The International Journal of Indian Psychology
ISSN 2348-5396 (Online) | ISSN: 2349-3429 (Print)
Volume 13, Issue 1, January- March, 2025
DIP: 18.01.075.20251301, DOI: 10.25215/1301.075
https://www.ijip.in

Research Paper

College Students' Positive and Negative Aspects of Mental Health can be Predicted by Their Sleep Hygiene and Quality

Akhinu Suvid V.S.[1], Dr. Shahnawaz Mushtaq Mangral[2]*

ABSTRACT

One of the populations most at risk for chronic sleep loss and poor sleep quality, which can have detrimental health repercussions, is college students. College students are also infamous for having bad sleep hygiene, which refers to changeable habits that encourage getting enough good sleep. Although research indicates that sleep can affect both good and negative elements of mental health in college, few studies have looked at how sleep affects depression and subjective well-being in the same model. Additionally, not much research has examined sleep hygiene as a modifiable risk factor for mental and good health outcomes. The current study examined structural equation models that suggested that the effects of sleep hygiene practices on depression and low subjective well-being were either wholly or partially mediated by sleep quality. A very well-fitting model was proposed by a partial mediation model (CFI =.98, TLI =.94, RMSEA =.08), and sleep hygiene had significant direct and indirect impacts on depression and subjective well-being. Research indicates that initiatives aimed at helping college students improve their sleep hygiene and quality may have an impact on their overall wellbeing, which in turn may enhance their mental health. College-related life transitions and academic demands may also put students at higher risk for mental health issues. Both positive (subjective well-being) and negative (depression) components of mental health can have an impact on one's physical health and general quality of life. The current study postulated that sleep hygiene practices would act as an indirect risk factor and that poor sleep quality would predict higher levels of depression and worse subjective well-being. Research revealed that college students who reported higher-quality sleep also had better mental health outcomes. Furthermore, sadness and subjective well-being were both directly and indirectly predicted by sleep hygiene practices. The mental health of this vulnerable group may be enhanced by interventions aimed at enhancing college students' sleep hygiene and quality.

Keywords: *Positive and Negative Aspects, Mental Health, Sleep Hygiene, Quality*

The Centers for Disease Control and Prevention has stated that, despite its detrimental consequences on health, inadequate sleep is an underappreciated public health issue in India. Adults who sleep for shorter periods of time than the age-appropriate amount (7+ hours a night for young adults and adults; poor sleep quality with or without the

[1]Research scholar, Shri Venkateshwara University
[2]Research guide
*Corresponding Author

Received: January 4, 2025; Revision Received: February 08, 2025; Accepted: February 12, 2025

presence of a sleep disorder) are said to be getting insufficient sleep. Subjective assessments of the consistency and restfulness of sleep, as well as impressions of sleep disruptions, make up perceived sleep quality. Insomnia, excessive daytime sleepiness, and irregular circadian rhythms are just a few of the symptoms and conditions that can be associated with sleep abnormalities (Alvaro, Roberts, & Harris, Studies indicate that during the previous three decades, there has been a significant rise in the prevalence of short sleep duration and poor sleep quality. Although sleep issues have become more prevalent in the general population, according to data from the Behavioral Risk Factor Surveillance System survey, almost half (45.5%) of Indians who reported getting less than 1–13 days of sleep in the previous month are between the ages of 18 and 24 (Centers for Disease Control and Prevention). These results are consistent with research that indicates emerging people, especially college students, are susceptible to persistent sleep deprivation.

Sleep issues have been extensively studied as a risk factor for psychopathology, especially depression. Symptoms of depression include feelings of sadness or irritability, a diminished interest in activities, trouble focusing, exhaustion, and suicidal thoughts. Clinical studies have repeatedly shown that depression and sleep issues are comorbid. According to meta-analyses, there is a continuous link between depression and sleep, however there is more evidence that poor sleep quality occurs before depression rather than the other way around. Even though there is ample evidence linking sleep to depression, this study mainly looks at how sleep affects the negative aspects of mental health. According to the World Health Organization, mental health is a state of well-being in which an individual is capable of recognizing their own strengths, managing everyday stressors, working effectively, and making a positive contribution to their community. Therefore, it is possible to think of mental health in two dimensions, including both positive (i.e., psychological or subjective well-being) and negative (i.e., psychopathology, including depression and anxiety) components of mental health.

The World Health Organization Therefore, more research is required to determine whether sleep contributes to the beneficial elements of mental health as well. According to certain research, getting enough sleep can improve mental health in a number of ways, including subjective well-being. Few studies have looked at how sleep affects both components of mental health within the same model, despite the fact that studies have found separate relationships between sleep and both positive and negative aspects of mental health. Furthermore, the study of sleep habits as indicators of mental health has received minimal attention. Practices known as "sleep hygiene" are thought to support adequate sleep quantity, healthy sleep quality, and alertness throughout the day.

According to a recent study by Barber, Rupprecht, and Munz, the stressor-appraisal process was used to indirectly predict well-being based on sleep hygiene. This innovative study was among the first to examine how sleep hygiene practices affect wellbeing and hypothesized that sleep hygiene may contribute to the development of good mental health. These results could have useful ramifications for behavioral treatments, such as focusing on sleep hygiene practices rather than sleep outcomes as a habit that can be changed to enhance wellbeing (Barber et al., Based on these early findings, the current study set out to test sleep hygiene as a predictor of mental health, operationalized as both depression and subjective well-being. This was done in order to support previous research that suggested poor sleep quality is a significant risk factor and more strongly associated with well-being than quantity of sleep.Although there is some evidence that sleep predicts emotion and is a greater predictor

of sadness than that depression influences sleep, the research also suggests that sleep and emotions may be bidirectional. As a result, the model under test employed sleep metrics as mental health predictors.

We suggested the following to a group of college students:

- **H1:** Subjective well-being and depression are predicted by sleep quality.
- **H2:** Through sleep quality, sleep hygiene will predict depression and wellbeing in an indirect manner.

METHODOLOGY

Participants

A path model evaluating the direct and indirect impacts of sleep hygiene on both positive and negative aspects of mental health was tested using survey data. A university-specific online recruitment service where students can register for research studies and experiments was used to find participants (N = 218) in urban locations. Prior to the survey, all participants gave their agreement, and the study was approved by the university's institutional review. Participants had to be enrolled in a four-year institution and at least eighteen years old in order to be eligible. A number of questionnaires assessing activities, sleep patterns, mental health, and demographic data were filled out by the participants. The current theoretical premise that sleep hygiene practices and sleep quality influence mental health has a chronological precedence, as individuals completed a second in-person survey evaluating depression and subjective well-being one week later. In exchange for their time, participants received research credits or additional credit in a college course.

Actions

Age, gender, marital status/number of children, housing on or off campus, roommate status, year in school, and if the individual had ever received a sleep problem diagnosis were among the demographic questions. Ten subjects self-reported having insomnia, six self-reported having bruxism (teeth grinding), and one self-reported having restless legs syndrome. To make sure associations weren't caused by an underlying sleep issue, these data were used as a covariate in the final analyses.

Sleep hygiene The Sleep Hygiene Practice Scale (SHPS) was used to measure sleep hygiene habits. The SHPS (Yang, Lin, Hsu, & Cheng) assesses daily routines and sleeping patterns that may have an adverse effect on sleep. Participants are asked to score the frequency of each behavioral activity on 30 items on the scale. Sleep scheduling and timing (5 items, such as “Sleep in on weekends”), eating/drinking behaviors (6 items, such as “Drinking a lot during the hour prior to sleep”), sleep environment (8 items, such as “Feeling too hot or too cold during sleep”), and arousal-related behaviors (11 items, such as “Unpleasant conversation prior to sleep”) are among the four hygiene domains covered by the scale items. A total score from the four domains was calculated by adding the responses, which were recorded on a six-point Likert scale from 1 (never) to 6 (always). Higher scores denoted poorer sleep hygiene. Internal consistency estimates for the current study were reasonable for the total scale (α =.87), arousal-related behaviors subscale (α =.72), sleep environment subscale (α =.81), and sleep scheduling subscale (α =.72). However, the eating/drinking habits subscale (α =.58) had low internal consistency.

Mental well-being

Measures were taken of both the positive (subjective well-being) and negative (depression) aspects of mental health. The BCC Subjective Well-Being Scale (BCC-SWB; Kinderman, Schwannauer, Pontin, & Tai) was used to measure subjective well-being. The BCC-SWB is a 24-item measure that uses component analysis to show three different subscales: relationships, physical health and well-being, and psychological well-being. A five-point Likert scale, with 1 denoting "never" and 5 denoting "almost always," is used to signify responses. Item four received a reverse score for scoring. Concurrent validity assessments and important demographic variables have demonstrated strong correlations with the entire 24-item scale (Pontin, Schwannauer, Tai, & Kinderman). The scale was validated in a sample of 23,341 adults by a study (Pontin et al.), which also showed substantial relationships with the List of Threatening Experiences Questionnaire and the Goldberg Anxiety and Depression Scales scores. Internal consistency estimates for the psychological well-being subscale (α =.93) and the overall scale (α =.95) in this study were excellent; internal consistency estimates for the relationships subscale (α =.78) and the physical health well-being subscale (α =.83) were good. Over a period of seven days, the scale showed excellent temporal stability (r =.90).

For 37% of the sample, item 14 (Do you feel able to grow and develop as a person?) had missing values. The Chronbach's alpha coefficient for the subscale was.92, and the available data for item 14 showed a significant correlation with all other items in the psychological well-being subscale (r =.47–.71, p <.001). Consequently, the average score of the 11 additional items (items 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, and 15) in the psychological well-being subscale was used to impute missing values. A psychological well-being subscore was generated by adding the items after item 14's missing values were imputed. There is a sleep-related item on the physical well-being subscale (Item 2: Are you satisfied with the quality of your sleep?). We conducted analyses using the whole physical well-being subscale (7 items total) and again without the sleep item (6 items total) to make sure this item did not overlap with other sleep-related measures. There was a r =.99 correlation between the amended subscale that eliminated the sleep question and the subscale measuring overall physical well-being.

Poor mental well-being

The Center for Epidemiologic Studies Depression Scale (CES-D) Short-Form was used to measure depression. One of the most popular and reliable assessments of depression symptoms is the CES-D. With Likert response scales ranging from 0 (rarely or never) to 3 (most or always), the short-form scale comprises 10 items about feelings and actions throughout the previous week. Positive experience-describing items were reverse-coded, and the sum of the scores indicated the presence of depressed symptoms. There is a sleep-related item on the CES-D (Item 7; My sleep was restless). We performed analyses using the complete 10-item scale and again without the sleep item to make sure this item did not overlap with other sleep-related measures; the revised scale with the sleep item removed and the total scale showed a r =.99 correlation.

Analysis

Descriptive data (see Table 1) and Pearson product-moment correlations between variables of interest were produced using the IBM SPSS 23 statistical software. All variables produced reasonable averages and variability, according to descriptive data. Depression,

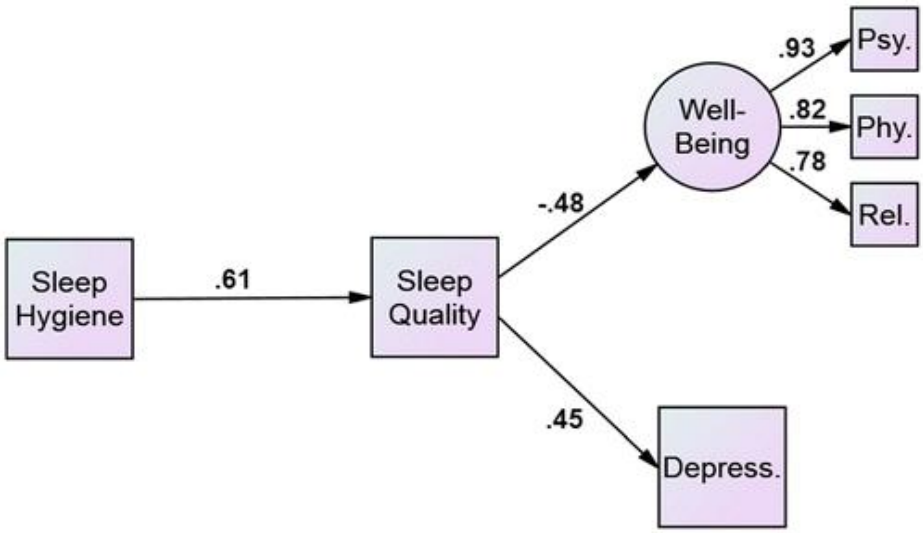
well-being, sleep hygiene, and sleep quality all showed high correlations with one another and in the anticipated direction.

Analyses were performed using statistical tools to evaluate the hypotheses that sleep hygiene would have indirect effects through sleep quality and that depression and subjective well-being would be predicted by sleep quality. Effect sizes for direct and indirect pathways were generated using structural equation modeling, and bootstrapping procedures with 500 samples at 95% confidence intervals were used to determine significance tests for indirect effects. By estimating standard errors with the presence of all predictors, mediators, and dependent variables within the same model, structural equation modeling provides a thorough approach when multiple dependent variables are being examined within the same model. This is appropriate given the three-factor structure of the BCC-SWB measurement tool. In the structural equation model, the manifest variable of depression and the latent construct of subjective well-being were permitted to co-vary.

Findings

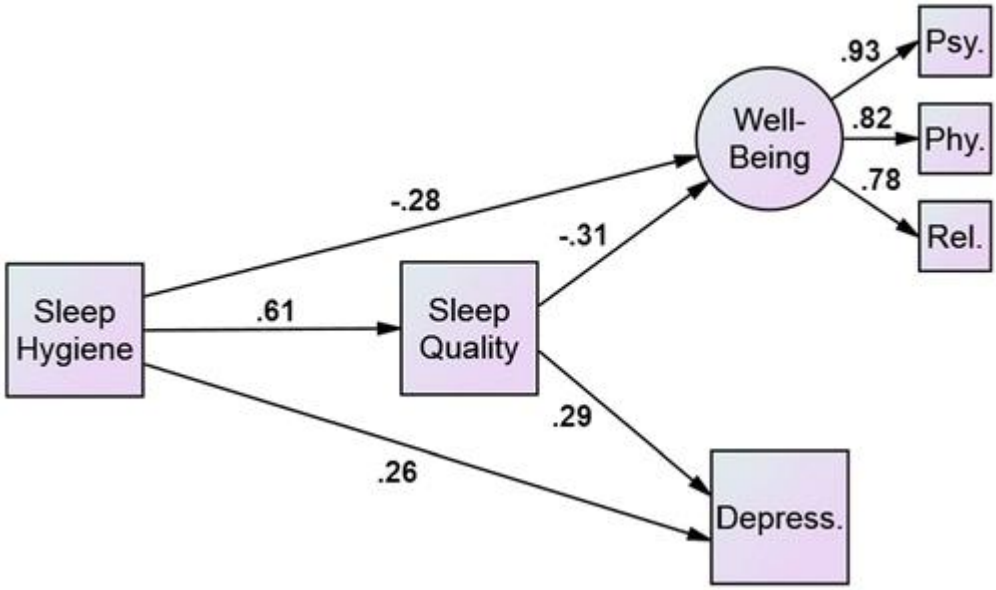
In the initial testing of a comprehensive mediation model (see Figure 1), sleep hygiene only produced indirect pathways to outcomes related to mental health. Sleep hygiene produced both direct and indirect pathways to depression and subjective well-being in a different partial mediation model that was evaluated (see Figure 2). Age, gender, and self-reported sleep problem were all included as factors in all models.

Figure 1 shows the complete mediation model, whereby sleep hygiene used sleep quality to indirectly predict mental health (operationalized as sadness and subjective well-being).



Note: Path weights are standardized regression weights, all significant at the $p < .005$ level or lower.

Figure 2. Partial mediation model in which sleep hygiene directly predicted mental health (operationalized as depression and subjective well-being) and yielded indirect effects via sleep quality.



Note: Path weights are standardized regression weights, all significant at the $p < .005$ level or lower.

Model of full mediation

A good-fitting model was shown by the entire mediation model's model fit indices (X2 = 40.19, CFI =.96, TLI =.91, RMSEA =.09). Table 3 presents the path model's results (unstandardized regression coefficients). At the p <.001 level, all direct effects were significant (standardized regression coefficients are shown in Figure 1).

Model of partial mediation

A very good-fitting model was shown by the partial mediation model's model fit indices (X2 = 26.40, CFI =.98, TLI =.94, RMSEA =.08). Table 3 presents the findings for the partial mediation route model (unstandardized regression coefficients). There were notable direct and indirect pathways for both mental health outcomes when sleep hygiene was permitted to predict depression and subjective well-being directly. At the p <.005 level or less, all direct effects were significant (standardized regression coefficients are shown in Figure 2). Significant indirect effects of sleep hygiene were observed in depression (β =.18, p <.001) and subjective well-being (β = −.19, p <.001).

We rescored the physical well-being subscale without the item "Are you happy with the quality of your sleep?" to make that relationships between the sleep-related measures and mental health measures were not largely driven by sleep-related items. as well as the CES-D score without the component "My sleep was restless." The models of partial and full mediation were reexamined. The data was well-fitted by both the partial mediation model (X2 = 19.44, CFI =.99, TLI =.97, RMSEA =.05) and the full mediation model (X2 = 31.86, CFI =.97, TLI =.94, RMSEA =.08). Every pathway produced almost the same path weights and remained statistically significant.

CONVERSATION

The results of this study showed that sleep quality among college students predicted both positive and negative aspects of mental health in a single model (H1). In other words, poorer sleep quality was linked to higher levels of depressive symptoms and lower subjective well-being after adjusting for age, gender, and self-reported sleep problem. Furthermore, despite the impact of age, gender, and self-reported sleep problems, sleep hygiene had both direct and indirect effects on college students' subjective well-being and sadness (H2). According to self-regulation theories, getting enough sleep is crucial for supplying the energy required to properly handle stress and control emotions; as a result, sleep hygiene may have an indirect impact on mental health by affecting the quality of sleep. Sleep hygiene has significant direct effects on depression and subjective well-being; presumably sustaining consistent, healthy sleep hygiene practices leads to satisfaction, which enhances wellbeing and reduces depressive symptoms.

The findings produce a number of important facts that significantly advance the body of literature. First of all, it is new to include both good and negative mental health indices. When adjusting for the other component, substantial direct and indirect impacts can be seen as distinct relationships with each of the two mental health components because they were permitted to co-vary. Sleep may have a varied relationship with happy and negative emotions, which makes this distinction crucial. Research showing a connection between sleep and well-being may guide intervention efforts aimed at promoting psychological well-being and excellent mental health since psychological well-being has numerous preventive health advantages for the immune and cardiovascular systems.

Additionally, the study found evidence that sleep hygiene may have an impact on emotional well-being. Few studies have been published on the relationships between sleep hygiene practices and positive aspects of mental health, despite the fact that numerous studies have shown links between happy emotions and good sleep in a range of populations. Both direct and indirect relationships between sleep hygiene and both good and negative emotions were suggested by the current research. These findings are significant because poor mental health contributes to many negative physical and socioemotional outcomes, can impair academic performance, and is a risk factor for dropping out of college. They also suggest that good sleep hygiene practices may be protective against depressive symptoms in college students and promote high subjective well-being during a critical period marked by many life changes, developmental milestones, and identity exploration.

REFERENCES

Adams, S. K., & Kisler, T. S. (2013). Sleep quality as a mediator between technology-related sleep quality, depression, and anxiety. *Cyberpsychology, Behavior, and Social Networking, 16*, 25–30.

Ahrberg, K. K., Dresler, M. M., Niedermaier, S. S., Steiger, A. A., & Genzel, L. L. (2012). The interaction between sleep quality and academic performance. *Journal of Psychiatric Research, 46*, 1618–

Alvaro, P. K., Roberts, R. M., & Harris, J. K. (2013). A systematic review assessing bidirectionality between sleep disturbances, anxiety, and depression. *Sleep, 36*, 1059–1068.

American College Health Association. (2007). American College Health Association national college health assessment spring 2006 reference group report (abridged). *Journal of American College Health, 55*, 195–206.

Arnett, J. J. (2007). Emerging adulthood: What is it, and what is it good for? *Child Development Perspectives*, *1*, 68–73

Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, *88*.

Brick, C. A., Seely, D. L., & Palermo, T. M. (2010). Association between sleep hygiene and sleep quality in medical students. *Behavioral Sleep Medicine*, *8*.

Buysse, D. J., Reynolds, C. F, Monk, T. H., Berman, S. R., & Kupfer, D. J. (1989). The Pittsburgh Sleep Quality index: A new instrument for psychiatric practice and research. *Psychiatry Research*, *28*, 193–213.

Furr, S. R., Westefeld, J. S., McConnell, G. N., & Jenkins, J. (2001). Suicide and depression among college students: A decade later. *Professional Psychology: Research and Practice*, *32.*

Knutson, K. (2012). Does inadequate sleep play a role in vulnerability to obesity? *American Journal of Human Biology*, *24.*

Acknowledgment

The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author(s) declared no conflict of interest.

How to cite this article: Akhinu, S.V.S. & Shahnawaz, M.M. (2025). College Students' Positive and Negative Aspects of Mental Health can be Predicted by Their Sleep Hygiene and Quality. *International Journal of Indian Psychology*, *13*(1), 791-798. DIP:18.01.075.20251301, DOI:10.25215/1301.075