SLEEPING WELL DURING A PANDEMIC: THE ROLE OF VARIOUS FORMS OF SOCIAL SUPPORT IN PROTECTING AGAINST INSOMNIA

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Introduction: Social support from friends, family, and significant loved ones is critical to sustaining mental health during crises. During the course of the COVID-19 pandemic, the populace has had to restrict many aspects of normal social contact. Consequently, social isolation and accompanying feelings of loneliness have spiked. There has also been a contemporaneous increase in the rates of insomnia. Considering this correlation, we investigated the potential role of various types of social/emotional support on the severity of insomnia. We hypothesized that greater social support from family, friends, and significant loved ones would all contribute to lower insomnia during the pandemic.

Methods: During October 2020, 1020 participants (58.2% female) completed an online survey that included the Multidimensional Scale of Perceived Social Support (MSPSS), a measure of social support, and the Insomnia Severity Index (ISI), a measure of insomnia. The severity of insomnia was predicted using multiple linear regression, with the three sources of support from the MSPSS (family, friend, and significant other) entered stepwise.

Results: All three sources of support were significantly correlated with lower ISI scores (family, r=-.163, p=1.6x10^-7; friend, r=-.125, p=6.5x10^-5; significant other, r=-.095, p=0.002). However, when all three variables were entered into stepwise regression, only increased familial support was significantly associated with lower insomnia levels (R² = 0.027, β=-.163, p=1.6x10^-7). In contrast, neither the support of friends nor support from significant others added any additional predictive power once family support was in the model.

Conclusion: While perceived social support from friends and significant others was correlated with lower insomnia, we found that ISI scores were most significantly associated with perceived family support. In fact, once family support was accounted for, other sources of support did not account for additional variance. Ongoing family support plays a critical role in mental health and wellbeing, which is clearly demonstrated in the quality of sleep. During the social distancing imposed by the pandemic, it is vital that we find creative ways to maintain familial social support. Future work may benefit by examining the association between the use of electronic technologies to sustain social support and sleep outcomes.

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INVESTIGATING DECREASED POSITIVE AIRWAY PRESSURE COMPLIANCE IN A VETERAN AFFAIRS SLEEP MEDICINE CLINIC DURING THE 2020 PANDEMIC

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Introduction: Positive airway pressure (PAP) compliance for the treatment of sleep apnea at the Albuquerque Veterans Affairs (VA) Sleep Medicine clinic has been observed to be lower in new setup patients after the onset of the COVID-19 pandemic. The reasons for decreased PAP compliance during the COVID-19 pandemic are unclear. The primary outcome will be to identify if there is a common reason that patients at the Albuquerque VA were less compliant with PAP after the onset of the COVID-19 pandemic.

Methods: Compliance data for 4/1/2020 through 9/30/2020 was compared to compliance data for 4/1/2019 through 9/30/2019. Compliance after PAP machine setup was confirmed to be lower during the 2020 time period. Noncompliant patients will be selected by setup type, new versus machine replacement, and surveyed for reasons for noncompliance. The survey will be conducted at the Albuquerque VA Sleep Center and will include questions regarding beliefs, barriers, and challenges with the use of PAP therapy during the coronavirus pandemic. The definition for initial PAP compliance will be the use of PAP therapy for greater than or equal to four hours per night on at least 70% of nights.

Results: For the 6-month time period of 4/1/2019 through 9/30/2019, there were 758 PAP setups at the Albuquerque VA. The 30-day compliance for the 758 setups was found to be 61.4%. Comparatively, for the six-month period of 4/1/2020 through 9/30/2020, there were 462 setups with a 30-day compliance result of 49.7%. A survey consisting of questions designed to elicit barriers to use as well as beliefs regarding PAP and COVID-19 will be administered to 20% (n=46) of the non-compliant patients who were set up with a PAP machine during the 2020 study period.

Conclusion: PAP compliance after machine setup was lower at the Albuquerque VA sleep center in 2020 versus 2019 (49.7% versus 61.4%). The reasons for the lower observed compliance are attributed to the effects of the coronavirus pandemic. A random sampling of the non-compliant patients during the 2020 time period will be performed and the results will be presented once available.

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COVID-19. This study is limited by the nature of the self-reported data, where we cannot verify a positive COVID-19 test. Causality cannot be inferred due to the cross-sectional nature of this study. Future work will need to determine the extent to which sleep-related factors are due to biological versus psychological factors associated with the diagnosis of COVID-19.

Support (if any):

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ACTIGRAPHY TO EVALUATE SLEEP IN THE INPATIENT SETTING: A SYSTEMATIC REVIEW
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Introduction: Sleep disruption is common among hospitalized patients due to psychological, physiological, and environmental reasons including illness, pain, anxiety, invasive interventions, frequent monitoring, and stimuli, especially noise and light. The AASM has published guidelines for the use of actigraphy in the outpatient setting, but there is a paucity of literature evaluating the validity of actigraphy in inpatients. We sought to summarize the evidence surrounding the use of actigraphy for inpatient sleep evaluation.

Methods: Systematic review was conducted according to the Preferred Reporting of Systematic Reviews and Meta-Analysis (PRISMA) guidelines. Databases were queried by two independent reviewers for English-language studies published between 1990 and 2020. The initial search screened for all occurrences of “actigraphy AND sleep AND hospital” then was further refined to include studies of actigraphy used for monitoring in the inpatient hospital setting and exclude studies evaluating actigraphy in outpatient, rehabilitation, immediate postoperative, or intensive care unit settings.

Results: 1221 were screened from initial search results. 48 articles were identified through screening of abstracts. Full-text review of the articles was then completed. Of the 48 articles, a total of 12 studies examined general medical inpatients, 12 studies examined inpatients with neurologic disorders, 5 studies examined inpatients with cancer, 6 studies examined patients with mental illness, 9 studies examined elderly patients, and 4 studies examined other defined populations (pregnancy, trauma, liver transplantation, and hip arthroplasty). We summarize the qualitative findings of inpatient actigraphy as it relates to each of these populations. Commonly reported outcome measures were total sleep time (TST), number of nighttime awakenings, and concordance with polysomnography (PSG).

Conclusion: We summarize the existing evidence for the use of actigraphy in the inpatient setting. Actigraphy may provide a simple and effective method for screening of sleep disorders in the inpatient setting. With regard to the published literature, there is support for the use of actigraphy in the inpatient setting in certain patient populations, especially traumatic brain injury. Variation in data output of actigraphy devices and outcome measures presents a barrier to meta-analysis of pooled data. Standardization of outcome measures will allow for effective synthesis of future studies.

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A PANDEMIC’S IMPACT ON NIGHTMARE FREQUENCY
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Introduction: Nightmares have been defined as bad dreams that produce awakenings and have content which can be recalled upon awakening. Frequent nightmares have been linked to many negative outcomes, such as depression and suicide. Research has demonstrated that stress can impact the likelihood and frequency of nightmare occurrences. Furthermore, extreme stress (such as trauma) can produce chronically recurring nightmares. Given the rise in societal stress as a result of the Covid-19 pandemic, one could expect an increase in nightmares within the general population. With this in mind, our project sought to examine if nightmares are occurring more frequently during the Covid-19 pandemic.

Methods: Our project measured sleep quality and disordered symptoms in N = 2,126 undergraduate college students from the years 2017 to 2020 via online surveys. Data from 2020 was only gathered after the start of the Covid-19 pandemic (which was defined as March 11th 2020). Nightmares were assessed with a self-report questionnaire which asked, “have you experienced a nightmare within the past month”, to which respondents could respond with “yes”, “no”, or “unsure”. Prior to this question participants were told a nightmare is being defined as a bad dream that wakes one up and has remembered dream content upon awakening. Frequencies between years were compared using ANOVA techniques.

Results: In regard to the percentage of our sample that reported a nightmare during the previous month, the year 2020 was significantly higher (41.1%; F = 10.27, p < 0.001) than all other years assessed (2017 = 27.0%; 2018 = 25.3%; 2019 = 31.7%). Furthermore, there was no significant difference between any of the pre-Covid-19 years.

Conclusion: In 2020, A higher percentage of students reported experiencing a nightmare within the past month than any of our other captured years. Given our 2020 data only assessed students post the start of the pandemic, the significant increase of nightmares experienced by our sample could be related to stress produced by the Covid-19 pandemic. Considering that nightmares have been found related to several negative outcomes, such as depression and suicide, both assessment of, and treatments for nightmares may be especially needed during our current climate.

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SLEEP LOSS IN HEALTHCARE WORKERS DURING THE COVID-19 PANDEMIC
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Introduction: During the pandemic, healthcare workers have shared their stresses on social media, including regarding sleep disturbances. However, an assessment of sleep using validated measures among healthcare workers on social media is lacking.

Methods: A restricted, self-selection survey was distributed on Facebook, Twitter, and Instagram for 16 days targeting healthcare workers during our current climate.

Results: Of the 983 who clicked our link, 906 completed the survey. Participants were mostly white (70%), female (75%), physicians (64%). Mean sleep duration was 6.1 (SD1.2) hours. Nearly 90% experienced poor sleep (PSQI). One third reported moderate or severe anxiety, and 14% reported severe anxiety. Causality cannot be inferred due to the cross-sectional nature of this study. Future work will need to determine the extent to which sleep-related factors are due to biological versus psychological factors associated with the diagnosis of COVID-19.