



ASSESSMENT OF QUALITY OF SLEEP AMONG STUDENTS AT SELECTED NURSING COLLEGE, HOSUR.

Nursing

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ABSTRACT

Background Of Study: Sleep is a fundamental aspect of human life, essential for physical and mental health, cognitive function, and overall well-being. Students are vulnerable to sleep disturbance due to various factors such as academic pressure, social obligations, and lifestyle choices. Poor sleep quality among college students leads to negative consequences on their academic performance. **Objectives:** To assess the quality of sleep among students using a standardized sleep assessment questionnaire. **Method:** Non-experimental descriptive research design was adopted for the present study. One hundred students were selected using a convenience sampling technique. The standardized Pittsburgh Sleep Quality Index (PSQI) was used to assess the quality of sleep among nursing students. The data collected was interpreted using descriptive and inferential statistics. **Results:** The study revealed that the average mean score of the overall sleep quality was 5.52 ± 2.54 , indicating poor sleep quality among students. The sleep quality score concerning the component of sleep latency (1.16 ± 0.98) and sleep disturbance (1.18 ± 0.64) contributed considerably to poor quality of sleep. The association between quality of sleep with demographic variables revealed that there was significant association found between sleep quality with gender and living condition at $p < 0.05$. **Conclusion:** The findings of the present study revealed that there was poor quality of sleep among college students. Students faced disturbances with decreased hours of sleep.

KEYWORDS

Quality of sleep, sleep latency, Pittsburgh Sleep Quality Index (PSQI)

INTRODUCTION

College days are marked by desperate changes for living environment, academic responsibilities, social commitments, and new roles. During these transitional challenges, college students overlook their physical and psychosocial well-being, which often influences poor diet and sleep habits.¹ Sleep is essential for maintaining cognitive function, emotional stability and overall physical health. It plays a crucial role in memory, consolidation, leading and problem-solving skills which are important for college students. However, studies indicate that students often experience poor sleep quality and insufficient sleep duration due to various academic and social lifestyle factors.²

Studies have shown that inadequate sleep can negatively impact concentration, memory retention and academic performance. Additionally, chronic sleep deprivation is associated with increased risk of mental health issues such as anxiety, depression and physical concerns like weakened immunity, metabolic disorders, weight gain, cardiovascular risk and other physiological disorders.³ Despite the well-documented importance of sleep, many college students continue to prioritize academic and social activities over adequate rest. There is a need for research to assess sleep pattern, duration, and quality among students in institutional settings.⁴

The present study carried out to assess the quality of sleep among college students will help determine the area of problem as well as the factors contributing to it.

MATERIAL AND METHOD

The non-experimental descriptive design was adopted for the study. The study was conducted at selected college in Hosur. Formal permission as well as individual consent was obtained from the participants. One hundred students were selected using convenient sampling techniques. One hundred participants completed the questionnaire with duration of 20 mins. The standardized Pittsburgh Sleep Quality Index Questionnaire⁵ was used to collect data, which consisted of 19 questions grouped into 7 components namely, subjective sleep quality, sleep latency, sleep duration, sleep efficiency, sleep disturbances, use of sleep medication and daytime dysfunction. Each component is scored on a scale from 0 to 3, the total global PSQI score ranging from 0-21. The score of less than five generally indicates poor sleep quality. Each participant took 10 minutes to complete the questionnaire. The data collected was analyzed using Jamovi software.

RESULTS

The description of demographic variables, the results revealed that most of the participants belonged to 18-20 years of age group. And

71% were females compared to 29% males. Considering use of screen time, 81% of participants reported using screens for more than 1 hour daily, whereas 19% used them for less than an hour. Regarding their living situation, 75% lived with roommates, and 25% stayed with family. When assessing concentration level while studying, 62% of participants identified as being easily distracted, while 38% reported being focused.

Table 1: Mean And Standard Deviation Of Components Of Pittsburgh Sleep Quality Index

COMPONENTS OF SLEEP QUALITY	MEAN $\pm$ S.D
Global PSQI score	5.52 $\pm$ 2.54
component 1(sleep quality)	0.99 $\pm$ 0.85
component 2(sleep latency)	1.16 $\pm$ 0.98
component 3(sleep duration)	0.99 $\pm$ 0.76
component 4(sleep efficiency)	0.17 $\pm$ 0.53
component 5(sleep disturbance)	1.18 $\pm$ 0.64
component 6(use of sleep medication)	0.12 $\pm$ 0.33
component 7(daytime dysfunction)	0.87 $\pm$ 0.79

Table 1 depicts distribution of components of sleep quality among students. The average global PSQI score among college students was 5.52 ± 2.54 , indicating poor sleep quality among students. The sleep efficiency was good (mean 0.17), and use of sleep medication was minimal (mean 0.12), other components contributed to poor sleep. Students experienced moderate sleep latency (1.16) and frequent sleep disturbances (1.18), with some degree of daytime dysfunction (0.87). Although sleep duration (0.99) and subjective sleep quality (0.99) were relatively better, the combined impact of disturbed and delayed sleep led to compromised overall sleep quality.

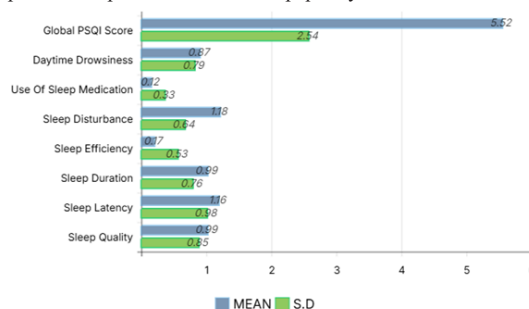


Fig 1: Mean and standard deviation of components of Pittsburgh Sleep Quality Index

Table 2: Association Between Quality Of Sleep Components With Selected Demographic Variables.

Demographic Details	n	Global PSQI score mean±SD	Com p 1 mean±SD	Com p 2 mean±SD	Com p 3 mean±SD	Com p 4 mean±SD	Com p 5 mean±SD	Com p 6 mean±SD	Comp 7 mean±SD
AGE									
18-20 years	98	5.48±2.36	1.01±0.84	1.15±0.98	0.99±0.77	0.15±0.48	1.18±0.66	0.11±0.31	0.89±0.79
21-23 years	2	5.00±2.98	0±0	1.50±0.70	2.00±0	0.50±0.71	0.50±0.71	0.50±0.71	0±0
χ ²		7.34	4.76	1.56	1.74	4.21	0.65	2.79	3.79
P		0.88	0.19	0.67	0.78	0.24	0.89	0.10	0.28
GENDER									
Male	29	5.34±2.47	1.00±0.74	1.17±1.08	1.10±0.81	0.24±0.70	1.00±0.74	0.14±0.39	0.83±0.79
Female	71	5.59±2.63	0.98±0.89	1.15±0.95	0.94±0.74	0.14±0.46	1.25±0.58	0.11±0.32	0.89±0.78
χ ²		10.5	1.49	0.51	4.15	0.09	9.69	0.12	0.26
P		0.65	0.68	0.92	0.39	0.38	0.02	0.72	0.97
SCREEN TIME									
<1 hour	19	6.58±3.52	1.00±0.89	1.26±1.10	1.26±0.87	0.26±0.73	1.37±0.60	0.21±0.42	1.00±0.88
>1 hour	81	5.27±2.20	0.99±0.84	1.14±0.94	0.93±0.72	0.15±0.45	1.14±0.65	0.10±0.30	0.84±0.77
χ ²		21.2	3.40	1.38	6.88	1.58	2.95	1.82	0.93
P		0.07	0.33	0.71	0.14	0.66	0.40	0.18	0.82
LIVING SITUATION									
Family	25	6.20±3.13	1.08±0.91	1.52±1.13	1.16±0.95	0.08±0.69	1.32±0.75	1.76±0.65	0.88±0.82
Room mates	75	5.29±2.21	0.96±0.80	1.04±0.92	0.93±0.73	0.20±0.60	1.13±0.59	0.11±0.32	0.87±0.78
χ ²		12.3	9.09	2.98	3.71	1.10	4.45	0.50	2.60
P		0.50	0.03*	0.39	0.45	0.78	0.22	0.48	0.46
CONCENTRATION LEVEL									
Focused	38	5.24±2.37	1.97±0.36	0.97±0.90	0.89±0.65	0.08±0.27	0.97±0.75	0.27±0.45	0.86±0.85
Easily distracted	62	5.69±2.68	1.03±0.57	1.29±1.03	1.03±0.80	0.22±0.64	1.25±0.60	0.06±0.25	0.85±0.76
χ ²		13.1	0.31	4.17	1.16	1.80	5.85	5.57	1.43
P		0.44	0.96	0.24	0.88	0.61	0.12	0.02*	0.70

Table 2 depicts, Association between quality of sleep with demographic variables revealed that subjective sleep quality has significant difference based on living conditions, as individuals residing with family reported poorer sleep quality (1.08±0.91) than those living with roommates (0.96±0.80) at (χ²=9.90, p = (0.03). Furthermore component 6 use of medication for sleep has significant relationship with daytime concentration at (χ²=5.57, p=0.02).

DISCUSSION

The present study revealed that the overall sleep quality index was 5.52 ± 2.54, indicating poor quality of sleep. Students experienced moderate sleep latency (1.16±0.98) and frequent sleep disturbances (1.18±0.64).

The present study results are consistent with a similar study conducted on sleep quality and academic progression among students at selected universities in Iran. The study results reported that the overall mean score for the quality of sleep was 6.87 ± 2.25, and the global PSQI score was greater than 5 showing poor quality of sleep among students.⁶

The current study reveals an association between sleep components with selected demographic variables shows a statistically significant

difference in subjective sleep quality (Component 1) based on living arrangements.

The results are analogue with Chinese community-based cohort found that living environment strongly predicted several PSQI subcomponents including subjective sleep quality (OR ≈ 1.28; p=0.002).⁷

The present study results are consistent with a similar cross-sectional survey of medical students aged ~19–27years (mean 21.7) revealed that subjective sleep quality, sleep duration, and daytime dysfunction were prominent contributors to poor overall sleep quality among those living with family or in dormitories.⁸

Nursing Implication

The studies related to quality of sleep among university students may identify the students' sleep status and its determinants and help to create awareness about good quality of sleep. The nurse has to mobilize the available resource personnel towards health education on the importance of sleep-in student life. Nurse educators should emphasize more on preparing students to impart knowledge on consequences of poor sleep quality and its preventive measures.

Limitations:

Duration of data collection limited to one week.

CONCLUSION

The study concluded that there was poor quality of sleep evidence among students. The sleep quality has significant relationship with living conditions and poor sleep quality has impact on daytime concentration. Hence the study suggests that awareness of sleep hygiene practices among undergraduate students may enhance their academic performance and wellbeing.

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