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Sleep Habits and Academic Achievement: Understanding their Relationship Among University Students

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Abstract: Sleep is an important part of human life and plays a major role in maintaining physical health, mental well-being, and effective learning. University students often face academic pressure, examination preparation, personal responsibilities, and changing lifestyles, which may affect their sleeping habits. The present review explores how sleep habits are connected with academic achievement among university students. It gives particular attention to sleep quality, sleeping duration, regularity of sleep, daytime tiredness, and lifestyle-related factors. The available research suggests that insufficient or disturbed sleep may affect concentration, memory, attention, learning ability, and classroom participation. Students who maintain regular sleeping schedules and obtain sufficient rest may have better opportunities to perform their academic activities effectively. The review also highlights the influence of academic stress, excessive smartphone use, caffeine consumption, irregular study routines, and psychological difficulties on sleep patterns. However, the connection between sleep and academic achievement is not simple because educational outcomes are also affected by motivation, teaching methods, family background, and individual differences. The article emphasizes the importance of sleep awareness and healthy daily routines in higher education institutions. It also identifies research gaps and suggests practical measures for improving student well-being and learning outcomes.

Keywords: *Sleep Habits, Sleep Quality, Academic Achievement, University Students, Sleep Duration, Cognitive Functioning, Student Well-being.*

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I. INTRODUCTION

Sleep is a basic human need that supports the proper functioning of the body and mind. It provides time for physical recovery and helps the brain process information received during the day. Memory, attention, learning, and emotional balance are closely connected with healthy sleep. These functions are particularly important for university students because their academic activities require regular concentration, understanding, information processing, and problem-solving skills.

University life brings several changes in students' daily routines. Many students have to manage lectures, assignments, examinations, personal responsibilities, social activities, and sometimes part-time employment. Due to these demands, they may reduce their sleeping hours or follow irregular sleeping schedules. Some students also spend considerable time using smartphones, computers, and social media, particularly at night. Such habits may disturb their normal sleep routines.

Sleep problems are commonly reported among college and university students. Lund et al. (2010) examined sleeping patterns among college students and identified several factors associated with disturbed sleep. Their findings show that sleep difficulties should be understood in relation to students' daily activities and lifestyle conditions.

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Sleep is also important for the learning process. The brain requires adequate rest to organize and retain information. Curcio et al. (2006) explained that sleep loss can affect learning capacity and academic functioning. When students regularly obtain insufficient sleep, they may experience difficulties in maintaining attention, remembering information, and completing academic tasks effectively.

Academic achievement is influenced by several factors, including intelligence, motivation, teaching quality, study habits, family support, and psychological conditions. Sleep is another important factor that deserves attention. Gilbert and Weaver (2010) reported a relationship between sleep quality and academic performance among university students. Similarly, Okano et al. (2019) found that sleep quality, duration, and consistency were associated with academic performance among college students.

The timing and regularity of sleep may also be important. Students who sleep at different times each day may experience difficulties in maintaining alertness during regular academic hours. Phillips et al. (2017) reported that irregular sleep and wake-up patterns were associated with poorer academic performance and changes in circadian timing.

Poor sleep may also contribute to daytime tiredness, reduced motivation, and emotional difficulties. These problems can make it harder for students to participate in classroom activities and maintain productive study routines. At the same time, academic pressure and examination-related stress may disturb sleep. Therefore, the relationship between sleep and academic achievement may work in both directions.

In this context, the present review examines the major aspects of student sleep habits and their possible relationship with academic achievement. It also discusses the importance of promoting healthy sleep practices within higher education institutions.

➢ *Objectives of the Review*

The main objectives of this review are:

- To understand the relationship between sleeping habits and academic achievement among university students.
- To examine the importance of sleep quality, duration, and regularity in the learning process.
- To identify the major lifestyle and psychological factors that influence students' sleeping patterns.
- To discuss the possible effects of insufficient sleep on memory, concentration, and academic activities.
- To identify research gaps and suggest practical measures for improving sleep habits among university students.

II. RESEARCH METHODOLOGY

➢ *Research Design*

The present article follows a narrative literature review design. It is based on previously published research, review articles, and relevant academic studies concerning sleep habits and academic achievement among university students. No primary data were collected for this article.

➢ *Sources of Literature*

Relevant academic literature was considered from scholarly publications and research databases, including PubMed, Google Scholar, and peer-reviewed journal sources. The search focused on subjects related to sleep quality, sleep duration, sleeping patterns, daytime sleepiness, cognitive functioning, and academic performance.

➢ *Selection of Studies*

Priority was given to research that examined university or college students and discussed the relationship between sleep and educational or cognitive outcomes. Relevant review papers and empirical studies were also considered to develop a broader understanding of the topic.

➢ *Organization and Analysis*

The selected literature was arranged according to major themes. These included sleep quality, duration, regularity, daytime tiredness, lifestyle habits, psychological factors, and academic achievement. The findings were compared through qualitative discussion to identify common observations, differences, and areas requiring further investigation.

III. REVIEW OF RELATED LITERATURE

➢ *Sleep Quality and Academic Achievement*

Sleep quality refers to the overall experience of sleeping and feeling rested after waking up. It includes the ability to fall asleep, remain asleep during the night, and feel refreshed in the morning. Therefore, sleep quality is not determined only by the total number of hours spent sleeping.

Students with poor sleep quality may wake up several times during the night or experience difficulty falling asleep. Such problems may affect their energy levels and readiness for academic activities.

Gilbert and Weaver (2010) examined sleep quality and academic performance among university students. Their findings indicated a negative relationship between poor sleep quality and grade point average. This suggests that sleep difficulties may be connected with students' educational outcomes.

Okano et al. (2019) also reported that different dimensions of sleep, including quality, duration, and consistency, were associated with academic performance. These findings indicate that students should pay attention to the overall quality of their sleep rather than focusing only on sleeping hours.

➢ *Sleep Duration and the Learning Process*

Sleep duration refers to the total amount of time a person spends sleeping. Adequate sleep provides the brain with an opportunity to recover and process information. For university students, sufficient sleep is important because learning often involves understanding new concepts, remembering facts, and applying knowledge.

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Curcio et al. (2006) reviewed the effects of sleep loss on learning capacity and academic performance. Their work highlighted the negative consequences of insufficient sleep for important learning processes.

Pilcher and Walters (1997) also examined the effects of sleep deprivation among college students. Their research showed that participants who experienced sleep deprivation performed less effectively on a cognitive task than those who obtained normal sleep.

These findings suggest that students who regularly sacrifice sleep to complete academic work may not always receive the expected benefits from additional study time. A balanced routine that includes both effective study and adequate sleep may be more helpful.

- *Regular Sleeping Patterns and Academic Performance*

The timing of sleep is another important part of healthy sleeping habits. Going to bed and waking up at very different times may disturb the body's natural sleep-wake rhythm.

Phillips et al. (2017) examined sleep regularity among university students and found that irregular sleep-wake patterns were associated with poorer academic performance. Their findings highlight the importance of maintaining a relatively stable daily schedule.

Eliasson et al. (2010) also investigated sleeping habits and academic performance among college students. Their research drew attention to the importance of sleep timing and wake-up patterns.

Maintaining a regular sleep schedule may help students feel more alert during lectures and study periods. It may also make it easier to organize daily academic activities.

- *Daytime Sleepiness and Classroom Activities*

Daytime sleepiness is a common problem among university students who do not obtain sufficient or restorative sleep. It may appear as tiredness, difficulty remaining awake, reduced attention, or a strong desire to sleep during the day.

Hershner and Chervin (2014) discussed the causes and consequences of sleepiness among college students. Their review explained that sleep deprivation and irregular sleeping schedules may affect learning, mood, and academic functioning.

Students who experience regular daytime sleepiness may find it difficult to follow lectures, participate in discussions, and complete assignments within the expected time. They may also need more time to understand information.

Therefore, daytime alertness should be considered an important part of student academic functioning.

- *Sleep and Memory Development*

Memory plays a central role in higher education. Students need to remember information from textbooks, lectures, practical activities, and previous learning experiences. Sleep supports the processes through which newly learned information is organized and retained.

Curcio et al. (2006) explained that sleep loss can interfere with learning and memory-related processes. Insufficient rest may therefore make it difficult for students to remember and use information effectively.

Students who study for long hours without sufficient sleep may experience reduced concentration and difficulty recalling previously learned material. This does not mean that sleep alone determines memory or examination results. However, healthy sleep can support the cognitive activities required for effective learning.

- *Lifestyle Habits and Sleep Difficulties*

Students' daily habits have an important influence on their sleeping patterns. Late-night smartphone use, excessive screen time, irregular meals, caffeine consumption, social activities, and changing study schedules may contribute to sleep difficulties.

Lund et al. (2010) examined disturbed sleep among college students and highlighted the importance of different lifestyle and personal factors. Their findings support the need to consider the wider environment in which students live and study.

Technology is particularly relevant because many students use smartphones until late at night. Continuous online activities may delay bedtime and reduce the time available for sleep. Similarly, drinking caffeinated beverages late in the day may make it harder for some individuals to fall asleep.

Developing healthier daily routines may help students manage these difficulties.

- *Psychological Stress and Sleep Quality*

Psychological well-being is closely related to sleeping habits. Academic pressure, examination anxiety, personal difficulties, and concerns about future employment may create mental stress among university students.

Taylor et al. (2013) examined insomnia among college students and discussed its relationship with mental health, quality of life, and substance-use difficulties. Their study highlights that sleep problems may occur together with other psychological and lifestyle challenges.

The relationship may also operate in the opposite direction. Students who regularly experience poor sleep may find it more difficult to manage emotional pressure and daily responsibilities.

Therefore, sleep should be considered an important part of student mental well-being rather than simply a matter of personal routine.

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➢ *Sleep-Wake Cycles and Student Performance*

The sleep-wake cycle refers to the natural pattern of sleeping and waking during a 24-hour period. It is influenced by biological processes, daily activities, environmental conditions, and individual preferences.

Medeiros et al. (2001) studied the relationship between sleep-wake patterns and academic performance among medical students. Their research discussed how academic schedules and individual characteristics may influence sleeping patterns and educational functioning.

Similarly, Trockel et al. (2000) examined health-related behaviors and academic performance among first-year college students. They found that sleep habits, particularly wake-up times, were relevant to differences in students' grade point averages.

These studies suggest that academic achievement should be examined in connection with students' broader health-related behaviors.

➢ *Sleep Awareness and University Support*

Universities have an important role in supporting students' physical and psychological well-being. However, student support programs often focus mainly on academic performance, examination preparation, and career development.

Sleep education may be included as another useful area of student support. Hershner and O'Brien (2018) examined a randomized sleep education intervention for college students, highlighting the value of educational approaches to sleep health.

Universities can arrange awareness sessions, counseling facilities, and time-management activities to help students develop healthier routines. Teachers can also encourage students to balance their academic responsibilities with sufficient rest.

Such efforts may contribute to a healthier learning environment.

IV. ANALYTICAL DISCUSSION

The reviewed studies provide useful evidence that sleeping habits are connected with students' academic and cognitive functioning. However, the relationship should not be understood as a simple connection in which more sleep automatically produces higher grades. Several related factors need to be considered.

First, sleep quality appears to be an important dimension of student well-being. A student may spend enough time in bed but still experience disturbed sleep and daytime tiredness. Therefore, the number of sleeping hours alone cannot provide a complete picture of sleep health. The findings reported by Gilbert and Weaver (2010) and Okano et al. (2019) support the importance of considering sleep quality alongside duration.

Second, regularity may be as important as the total amount of sleep. Students who frequently change their sleeping and waking times may find it difficult to maintain alertness during academic hours. Research by Phillips et al. (2017) provides evidence of an association between irregular sleeping patterns and poorer academic performance.

Third, sleep has an important connection with learning-related mental activities. Attention, memory, concentration, and information processing are needed for understanding academic material. Sleep deprivation may interfere with these functions, as discussed by Curcio et al. (2006) and Pilcher and Walters (1997). Consequently, long study hours cannot always compensate for insufficient rest.

Fourth, the influence of lifestyle and psychological conditions should not be ignored. Smartphone use, academic pressure, caffeine consumption, irregular daily routines, and emotional difficulties may affect sleep quality. Lund et al. (2010) and Taylor et al. (2013) provide useful evidence for understanding these wider influences.

Another important issue is the possible two-way relationship between sleep and academic pressure. Students may reduce sleeping hours because they have assignments or examinations to complete. On the other hand, insufficient sleep may reduce their ability to concentrate and complete academic work efficiently. This can create a continuing cycle of academic pressure and poor sleep.

The evidence also suggests that universities should treat sleep health as part of student support. Sleep education, counseling, time-management guidance, and awareness of healthy routines may help students understand the importance of adequate rest.

However, most of the reviewed evidence identifies associations rather than proving that sleep directly causes higher academic achievement. Academic performance is also affected by teaching quality, intelligence, motivation, socioeconomic conditions, family support, and personal circumstances. These factors should be considered when interpreting the findings.

Overall, the literature supports the view that healthy sleeping habits can provide a better foundation for learning and academic activities. Nevertheless, further research is needed to understand how sleep improvements influence academic outcomes across different educational and cultural settings.

V. RESEARCH GAPS AND FUTURE DIRECTIONS

Although several studies have examined sleep and academic achievement, some important areas require further attention.

- Limited Research in South Asian Settings: Much of the available evidence comes from particular international university settings. More studies are needed among

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university students in Nepal, India, and other South Asian countries.

- Need for Long-Term Studies: Many existing studies examine students at a particular point in time. Longitudinal research could provide a better understanding of how sleeping patterns and academic outcomes change over semesters or academic years.
- Differences in Measurement: Researchers use different methods to measure sleep quality, sleep duration, and academic performance. Greater use of validated instruments and reliable academic records would improve comparisons across studies.
- Influence of Technology: Smartphone use, social media, online learning, and late-night screen exposure require further investigation in relation to student sleep habits.
- Role of Psychological Factors: More research is needed to understand how academic stress, anxiety, emotional well-being, and sleep difficulties influence one another.
- Intervention-Based Research: Future studies should examine whether sleep education, time-management training, and other sleep-health interventions can produce measurable improvements in student well-being and academic functioning.

Future researchers may also use mixed-method approaches to understand both the statistical relationship and students' personal experiences of sleep difficulties.

VI. PRACTICAL IMPLICATIONS

The findings of this review have several practical implications for university students, teachers, and educational institutions.

- For Students: Develop a regular sleeping and waking routine and avoid unnecessary late-night activities.
- For Universities: Organize awareness programs that explain the importance of sleep for health and learning.
- For Teachers: Encourage students to maintain a healthy balance between academic responsibilities and personal well-being.
- For Academic Planning: Promote realistic assignment schedules and appropriate examination preparation periods.
- For Time Management: Encourage students to plan their study activities rather than depending on repeated late-night study sessions.
- For Technology Use: Create awareness about excessive smartphone and social media use before bedtime.
- For Psychological Support: Provide counseling and stress-management facilities for students experiencing academic pressure.
- For Researchers: Conduct further studies using validated sleep measures and actual academic performance indicators.

These measures may help create an educational environment in which students can maintain both academic progress and healthy daily routines.

VII. LIMITATIONS OF THE REVIEW

The present article has certain limitations. First, it is based on previously published literature and does not include primary data collected directly from university students. Second, the review follows a narrative approach rather than a systematic review or statistical meta-analysis. Third, the selected studies differ in their research methods, sample characteristics, and measurement tools. Fourth, many studies examine associations between sleep and academic performance, so their findings do not establish a direct cause-and-effect relationship. Finally, research findings from particular countries and universities may not represent the experiences of all students, especially those studying in different cultural and socioeconomic settings.

VIII. CONCLUSION

Sleep is an important part of student life and has a meaningful connection with learning, cognitive functioning, and academic activities. The reviewed literature indicates that sleep quality, sufficient duration, and regular sleeping schedules are associated with more favorable academic and cognitive outcomes among university students.

Students who experience insufficient sleep or irregular sleeping patterns may face difficulties with concentration, memory, classroom participation, and daily academic responsibilities. Lifestyle habits, excessive technology use, academic stress, and psychological difficulties may further contribute to sleeping problems.

The review also highlights that academic achievement depends on several factors, and sleep should not be considered the only explanation for differences in student performance. However, healthy sleeping habits can support the mental and physical conditions needed for effective learning.

Universities can play a positive role by promoting sleep awareness, counseling support, time-management skills, and healthy student routines. Students should also understand that academic preparation requires not only study time but also adequate rest.

In conclusion, healthy sleep should be recognized as an important part of university students' overall well-being and academic development. Further research, particularly in Nepal and other South Asian countries, is needed to understand this relationship in different educational settings.

REFERENCES

[1]. Curcio, G., Ferrara, M., & De Gennaro, L. (2006). Sleep loss, learning capacity and academic performance. *Sleep Medicine Reviews*, *10*(5), 323–337. https://doi.org/10.1016/j.smrv.2005.11.001

[2]. Eliasson, A. H., Lettieri, C. J., & Eliasson, A. H. (2010). Early to bed, early to rise! Sleep habits and academic performance in college students. *Sleep and*

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov495

Breathing, 14(1), 71–75. https://doi.org/10.1007/s11325-009-0282-2

[3]. Galambos, N. L., Vargas Lascano, D. I., Howard, A. L., Maggs, J. L., & Sears, C. (2013). Who sleeps best? Longitudinal patterns and covariates of change in sleep quality in young adults. *Journal of Adolescent Health, 53*(5), 632–638. https://doi.org/10.1016/j.jadohealth.2013.06.011

[4]. Gilbert, S. P., & Weaver, C. C. (2010). Sleep quality and academic performance in university students: A wake-up call for college psychologists. *Journal of College Student Psychotherapy, 24*(4), 295–306. https://doi.org/10.1080/87568225.2010.509245

[5]. Hershner, S., & Chervin, R. (2014). Causes and consequences of sleepiness among college students. *Nature and Science of Sleep, 6*, 73–84. https://doi.org/10.2147/NSS.S62907

[6]. Hershner, S., & O'Brien, L. M. (2018). The impact of a randomized sleep education intervention for college students. *Journal of Clinical Sleep Medicine, 14*(3), 337–347. https://doi.org/10.5664/jcsm.6974

[7]. 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

[8]. Medeiros, A. L. D., Mendes, D. B. F., Lima, P. F., & Araujo, J. F. (2001). The relationships between sleep-wake cycle and academic performance in medical students. *Biological Rhythm Research, 32*(2), 263–270. https://doi.org/10.1076/brhm.32.2.263.1359

[9]. Okano, K., Kaczmarzyk, J. R., Dave, N., Gabrieli, J. D. E., & Grossman, J. C. (2019). Sleep quality, duration, and consistency are associated with better academic performance in college students. *npj Science of Learning, 4*, Article 16. https://doi.org/10.1038/s41539-019-0055-z

[10]. Phillips, A. J. K., Clerx, W. M., O'Brien, C. S., Sano, A., Barger, L. K., Picard, R. W., Lockley, S. W., Klerman, E. B., & Czeisler, C. A. (2017). Irregular sleep/wake patterns are associated with poorer academic performance and delayed circadian and sleep/wake timing. *Scientific Reports, 7*, Article 3216. https://doi.org/10.1038/s41598-017-03171-4

[11]. Pilcher, J. J., & Walters, A. S. (1997). How sleep deprivation affects psychological variables related to college students' cognitive performance. *Journal of American College Health, 46*(3), 121–126. https://doi.org/10.1080/07448489709595597

[12]. Taylor, D. J., Bramoweth, A. D., Grieser, E. A., Tatum, J. I., & Roane, B. M. (2013). Epidemiology of insomnia in college students: Relationship with mental health, quality of life, and substance use difficulties. *Behavior Therapy, 44*(3), 339–348. https://doi.org/10.1016/j.beth.2012.12.001

[13]. Trockel, M. T., Barnes, M. D., & Egget, D. L. (2000). Health-related variables and academic performance among first-year college students: Implications for sleep and other behaviors. *Journal of American College Health, 49*(3), 125–131. https://doi.org/10.1080/07448480009596294