarly, those who reported more positive dream content reported both increased (RRR=17.37,p<0.0005) and decreased (RRR=7.14,p<0.002) recall, as did those who reported less positive content (Increased RRR=4.49,p<0.0005; Decreased RRR=5.59.p<0.0005). Less recall was associated with greater insomnia severity (RRR=1.08,p<0.001), fatigue (RRR=1.04,p<0.001), sleepiness (RRR=1.09,p<0.001), COVID stress (RRR=1.67,p<0.05), anxiety (RRR=1.08,p<0.01), and depression (RRR=1.06,p<0.001), worse sleep environment (RRR=1.06,p<0.005), and less sleep control (RRR=0.56,p<0.001).

Conclusion: The results of this survey suggest that a sudden decrease in dream recall in reaction to a new stress could be considered as a perjorative indicator regarding sleep quality and mental health.

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