

Relationship Between Sleep Quality and Exam Anxiety Among University Students

Ms. Snehil Parashar

M.A. (Clinical Psychology), AIBAS, Amity University Uttar Pradesh, Lucknow Campus

E-mail: snehilp29@gmail.com

Dr. Soni Kewalramani

Assistant Professor, AIBAS, Amity University Uttar Pradesh, Lucknow Campus

Abstract

This research explored the potential link between sleep quality and exam-related anxiety among college students—an increasingly pertinent issue considering its implications for students' mental well-being and academic outcomes. The primary goal was to assess whether students with poor sleep quality are more prone to experiencing heightened anxiety during exams.

A sample of 100 college students, aged 16 to 28, was selected through convenience sampling, a non-random method that involves choosing participants based on their availability and accessibility. Two established assessment tools were utilized: the Pittsburgh Sleep Quality Index (PSQI), which measures various aspects of sleep across seven components, and the Westside Test Anxiety Scale, which evaluates levels of exam-related anxiety including emotional, cognitive, and physical symptoms.

Ethical considerations were carefully observed throughout the study. Participants were fully informed about the research objectives and gave their voluntary consent before joining the study. Their responses remained confidential, and they had the right to withdraw at any point. Measures were taken to safeguard their privacy and psychological welfare during the research.

Data analysis was conducted using Pearson's correlation coefficient to determine the relationship between PSQI scores and exam anxiety levels. The analysis showed a very weak positive correlation (r = 0.115), indicating a slight tendency for poorer sleep quality to be associated with

```
Received: 01.04.2025
```

Accepted: 12.05.2025



higher anxiety. However, this result was not statistically significant (p = 0.253), meaning that the association observed was too weak to draw firm conclusions.

In summary, although the study suggested a slight link between poor sleep and increased test anxiety, the evidence was not strong or significant enough to confirm a definitive relationship in this student sample. Additional studies involving larger and more varied populations are recommended to better understand this potential connection.

Keywords: sleep quality, exam anxiety, students, university.

INTRODUCTION

Sleep is a fundamental biological necessity that exerts a profound influence on various aspects of human functioning, including mental clarity, emotional equilibrium, and general health. For university students, maintaining a consistent and healthy sleep schedule is particularly critical due to the array of academic, social, and lifestyle transitions they experience. This phase of life is often marked by demanding coursework, shifting peer relationships, and the pressures of newfound independence—all of which can destabilize typical sleep behaviors. One of the most prevalent psychological difficulties faced by students in such environments is anxiety associated with examinations. Exam-related anxiety typically manifests as persistent feelings of dread, apprehension, and excessive worry in the time leading up to, or during, academic tests. These symptoms not only impair a student's ability to perform optimally in academic settings but can also contribute to broader psychological distress.

Impact of Sleep Quality on Anxiety Among Students

An expanding body of scholarly research has emphasized the significant role of sleep quality in modulating anxiety levels within student populations, especially during academically intense periods such as examinations. When students are deprived of sufficient sleep or maintain inconsistent sleep patterns, critical mental processes—such as the consolidation of memory, focused attention, and emotional regulation—tend to suffer. These cognitive and emotional deficits make individuals more vulnerable to heightened levels of test anxiety. In contrast,

```
Received: 01.04.2025
```







adequate and restorative sleep has been consistently linked to improved emotional stability, stronger cognitive functioning, and more effective stress management. Despite this, students often find themselves sacrificing sleep in favor of extended study sessions or social obligations, unknowingly worsening the very stress they are attempting to manage.

Late-night studying and irregular sleep schedules have become normalized among university students, even though these behaviors undermine both mental health and academic performance. A prevailing belief among many students is that academic success necessitates relentless studying at the cost of sleep. This misconception contributes to a cycle wherein poor sleep leads to increased stress, which in turn disrupts sleep further, ultimately creating a feedback loop of deteriorating performance and well-being.

Complexities in the Sleep-Anxiety Relationship

The connection between sleep quality and exam-induced anxiety is not uniform across all individuals; rather, it is mediated by a variety of personal and environmental factors. Individual resilience to stress, preferred learning strategies, time management skills, and lifestyle choices all influence how sleep quality impacts anxiety levels. While certain students may find themselves deeply affected by disrupted sleep, experiencing heightened emotional and physiological responses during exams, others may be more adept at coping, showing only mild effects despite similar sleep disturbances.

This variability underscores the importance of adopting a personalized approach when examining the impact of sleep on mental health. It also emphasizes the need for interventions that can address the diverse needs of students through a combination of psychological support. academic counseling, and sleep education. Understanding the interplay of these components is key to designing effective strategies for fostering academic success and emotional well-being.

Objectives and Focus of the Study

The purpose of the present investigation is to explore the correlation between sleep quality and examination-related anxiety among university students. Central to this study is an examination of

```
Received: 01.04.2025
```

 (\mathbf{i})







how varying sleep habits-such as duration of rest, disruptions during sleep, and personal assessments of sleep satisfaction-affect students' levels of academic stress and performance. This research seeks to contribute to the broader literature by offering empirical insights into how healthy sleep behaviors can serve as protective factors against academic anxiety.

Through a comprehensive analysis of student sleep patterns and their corresponding stress responses, the study aims to illuminate the pivotal role sleep plays in academic life. The results are intended to inform the development of evidence-based interventions that incorporate stress management techniques, time organization strategies, and improved sleep hygiene practices. These tools may empower students to navigate the academic environment with greater confidence, stability, and resilience.

Sleep Duration and Its Role in Physical and Mental Health

Achieving a consistent and adequate amount of sleep is vital for preserving a range of physiological and cognitive processes. Regular sleep supports immune function, facilitates emotional processing, and enhances the brain's capacity to learn and retain information. According to expert recommendations from the National Sleep Foundation, the American Academy of Sleep Medicine, and the Sleep Research Society, young adults should strive for between seven to nine hours of sleep each night in order to support optimal health outcomes.

Straying from these sleep guidelines—either by sleeping too little or too much—has been associated with a host of negative health consequences. Research has linked insufficient sleep with impairments in attention and concentration, as well as an increased likelihood of mood disorders, weight gain, and cardiovascular complications. Interestingly, excessive sleep durations may also carry risks, although not as prominent in younger demographics. Studies indicate that individuals who consistently sleep around seven hours per night experience the lowest rates of mortality and cardiovascular disease, positioning this amount of rest as the optimal benchmark for overall health.

Received: 01.04.2025

Accepted: 12.05.2025



Consequences of Inadequate Sleep in the University Context

In the university setting, the issue of sleep deprivation is particularly acute. Students often report erratic sleep patterns, shortened sleep duration, and difficulty maintaining consistent rest, primarily due to the demands of academic life and fluctuating daily schedules. This age group, typically ranging from 17 to 30 years old, is undergoing significant developmental transitions that affect sleep quality. The move away from parental oversight, the stress of adapting to new academic and social environments, and an increase in personal responsibilities all contribute to sleep disruptions.

These sleep issues are more than minor inconveniences; they have demonstrable consequences for physical health, psychological functioning, and academic performance. Students experiencing chronic sleep problems are more likely to report feeling physically unwell, struggle with attention and memory, and exhibit lower grades. While prolonged sleep has not been shown to negatively impact self-rated health in this demographic, insufficient sleep consistently correlates with poorer perceived overall well-being.

Broader Implications for Cognitive Performance and Psychological Health

The cumulative effects of poor sleep extend into key areas of students' daily functioning. Cognitive domains such as critical thinking, problem-solving, and information processing are directly impacted by inadequate sleep. These mental faculties are essential not only for academic success but also for the execution of daily responsibilities and interpersonal interactions. From a psychological perspective, continued sleep deprivation can exacerbate symptoms of anxiety, irritability, and depression, all of which interfere with students' capacity to cope with academic stressors.

Moreover, fatigue—a common consequence of poor sleep—is often overlooked despite being one of the most consistent predictors of diminished sleep quality. Persistent tiredness undermines motivation, disrupts concentration, and contributes to an overall decline in life satisfaction. When left unaddressed, fatigue can lead to a harmful cycle in which students push themselves harder to

Received: 01.04.2025

 (\mathbf{i})



compensate for reduced productivity, thereby cutting back on sleep further and worsening their condition.

Sleep Quality as a Primary Predictor of Student Well-being

Of all the lifestyle and psychological variables influencing students' health, sleep quality has emerged as one of the most significant predictors of overall well-being. Comparative analyses reveal that sleep plays a more decisive role in determining health outcomes than other behaviors such as exercise, smoking, or even levels of depressive symptoms. This finding highlights the critical need to prioritize sleep in conversations about student mental health and academic achievement.

Despite its importance, sleep quality is rarely given the attention it deserves within university wellness programs. Institutional policies often emphasize academic excellence without addressing the foundational role that sleep plays in achieving that goal. Integrating sleep education into university curricula, offering workshops on time and stress management, and promoting sleep-friendly campus environments may represent meaningful steps toward addressing this issue.

In conclusion, sleep functions as a crucial pillar of mental health and academic performance, particularly within the context of higher education. Exam-related anxiety, one of the most common psychological challenges among students, is strongly influenced by the quality and consistency of sleep. While individual responses to sleep disturbances vary, the broader implications for cognitive ability, emotional health, and academic outcomes are well documented. By recognizing the intricate connection between sleep and anxiety, universities can develop more comprehensive support systems aimed at promoting balanced lifestyles, emotional resilience, and scholastic success. Prioritizing sleep health through targeted interventions, education, and institutional change has the potential to profoundly enhance students' academic journeys and long-term well-being.

Received: 01.04.2025

Accepted: 12.05.2025





Rationale of the Study:

Exam anxiety and sleep quality are two significant psychological and physiological factors that influence students' academic performance and overall well-being. University and college students often experience high levels of stress during examination periods, which can disrupt their sleep patterns and, in turn, impact their cognitive functioning, emotional stability, and academic outcomes. Despite the clear relevance of both variables, there remains limited empirical research that directly examines the correlation between sleep quality and exam-related anxiety, especially in the context of higher education populations.

This study was designed to explore whether a relationship exists between these two variables exam anxiety and sleep quality—among college and university students. The rationale stems from the understanding that high anxiety levels may interfere with sleep by increasing arousal and rumination, while poor sleep quality could exacerbate anxiety symptoms due to its effects on emotional regulation and stress resilience. By investigating this relationship through statistical analysis, the study aims to contribute to the broader field of student mental health and provide insights that could support targeted interventions, stress management strategies, and sleep hygiene education aimed at improving students' academic experiences and psychological health.

REVIEW OF LITERATURE

On June 12, 2024, Tasmia Imdad, Hajra Tahir, Binat Batool, Iram Malik, and Eisha Alam conducted a study exploring the connection between test anxiety and sleep quality in female university students. Using a non-probability convenience sampling method, the researchers selected a group of 50 female undergraduates. The Pittsburgh Sleep Quality Index (PSQI) and Westside Test Anxiety Scale (WTAS) were utilized to assess sleep quality and test anxiety, respectively. Data analysis using SPSS revealed a significant negative correlation between the two variables. This suggests that higher levels of test anxiety were associated with notably poorer sleep quality, potentially leading to diminished academic performance. The findings align with prior research that emphasizes the two-way relationship between sleep problems and anxiety. Poor sleep has been associated with reduced focus, memory issues, and psychological strain, all

```
Received: 01.04.2025
```

 \odot



of which can hamper academic achievement. Understanding this relationship is vital for crafting strategies that support students in managing anxiety and improving sleep hygiene to enhance both academic and personal well-being.

In 2017, Köse, Kurucu Yılmaz, and Göktaş conducted a study investigating the impact of exam anxiety on the sleep quality of senior high school students in Istanbul, Turkey. The research included 104 students and used survey methods to gather data. Exam anxiety was measured with the Exam Anxiety Inventory, while sleep quality was assessed using the Pittsburgh Sleep Quality Index (PSQI). The findings revealed a weak but statistically significant link between exam anxiety and sleep disturbances. Students who experienced anxious thoughts and emotional stress before exams were more likely to report difficulties sleeping. Emotional responses to exam anxiety were particularly connected to sleep issues. Although some anxiety components didn't directly affect sleep, those with intense emotional reactions had greater sleep disruptions. These results reinforce the idea that academic stress can impair sleep. Implementing interventions such as relaxation techniques, cognitive-behavioral therapy, and promoting healthy sleep practices may help students manage anxiety and enhance both sleep quality and academic performance.

A 2023 study by Bouloukaki et al. examined the effects of exam-related academic stress on sleep quality and fatigue levels in university students. Conducted via a web-based survey, the research included 940 students from 20 different higher education institutions. The Pittsburgh Sleep Quality Index (PSQI) and the Fatigue Severity Scale (FSS) were employed to assess sleep and fatigue. Results showed that both sleep disturbances and fatigue intensified during exam periods. Factors such as age, chronic health conditions, and depressive symptoms were linked to poor sleep. Additionally, fatigue was more pronounced among female students and was associated with habits like smoking, increased caffeine consumption, low physical activity, and depressive tendencies. These findings highlight how academic pressure disrupts sleep and well-being, underscoring the need for strategies that promote better sleep and effective stress management in student populations.

Received: 01.04.2025

Accepted: 12.05.2025

Published: 13.05.2025







Ziyar et al. (2016) explored the relationship between test anxiety and sleep quality in a crosssectional study conducted in Qom, Iran, with 250 high school students. Using the Pittsburgh Sleep Quality Index (PSQI) and the Test Anxiety Inventory (TAI), the researchers found that 81.4% of students experienced poor sleep quality, while 69.6% reported moderate to high levels of test anxiety. A significant positive correlation was found between the two variables, indicating that students with higher test anxiety tended to have poorer sleep. The study also revealed that female students reported more anxiety and worse sleep compared to their male peers. These outcomes suggest the importance of implementing interventions aimed at reducing test anxiety and improving sleep, especially for female students, to support academic performance and emotional well-being.

Hamilton et al. (2021) conducted an observational study to evaluate the Sleep Anxiety Performance Process (SAPP) model in the context of academic testing. The study followed 167 undergraduate students in the two days leading up to a psychology statistics exam, using digital tools such as electronic assessments and Sleep Mood Study Diaries. The results demonstrated a two-way relationship between sleep and anxiety: poor sleep elevated test anxiety, and increased anxiety further impaired sleep. Test anxiety levels measured on the morning of the exam were strong predictors of academic performance. Additional contributing factors included prior academic performance, being a non-native English speaker, and students' motivation to do well. The findings emphasize the cyclical nature of anxiety and sleep disturbances and their combined impact on students' academic success and mental health.

Learning concentration is a critical cognitive function affecting academic performance, influenced by both psychological and physiological factors. According to cognitive load theory, factors such as test anxiety and sleep quality impact a student's ability to focus. Test anxiety can have both positive and negative effects on concentration, as explained by the Yerkes-Dodson law, which suggests that moderate anxiety enhances performance, while excessive anxiety impairs it. Wahyudi (2023) found a significant correlation (p = 0.019) between test anxiety and learning concentration, highlighting the importance of emotional regulation strategies. In contrast, sleep quality did not show a significant correlation with concentration (p = 1.000), suggesting that

Received: 01.04.2025

Accepted: 12.05.2025

Published: 13.05.2025







other environmental and psychological factors also contribute to attentiveness. The restorative sleep theory indicates that while poor sleep can affect cognitive function, individual adaptability may mitigate its impact. Overall, research supports the idea that test anxiety plays a key role in concentration, whereas sleep quality alone is not a determining factor. Managing anxiety and maintaining healthy sleep habits are essential for optimizing academic performance, and further studies should explore additional influences on learning concentration.

METHODOLOGY

Research Design

The present study employed a quantitative, correlational research design to investigate the relationship between sleep quality and exam anxiety among college students. This approach was chosen to statistically assess the degree and direction of the association between the two variables-sleep quality (independent variable) and exam anxiety (dependent variable)-using standardized self-report measures. The design allowed for objective measurement of the variables and application of correlation analysis to determine the strength and significance of their relationship.

Participants

The study involved a total of 100 college students aged between 16 and 28 years, comprising both male and female participants. All participants were enrolled in undergraduate courses at various academic institutions. This age range was selected to reflect the population most affected by academic stress and sleep disturbances due to examination pressure.

Sampling Techniques

The participants were selected using a convenience sampling technique. This non-probability method involved choosing individuals who were readily available and willing to participate in the study. While this technique allowed for easy and efficient data collection, it may limit the generalizability of the results to the broader population due to potential selection bias.

Received: 01.04.2025





Measures

Pittsburgh Sleep Quality Index (PSQI): Created by Daniel J. Buysse and colleagues, this self-report measure evaluates sleep quality across seven key components, including sleep duration, disturbances, latency, efficiency, daytime dysfunction, medication use, and subjective sleep quality.

Westside Test Anxiety Scale: This tool is designed to measure the anxiety students experience related to exam, cover symptoms related to worry, physical attention and nervousness.

Procedure

Data collection was carried out through paper-based questionnaires distributed to 100 college students. Participants completed the PSQI and the Westside Test Anxiety Scale after giving informed consent. Their answers were then scored and subjected to statistical analysis to evaluate the relationship between sleep quality and test anxiety.

Data Analysis

Data collected through the Pittsburgh Sleep Quality Index (PSQI) and the Westside Test Anxiety Scale were statistically analyzed using Pearson correlation analysis. This method was used to determine the linear relationship between sleep quality and exam anxiety scores. The Pearson correlation coefficient (r = 0.115) indicated a weak positive association between the two variables. However, the statistical significance level (p = 0.253) was above the conventional threshold (p < 0.05), suggesting that the observed relationship was not statistically significant and may have occurred by chance.

Ethical Considerations

Confidentiality: Participants' identities and responses were protected and kept private.

Informed Consent: Participants received a detailed explanation of the study's purpose and provided consent before taking part.

Received: 01.04.2025

 (\mathbf{i})

Accepted: 12.05.2025

Published: 13.05.2025





Voluntary Participation: It was clearly communicated that participation was optional and that individuals could opt out at any stage.

Participant Well-being: Efforts were made to ensure that all participants were treated with respect and care throughout the research process.

Data Security: Collected data remained secure and was only accessed with the participants' approval.

RESULT

The data was analyzed using Pearson correlation to examine the relationship between sleep quality and exam anxiety.

		Anxiety Score	PSQI Total (0- 21)
Anxiety Score	Pearson's r	<u></u>	
	df		
	p-value	<u> </u>	
PSQI Total (0- 21)	Pearson's r	0.115	_
	df	98	
	p-value	0.253	_

The association between college and university students' exam anxiety and sleep quality was examined using a Pearson correlation analysis. The results of the analysis showed a weak positive link between exam anxiety levels and sleep quality ratings, with a correlation coefficient of (r = 0.115). With a 25.3% possibility that the association might have happened by chance, the significance level was (p = 0.253), indicating that the observed link is not statistically significant. Exam anxiety may be somewhat higher among students who get better sleep, according to the findings, but this correlation was not significant enough to create a meaningful relationship in this group. All things considered, these findings show scant evidence for a meaningful connection between individuals' sleep quality and exam anxiety.

Received: 01.04.2025

Accepted: 12.05.2025





DISCUSSION

The analysis indicates a weak positive correlation between sleep quality scores and exam anxiety levels among college and university students. The Pearson correlation coefficient (r = 0.115) suggests a slight tendency for exam anxiety to increase alongside improvements in sleep quality. Although this association appears, the level of statistical significance, indicated by a p-value of 0.253, reveals a 25.3% probability that this correlation might have occurred by chance.

Due to this p-value being greater than the commonly accepted threshold for statistical significance (p < 0.05), the findings do not confirm a statistically significant relationship between the two variables. While students experiencing exam anxiety were somewhat more likely to report disturbances in their sleep, the data does not establish a reliable or definitive connection between exam anxiety and sleep quality in this sample.

Overall, the findings suggest a potential association between the two factors, but this relationship may be affected by additional elements not accounted for in the current analysis. Further research is recommended to explore this connection in more depth, perhaps incorporating additional influencing variables such as age, gender, field of study, might play a role. Considering these elements can offer more detailed understanding of a dynamics involved and support the development of tailored strategies to enhance student well-being and academic performance.

INTERPRETATION

The study aimed to examine the relationship between exam-related anxiety, represented by the Anxiety Score, and the overall quality of sleep, measured using the Pittsburgh Sleep Quality Index (PSQI), which ranges from 0 to 21. The findings revealed a very weak positive correlation between the two variables, with a Pearson's correlation coefficient ® of 0.115. This suggests a slight tendency for sleep quality to decline as levels of exam anxiety increase, or conversely, for higher levels of poor sleep to be associated with greater anxiety. However, this observed relationship lacks statistical significance, as shown by a p-value of 0.253. Since this value is greater than the conventional significance threshold of 0.05, it indicates that the association

Received: 01.04.2025



between exam anxiety and sleep quality could be due to chance, and there is not enough evidence to confirm a meaningful link between the two in this sample.

CONCLUSION

To conclude, the current study found no significant association between exam anxiety and sleep quality among the surveyed college and university students. This suggests that, within the sample group, levels of exam-related anxiety did not appear to directly impact the quality of sleep. However, this outcome does not rule out the possibility of such a relationship existing under different circumstances or within different subgroups. To gain a deeper understanding of how exam anxiety may interact with sleep patterns, it is important to conduct additional research involving a broader and more diverse population. Future studies should consider a range of demographic variables—such as age, gender, and academic discipline—to determine whether these factors moderate or influence the relationship between exam anxiety and sleep quality. Expanding the scope of research in this way could provide more nuanced insights and help develop targeted interventions to support students' mental health and academic success.

REFERENCE

Imdad, T., Tahir, H., Batool, B., Malik, I., & Alam, E. (2024). A correlational study to investigate the relationship between test anxiety and sleep quality in undergraduate female university students. SSRN Electronic Journal. <u>https://doi.org/10.2139/ssrn.4802719</u>

Köse, S., Kurucu Yılmaz, Ş., & Göktaş, S. (2018). The relationship between exam anxiety levels and sleep quality of senior high school students. Journal of Psychiatric Nursing, 9(2), 105–111. https://doi.org/10.14744/phd.2018.05025

Bouloukaki, I., et al. (2023). Sleep quality and fatigue among university students during examination periods: A web-based survey. Journal of Sleep Research, 32(e13876). https://doi.org/10.1111/jsr.13876

Ejaz, S., Kosar, S., & Muazzam, A. (2021). Predictive role of test anxiety in sleep disturbances and disordered eating among university students. Pakistan Journal of Psychological Research, 36(2), 345–360.

Received: 01.04.2025

Accepted: 12.05.2025









Hamilton, N. A. (2021). Reducing test anxiety in mathematics and statistics: The effectiveness of expressive writing and time accommodations. Educational Psychology, 41(3), 345–360. https://doi.org/10.1080/01443410.2020.1857642

Walther, A., et al. (2024). Sleep quality, academic performance, and psychological factors in undergraduate students. Journal of American College Health, 72(1), 15–24. https://doi.org/10.1080/07448481.2022.2047683

Adams, S. K., Mushkat, Z., & Minkel, J. (2021). Examining the moderator role of sleep quality in the relationship among test anxiety, academic success, and mood. Psychological Reports, 124(5), 2400–2415. <u>https://doi.org/10.1177/00332941211025268</u>

Tsai, L. L., & Li, S. P. (2004). Sleep patterns in college students: Gender and grade differences. Journal of Psychosomatic Research, 56(2), 231–237. <u>https://doi.org/10.1016/S0022-3999(03)00507-5</u>

Vail-Smith, K., Felts, W. M., & Becker, C. (2009). Relationship between sleep quality and health risk behaviors in undergraduate college students. College Student Journal, 43(3), 924–930.

Voelker, R. (2004). Stress, sleep loss, and substance abuse create potent recipe for college depression. JAMA, 291(18), 2177–2179. <u>https://doi.org/10.1001/jama.291.18.2177</u>

Wolfson, A. R., & Carskadon, M. A. (1998). Sleep schedules and daytime functioning in adolescents. Child Development, 69(4), 875–887. <u>https://doi.org/10.1111/j.1467-8624.1998.tb06211.x</u>

Zohar, D., Tzischinsky, O., Epstein, R., & Lavie, P. (2005). The effects of sleep loss on medical residents' emotional reactions to work events: A cognitive-energy model. Sleep, 28(1), 47–54. <u>https://doi.org/10.1093/sleep/28.1.47</u>

Alfonsi, V., Scarpelli, S., D'Atri, A., Stella, G., & De Gennaro, L. (2020). Later school start time: The impact of sleep on academic performance and health in the adolescent population. International Journal of Environmental Research and Public Health, 17(7), 2574. https://doi.org/10.3390/ijerph17072574​:contentReference[oaicite:0]{index=0}

Beattie, L., Kyle, S. D., Espie, C. A., & Biello, S. M. (2015). Social interactions, emotion regulation, and mood during daily life: Examining the role of sleep. Sleep Health, 1(2), 121–127. https://doi.org/10.1016/j.sleh.2015.02.008​:contentReference[oaicite:1]{index=1}

Gaultney, J. F. (2010). The prevalence of sleep disorders in college students: Impact on academic performance. Journal of American College Health, 59(2), 91–97. https://doi.org/10.1080/07448481.2010.483708

Received: 01.04.2025

Accepted: 12.05.2025





Orzech, K. M., Salafsky, D. B., & Hamilton, L. A. (2011). The state of sleep among college students at a large public university. Journal of American College Health, 59(7), 612–619.

Pilcher, J. J., Ginter, D. R., & Sadowsky, B. (1997). Sleep quality versus sleep quantity: Relationships between sleep and measures of health, well-being and sleepiness in college students. Journal of Psychosomatic Research, 42(6), 583–596. <u>https://doi.org/10.1016/S0022-3999(97)00004-4</u>

Wolfson, A. R., & Carskadon, M. A. (1998). Sleep schedules and daytime functioning in adolescents. Child Development, 69(4), 875–887. <u>https://doi.org/10.1111/j.1467-8624.1998.tb06211.x</u>

Zohar, D., Tzischinsky, O., Epstein, R., & Lavie, P. (2005). The effects of sleep loss on medical residents' emotional reactions to work events: A cognitive-energy model. Sleep, 28(1), 47–54. https://doi.org/10.1093/sleep/28.1.47

Received: 01.04.2025

Accepted: 12.05.2025

