



RESEARCH PAPER

**Preferred Social Media Platforms among Nursing Students:
Associations with Digital Usage Patterns and Sleep Duration**

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ABSTRACT

The aim of this study was to determine the preferred social media platforms of nursing students in Islamabad and examine whether platform preference is associated with total daily social media usage time, the first social media use after waking up, last use before sleeping, and sleep duration. Using social media has become an integral part of daily life among university students, including nursing students. Frequent use of their favourite networks may affect their online behavior and sleep patterns. A structured questionnaire was used to conduct a quantitative cross-sectional survey among nursing students. Data from 202 students out of 208 participants were analyzed using descriptive statistics, chi-square tests, and the Kruskal–Wallis H test. The most used platforms were TikTok and Instagram. Platform preference was associated with daily social media usage time. The timing of first social media use after waking and sleep duration was also associated with platform preference. However, there was no difference in the last use before sleep across social media platforms. The findings highlight the need to raise awareness among nursing students regarding the use of their preferred social media platforms. Educational institutions should inform students about how platform preferences may influence daily social media use and sleep duration.

Keywords: Social Media, Nursing Students, Sleep Duration, Digital Habits

Introduction

In recent years, usage of social media has increased tremendously and has become an essential part of daily life. This is particularly true for university students. Social media provides ways to communicate and share information and experiences with others digitally, using text, images, videos, and more. As a result, social media has become an important medium for interaction, information sharing, entertainment, and educational communication influencing the daily routines and behaviour of students (Elkatmış, 2024; Duke et al., 2017). Nursing and medical students represent a group that faces demanding academic and clinical responsibilities. With effective time management and adequate sleep, they can achieve academic success and improved well-being. Despite this, frequent use of social media platforms may affect students' daily activities, including how much time they spend online and at what times of the day they use digital devices. Social media platforms such as Instagram, Facebook, Snapchat, TikTok, WhatsApp, and YouTube differ in how they allow various types of communication. While some students stick to their favourite social media platforms and spend more time on them, others move onto newer platforms. The differences in platforms preferred by students can have an effect on their digital usages like how early they start using social media after they wake up, how close to sleep on an average do they use these platforms, how this might be related to their sleep duration, etc. Prior research has studied the amount of time students spend on social media. However, few studies have examined whether differences in preference for specific social media platforms are associated with differences in digital behavior. Therefore, the present study aims to

identify preferred social media platforms among nursing students. The term social media platforms in this study refers to those online platforms that permit users to share, observe, interact and engage with publicly available content, rather than private messaging platforms. The present study also examines the relationship between preferred social media platforms and daily social media usage time. In addition, the study investigates the time of first social media use after waking, the last social media use before sleeping, and the average sleeping duration as well as their relationship with the preferred social media platforms. Sleep duration was included because the use of digital platforms may affect students' sleeping patterns and overall wellbeing,

Literature Review

The use of social media is rampant among university students including those studying health-related courses. According to a cross-sectional study performed on medical students in Jordan, 61% of the students spent three or more hours using social media per day. According to their study, Instagram was the most used platform by medical students as 48.7% reported using it, followed by Facebook (19.3%) and YouTube (11.9%) (Asghar et al., 2025; Taha et al., 2025). Another research conducted at Nishtar Medical University Pakistan among medical students reported that 97.4% of students used social media. In the same study, Tufail et al. (2025), reported that Instagram was the most popular choice (67.3%), followed by Facebook (24.6%) and Snapchat (8.1%). Additionally, Abdullah et al. (2025) suggested that the most popular social media applications used by university students comprise TikTok and Instagram. Grajek et al. (2025) reported that compared to boys, girls tend to be more active on visual platforms like Instagram and TikTok while boys more often report using information and communication apps like Discord and Reddit. Research examining nursing students also finds heavy use of social media in everyday life. According to Jimenez-Rodriguez et al. (2021) and Li et al. (2022), nursing students access their social media accounts multiple times every day, often spending anywhere between two and four hours daily. According to other studies, some nursing students spend three hours or more daily on social media (Al-Shdayfat, 2018; Barnable et al., 2018; Oducado et al., 2019) and more than 5 hours daily as reported by (Zarandona et al., 2019). Moreover, according to Alharbi et al. (2022), some students may spend six to nine hours daily on social media. Research has also looked at the kind of platforms students are using in addition to the time of use.

The evidence shows that students often access several social media sites at the same time, including WhatsApp, Instagram, Snapchat, Facebook, TikTok and YouTube (O'Connor et al., 2022; Sadd, 2019). Studies have also looked at platform-specific engagement. According to research by Yeşilyurt and Solpuk Turhan (2020) students who are frequent users of Instagram use it for a long time. Also, among young people, TikTok is one of the most preferred platforms, with adolescents spending a lot of time on it (Virós-Martín et al., 2024). The smartphone is a part of a student's life these days. According to Siebers et al. (2024), constant interaction with digital devices throughout the day, and even during the night, predominately includes social media use. Early morning checking of smartphone which is often aimed at accessing social media is associated with problematic smartphone use and poor quality of sleep (Kalal et al., 2023). It has also been reported that social media and electronic devices are used at night. Based on a study on medical students, 92.3% use their electronic devices before going to sleep while 88.4% use them for social networking (Alsulami et al., 2019). Similarly, Abdullah et al. (2025) found that university students tend to use social media most often at night, where many of them use multiple platforms. Students who reported lower sleep quality used social networking sites more than 60 minutes before bedtime on average. Similarly, a study analyzing the use of digital devices among adolescents - largely used for accessing social media platforms- found that increased use of electronic devices was negatively associated with sleep duration and poorer sleep quality (Pirdehghan et al., 2021). Likewise Abdullah et al. (2025) found that university

students, who use social media, especially at night or across multiple platforms, are likely to have poor sleep quality. The findings indicate that social media activity in the late evening hours may relate to sleep. Most previous research has examined students' general social media usage and outcomes associated with it. There is little literature that examines preferred social media platforms related to gender differences, daily usage patterns, morning and night time usage, as well as the relationship between platform preference and sleep duration.

Hypotheses

H1: There is a significant difference in the preference for social media platforms among nursing students

H2: Preferred social media platform and daily social media usage time show a significant relationship among nursing students.

H3: There is a significant association between preferred social media platform and the timing of first use after waking up among nursing students.

H4: The Preferred social media platform is associated with social media use before sleep among nursing students.

H5: The Preferred social media platform and average sleep duration of nursing students have a significant relationship.

Material and Methods

Study Design and Participants

The current investigation utilized a cross-sectional quantitative survey design. Data were collected from nursing institutes in Islamabad from December 15 to December 30, 2025. A convenience sampling technique was used to recruit students enrolled in nursing programs. A total of 230 nursing students were approached, of which 208 consented to participate in the study, resulting in a response rate of 90.4%. After excluding six cases with missing data for key study variables, the remaining analytic sample consisted of 202 students for the inferential analyses. The respondents were students enrolled in Bachelor of Science in Nursing (BSN) and Certified Nursing Assistant (CNA) programs. They included both male and female students. All participants were full-time nursing students at the time of data collection.

Inclusion Criteria

1. Students enrolled full-time in BSN or Certified Nursing Assistant (CNA) programs.
2. Students of either gender.
3. Students who consented to participate and completed the questionnaire.

Exclusion Criteria

1. Individuals not registered in a BSN or CNA nursing program.
2. Students who opted out of participation.
3. Questionnaires with large missing or incomplete responses.

Procedure

Before data collection, permission was taken from the relevant nursing institutes. Prior to completing the questionnaire, the participants were briefed about the study's aim and objectives. Data were gathered during face-to-face class sessions. The students filled in the questionnaire independently, and it took around 8–10 minutes. Participants received clear instructions for completing the questionnaire. They were given adequate time to respond to all items. No personal data were recorded. Only completed questionnaires were included in the final dataset for analysis.

Measures

Data for the present study were collected using a structured questionnaire developed by the researchers to collect demographic information and assess social media usage patterns.

Demographic Information

Participants reported basic demographic information including age, gender and the program in which they were enrolled in BSN or CNA.

Social Media Use and Sleep Duration

Participants indicated their preferred social media platform, defined as the social media application they use most often (e.g., Facebook, Instagram, TikTok, YouTube, Snapchat, X, or other). The average amount of time spent on social media every day was measured with the help of ordinal categories such as (less than 30 minutes, 30–60 minutes, 1–2 hours, 3–4 hours, 5–6 hours, and 7+ hours per day). Participants specified the timing for first social media use after waking up (i.e., less than 5 minutes, less than 1 hour, 2–3 hours, or 3+ hours), as well as the timing for last social media use before sleep (i.e., less than 5 minutes, less than 30 minutes, 1–2 hours, or greater than 2 hours). Participants' average sleep duration per night was assessed in ordinal ranges of less than 5 hours, 5–6 hours, 7–8 hours, or 9+ hours.

Data Analysis

Statistical tests were performed using IBM SPSS version 29. Frequencies, percentages, means, and standard deviations were derived to describe the demographic characteristics of respondents and their preferred social media platform. A chi-square goodness-of-fit test and chi-square test of independence was carried out to analyze the distribution of preferred social media platforms and association between gender and preferred social media platforms. Because the behavioral variables were ordinal and did not meet the normal distribution assumption, the Kruskal-Wallis H test was used to determine differences in daily social media usage time, time of the first social media use after waking, the last social media use before sleep, and mean sleep time based on preferred social media platform groups. Also mean rank values were calculated for interpreting group differences. A p value of less than .05 was considered significant for all analyses.

Ethical Consideration

This study received ethical clearance from the Institutional Review Board of the Department of Psychology, Faculty of Social Sciences, and International Islamic University Islamabad. The study procedures were ethical as per the institutional ethics committee and the Declaration of Helsinki. Informed consent was obtained from all respondents prior to data collection, and participation was voluntary. Participants' identities and responses were ensured protection and confidentiality. The study was approved as involving minimal risk to the participants.

Results and Discussion

Table 1
Demographic Characteristics of Participants (N = 202)

Variable	Category	n	%
Gender	Male	109	54
	Female	93	46
Program	BSN	124	61.4
	CNA	78	38.6
Age (years)	Mean \pm SD	19.78 \pm 1.57	—

Table 1 shows the demographic characteristics of the participants. The research subjects included a total of 202 nursing students which included 109 (54 %) male and 93 (46 %) female students. The majority of the participants enrolled in the BSN program (61.4%) and the rest in the Certified Nursing Assistant Program. (38.6%) The participants' age was 19.78 \pm 1.57 years.

Table 2
Most Preferred Social Media Platforms among Nursing Students (N = 202)

Social Media Platform	n	%
Facebook	17	8.4
Instagram	64	31.7
TikTok	78	38.6
YouTube	24	11.9
Snapchat	19	9.4

Table 2 presents the distribution of social media most used by nursing students. TikTok was the most preferred social media platform used (38.6%), followed by Instagram (31.7%). A smaller number of students stated that their most frequented social media platforms were YouTube (11.9%), Snapchat (9.4%), and Facebook (8.4%). A chi-square goodness-of-fit test revealed a significant difference in preference for the social media platforms among nursing students, χ^2 (4, N = 202) = 80.33, $p < .001$.

Table 3
Chi-Square Test for Association between Gender and Preferred Social Media Platform

Test	χ^2	df	p	N
Pearson Chi-Square	14.15	4	.007	202
Likelihood Ratio	16.81	4	.002	202

A Chi-square test for independence was done to check the relationship between gender and the most used social media site. In Table 3, the results showed that gender is significantly associated with the preferred social media platform, χ^2 (4, N = 202) = 14.15, $p = .007$. Cramér's $V = .26$. The likelihood ratio test (LR χ^2 (4) = 16.81, $p = .002$) confirmed this finding too. The Chi-square test assumptions were met, as no expected counts in the cells were below five.

Table 4
Distribution of Preferred Social Media Platforms by Gender

Social Media Platform	Male n (%)	Female n (%)	Total n (%)
Facebook	16 (14.7%)	1 (1.1%)	17 (8.4%)
Instagram	35 (32.1%)	29 (31.2%)	64 (31.7%)
TikTok	40 (36.7%)	38 (40.9%)	78 (38.6%)
YouTube	11 (10.1%)	13 (14.0%)	24 (11.9%)
Snapchat	7 (6.4%)	12 (12.9%)	19 (9.4%)
Total	109 (54.0%)	93 (46.0%)	202 (100%)

Table 4 shows the distribution of social media platforms preferred by gender. TikTok (36.7%) and Instagram (32.1%) were the most popular among male students, while

Facebook (14.7%), YouTube (10.1%), and Snapchat (6.4%) trailed behind. Likewise, TikTok (40.9%) and Instagram (31.2%) were the most used, followed by YouTube (14.0%) and Snapchat (12.9%), and Facebook (1.1%) among female students.

Table 5
Kruskal-Wallis Test Examining Differences in Digital Habits across Preferred Social Media Platforms (N = 202)

Variable	χ^2	df	p
Daily social media usage time	10.33	4	.035
Time of first social media use after waking	10.85	4	.028
Last social media use before sleep	6.27	4	.180
Average sleep duration	10.46	4	.033

A Kruskal-Wallis H test was performed to see if the digital behavior patterns differ among the students based on their social media selection. As reported in Table 5 the results showed statistically significant differences in average time spent on social media platforms on a daily basis, $H(4) = 10.33$, $p = .035$, $\eta^2 = .03$. There was a significant difference in the time of first social media use after waking, $H(4) = 10.85$, $p = .028$, $\eta^2 = .04$. On the other hand, there was no significant difference in the timing of last social media use before sleep, $H(4) = 6.27$, $p = .180$. Lastly, average sleep duration also differed significantly according to preferred social media platform, $H(4) = 10.46$, $p = .033$, $\eta^2 = .03$. Dunn's post-hoc tests with Bonferroni correction indicated that there were no significant pairwise differences between the platform groups.

Table 6
Mean Rank of Digital Behavior Variables by Preferred Social Media Platform

Variable	Social Media Platform	N	Mean Rank
Daily social media usage time	Facebook	17	85.41
	Instagram	64	118.37
	TikTok	78	89.58
	YouTube	24	105.83
	Snapchat	19	102.53
Time interval to first social media use after waking	Facebook	17	87.91
	Instagram	64	91.55
	TikTok	78	100.16
	YouTube	24	123.69
	Snapchat	19	124.63
Time interval to last social media use before sleep	Facebook	17	78.41
	Instagram	64	97.39
	TikTok	78	102.04
	YouTube	24	117.46
	Snapchat	19	113.63
Average sleep duration	Facebook	17	78.32
	Instagram	64	92.34
	TikTok	78	104.54
	YouTube	24	127.04
	Snapchat	19	102.58

The mean rank values of digital behaviour variables based on preferred social media platforms are shown in Table 6. For daily social media usage time, users of Instagram had the highest mean rank value of 118.37, which indicates they are using social media more daily in comparison to other platform groups and the difference is statistically significant $\chi^2(4) = 10.33$, $p = .035$. For the time of first social media use after waking, lower mean ranks of 87.91 and 91.55 for Facebook and Instagram users respectively indicate that these students check social media earlier after waking up, whereas Snapchat (124.63) and YouTube (123.69) users do so later. The difference was statistically significant, $\chi^2(4) = 10.85$, $p = .028$. For last social media use before sleep, Facebook users had the lowest mean rank (78.41), suggesting use closer to bedtime; however, the differences across platforms

were not statistically significant, $\chi^2(4) = 6.27$, $p = .180$. For average sleep duration, there was a significant difference, $\chi^2(4) = 10.46$, $p = .033$. While TikTok and Snapchat users were reported to get average sleep duration, YouTube users received relatively longer sleep duration and Facebook users received shorter sleep duration.

Discussion

This study investigated the social media preferences of nursing students and how these choices are associated with daily usage time, time of use, and sleep duration. As hypothesized, there was a significant difference in the preferred social media platforms among nursing students. Results indicated that TikTok and Instagram were the most used social media platforms among nursing students, consistent with the findings of Abdullah et al. (2025). In some earlier studies, it was found that students use visually oriented platforms such as Instagram with high frequency (Taha et al., 2025; Tufail et al., 2025). The present study found that TikTok was slightly more common than Instagram. The clustering of preference towards TikTok and Instagram could indicate a shared attraction to platforms that offer instant and continuous engagement. Regarding the second hypothesis, it was revealed that gender and preferred social media platform were significantly correlated. Although TikTok and Instagram were predominantly preferred social media platforms among both genders, some differences were observed between them. Female students used Snapchat and YouTube more, while more male students used Facebook. Previous research, such as that of Grajek et al. (2025), suggests that girls are more active on visual platforms like Instagram and TikTok, while boys are more interested in apps like Discord and Reddit. In the present study, for most students, these platforms appear to fulfill the purpose for which both genders use them. In a small number of cases, however, preferences differ due to variations in usage needs or other factors. The study's other finding was that the average daily time students spent on social media varied by platform. Students who preferred Instagram spent more time on social media than those who favored other platforms. These results are consistent with previous findings regarding excessive time spent on social media, especially on platforms like TikTok and Instagram, by nursing students (Jiménez-Rodríguez et al., 2021; Li et al., 2022; Oducado et al., 2019; Virós-Martín et al., 2024; Yeşilyurt & Turhan, 2020). Furthermore, the study revealed that students who are more inclined towards Facebook and Instagram tend to check their accounts as soon as they wake up, unlike those who use YouTube or Snapchat. This finding is consistent with previous research, which has observed students' tendency to check their Smartphone—most likely for social media use—soon after waking up (Kalal et al., 2023; Siebers et al., 2024) particularly on their favourite social media platforms. Another important finding of the study is that social media is used before sleep, though it does not differ by platform, and this is in line with existing findings that students are more likely to use electronic devices before sleep, mainly for social media, and more than one platform at night (Abdullah et al., 2025; Alsulami et al., 2019). One possible explanation for engaging with diverse social media platforms before sleep is that students have more spare time to explore different platforms for personal and academic purposes, such as entertainment, communication, and learning. Finally, the research observed differences in the sleep duration of students with different platform preferences. Students who preferred YouTube reported slightly longer sleep duration, and those who preferred Facebook reported shorter sleep duration. Previous research suggests that excessive use of digital media may negatively affect young people's sleep (Pirdehghan et al., 2021). But the association between sleep duration and specific or preferred social media platforms has rarely been investigated. Some platforms, like YouTube, are used for more intentional and episodic viewing, whereas others, like Facebook, may encourage more frequent checking and interaction, which could influence overall sleep routines. Despite differences being statistically significant within the preferred platforms group, effect sizes were small, indicating that students' social media platform preferences have only a small effect on their digital behaviour and sleep duration.

Conclusion

The current research investigated the social media applications preferred by nursing students and their relationship with their digital engagement and sleep duration. According to the study, it was found that TikTok and Instagram were the most preferred platforms used by nursing students. A significant association was found between platform preference and the daily duration of social media use and the timing of first social media use after waking up, as well as average sleep time. However, no significant difference was found in the timing of social media use before sleeping. The results offer a more nuanced understanding of students' digital lifestyles, and it is therefore relevant to take platform preference into account while studying social media use and sleep patterns.

Recommendations

Nursing students should be educated about the connections between their preferred social media platforms and the nature of their digital engagement and sleep duration. Awareness sessions that focus on the optimal and balanced use of platforms on a daily basis can be added to existing student support or health promotion activities. Monitoring social media use at different times, such as early morning and nighttime, may clarify how preferences for specific platforms relate to usage patterns and sleep. Future studies might explore the personality traits and motivations behind platform choice to gain better insight into digital behavior. Moreover, it would also be worthwhile to examine the relationship of algorithm-driven platforms, echo chambers, and filter bubbles with preferred social media platforms, and their impact on engagement and exposure patterns. Since the current study was based on convenience sampling from selected institutes and self-reported data, future studies should be conducted on larger and more diverse samples. Objective assessments of digital activity and longitudinal designs may provide stronger evidence regarding platform preference, usage patterns, and sleep outcome.

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