

AN EMPIRICAL STUDY ON SLEEPING HABITS AND PERCEPTION OF ITS HEALTH EFFECTS AMONG COLLEGE STUDENTS

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Abstract

Poor sleepers in college often do badly in their academics. Although obtaining enough sleep is crucial for health, it is not often given priority. The study that is being suggested is concerned with how students perceive sleeping patterns and how they affect physical health. The significance of the findings is supported by the evidence that inadequate sleep may have negative effects on people's health, academic performance, and well-being. Students' lives will thus be of higher quality as a result of their greater comprehension of their behaviour. The theoretical framework is developed in the following literature review by emphasizing factors like wellbeing, academic activities, and health. The objective of the study was to study the sleeping habit of the college students and to analyze the students' perception towards the sleeping habit. The study is a descriptive in nature conducted in Chennai city. The college students studying in the arts and science colleges were selected purposively as sample respondents. 300 respondents have been selected using convenient sampling technique. The data were collected through Google forms. It is observed from the study that the students aware about the importance of exercises and physical work for proper sleep and the importance of sleep for their academic performance.

Keywords: *Sleeping Habits Perception, Health effects, and College Students*

Introduction

A physiological function that is vital to life is sleep. Its caliber is closely correlated with both physical and mental health as well as other well-being indicators. Not only have sleep problems and their symptoms been disregarded, but they have also been poorly understood. Nearly one-third of individuals say they have trouble falling asleep. It is well established that age, occupational demands, physiological and behavioral factors, mental disease, and various medical illnesses may all affect a subject's sleep and wakefulness patterns. The importance of sleep and issues associated to lack of sleep has increased during the last several years.¹ The fundamental reason for this interest is the realization that exhaustion and drowsiness are spreading across society. Young doctors in their early years struggle to get enough sleep since they stay up late to study for exams in medical school and then spend a lot of time at the hospital. Students' stress levels are rising, and the busy schedules of interns and residents working at the hospital are having an impact on their health and way of life. In the last ten years, several research have examined the harmful consequences of sleep deprivation on medical house personnel in a variety of medical and surgical specialties.

Possible physiological requirements for humans and their typical functioning include sleep. Age, gender, lifestyle, emotional stress, and noise are some environmental, physical, and mental factors that affect sleep patterns. Adults need between three and nine hours of sleep every night on average. The quality of sleep have a big impact on a person's mental and physical health. Without proper sleep and a good mood, it is difficult to concentrate, which weakens one's ability to make decisions, stay motivated, and keep knowledge². Additionally, sleep allows the brain to assimilate new information and experiences well, improving comprehension and memory. Possible physiological requirements for humans and their typical functioning include sleep. Gender, age, lifestyle, emotional stress, and noise are some environmental, physical, and mental factors that affect sleep patterns. Adults need between seven and nine hours of sleep every night on average. The quantity and quality of sleep have a big impact on a person's mental and physical health. Concentration problems are eliminated by good mood and sleep³. Without it, the ability to make decisions, control one's emotions, and preserve knowledge is compromised. Additionally, sleep allows the brain to assimilate new information and experiences well, improving comprehension and memory.

Sleeping Habits and its Health effects: Theoretical Concept

Higher academic and social demands, irregular schedules, and other variables, students are more likely to have sleep problems and sleep deprivation. There are several entertainment alternatives and sleep-inducing items in college students' social life. University life is characterized by a high degree of liberty, minimal supervision, unhealthy habits including drinking and smoking, and readily available leisure activities. Lower sleep quality is associated with higher drinking intentions and diet beverages that are promoted to young people. Young people often utilize screen-based technology, and excessive screen time and the risk of obesity are strongly correlated with poor sleep. Overusing cellphones not only interferes with sleep but also promotes physical inactivity, which has a negative impact on the quality of sleep. College may be difficult for many students, and because they now need considerably more mental health care, mental health problems have become increasingly prominent. Research shows that sleeping problems are common and have been related with worse mental health, particularly in young people and college students. Students could still be resistant to accepting that they need psychiatric treatment due to their ambiguous help-seeking behaviour. It is assumed that the mental health problems among college students are higher than those reported in the literature at the moment. It is now compelling evidence indicating a relationship between good sleep and mental health in both directions. As was previously said, poor mental health is associated with sleep problems⁴. The studies indicated that poor mental health might impact the quality of sleep. Prior studies examined supporting data for elements affecting sleep quality from diverse perspectives (such as sleep quantity). Since raising physically

¹ Adams, Appleton and Taylor (2017) "Sleep health of Australian adults in 2016" Sleep Health Foundation national survey, Sleep Health, Vol.3 (1), pp. 35-42

² Edwards & Loprinzi (2017) " Experimentally increasing sedentary behavior results in decreased sleep quality among young adults" Mental Health Phys Act, Vol. 12, pp. 132-140

³ X. Wu, S. Tao and Zhang(2015), "Low physical activity and high screen time can increase the risks of mental health problems and poor sleep quality among Chinese college students" Vol.10 (3),pp.2-4

⁴ Colten, H. & Altevogt,(2006). "Sleep disorders and sleep deprivation. An unmet public health problem. Institute of Medicine. Washington DC" The National Academies Press. pp.33-37

and intellectually well children is crucial for boosting public health, it is essential to analyze the factors that influence how well college students sleep.

Sleep and Its Functions

Sleep is an essential component of everyday existence. Without it, we would not be able to survive. One is considered to only be able to go so long without sleep before passing away. That just demonstrates how crucial sleep is. Our body don't shut down or enter a halt when we go to sleep. They continue to be active as their bodies and minds heal. Sleep allows the body to replenish its energy reserves, heal injuries and diseases, and fortify its defenses against disease. When we are sleeping, our brains are highly busy. While we are unconscious, our brain reviews everything that has transpired during the day, restoring and erasing memories. It aids in learning and eliminates pointless thinking. The brain is always active; it never stops⁵. Two basic processes in the body control whether we are awake or sleeping. One cannot just get exhausted or fall asleep; there are biological processes involved. Our level of fatigue is controlled by sleep homeostasis, often known as sleep pressure. The sleep pressure is low in the mornings normally, after a good night's sleep, so one doesn't feel exhausted. As the day goes on, the strain builds and we get more exhausted; by nightfall, we are ready for bed. Every time we go to sleep and when we get up in the morning, this sleep pressure resets⁶. Our sleep and the quality of our sleep are influenced by a variety of things. A person may not have the proper temperature in the room, be contagious, have a spouse, kids, or pets disrupt them when they sleep, or the surroundings may be excessively noisy. Sometimes a lousy night's sleep is caused by a sleep disorder, a real medical issue. There are various ways that sleep disturbances may harm one's health. A sleep disturbance results in sleep deprivation and a number of other health issues. Age also plays a significant role in the effects of sleep deprivation. Age affects how much sleep a person needs each night. Sleep needs vary depending on age, with elderly and middle-aged persons needing the most sleep. Typically, a person's need for sleep reduces as they age. The transition from childhood to adolescence and the teen years, however, is different. When it comes to the number of hours they need to sleep, adolescents need just as much rest as preteens⁷. The typical amount of sleep that a teen need each night is about nine hours. Teenagers who often stay up late and get up early in the morning are more likely to suffer from sleep deprivation and daytime tiredness. Demanding schoolwork, the workplace, social life, media, etc. are elements that are examined as contributing to teenage sleep deprivation.

Sleep hygiene is important for students' physical health, quality of life, and academic achievement. They evaluated the sleep quality, attitudes about the issue, and issues related to poor sleep quality in their research of 855 students. The researchers come to the conclusion that students' ability to maintain a strict schedule and get adequate rest, particularly during test periods and stressful times, is significantly impacted. The respondents had more nightmares on average, were generally exhausted, and struggled to perform well in school. It implies that the quantity and quality of students' sleep directly affects their physical health. While the majority of respondents agree that getting too little sleep might lead to future issues, they are nevertheless unable to change their routines in order to make progress in this area. Toscano - Hermoso et al. (2020)⁸. In this sense, the presented research confirms the hypothesis put forward in Adriansen et al. (2017)⁹ study and advances our understanding of the issue at hand. The findings show that exercise may counteract the harmful impacts of stress and sleep deprivation brought on by health-related outcomes. The findings also highlight a harmful misconception that exercise might help make up for a lack of sleep (Wunsch et al., 2017)¹⁰. It implies that despite being aware of the significance of healthy sleep habits, students may still have misguided ideas about how to align their actions in order to achieve desired results.

Research Objectives

The study is aiming

⁵ Kaliyaperumal, Elango, ., Alagesan., & Santhanakrishanan,(2017) "Effects of sleep deprivation on the cognitive performance of nurses working in shift". *Journal of clinical and diagnostic research*. Vol. 11, (8), pp.1-3.

⁶ Simou, E., Britton, & Leonardi-Bee, (2018). "Alcohol and the risk of sleep apnoea: a systematic review and meta-analysis". *Sleep Medicine* Vol.42, pp.38-46.

⁷ Hartzler (2014). "Fatigue on the flight deck: The consequences of sleep loss and the benefits of napping. *Accident analysis and prevention*" Vol. 62, pp.309-318.

⁸ Toscano-Hermoso., Arbinaga., Fernandez-Ozcorta., Gomez-Salgado & Ruiz-Frutos, C. (2020). "Influence of sleeping patterns in health and academic performance among university students". *International Journal of Environmental Research and Public Health*, Vol.17, pp.11-17

⁹ Adriansen, R., Childers, A., Abraham, S., & Yoder, T. (2017). "Sleeping habits and perception of its health effects among college students". *International Journal of Studies in Nursing*, 2(2), 28-36

¹⁰ Wunsch, K., Kasten, N., & Fuchs (2017), "The effect of physical activity on sleep quality, well-being, and affect in academic stress periods". *Nature and Science of Sleep*, Vol. 9,pp. 117-126

- To study the sleeping habit of the college students
- To analyze the students' perception towards the sleeping habit.

Research Methodology

The study is a descriptive in nature conducted in Chennai city. The college students studying in the arts and science colleges were selected purposively as sample respondents. 300 respondents have been selected using convenient sampling technique. The data were collected through Google forms.

Findings, Results and Conclusions

1. Demographic variables

The profile of the sample respondents taken in the study are gender, age level and number of hours sleeping. The sleeping habit of the students will be based on the age and gender. Hence, these two variables are observed from the respondents. The result is given below.

Table 1
Demographic variables

Variables	Number of respondents	Percent
Gender	Male	128
	Female	172
Age	Upto 18	111
	19-22	118
	More than 22	71
Number of hours sleeping	Less than 7 hrs	96
	7-8 hrs	150
	More than 8 hrs	54
Total	300	100.0

Out of 300 sample respondents selected for the study, 172 (57.3%) respondents are female and 128 (42.7%) are male. The classification of the respondents based on their age, it is found that 118 (39.3%) are aged from 19 to 22 years, 111 (37.0%) are aged 18 and below and 71 (23.7%) are aged more than 22 years. The sleep period during night is considered as major factor in the study. Half of the sample respondents (50.0%) normally sleep 7 to 8 hours, 96 (32.0%) respondents sleep less than 7 hours in night and 54 (18.0%) respondents sleep more than 8 hours.

2. Sleeping habit

The sleeping is a normal and pleasant activity. But the young people are not get proper sleep due to the academic work commitment, the domination of the electronic goods and social media. In this perspective, the sleep habit followed by the respondents is analyzed as follows.

Table 2
Sleeping habits

Sleeping habits	Mean	Std. Deviation
Have proper time to go bed	4.12	1.203
Habit of using cell phone or tv before sleep	3.64	0.844
Habit of using the mobile phone after everyone slept at home	3.28	0.791
Have not satisfied with the quality of the sleep	3.11	1.102
Do not have the habit to wake up after sleep	2.93	1.367
Feel sleepy after waking up in the morning	3.19	1.185
Use of social media during the sleeping time	3.20	1.094
Takes more than 30 minutes to sleep after reaching bet	3.20	1.170
Having the problem of taking time to sleep again after disturbance of sleep	3.37	1.304

The mean shows that the majority of the respondents go to bed to sleep in proper time (4.12). Habit of using the electronic gadgets before sleeping in the night is also the habit followed by most of the students (3.64). Another major problem has been identified from the students that they do not have proper sleep after having disturbance during the sleeping time. The habit may differ based on the gender. Hence, each habit is related with the gender is analyzed.

Table 3
Gender and sleeping habits

Gender	Very less	Less	Moderate	High	Very high	Total	Result
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Have proper time to go bed							
Male	4 3.1%	6 4.7%	16 12.5%	28 21.9%	74 57.8%	128 100.0%	Chi-square 7.743
Female	16 9.3%	5 2.9%	31 18.0%	28 16.3%	92 53.5%	172 100.0%	
Total	20 6.7%	11 3.7%	47 15.7%	56 18.7%	166 55.3%	300 100.0%	Sig. 0.101
Habit of using cell phone or tv before sleep							
Male	2 1.6%	8 6.2%	22 17.2%	76 59.4%	20 15.6%	128 100.0%	Chi-square 19.123
Female	6 3.5%	16 9.3%	38 22.1%	108 62.8%	4 2.3%	172 100.0%	
Total	8 2.7%	24 8.0%	60 20.0%	184 61.3%	24 8.0%	300 100.0%	Sig. 0.001
Habit of using the mobile phone after everyone slept at home							
Male	4 3.1%	6 4.7%	71 55.5%	33 25.8%	14 10.9%	128 100.0%	Chi-square 5.394
Female	3 1.7%	12 7.0%	111 64.5%	36 20.9%	10 5.8%	172 100.0%	
Total	7 2.3%	18 6.0%	182 60.7%	69 23.0%	24 8.0%	300 100.0%	Sig. 0.249
Have not satisfied with the quality of the sleep							
Male	6 4.7%	41 32.0%	33 25.8%	34 26.6%	14 10.9%	128 100.0%	Chi-square 1.445
Female	5 2.9%	55 32.0%	47 27.3%	41 23.8%	24 14.0%	172 100.0%	
Total	11 3.7%	96 32.0%	80 26.7%	75 25.0%	38 12.7%	300 100.0%	Sig. 0.836
Do not have the habit to wake up after sleep							
Male	33 25.8%	16 12.5%	33 25.8%	29 22.7%	17 13.3%	128 100.0%	Chi-square 4.910
Female	42 24.4%	12 7.0%	43 25.0%	55 32.0%	20 11.6%	172 100.0%	
Total	75 25.0%	28 9.3%	76 25.3%	84 28.0%	37 12.3%	300 100.0%	Sig. 0.297
Feel sleepy after waking up in the morning							
Male	10 7.8%	35 27.3%	29 22.7%	36 28.1%	18 14.1%	128 100.0%	Chi-square 1.822
Female	12 7.0%	39 22.7%	47 27.3%	45 26.2%	29 16.9%	172 100.0%	
Total	22 7.3%	74 24.7%	76 25.3%	81 27.0%	47 15.7%	300 100.0%	Sig. 0.769
Use of social media during the sleeping time							
Male	5 3.9%	16 12.5%	59 46.1%	25 19.5%	23 18.0%	128 100.0%	Chi-square 13.037
Female	22 12.8%	19 11.0%	69 40.1%	46 26.7%	16 9.3%	172 100.0%	
Total	27 9.0%	35 11.7%	128 42.7%	71 23.7%	39 13.0%	300 100.0%	Sig. 0.011
Takes more than 30 minutes to sleep after reaching bet							
Male	12 9.4%	19 14.8%	35 27.3%	49 38.3%	13 10.2%	128 100.0%	Chi-square 2.616
Female	25	23	39	70	15	172	

	14.5%	13.4%	22.7%	40.7%	8.7%	100.0%	
Total	37	42	74	119	28	300	Sig.
	12.3%	14.0%	24.7%	39.7%	9.3%	100.0%	0.624
Having the problem of taking time to sleep again after disturbance of sleep							
Male	11	17	34	23	43	128	Chi-square
	8.6%	13.3%	26.6%	18.0%	33.6%	100.0%	
Female	21	27	49	39	36	172	6.545
	12.2%	15.7%	28.5%	22.7%	20.9%	100.0%	
Total	32	44	83	62	79	300	Sig.
	10.7%	14.7%	27.7%	20.7%	26.3%	100.0%	0.162

The habit of going to bed on proper time shows that most of the male respondents (57.8%) and 53.5% of the female respondents do very often. There is no significant difference in the sleeping based on the gender. The calculated Chi-Square value is 6.545 for the degree of freedom 4 is less than the expected value. The p value is 0.162.

Another habit of using cell phone before sleep shows that majority of male (59.4%) and female (62.8%) are highly having. But in very high level of the habit shows 15.6% of the male and 2.3% of the female have the habit. Hence, the difference in the habit of using electronic gadgets is significant between male and female students. The Chi-Square value is 19.123 (df-4) is significant at 1% level ($p < 0.001 > 0.010$).

The habit of using mobile phone after everyone slept in the home is done by the majority of the male (55.5%) and female (64.5%) at moderate level. The habit does not have any significant difference according to the gender. The Chi-Square value is 5.394 and p value is 0.249. It is more than 5%.

The satisfaction towards the quality of the sleep is essential for the students to be good enough. The result shows that most of the respondents from both male and female categories are very highly agree that they have not satisfied. Hence, the Chi-Square value (1.445) for the degree of freedom 4 is insignificant ($p > 0.836 > 0.050$). It is concluded that there is no relationship between the gender and the satisfaction towards the quality of sleep.

There is a habit of the people to wake up in midnight and used to watch TV or mobile phone. In this aspect, the respondents were asked to give their sleeping habit. The result depicts that 25.8% of the male respondents are moderately having the habit and 32.0% of the female have high level. But the difference in the percentage according to the gender is not having significant difference. The Chi-Square value is 4.910 and value of probably is 0.297 (29.7%) are insignificant.

A peaceful and sound sleep will give the students a fresh morning wake up. In this point of view, the respondents are asked about their feeling in the morning. The cross table shows that most of the male (28.1%) respondents are highly not having fresh mind while waking up in the morning. But the most of the female respondents (27.3%) are not much sleepy mind in the morning after the sound sleep.

About the habit of students about the use of social media while sleeping, most of the male (46.1%) and female (40.1%) are moderately using the social media. But more percentage (18.0%) are having the habit at very high level whereas the female are at 9.3%. The difference in the percentage of using social media significantly varies between male and female respondents. The Chi-Square value is 13.037 which is significant at 5% level ($p < 0.011$).

Some people sleep immediately after reaching the bed and somebody will take some time to sleep. The respondents are asked about their habit about immediate sleep. High percentage of male (38.3%) and female (40.7%) have opined that they are not sleeping immediately. There is no significant difference in this habit between the male and female students.

The habit is found from some people that their sleep will be disturbed after waking up in the middle of the sleep. More percentage of the male (33.6%) are having very high chance and 28.5% of the female have moderate chance. But the variation in the percentage is found insignificant from the Chi-Square test result. The p value is 0.162. It is concluded that there is no relationship between the gender and the habit.

3. Perception about the sleeping habit

The opinion of the students regarding to their sleep is important. The opinion or feelings will make them to realize the importance of the sleep. In this perspective, their perception is studied using some statements like, importance of exercise, impact n academic performance, effect of drinking hot drinks before sleep, role of social media in spoiling the social media, etc. Their perception is studied as below with the help of descriptive statistics.

Table 4
 Perception towards sleeping

Perception	Mean	Std. Deviation	Mean Rank	Rank
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Exercises gives better sleep	4.21	1.048	5.48	I
Improper sleep affects the academic performance	3.51	0.898	4.25	II
Hot drinks before going to bed gives better sleep	3.40	0.877	4.19	III
Social media or chat with friends affects the sleep in night	3.22	1.115	3.83	IV
Food taking habit influences on the food habit	2.90	1.412	3.31	VII
Need good for mental and emotional stability	3.03	1.182	3.53	V
Normal sleeping for 8 hours is required for good health	2.99	1.005	3.41	VI

The above table shows that most of the respondents feel that exercise or any hard physical work make them sleep better (5.48). The students are participating in sports, exercises, regular visit to the schools after a long travel, or any physical work make them tired and give good sleep. Most of the students agree that the improper sleep affects their academic performance (4.25). The students are also having the habit of taking hot drinks before going to bed as they feel it gives them good sleep (4.19). Intervention of the social media and its impact on their sleep is more (3.83). Importance of the sleep for the good mental and emotional stability (3.53), need of normal sleeping hours (3.41) and the role of food taking habit on the sleeping pattern (3.31) are ranked fifth, sixth and seventh respectively. It is observed from the study that the students aware about the importance of exercises and physical work for proper sleep and the importance of sleep for their academic performance.

Conclusion and Implications of the study

The current investigation has several consequences and relevance. Numerous papers pertaining to sleep factors were uncovered in this investigation. The practical consequences of this research are the promotion of healthy lifestyle habits and the formulation of a notion of sleep health. A further conclusion of the present research is that it emphasized the significance of many variables that may affect sleep quality. Therefore, any confounding variables should be considered while implementing sleep therapies. Education is essential for supporting sleep health and enhancing sleep quality among college students. The value of this research lies primarily in its synthesis of current knowledge on sleep factors and accumulation of evidence for sleep health treatments. It is observed from the study that the students aware about the importance of exercises and physical work for proper sleep and the importance of sleep for their academic performance.

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