The Relationship Between Social Media Use Before Bedtime and Sleep Quality Among Students of the Faculty of Science Chiang Mai University Academic Year 2025

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ABSTRACT

This study aimed to examine the relationship between bedtime social media usage and sleep quality among students in the Faculty of Science, Chiang Mai University, during the 2025 academic year, and to analyze factors associated with sleep quality. A questionnaire was used as the data collection instrument. The sample consisted of 150 students selected through stratified random sampling by academic year, followed by simple random sampling within each stratum. Data were analyzed using descriptive statistics, the Chi-square test, and Spearman's rank correlation coefficient. The results showed that the majority of participants were female (57.33%). The Chi-square analysis indicated that general characteristics–including gender, academic year, and field of study–were not significantly associated with sleep quality. However, certain bedtime social media behaviors were significantly related to sleep quality in specific aspects. These included the duration of social media use before bedtime, the primary purpose of social media use before bedtime, the time taken to fall asleep after using social media, and the frequency of bedtime social media use per week. Furthermore, Spearman's rank correlation analysis revealed that most social media usage variables were significantly correlated with sleep quality. In conclusion, the findings suggest that a large proportion of students experience poor sleep quality, and increased duration of social media use before bedtime is associated with poorer sleep quality.

INTRODUCTION

Social media is an integral part of university students' lives, especially nighttime use, which may affect sleep quality.Poor sleep quality impacts physical health, mental health, emotional well-being, and academic performance, and studies show that social media use before bed is associated with shorter and poorer sleep.This study therefore aims to analyze pre-bedtime social media use and its relationship with sleep quality among Faculty of Science students at Chiang Mai University in the 2025 academic year.



OBJECTIVE

1. To examine pre-bedtime social media usage behaviors among students of the Faculty of Science, Chiang Mai University, academic year 2025.
2. To assess the sleep quality of students of the Faculty of Science, Chiang Mai University, academic year 2025.
3. To investigate the relationship between pre-bedtime social media usage behaviors and sleep quality among students of the Faculty of Science, Chiang Mai University, academic year 2025.

DATA COLLECTION

The questionnaire was used as a tool for data collection.Thequestionnaire was divided into three sections.

1. General information of the respondents
2. Information regarding social media usage behavior before bedtime
3. Information regarding the Pittsburgh Sleep Quality Index (PSQI)

DATA ANALYSIS

1. Descriptive Statistics
2. Chi-Square Test

$$\chi^2 = \sum_{i=1}^{r}\sum_{j=1}^{c} \frac{(O_{ij}-E_{ij})^2}{Eij}$$

3. Spearman's Rank Correlation Coefficient

$$T = r_s$$

$$r_s = 1 - \frac{6\sum_{i=1}^{n}\left(R\left(X_i\right) - R\left(Y_i\right)\right)^2}{n\left(n^2-1\right)}$$

SCOPE OF THE STUDY

POPULATION

The population in this study consists of first- to fourth-year students of the Faculty of Science at Chiang Mai University in the academic year 2025 was 2,500 (excluding 52 international students). The calculated sample size was 97 students. However, to increase the reliability of the data, data were actually collected from 150 participants.

SAMPLING METHOD

The sample size was determined using stratified random sampling to ensure comprehensive representation and appropriate proportions across all academic years. The population was stratified by year level, after which simple random sampling was conducted within each stratum using Microsoft Excel to select participants. The resulting sample distribution consists of 47 first-year students, 37 second-year students, 35 third-year students, and 31 fourth-year students.

Table : Number and Percentage of Sleep Quality

Sleep Quality		Total
Good Sleep Quality	Poor Sleep Quality	
58 (38.67)	92 (61.33)	150 (100.00)

Conclusion : Most students experience poor sleep quality.

Table : Analysis of the Relationship between General Information and Sleep Quality

General information	χ^2	P-value
Gender	0.583	0.445
Year	4.238	0.237
Major	6.865	6.865

Conclusion : There was no statistically significant correlation between General Information and sleep quality.

Table : Analysis of Spearman's Rank Correlation Coefficient Between Pre-Bedtime Social Media Use Behavior and Sleep Quality

Pre-Bedtime Social Media Use Behavior	r_s	(P-value)
The duration of social media use before bedtime.	0.233	<0.001
The duration of time to fall asleep after using social media before bedtime	0.295	<0.001
Frequency of social media use before bedtime per week	-0.088	0.285
Waking up during the night to access social media	-0.163	0.047

Conclusion : What is the duration of time you spend using social media during the pre-bedtime period, How long does it take you to fall asleep after using social media, and Have you ever awakened during the night to access social media were significantly associated with sleep quality.

RESULTS : Sleep duration does not always reflect sleep quality, as sleep quality also depends on other behavioral factors, such as social media use before bedtime. Using social media before bed can lead to going to sleep later and may consequently result in poorer sleep quality. The analysis revealed a statistically significant relationship between pre-bedtime social media use behaviors and sleep quality; however, the association was significant only in certain aspects. In conclusion, the longer social media is used before bedtime, the poorer the sleep quality becomes.

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