

Influence of the Social Media Programs Usage on Academic Performance among Student Nurses: A Cross-Sectional Study

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ABSTRACT

Introduction: This study examines the impact of social media program use on academic performance among student nurses, using a cross-sectional design.

Objectives: This study aims to investigate the influence of social networks on academic achievement among nursing students.

Methods: A cross-sectional design was adopted to achieve the aim of the current study. A structured online questionnaire consisting of twenty questions was used to collect responses from undergraduate students majoring in nursing sciences, excluding preparatory-year students. The survey was completed by 223 male and female students, and data were categorized, coded, and analyzed using the appropriate statistical methods in SPSS version 25. Descriptive statistics were used to describe the sample's major variables.

Results: The results show that 223 participants completed the survey, with 55.2% males and 44.8% females. There was a statistically significant relation between the influence of social networks and the cumulative average of students' academic achievement, with a p-value less than 0.05. Most of the participants were aged between 20–22 years, and 48.5% of the study participants had a cumulative average between 3.5 to 4. The students used Snapchat most frequently at 88.1%, followed by WhatsApp at 87.3%, while Facebook was the least used social media platform at 1.5%.

Conclusions: Social network usage has increased in recent years, and students use social networks for academic and socialization purposes. Our research focused on nursing students and found that social networks significantly affect academic achievement.

Keywords: Effect of social networks, Academic achievement, Nurses' students

INTRODUCTION

Students are the backbone of nation-building, representing the first national wealth and the main tool for education development. Students' abilities and outstanding performance to high, lofty goals¹. Thus, students' performance is linked to popular means of social communication, making it necessary to prioritize and manage time to affect academic output².

The internet is used for searching sources and information and has become a means of communication for social, commercial, and academic affairs. This is particularly evident in the case of students who use various social networking sites for communication³. Social networks have become increasingly popular, particularly among university-age students. Not only do working people use social networks, but also students widely engage with them. The most popular social network among students is Facebook, with a reported 84% usage rate in a study conducted in Malaysia⁴. Another study indicated that university students in the age group of 18 to 29 years were the primary users of social media⁵.

Problem Statement

Excessive use of social networks can lead to health problems and academic issues for students. A survey conducted on students addicted to social media found that it leads to a lack of concentration in academic matters. A study on the risks of social networks found that their use can lead to psychological problems and depression, potentially affecting academic performance⁶. Many scientists believe social networks may threaten young individuals due to incorrect impressions regarding relationships and emotions. Losing these connections can lead to emotional distress⁶. However, students often turn to various modes of communication to reduce stress, add some fun, and break from academic routines. Social networks have an effective role in the educational process, allowing for the exchange of information between students at a rapid pace. While there are benefits to using social networks, studies show they can also have negative impacts, particularly when students become preoccupied with them, devoting studying time to social media instead⁷.

Here we address two major research questions: (i) What is students' perception regarding the relationship between academic achievement

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and social media usage? And (ii) What is the effect of social network usage on the academic achievement of students studying nursing sciences?

Significance of the Study

The widespread use of social networks is still unknown to a large number of people, and their impact, whether positive or negative, remains unclear. The prevalence of social media use among nursing students at Al-Baha University, Saudi Arabia, reveals the importance of understanding the impact of communication programs and the time spent using them. This issue is not limited to nursing but is relevant to all areas of life. However, given the sensitivity of the nursing profession, which involves caring for individuals in various health situations, it is important to investigate the effects of social networks on academic achievement in this field. Therefore, this study aims to examine the impact of social networks on academic achievement among nursing students at Al-Baha University, Saudi Arabia.

METHODS

Research Setting and Design: The study was conducted among nursing students studying Nursing Sciences at Al Baha University. A cross-sectional design was adopted to achieve the aim of the current study in the department of nursing at Al-Baha University. We enrolled nursing students at Al Baha University. Both genders are male and female and of all nationalities. The exclusion criterion was preparatory-year nursing students.

Sample Size and Sampling Technique: Random sampling was used in this study, and the sample size was determined by calculating the following formula.

$$N = N/1 + N(d)^2$$

where n = sample size, N = population size, and d = degree of accuracy desired (the accepted margin of error was 0.05).

$$n \approx 223, n = 540/1 + 540(0.05)^2 = 229.8, n \approx 223$$

Data Collection: A structured questionnaire was developed from previous studies^{1,2}.

Testing Instrument: To ensure the validity of the questionnaire, a pilot study was conducted on 16 students, and the results were used to make necessary improvements and adjustments to the questionnaire. The reliability of the instrument was tested using Cronbach's alpha.

Data Collection: Data was collected using a questionnaire survey after necessary modifications were made based on the pilot study and expert reports.

Data Analysis: Data were categorized, coded, and analyzed using appropriate statistical methods in the SPSS program. Descriptive statistics were used to describe the major variables of the sample.

Ethical Considerations: The ethics committee of Al Baha University, Faculty of Applied Medical Sciences approved this study. Informed consent was obtained from all respondents before administering the questionnaire, and the study's objectives were fully explained.

RESULTS

Sociodemographic Characteristics: Table 1 presents the demographic characteristics and other variables of the 223 participants. The sample comprised 52.5% males and 47.5% females. Most participants were

between the ages of 20 to 22 years (74.9%). Almost half of the participants had a cumulative average of level 4 (48.9%). 49.3% of the study participants had a cumulative average between 3.5 to 4.

The Period Students Spend on Social Networks: Table 2 displays the average hours spent by students using social networks. Of the participants who spend time on social media, 60.1% spend 4–6 h, 4.9% spend less than 2 h, 19.7% spend 2–4 h, and only 15.2% of students spend more than 6 h on social networks.

Use of Social Media During Academic Learning: Table 3 displays the effect of social network programs on academic achievement. 33.2% of the students reported being affected by social network programs on their academic achievement, while 15.7% reported no impact. More than half of the students (51.1%) reported that social network programs sometimes influenced their academic achievement.

The Relationship Between the Effect of Social Networks and Cumulative Average: Table 4 displays a statistically significant relationship between the influence of social networks and the cumulative average of students with a cumulative average of less than 2, from (2 to 2.4), and from (2.5 to 3), ($P < 0.05$). However, there is no statistical significance for students with a cumulative average of (3 to 3.4), and (3.5 to 4) at $P > 0.05$.

Students' Use of Social Networks: We found that the highest usage of social network programs was for Snapchat (88.1%), followed by WhatsApp (87.3%). The usage rate for other social network programs was as follows: TikTok (73.9%), Twitter (53%), YouTube (50%), Instagram (49.3%), Netflix (29.9%), Telegram (26.1%), Twitch (4.5%), and Facebook (1.5%), as shown in Figure 1.

The Influence of Popular Topics in Social Media (trends) on Academic Achievement: The study also examined the influence of popular topics in social networks on trends in academic achievement. Only 5% of students agreed that the prevalence of trends affects their academic studies, while 32% reported no effects on academic studies. Most study participants (63%) reported that trends sometimes affect their academic achievement, as shown in Figure 2.

Table 1. Sociodemographic characteristics ($n = 223$)

Variable	Frequency	Percentage	
Gender	Male	117	52.5%
	Female	106	47.5%
	Total	223	100%
Age categories (in years)	Less than 20 years	37	16.6%
	20–22 years	167	74.9%
	More than 3 years	19	8.5%
	Total	223	100%
Level of student	Level 4	109	48.9%
	Level 6	45	20.2 %
	Level 8	69	30.9%
	Total	223	100%
Cumulative average	From 3.5–4	110	49.3%
	From 3–3.4	62	27.8%
	From 2.5–3	34	15.2%
	From 2–2.4	10	4.5%
	Less than 2	7	3.1%
Total	223	100%	

Table 2: The period students spend on social networks

Variable	Frequency	Percentage	
The time students spend on social media	< 2 h	11	4.9 %
	2–4 h	44	19.7 %
	> 4–6 h	134	60.1 %
	> 6 h	34	15.2 %
	Total	223	100%

Table 3: Use of social media during academic learning

Variable	Frequency	Percentage	
The effect of social networks programs on academic achievement	Yes	74	33.2%
	No	35	15.7%
	Some time	114	51.1%
	Total	223	100%

Table 4: The relationship between the effect of social networks and cumulative average

Cumulative average	Relationship between the cumulative average and social networks			p-value
	Yes	No	Sometime	
Less than 2	37 (16.6%)	15 (6.7%)	58 (26%)	0.01
From 2 to 2.4	20 (9%)	10 (4.5%)	32 (14.2%)	0.00
From 2.5 to 3	12 (5.4%)	7 (3.1%)	15 (6.7%)	0.00
From 3 to 3.4	3 (1.3%)	2 (0.9%)	5 (2.2%)	0.72
From 3.5 to 4	2 (0.9%)	1 (0.4%)	4 (1.8%)	0.85

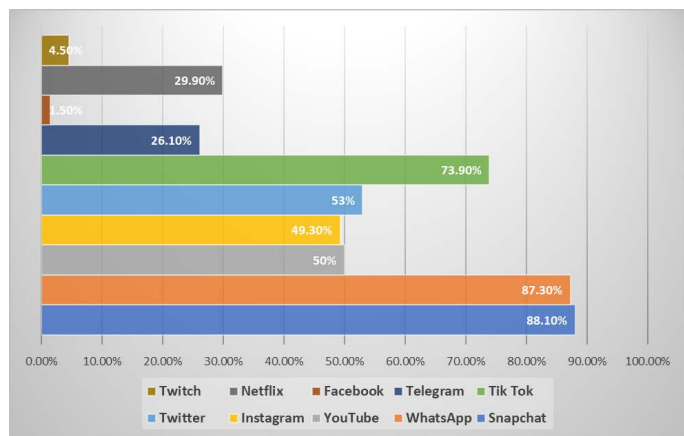


Figure 1: Students’ use of social networks

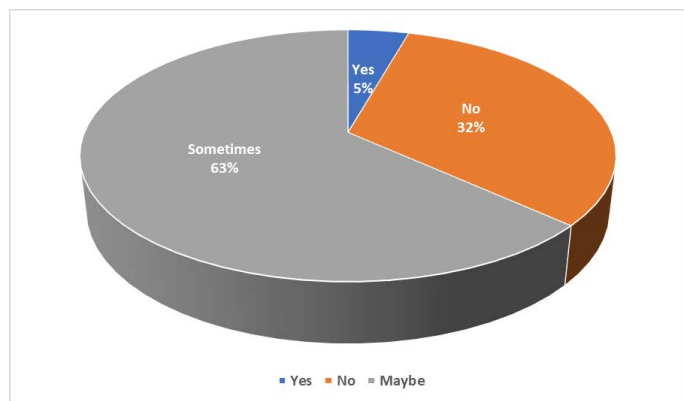


Figure 2: The influence of popular topics in social networks (trends) on academic achievement

DISCUSSION

Students’ Use of Social Media: Our study found that Snapchat (88.1%) was the most popular social network among students, followed by WhatsApp (87.3%). This contrasts with a study conducted in Malaysia⁸, which found that Instagram (31.2%) and Twitter (27.0%) were the most addictive social media platforms. However, our findings are consistent with another study conducted at Hail University, Saudi Arabia, which found that Instagram and WhatsApp were more commonly used among students⁹. Facebook was the least popular social media platform in our study, with only 1.5% of students using it. This finding is inconsistent with a study by Kolhar in (2020)¹⁰. According to a study by Olutola et al¹¹. WhatsApp was the most widely used social network. This was confirmed by a report from 2015 that ranked the usage of social media platforms as follows: WhatsApp (91.1%), Facebook (80.2%), and Twitter (52.9%)¹¹.

The Correlation Between Social Media’s Impact and Students’ Cumulative Average: The cumulative average of the students reveals that the use of social networks has affected a portion of them. Those with a cumulative average of less than 3 exhibited a negative impact on their academic levels. A statistically significant relationship (P = 0.001) was found, which contradicts a previous study by Wan et al. that showed no statistically significant relationship between academic performance and the use of social media¹². However, there was no statistical significance for students with a cumulative average of more than 3 (P > 0.05). Thus, there was no effect on their academic performance. This finding is consistent with a study among nursing students in Saudi Arabia, where social communication led to improved academic achievement by incorporating it into the educational process¹³.

Use of Social Media During Academic Learning: Our study examined the percentage of students who use social media during academic lessons and found that 33.2% use it during class, while only 15.7% stop using it. This finding is consistent with a study by Badshah et al. (2021), which showed that more than a third of students engage in social networking programs during class, with a negative impact on academic achievement¹⁴. Another study found that social media addiction has positive and negative effects on students. Some students use it to follow up on their lessons, which is positive, while others may lose focus and waste time, which has a negative effect¹⁵.

The Time Students Spend on Social Networks: Our study examined students’ total time on social networks and found that 60.1% spend approximately 4-6 h daily. As previously mentioned, this can positively impact academic duties but negatively impact academic achievement if used during non-academic times. This finding is consistent with a study by Diluxshy (2019), which found that 65% of students use social media for 3-6 h per day¹⁶.

LIMITATIONS

This study has some limitations. It was conducted solely at Al Baha University in Saudi Arabia and thus may not be generalizable to other educational institutions.

CONCLUSION

In recent years, the use of social networks has increased, and students use them for academic and socialization purposes. Our research focused on nursing students and found that social network usage significantly impacts academic achievement.

Authorship Contribution: All authors share equal effort contribution towards (1) substantial contributions to conception and design,

acquisition, analysis, and interpretation of data; (2) drafting the article and revising it critically for important intellectual content; and (3) final approval of the manuscript version to be published.

Potential Conflict of Interest: None

Competing Interest: None

Acceptance Date: 10 May 2023

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