

Does a Sleep Workshop Reduce Student Stress?

Andra K. MacDonald

Psi Beta Honor Society, Bellevue College Chapter

Author Note

The author can be contacted through email: a.k.macdonald1@gmail.com

Suggested bibliographic reference

MacDonald, A. (2023). Does a sleep workshop reduce student stress? *Psi Beta Journal of Research*, 3(1), 39-43.

<https://doi.org/10.54581/UYJS7907>

Abstract

Increasing mental illness among college students continues to be a critical issue. College life is often a time of great transition, contributing to and exacerbating students' rising stress, anxiety, and other mental health struggles. Poor sleep habits may develop during college, and poor sleep quality can amplify stress. To explore how institutions might help students struggling with stress, we conducted this study to examine whether a sleep-focused workshop would reduce stress levels in students at a Pacific Northwest community college. We generated an online pre- and post-workshop survey consisting of the Beck Anxiety Inventory, the Perceived Stress Scale (PSS), and the Sleep Quality Scale, which was distributed to participants before and after a sleep workshop presented by the college's psychology department. It was hypothesized that (1) poor sleep quality correlates to higher student stress levels, and (2) that the sleep workshop intervention would reduce stress levels. Sleep quality and stress were found to be moderately negatively correlated before the workshop, $r(57) = -.482, p < .001$, and after the workshop, $r(40) = -.500, p < .001$. Additionally, there was a statistically significant decrease in stress after the workshop ($M = 26.50, SD = 7.91$) compared to before the workshop ($M = 28.77, SD = 7.41$), $t(56) = 29.33, p < .001$. These results provide more insight into the utility of sleep workshops for students and whether they can help students manage stress and improve their sleep quality, potentially improving student mental health by lowering stress and improving quality of life and education overall.

Keywords: sleep quality, sleep workshop, perceived stress, college students, community college

Mental health is a significant issue among college students in the U.S. and other countries, with increasingly higher reported mental health struggles in recent years. While most research on this issue has focused on students attending 4-year institutions, 2-year college students also have been found to have as high or higher rates of mental health issues. Two-year college students in the age range 18-22 years old had higher rates of depression, anxiety, and suicidal ideation than their 4-year college/university counterparts (Lipson et al., 2021). It is important to note that many students attending community college come from marginalized backgrounds and, as such, are more likely to have mental health struggles and less likely to have access to mental health treatment. For 2-year institution students, financial issues were the most significant barrier to treatment access. Additionally, financial stress was a key influence on community college students' mental health issues and academic performance (Lipson et al., 2021).

Notably, mental health is thought to have a close relationship with sleep (Becker et al., 2018; Hartmann & Prichard, 2018; Jackson et al., 2020; Lund et al., 2010; McCabe et al., 2018). Poor sleep is correlated with higher negative moods, including lack of enthusiasm, emotions such as anger, fatigue, tension, and higher rates of physical illness (Lund et al., 2010). Mental illnesses such as anxiety and depression are correlated to poor sleep quality (Becker et al., 2018). Perceived stress is one of the most influential factors related to the poor sleep quality of students; specifically, as stress increases, sleep quality decreases (Doolin et al., 2018; Lund et al., 2010). Notably, academic and emotional stress have been found to hinder students' sleep the most (Lund et al., 2010).

High levels of poor sleep quality have been reported among college students. One study found that only 29.4% of students reported receiving eight or more hours of sleep a night, which is concerning as eight hours is the average amount of sleep needed for young adults (Lund et al., 2010). Another study found that only a third of students

reported getting 7+ hours of sleep, and 62% were determined to be poor sleepers (Becker et al., 2018). Additionally, poor sleep quality negatively influences student academic performance, with lower GPAs and a higher likelihood of dropping a course correlated to poorer sleep quality (Al-Kandari et al., 2017; Hartmann & Prichard, 2018).

Prior studies have evaluated the benefits of sleep workshops; studies have found that workshops can significantly increase awareness of the importance of good sleep habits. While some workshops have failed to change student sleep practices significantly, students reported believing that they could improve their sleep quality after attending the workshops (McCabe et al., 2018). Another sleep program found mild improvements in students' sleep duration and sleep habits, specifically among students who reported getting the least amount of sleep (Levenson et al., 2016).

The current study evaluated a sleep workshop that focused on bringing awareness of good sleep habits to students at a Pacific Northwest community college to combat poor student mental health. It was hypothesized that (1) poor sleep quality of community college students correlates to higher student stress levels. Additionally, because of the established connection between sleep and stress and the beneficial impacts of prior sleep workshops on students, it was hypothesized that (2) the intervention of a sleep workshop would decrease students' stress levels.

Method

Participants

Participants in this study were students at a Pacific Northwest community college. A total of 40 participants completed the pre- and post-sleep workshop surveys. Twenty percent of participants were under 18 years old, 40% of participants were between the ages of 18-20 years old, 12.5% were between the ages of 21-24, 17.5% were 25-29, 5% were 30-39, and 5% were 40-49. It is important to note that some students were dually enrolled in college and high school, resulting in a few participants being under 18. However, the institution's

Institutional Review Board (IRB) approved participation of dual enrolled students before data collection began. Forty-two- and one-half percent of participants were White, 32.5% were Asian, 7.5% were Black/African American, 5% were Hispanic/Latinx, 10% responded as another race/ethnicity, and 2.5% declined to answer. Women made up 66.67% of participants; men were 25.64% of students; and transgender, non-binary, and genderqueer participants made up 7.69% of participants. Twenty-two- and one-half percent of participants identified as part of the LGBTQIA+ community. Participants' family income ranged from under \$30,000/year to over \$150,001 or more/year. Thirty percent of student participants reported having financial concerns.

Materials and Procedure

Participants were notified of a free sleep workshop on campus through flyers, other students, and professors. Students who chose to participate were sent an online survey developed through Qualtrics XM consisting of 21 items of the Beck Anxiety Inventory (Beck et al., 1998), ten items from the Perceived Stress Scale (PSS; Cohen et al., 1983), six items from the Sleep Quality Scale (SQS; Yi et al., 2006), and nine demographic questions. The questionnaire used a mixture of forced-choice questions for demographics, 4-point Likert-type scales ranging from not at all to severely for the Beck Anxiety Inventory, ranging from rarely to almost always for the SQS, and a 5-point Likert-type scale ranging from never to very often for the PSS. The survey was distributed to participants approximately two weeks before and after the sleep workshop, a workshop presented by the institution's psychology department. The survey was emailed, and students completed it on their own time. Some students were given the incentive of extra class credit in exchange for participating in the study, though awarding of extra credit was at the discretion of individual faculty members. Notably, we conducted a pilot study prior to this study, and the results of the pilot were used to refine the procedure and protocol of the current study.

The current study, as well as the pilot study, were approved by the institution's IRB, allowing the study to be conducted on campus. Before completing the research survey, students were informed of the study's goals; the information to be collected; informed that their participation was entirely voluntary; and that all data collected would be anonymous. Participants were also informed that some questions might be sensitive and, as a safety measure, they were given links to the campus's counseling center and the Counseling Center Chair so that they could contact those resources if they felt it necessary. All participants provided informed consent.

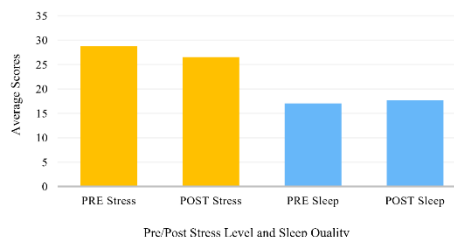
The sleep workshop was a single, one-hour session conducted over Zoom. To increase participation, participants were given the option of attending one of two workshop times. The workshop focused on informing students about the short-and long-term effects of sleep deprivation on the brain and body, as well as providing students with sleep tips on how to achieve better quality sleep.

Results

All data were analyzed using the Statistical Package for the Social Sciences (SPSS) software. It was found that sleep quality and stress before the sleep workshop were negatively correlated, $r(57) = -.482, p < .001$. After the workshop, sleep quality and stress were also found to be negatively correlated, $r(40) = -.500, p < .001$. Notably, there was a statistically significant decrease in Perceived Stress Scale (PSS) scores from before ($M = 28.77, SD = 7.41$) to after ($M = 26.50, SD = 7.91$) the workshop, $t(56) = 29.33, p < .001$.

Although sleep quality had a minor increase, it was not statistically significant (see Figure 1).

Figure 1. Pre and Post Stress Level and Sleep Quality



Discussion

This study found that stress is negatively correlated with sleep quality, meaning that as stress levels decrease, sleep quality levels increase, and vice versa. These findings support the hypothesis (1) that community college students' poor sleep quality correlates to higher stress levels. Additionally, the results of this study also showed that student stress levels had a statistically significant decrease after the sleep workshop, supporting the hypothesis (2) that the intervention of a sleep workshop would decrease students' stress levels. These results are consistent with previous sleep interventions, which have found such workshops and programs beneficial for students (Levenson et al., 2016; McCabe et al., 2018). However, this study differed in that it focused on alleviating stress through the sleep workshop intervention. In contrast, previous studies have focused more on improved sleep awareness and increased practice of good sleep habits, which was not specifically measured in this study.

While we collected information on the number of classes students were taking, we did not explore how academic performance might be impacted by stress at this institution, nor how a workshop might improve academic success among students. However, because there was a correlation between improved sleep quality and academic success, the connection to academic performance is something to explore in future studies (Al-Kandari et al., 2017; Hartmann & Prichard, 2018).

The results of this study indicate that a sleep-focused workshop can be beneficial for lowering students' stress and but not for increasing students' sleep quality. The lack of improved sleep quality could be due to several factors, mainly the workshop's duration and the post-survey data collection timing. Since the workshop implemented was a one-time hour-long session with no other intervention elements, the duration of the intervention possibly was too short to effectively improve sleep quality. Likely, a longer-duration intervention with a more individualized focus on participants might

be more effective, as seen in other studies (Levenson et al., 2016; McCabe et al., 2018). Additionally, the post-workshop survey was distributed to students around the time of midterm examinations, which could have influenced the amount of sleep students were getting and their stress levels. It is also important to note that due to the unequal sample sizes of the pre-survey (n=56) and the post-survey (n=40), there could be a greater risk of finding significant results when they are not actually significant (Type 1 error). Another limitation is that all measurements of stress and sleep quality were done through student self-report, meaning that the reliability of the results is largely based on student perception.

Regarding the generalizability of this study, it is important to note that the overall sample size was relatively small, with a total of 40 participants. Additionally, the majority of participants identified as women (67%) and were either White (43%) or Asian (33%). These factors all impact the diversity of this sample, which impacts the generalizability of these results to a broader population.

This study should be replicated to measure the impact of the sleep workshop on students' levels of sleep health awareness and healthy sleep habits. The next iteration of this study should include more measures of students' academic performance. The results could provide a clearer idea of how students on campus are doing academically, how this might correlate to general sleep health, and how sleep workshops might improve these factors. Additionally, a series of sleep-focused workshops given over a longer duration of time might increase students' sleep quality more than a single-time workshop, and including more individualized feedback or other elements for workshop participants could help improve sleep quality (Levenson et al., 2016; McCabe et al., 2018).

This study brings more attention to the mental health of community college students. It explored how an intervention in the form of a sleep workshop could be beneficial for the student populations of 2-year institutions, especially as such

institutions often have more significant numbers of marginalized students who have limited access to mental health services and face other health disparities (Jackson et al., 2020; Lipson et al., 2021). This research contributes to what we know about sleep workshops and wellness workshops for students in general. It shows that these workshops have the potential to be an effective avenue to help students manage stress and, in the future, improve their sleep quality. These beneficial impacts could notably improve student mental health by reducing stress and anxiety and result in the improvement of students' education, academic careers, and daily life.

References

- Al-Kandari, S., Alsalem, A., Al-Mutairi, S., Al-Lumai, D., Dawoud, A., & Moussa, M. (2017). Association between sleep hygiene awareness and practice with sleep quality among Kuwait University students. *Sleep Health, 3*(5), 342–347. <https://doi.org/10.1016/j.sleh.2017.06.004>
- Beck, A. T., Epstein, N., Brown, G., & Steer, R. (1988). Beck Anxiety Inventory [Database record]. APA PsycTests. <https://doi.org/10.1037/t02025-000>
- Becker, S. P., Jarrett, M. A., Luebbe, A. M., Garner, A. A., Burns, G. L., & Kofler, M. J. (2018). Sleep in a large, multi-university sample of college students: Sleep problem prevalence, sex differences, and mental health correlates. *Sleep Health, 4*(2), 174–181. <https://doi.org/10.1016%2Fj.sleh.2018.01.001>
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). Perceived Stress Scale [Database record]. APA PsycTESTS. <https://doi.org/10.1037/t02889-000>
- Doolin, J., Vilches, J. E., Cooper, C., Gipson, C., & Sorensen, W. (2018). Perceived stress and worldview influence sleep quality in Bolivian and United States university students. *Sleep Health, 4*(6), 565–571. <https://doi.org/10.1016/j.sleh.2018.08.006>
- Hartmann, M. E., & Prichard, J. R. (2018). Calculating the contribution of sleep problems to undergraduates' academic success. *Sleep Health, 4*(5), 463–471. <https://doi.org/10.1016/j.sleh.2018.07.002>
- Jackson, C. L., Walker, J. R., Brown, M. K., Das, R., & Jones, N. L. (2020). A workshop report on the causes and consequences of sleep health disparities. *Sleep, 43*(8), 1–11. <https://doi.org/10.1093%2Fsleep%2Fzsa037>
- Levenson, J. C., Miller, E., Hafer, B. L., Reidell, M. F., Buysse, D. J., & Franzen, P. L. (2016). Pilot study of a sleep health promotion program for college students. *Sleep Health, 2*(2), 167–174. <https://doi.org/10.1016/j.sleh.2016.03.006>
- Lipson, S. K., Phillips, M. V., Winqvist, N., Eisenberg, D., & Lattie, E. G. (2021). Mental health conditions among community college students: A national study of prevalence and use of treatment services. *Psychiatric Services, 72*(10), 1126–1133. <https://doi.org/10.1176/appi.ps.202000437>
- Lund, H. G., Reider, B. D., Whiting, A. B., & Prichard, J. R. (2010). Sleep patterns and predictors of disturbed sleep in a large population of college students. *Journal of Adolescent Health, 46*(2), 124–132. <https://doi.org/10.1016/j.jadohealth.2009.06.016>
- McCabe, B. E., Troy, A. S., Patel, H. H., Halstead, V., & Arana, M. (2018). Development of a university campus healthy sleep promotion program. *Issues in Mental Health Nursing, 39*(3), 264–268. <https://doi.org/10.1080%2F01612840.2017.1397231>
- Yi, H., Shin, K., & Shin, C. (2006). Development of the sleep quality scale. *Journal of Sleep Research, 15*(3), 309–316. <https://doi.org/10.1111/j.1365-2869.2006.00544.x>