

Sleep Hygiene as a Stress Management Strategy for Students.

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ABSTRACT

Sleep Hygiene as a Stress Management Strategy for Students Background: Sleep is an essential component of a healthy lifestyle and hence a health-related resource.

The study aims to understand the genesis and significance of sleep hygiene as a coping mechanism for students, as well as the extent to which they use sleep to manage stress.

In this longitudinal study, 145 students reported on their sleep hygiene habits, health-related intentions, stress levels, and sleep quality during a two-week period. Multiple regression and moderation analyses were conducted. Findings: Stressful situations that occurred recently did not influence intentions to practice good sleep hygiene. On the other hand, a strong correlation was discovered between the intention to practice good sleep hygiene and its actual implementation. Students who follow good sleep hygiene practices report feeling less stressed. In conclusion, students with good intentions can manage their stress better when they practice good sleep hygiene. More investigation is needed to pinpoint the characteristics of sleep hygiene behavior and strategies for motivating students to use it as a coping mechanism when promoting their health.

Keywords: Stress, coping, sleep, sleep hygiene, intention, behaviour, students.

INTRODUCTION

Sleep is crucial for regenerating the body, mind, and soul and is a valuable health resource (1). Non-restful sleep can have negative effects on health, mental and physical performance. Performance and engagement in both professional and social settings are important [2]. Lack of sleep combined with

chronic stress poses a significant health risk.

Although studies have shown that stress has a deleterious impact on sleep [3, 4], the impact of sleep on the perception of stress has not yet been shown.

thoroughly examined and underrepresented in the literature. As a result, the current study intends to explore the relationship between students' desired sleep hygiene behaviors and stress experiences as well as the function of sleep as a health-related resource and stress-reduction technique.

The transactional stress model [5] states that "stress" is a subjectively felt state of tension that results from an imbalance of perceived environmental (or internal) needs as well as personal resources. Stress is increased when environmental demands are seen as erratic, uncontrollable, and long-lasting. Stress arises if it is determined that a person's personal resources are insufficient to handle the specific stressor. According to Lazarus [5], there are two main ways that people cope with stress: emotion-oriented coping, which entails using techniques to elevate one's own emotional condition, and problem-oriented coping, which entails actively intervening in the situation to alter the problem.

Students are impacted by a variety of stressors during their education, including workload and time constraints [6]. Students' personal stressors are associated with a wide range of factors. Stress manifests itself in several ways, from physiological to psychological ailments such as headaches, palpitations, stomach pain, mood changes, or difficulty concentrating. Stress levels rise and cause a decline in health-promoting behaviors [6], as well as an increase in risky behaviors like smoking or sleeping patterns [7]. Weak coping strategies and insufficient phases of rehabilitation might result in burnout.

MATERIALS AND METHODS

In this two-week longitudinal study, students reported on their stress levels and sleep hygiene.

Behavior was assessed using a paper and pencil questionnaire. The study followed Helsinki Declaration guidelines and was approved by a local ethical council. N = 145 students from various study programs (midwifery, health sciences) are included in the sample. Out of n = 122, women made up the majority. M = 27.68 years (SD = 4.53; range: 20-46 years) was the average age. At the time of the survey, the majority of study participants were married or in a committed relationship; 20% of participants had children already.

Furthermore, about 25% of research participants had training in the field of physical and speech therapy, compared to the majority of participants who had expertise in the care industry. Most survey participants reported working part-time jobs in addition to their education, with approximately 98% completing a full-time course. Feeling pressured. The Percieved Stress Questionnaire (PSQ), in German, was used to gauge students' stress levels at both T1 and T2.[14]. Twenty items on a standardized test measure the amount of stress that is now subjectively experienced. A 4-point Likert scale was used for the responses, with 1 denoting "not at all" and 4 denoting "three or more times per week." A total score was calculated for analysis, with values ranging from 0 to 100 represents an above-average stress level, while Cronbach's alpha ranges from 0.80 to 0.86 (Fliege et al., 2005). Practice good sleep hygiene. At t2, good sleeping habits Two items that are similar to were used to evaluate behavior [13]. (For example, "In the previous two weeks, how many days did you avoid doing anything stressful or anxious right before bed?/...did you not drink coffee, or any other beverage containing tea or caffeine, eight hours before bedtime?"). In the previous two weeks, the students were asked to list the number of days they had engaged in the appropriate sleep hygiene behavior.

RESULTS

Students' stress levels were stable ($F(1, 131) = 2.78, p = 0.09$), with $M = 42.2$ ($SD = 18.8$) at T1 and $M = 39.3$ ($SD = 17.6$) at T2. The intention to practice sleep hygiene was quite strong (avoiding stress and anxiety T1: $M = 4.51, SD = 1.20$; avoiding coffee T1: $M = 3.52, SD = 1.74$). On average, students practiced sleep hygiene to reduce stress and anxiety ($M = 9.5, SD = 3.8$) and avoided coffee on 7.9 ($SD = 5.5$) out of 14 days. There was no significant correlation found between perceived stress levels at T1 and intentions to practice good sleep hygiene, which defies hypothesis 1 regarding the relationship between higher perceived stress levels and intentions. Age and gender did not correlate with intention (refer to Table 1).

There was a significant correlation between intention and avoiding caffeine at T2, meaning that students with greater intentions at T1 more strongly avoided caffeine at T2, which is consistent with hypothesis 2, the relationship between intentions at T1 and sleep hygiene behavior at T2.

There was no correlation between intention and avoiding stress or anxiety, which runs counter to hypothesis 2. The greatest predictor in this case was stress events (see Table 2). According to hypothesis 3 on the connection between stress at T2 and anticipated sleep hygiene behavior at T2, there was a significant interaction of intention and practiced good sleep hygiene in predicting stress events at T2 in order

to prevent anxiety and stress. Conditional effects reveal that in students with high goals, avoiding stress and anxiety was linked to lower stress levels ($B_{cond.} = -1.96, p < 0.001$), but in those with poor intentions, there was no correlation ($B_{cond.} = -0.49, p = 0.22$). Contrary to hypothesis 3, there was no correlation found between cutting out caffeine and altered stress levels.

DISCUSSION

This study examined how students use sleep hygiene to manage stress. However, there was no connection. Students who reported stronger goals for sleep hygiene were more likely to do it, leading to reduced tension and anxiety before bedtime. The current study's findings about the stress experiences of the students align with several research that demonstrate that students typically remark elevated levels of stress [14].

Given that students appear to be a population at risk for engaging in health-harming behaviors [6, 16], it is not surprising that the current study's hypothesis 1 was refuted and stress perception did not result in the establishment of intentions to promote health. Whether or not students employ sleep hygiene in addition to other coping mechanisms to deal with stress is debatable [5, 9, 17]. As a result, further research on this matter is required. Future research should take into account additional variables that influence how intentions are formed.

This work is the first to combine the assumptions of health behavior change models [8, 9] and stress models [5] to evaluate anticipated outcomes. Sleep hygiene is used as a coping method.

Future studies should consider all types of students' sleep behavior and quality, as the current study focused on forming and enacting goals for sleep hygiene in the context of stress. Sleep issues have been linked to several mental diseases, warranting further research. Control for symptoms and diagnosis.

REFERENCES

1. Gupta R, Neubauer DN, Pandi-Perumal SR. Sleep and Neuropsychiatry. New York: Springer; 2021.
2. Gerlach M, Sanner B. Leitlinien in der Praxis: Die neue S3-Leitlinie "Nicht erholsamer Schlaf/Schlafstörungen" Kapitel "Schlafbezogene Atmungsstörungen" [Guidelines in Practice: The New S3 Guideline "Sleeping Disorders - Sleep-Related Abnormal Breathing"]. Laryngo Rhino Otol. 2017;96:685-690.
3. Hefez A, Metz L, Lavie P. Long-term effects of

- extremesituational stress on sleep and dreaming. *Am J Psych.*1987;144:344-347.
4. Van Reeth O et al. Physiology of sleep– Interactions between stress and sleep: from basic research to clinical situations.*Sleep Med Rev.* 2000;4:201-219.
5. Lazarus RS, Folkman S. Stress, appraisal, and coping. New York: Springer; 1984.
6. Voltmer E, Köttner T, Spahn C. Perceived medical school stress and the development of behavior and experience patterns in German medical students. *Medical Teacher* 2012;34:840-847.
7. Maslach C, Leiter MP. The truth about burnout. San Francisco, CA: Jossey-Bass; 1997.
8. Ajzen I, Fishbein M. Understanding attitudes and predicting social behavior. Englewood Cliffs, N.J.: Prentice-Hall; 1980.
9. Schwarzer R. *Lehrbuch der Gesundheitspsychologie* [Health psychology: A textbook]. 2nd rev. ed. Göttingen, Germany: Hogrefe; 1997.
10. Sedeh A, Keinan G, Daon K. Effects of stress on sleep: the moderation role of coping style. *Health Psychol.* 2004;23:542-5.
11. Pedersen ER et al. Increasing Resilience through Promotion of Healthy Sleep among Service Members. *Mil Med* 2015;180:4-6.
12. Chokroverty S. *Sleep Disorders Medicine*. 4th ed. New York: Springer; 2017.