

Sleep Quality among Nursing students in Kathmandu Valley: A Cross-sectional Study

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ABSTRACT

Introduction: Sleep Quality is an essential component of the learning and memory processes. Nevertheless, sleep issues are common among college students and may negatively impact their academic performance. This study aimed to explore sleep quality among undergraduate nursing students in Nepal.

Methods: We conducted a cross-sectional descriptive study among 267 nursing students from seven colleges located in Kathmandu Valley. A self-administrated questionnaire was distributed among students to assess sleep quality. We used the Pittsburgh Sleep Quality Index (PSQI) to determine sleep quality. Collected data was entered and analyzed in SPSS version 18.

Results: Of total, 97 students (36.3%) were found to have good sleep quality, whereas 170 students (63.7%) were found to have poor sleep quality.

Conclusions: Poor sleep quality was common among nursing students and may have negative effects on both health and academic performance. Nursing students should be actively intervened upon to enhance their sleep hygiene.

Keywords: *Nepal; Nursing students; Sleep quality.*

INTRODUCTION

Sleep Quality is defined as one's contentment with the sleep experience, which includes features of sleep initiation, sleep maintenance, sleep quantity, and waking refreshment.¹ Proper sleep promotes the optimal functioning of the brain, which contributes in the improvement of knowledge and the comprehension of new ideas.² University students, who have a high academic demand, suffer from the issue of poor sleep quality.³

Nursing students especially are vulnerable to stress as their professional and academic responsibilities are very demanding.⁴ Very little research has been done on the impact of irregular work schedules: such as work shift, and academic stress on sleep among nursing students in Nepal. Therefore, this study aimed to determine the

prevalence of sleep quality among nursing students at the undergraduate level in Nepal.

METHODS

We conducted a cross-sectional study among 267 Bachelors of Science in Nursing students. Permission letter was obtained from the respective college. Prior to data collection, an ethical approval letter (Ref: 138/2018) was received from the Institutional Review Board. Duration of data collection was from July 2018 to August 2018. Signed informed consent was taken from students before their participation.

Target population was third and fourth year students studying Bachelors of Science in Nursing at seven nursing colleges in Kathmandu Valley. The students who were absent on the respective day and who refused to

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participate in our study were excluded from this study.

The sample size was calculated by using formula:

$$n = Z^2pq/d^2$$

Where, n=sample size

Z=confidence level=1.96

p= 50%=0.5

d= allowable error=0.06

q= (1-p) = 0.5

$$n = 1.96^2 \times 0.5 \times 0.5 / 0.06^2$$

i.e. n= 267

Therefore, the calculated sample size was 267. Students were recruited conveniently from seven nursing colleges in Kathmandu Valley.

A semi-structured questionnaire including the Pittsburgh Sleep Quality Index (PSQI) was used to collect data for the study. A socio-demographic profile was part of the semi-structured questionnaire. The 19-item PSQI is a self-administered questionnaire that examines sleep patterns during the past month. PSQI has seven components of sleep quality: sleep latency, sleep duration, subjective sleep quality, sleep efficiency, sleep disturbances, use of sleep medication and day-time dysfunction. The score for each component ranges from 0 to 3 and the sum is a global score that ranges from 0 to 21. Higher scores signify poor sleep quality. A global score >5 detects poor sleep quality.⁵

Collected data were entered and analyzed in SPSS version 20.0. Descriptive analysis was done and presented using frequency and percentage.

RESULTS

Table 1 presents the prevalence of poor sleep quality. Out of 267 students, 97 students (36.3%) were found to have good sleep quality, whereas 170 students (63.7%) were found to have poor sleep quality.

Table 1. Prevalence of poor sleep quality (n=267)

Sleep Quality	n(%)
Good	97(36.3)
Poor	170(63.7)

Table 2 presents socio-demographic characteristics of nursing students. The mean age of the students was 21.14(1.48). We found that 245 respondents (91.8%) were Hindu, 14 (5.2%) were Buddhist and 8 of them (3%) were Christian and others. Similarly, 95 respondents (35.6%) were Brahmin, 70 (26.2%) were Chettri, 86 (32.2%) were Janajati and Adhibasi and 6 (6%) of them were others. Among the total 267 respondents, 247 (92.5%) of them were unmarried. Similarly, 180 (67.4%)

respondents had sufficient monthly expenditure, 58 (21.7%) had insufficient monthly expenditure and 29 (10.9%) of them had surplus monthly expenditure. About 186 (69.7%) respondents lived with parents followed by 43 (16.1%) in hostels, 21 (7.9%) with relatives, 17 (6.4%) of the respondents lived alone and with friends. We found that 39 (14.6%) respondents had academic scholarships.

Table 2. Socio-demographic profile of nursing students (n=267)

Variables	n(%)
Age	
18-20	88 (33.0)
21-23	168 (62.9)
24-25	11 (4.1)
Mean±S.D=21.21±1.448	
Religion	
Hindu	245 (91.8)
Buddhist	14 (5.2)
Christian and Others	8 (3.0)
Ethnicity	
Brahmin	95 (35.6)
Chettri	70 (26.2)
Janajatai & Adhibasi	86 (32.2)
Others	16 (6.0)
Marital status	
Unmarried	247 (92.5)
Married	20 (7.5)
Monthly expenditure	
Sufficient	180 (67.4)
Insufficient	58 (21.7)
Surplus	29 (10.9)
Lives with	
Parents	186 (69.7)
Hostel	43 (16.1)
Relatives	21 (7.9)
Alone and Friends	17 (6.4)
Academic scholarships	
No	228 (85.4)
Yes	39 (14.6)

DISCUSSION

One of the most critical aspects of the learning and memory processes is sleep quality. However, poor sleep quality is common among college students, and it might have an impact on their academic performance. So far, not much research has been carried out on how well nursing students sleep, especially research from Nepal. In this context, we aimed to assess the level of quality of sleep among nursing students in Kathmandu. The study showed that 170 (63.7%) students had bad quality of sleep. This research discovered a greater frequency of poor sleep quality among undergraduate nursing

students than among undergraduate non-medical students (35.4%)⁶ and school level students (31%) in Nepal.⁷ A comparable research from a Nepalese private medical college found a lower percentage of people with poor sleep quality (44.3%) than ours.⁸ This result could be affected by environmental factors and by the way a college student sleeps: such as staying up late to study, using the internet too much, and drinking too much caffeine.

A study on medical students in Karachi, Pakistan, found that 39.5% of them had poor sleep quality, with 44% of poor sleepers being women and 32.8% being men. Sleep disturbances probably mess with the ability to think clearly, which can lead to depressive symptoms.⁸ Studies have shown that depression is caused among students who don't get enough sleep and perform poorly in school.⁷ Shift work affects both how well you do at work and how well you do in university.⁸ Lack of sleep negatively impacts the performance of hospital staff nurses. Several studies have shown that not getting enough sleep is a major cause of medical error. According to previous studies, nursing students tend to sleep in a way that is not regular.⁹⁻¹¹ This means that their start and end times change, and they sleep later on weekends than during the week.

In the present study, we can find poor sleep quality among nursing students. The finding is consistent with the international studies conducted in Turkey¹², the United States¹³, and Brazil.¹⁴

To date, limited research has been completed on the sleep quality of nursing students, especially in Nepal. This study has a few limitations, which may be lessened by further research in this field. In addition, this research relied on self-report to assess sleep quality, which completely relied on participants in terms of accuracy and honesty while answering survey questions. Second, the research is cross-sectional study having its own limitations.

CONCLUSIONS

Poor sleep quality was seen in three out of every five nursing students, which not only affects their academic performance but also their physical health. This points to the need of identifying vulnerable students and teaching medical students about the importance of getting enough sleep and the risks associated with not doing so.

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CONFLICT OF INTEREST

None

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