

Impact of Using Social Networking as Learning Aid on Nursing Students Academic Engagement and Achievement

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Abstract

Background: Social networking sites are an integrated component of the lives of many students, these sites have various effects on their lifestyles, especially in their academic engagement and achievement; and it encourages students to actively engage with group work. **The aim** of the study is to assess the impact of using social networking as learning aid on nursing students' academic engagement and achievement. **Research design:** a descriptive cross-sectional research design was utilized. **Subjects:** consisted of a representative sample (30%) of the total number of undergraduate nursing students from the 1st, 2nd, 3rd, and 4th academic years (no. =840). **Setting:** The study was conducted at the faculty of nursing at Minia University, Egypt. **Data collection:** two tools included as following: "Social networking questionnaire", and "Student academic engagement questionnaire". **Results:** showed that the majority (91.50%) of nursing students had a moderate level regarding social networking sites usage, more than two-thirds (67%) of them had a moderate level of student academic engagement, and more than half (51.80%) of them had very good degrees regarding student's academic achievement. **Conclusion:** there was a highly statistically significant correlation between SNSs usage and students' academic engagement, while there was no statistically significant correlation between students' academic achievement with SNSs usage and students' academic engagement. **Recommendation:** Encourage students to use social networking sites appropriately to help them improve their academic engagement and achievement.

Keywords: Social Networking, Learning Aid, Nursing Students, Academic Engagement, Achievement.

Introduction:

In recent years, the use of social networks has been growing at an unprecedented speed (Wong et al., 2021). Social Networking Sites (SNSs) are built upon since the creation of communities and commerce, and networking skills have been important in most career fields (Chugh et al., 2021). In the 21st century social networking skills are becoming necessary proficiencies, beyond entry-level positions, in many industries including academic institutions (Pulgar, 2021).

The use of various SNSs, i.e., Facebook, blogs, Twitter, web conferencing and LinkedIn has become a universal and standard communication medium (Atikuzzaman, 2021). Nowadays, social media is being widely not only used for communication purposes but also educational purposes by students, teachers, and academic staff (Kanwal et al., 2019).

Also, the ability of students to communicate in several ways assists in their engagement and content retention levels (Afify, 2020). Moreover, Bedir (2021) have argued that teachers and students could effectively discuss and exchange their course-related ideas via social media. In addition to these, it is believed that the multi-functionality of social media encourages students to actively engage with group work, discuss and share more easily among themselves via multiple chat rooms (Gonzalez, 2020).

Student engagement is the physical and psychological effort in which students should devote their power to academic experience (Shah & Cheng, 2019). Student engagement to happen effectively, it should include time, effort, resources, participation, activities, emotions, and

feelings within the context of embracing student teaching. It could be a measure for ongoing assessment of the quality of the nursing program and the success of graduation students (Redmond et al., 2020).

In considering the advancements in technology and the generational characteristics of college students today, students have become accustomed to accessing information immediately through utilizing the internet and social media (Kremer, 2022). Thus, SNSs can be used to increase student engagement if the activities are designed to reach the desired educational outcomes. Engaging students in their learning can be one of the most critical aspects of a successful undergraduate education (Borup et al., 2020).

Academic engagement of students could increase their desirable academic performance and success (Kim et al., 2019). Recent evidence indicates that engagement in academic-related learning activities is one of the important determinants of students' success in a university. Hence, it is essential to provide a set of strategies for maintaining and enhancing the academic engagement and achievement of nursing students (Ghasemi et al., 2020).

Whether or not a student undergoing a planned educational process, gains the demanded level of skills and accomplishments is determined by the student's academic achievement level. Student academic achievement is measured by grades, scores, or both. Therefore, teachers should consider their students' motivations and preferred learning styles, track their learning in their academic environment, and encourage them to engage in learning (Namoun & Alshantqi, 2020).

Thus social networking sites provide current students with new opportunities for interacting with other

students and institutional personnel, peer support, and collaborative workspace (Alhammedi, 2021). Some of these interactions and experiences students have in online SNSs mirror educationally purposeful activities that affect students' engagement. This is a significant benefit since engagement is a key component of student development and academic achievement (Gohain, 2021).

Moreover, Academic achievement is representing one of the most widely studied outcomes in educational research and assessment. So, nursing education is a substantial personal investment of time and effort for the student and a major investment of government in many countries, therefore, supporting students' success in their academic education. Also, trying to identify predictors of academic success to ensure quality education and high completion rates (Bayoumy & Alsayed, 2021).

Significance of the Study

There are numerous differences between past and current generations of undergraduate nursing students. Today, students live in a society where social media is ubiquitous, and its utilization is virtually unavoidable. Social media influences modern nursing students' experiences by affecting their thoughts and opinions. Moreover, the formal uses of social media within nursing curricula have reported advantages through its inclusion for undergraduate nursing students. When social media was incorporated into nursing curricula, it increased students' grades and supported peer teaching (Alharbi et al., 2021).

Also, Atikuzzaman (2021) stated that the majority of the students experienced a favorable feeling in their learning in the classes where social media was used as a supplementary tool. Moreover, students possess a positive attitude toward using social media in education. Dumford and Miller, (2018) mentioned that evaluating and comparing the impact of social networking and traditional models on nursing students' academic engagement and academic achievement has great importance to educational institutions as it helps them to pinpoint the strengths and to identify areas for improvement, especially in health care teaching institutions.

From my experiences working with students; it was noted that using SNSs are more used frequently among students for academic purposes; and this use is supposed to enhance their engagement in teaching and learning. SNSs use can improve their academic success; so from own view; it is needed to explore the nursing student's social networking use and its impact on their academic engagement and achievement.

Aim of the Study:

The aim of the current study is to assess the impact of using social networking as learning aid on nursing student's academic engagement and achievement

Research Questions:

1. What are the levels of nursing students' social networking use?
2. What are the levels of nursing students' academic engagement?
3. What are the levels of nursing students' academic achievement?
4. What are the impact of using social networking on students' academic engagement and achievement?

Subjects and Methods:

Research design:

A descriptive cross-sectional research design was utilized to achieve the aim of the current study.

Setting:

This study was conducted at the faculty of nursing at Minia University, Egypt.

Subjects:

The study subject was selected by using Systematic Random Sample from all undergraduate nursing students of the Faculty of Nursing- Minia University. It consisted of a representative sample (30%) of nursing students from the 1st, 2nd, 3rd, and 4th academic years during the "second semester" of the academic year 2021 -2022 (total number 840). the subjects were distributed as the 1st year= 255, 2nd year= 285, 3rd year= 180, and the 4th year= 120 student.

Data collection tools

Data were collected by using two tools as following:

Tool (I): Social networking questionnaire: It was classified into three parts:

Part 1: Personal data: This included data such as (code, age, gender, residence, marital status, academic year, last academic certification, and Last academic achievement).

Part 2: Academic achievement of the current year: and classified as follows (poor = < 60%, fair = 60% to 64.9 %, good= 65% to 74.9 %, very good= 75% to 84.9%, excellent= > 85%)

Part 3: Social Networking Sites Usage (SNSsU): this part was developed by the researcher based on the literature (Chiu et al., 2006; Swang, 2011; Aslam et al., 2013; Evans et al., 2015) to assess the nursing student's usage of social networking sites. It was translated into Arabic version; consisted of (62 items) and was divided into 8 dimensions. 1st: social networking site usage intensity (15 items), 2nd: social interaction ties (6 items), 3rd: trust (7 items), 4th: norm of reciprocity (3 items), 5th: identification (4 items), 6th: shared language (3 items), 7th: perceived social networking sites benefits (19 items), 8th: knowledge sharing (5 items).

For the 1st dimension, it encompassed two questions (1 and 2) that were measured by five points Likert scale (Always= 5, to never= 1). Questions (3, 4, 5, and 6) were measured by five points scale (form none=1 to up, to 10 hrs/day=5). Question (7, 8, 9, 10, and 11) were measured by five-point scale (form zero/day=0, to up to 31 time/ day=5). Questions (12, 13, 14, and 15) were measured by MCQ. For dimensions two to dimension eight; the items were measured by five-point Likert scale (Strongly agree=5, to strongly disagree=1).

The Scoring system: of this part was classified as follows: low level of using social networking (88-219), moderate level (220-330), and high level (331-440).

Tool (II): Student academic engagement questionnaire: this tool consisted of two parts as follows:

Part (I): Students' engagement: This part was developed by the researcher based on the literature Pike, (2013) and Buckley, (2018). It included (54 items) and was divided into 6 dimensions as follows: 1st: students' practices of academic work (9 items), 2nd: mental activities of academic work (4

items), 3rd: non-academic engagement activities (6 items), for dimensions (1, 2, and 3); the items were measured by a five-point Likert scale (Very often=5, to Never=1).

4th: benefits of student engagement activities (10 items), 5th is the students' role in academic engagement (4 items), 6th: barriers to student engagement (21 items). For dimensions (4, 5, and 6); the items were measured by a five-point Likert scale (Strongly agree=5, to strongly disagree=1). **Part (II): Impact of using social networking on academic Engagement:** it was composed of (10 items) to assess the effect of social networking on academic engagement, and was divided into two dimensions, positive impact of using social networking on academic engagement is (4 items), and negative impact of using social networking on academic engagement (6 items); the items were measured by five-point Likert scale (Strongly agree=5, to strongly disagree=1).

The **Scoring system:** of this tool was classified as follows: low level of student academic engagement (64-159), moderate level (160-240), and high level (241-320).

Validity of the tool:

The tools were submitted to a jury of 5 experts in the field of nursing administration and education; each expert panel was asked to examine the instruments for their content validity, coverage, clarity, wording, length, format, applicability, and overall appearance. No modification was done.

Reliability of the tool:

Reliability of the tools was performed to confirm the consistency of the tools. The internal consistency was measured to identify the extent to which the items of the tools measured what it was intended to measure. Also, the Cronbach alpha test was used for measuring the reliability of tools and it was (0.953) for social networking sites usage tools, and (0.916) for academic engagement tools.

Pilot study:

A pilot study was conducted on (10%) of nursing students (students = 84) (of the total study subjects) before starting the fieldwork to test the clarity and applicability of items included in the tools. Estimated time required for filling

the tools; was about 15 min, for each sheet and the results of the pilot study indicated that; the tools were applicable, didn't need changes and it was added to the final results. The pilot study subjects were excluded from the total number of study subjects.

Data collection procedure:

Official Permissions were obtained from administrative authorities before the data collection procedure. During each classroom visit, the researcher took permission from the head of the department, the clinical coordinators, and the clinical instructors to work with students at the beginning or the end of the clinical section according to the appropriate time for students. The sheets were given individually to all of them and they were given time to respond to them. Also, the data were received according to each student's time, of students. Data were collected from (1st, 2nd, 3rd, and 4th-year faculty students) during the second semester of the academic year 2021- 2022 (from March to June).

Ethical Consideration:

An official letter was granted from the Ethical Committee of research and the Faculty Dean. Before conducting the pilot study as well as the actual study, oral consent was obtained from the participants after explaining the purpose of the study. The study subjects have the right to refuse to participate or withdraw from the study without any rationale at any time. The study subjects' privacy was considered during the collection of data. Participants were assured that all their data were highly confidential; anonymity was also assured by assigning a number for each nursing student instead of names to protect their privacy.

Statistical analysis:

The collected data were tabulated, computerized, analyzed, and summarized by using descriptive statistical tests to test research questions using the SPSS version (25). Qualitative data were expressed as frequency and percentage. Probability (P-value) is the degree of significance, less than 0.05 was considered significant. The following statistical tests were used for the analysis of numeric data such as (the Anova test, Fisher exact, and Correlation analysis).

Results: -

Table (1): Percentage distribution of the nursing student's personal data (no.=840).

Personal data	Nursing students (no.= 840)	
	No.	%
Age		
➤ 18-19yrs	285	33.9
➤ 20-21yrs	356	42.4
➤ 22-23yrs	192	22.9
➤ > 23	7	0.8
Mean ± SD	21± 123	
Gender		
➤ Female	493	58.7
➤ Male	347	41.3
Residence		
➤ Rural	625	74.4
➤ Urban	215	25.6
Marital status		
➤ Single	826	98.3
➤ Married	14	1.7
Academic's year		
➤ First	255	30.4
➤ Second	285	33.9
➤ Third	180	21.4
➤ Fourth	120	14.3
Last certification		

Personal data	Nursing students (no.= 840)	
	No.	%
➤ Secondary school	723	86.1
➤ Technical institution	117	13.9
Last academic achievement		
➤ Poor	5	0.6
➤ Fair	8	1.0
➤ Good	128	15.2
➤ Very good	433	51.5
➤ Excellent	266	31.7

Table (1) illustrates that (42.4. %) of nursing students are in the age group ranged from (20-21) years old with mean± SD (21±0.123), and there are (58.70%) of them females while (41.30%) are males. Moreover, it was noted from **table (1)** that there are (74.4%) of them live in rural areas; concerning marital status, there are (98.3%) of them single. And about students' academic year, (33.9%) of them are in the second year, and (14.3%) of them are in the fourth year.

As regards their last certification, it was noted that (86.1%) of them have secondary school certification. Concerning their last academic achievement, there are (51.5%) of them have a very good degree.

Table (2): Percentage distribution of nursing students regarding social networking sites usage dimensions (no.= 840)

Social networking sites' usage dimensions	Low		Moderate		High	
	No.	%	No.	%	No.	%
1. Social Networking Site Usage intensity	446	53.1	379	45.1	15	1.8
2. Social interaction ties	17	2	463	55.1	360	42.9
3. Trust	51	6.1	536	63.8	253	30.1
4. Norm of reciprocity	26	3.1	598	71.2	216	25.7
5. Identification	46	5.5	396	47.1	398	47.4
6. Shared language	42	5	653	77.7	145	17.3
Social Networking Benefits						
Peers benefits	47	5.6	622	74	171	20.4
Personal and educational	23	2.7	484	57.6	333	39.7
7. Social networking sites benefits	20	2.4	499	59.4	321	38.2
8. Knowledge sharing	54	6.4	434	51.7	352	41.9

Table (2) shows that there are (53.1%) of nursing students have a low level of "social networking sites intensity" dimension. While, there are (77.7%, 71.2%, 63.8%, 59.4%, 55.1%, and 51.7%, respectively) of them have a moderate level for the following dimensions "shared language, norm of reciprocity, trust, social networking sites benefits, social interaction ties, and knowledge sharing". For the identification dimension, it was observed that (47.4% and 47.1% respectively) of them have a high and a moderate level.

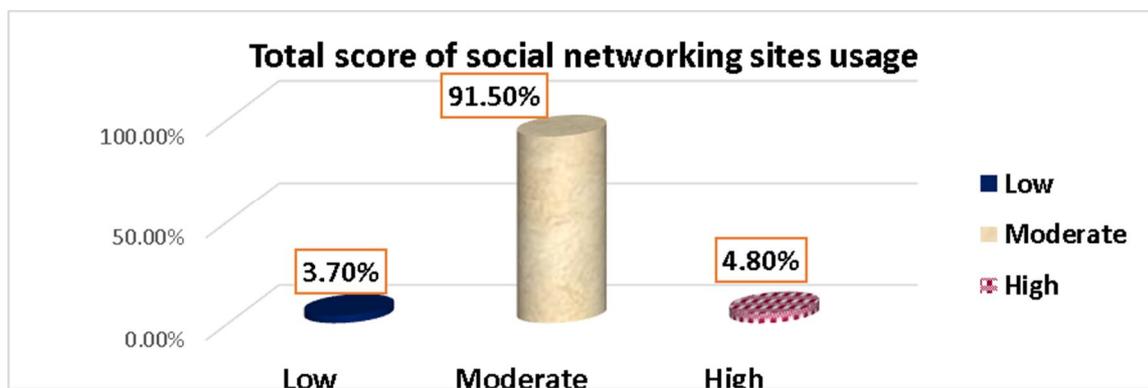


Figure (1) the percentage distribution of nursing students' level regarding total social networking sites usage

Figure (1) shows that there are (91.50%) of nursing students have a moderate level regarding total score of social networking sites usage; while there are (4.80%) of them have a high level and (3.70%) have a low level regarding their total score of social networking sites usage.

Table (3): Percentage distribution of faculty nursing students regarding student academic engagement dimensions (no.= 840)

Academic engagement dimensions	Low		Moderate		High	
	No.	%	No.	%	No.	%
Part I: Student engagement						
1. Students' practices of academic work	82	9.8	529	63	229	27.2
2. Mental activities of academic work	44	5.2	396	47.1	400	47.7
3. Non-academic engagement activities	290	34.5	380	45.2	170	20.3
4. Benefits of Student engagement activities	26	3.1	435	51.8	379	45.1
5. students' Role within academic Engagement	51	6.1	447	53.2	342	40.7
6. Barriers to Student Engagement	17	2	568	67.6	255	30.4
Total Part (I)	14	1.7	613	73	213	25.3
Part II: Impact of using social networks on students' academic engagement						
1. Positive impact	32	3.8	452	53.8	356	42.4
2. Negative impact	46	5.5	639	76.1	155	18.4
Total Part (II)	22	2.7	622	74	196	23.3

Table (3) shows for part (I) that nursing students have a moderate level of academic engagement regarding all dimensions (67.6%, 63%, 53.2%, 51.8%, and 45.2%, respectively); except for the dimension “mental activities of academic work,” it was noted that there are (47.7%) of them have a high level and (47.1%) have a moderate level. Concerning the total of part (I), there are (73%) of nursing students have a moderate level, and (25.3%) have a high level.

Regarding part (II), it was noted that (53.8%) of nursing students have a moderate level regarding the "Positive impact of using social networks on students' academic engagement" and (42.4%) have a high level. While (76.1%) of them have a moderate level regarding the negative impact of using social networks on students' academic engagement". For the total of Part (II) there are (74%) of nursing students have a moderate level and (23.3%) have a high level.

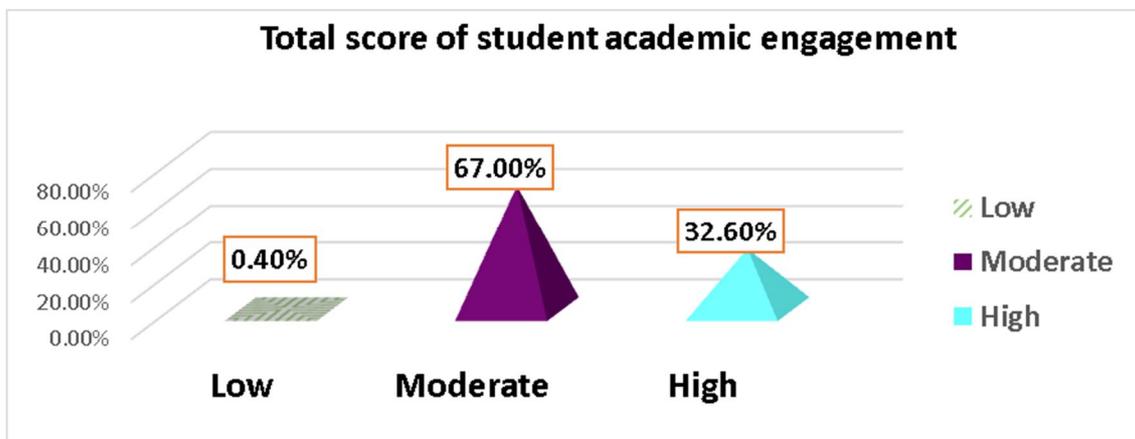


Figure (2): Percentage distribution of nursing students regarding total student academic engagement score (no.=840)

Figure (2) shows that there are (67%) of nursing students have a moderate level, (32.60%) have a high level, and (0.40. %) have a low level of total student academic engagement score.

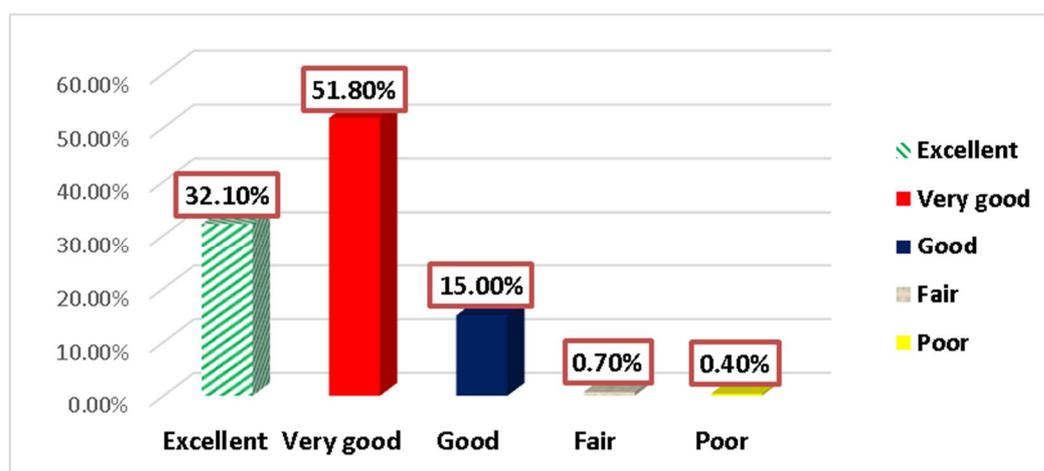


Figure (3) Percentage distribution of the nursing student's academic achievement for the year (2021- 2022) (no.=840).

Figure (3) shows that (51.80%) of nursing students have a very good degree, (32.10%) have an excellent degree, (15.0%) have a good degree, (0.70%) have a fair degree, and (0.40%) have a poor degree.

Table (4): Variance analysis between the mean score of nursing student's academic years regarding social networking sites usage and Academic Engagement (no.=840)

Variables	First year (no.=255)	Second year (no.=285)	Third year (no.=180)	Fourth-year (no.=120)	ANOVA – test	
	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	F	p-value
The total score SNSs usage	280.20±33.71	265.27±30.16	277.80±35.47	276.46±29.44	11.079	0.001**
The total score of Academic Engagement	231.81±29.47	219.45±27.34	217.69±32.57	218.12±22.31	12.754	0.001**

Table (4) shows regarding the total score of social networking sites usage that there are statistically significant variances between four academic years (1st, 2nd, 3rd, 4th) in favor of first-year students (280.20±33.71) with (f=11.079, p= .001**). Also regarding the total score of students' academic engagement, there are highly statistically significant variances between four academic years (1st, 2nd, 3rd, 4th) in favor of first-year students (231.81±29.47) with (f=12.754, p= .001**).

Table (5): Correlation between the study variables among nursing students (no.= 840)

Variables		Variables		
		Social networking sites usage	Student academic engagement	Academic achievement
Social networking sites usage	R P- value	1	0.216** (0.001)	0.038 (0.268NS)
Student academic engagement	R P- value	0.216** (0.001)	1	0.040 (0.251NS)
Academic achievement	R P- value	0.038 (0.268NS)	0.040 (0.251NS)	1

Table (5) shows that there is a positive highly statistically significant correlation between social networking sites usage and students' academic engagement with a p-value (0.001) **. While there is no statistically significant correlation between social networking sites usage and students' academic achievement with a p-value (0.268). Moreover, there is no statistically significant correlation between students' academic engagement and their academic achievement with a p-value (0.251).

Discussion

During the COVID-19 pandemic, there has been an increase in the use of digital platforms for educational purposes. Moreover, the increased use of smartphones and social media has affected the academic performance of students. Social networking sites have become important tools for facilitating the teaching-learning process, it includes applications and websites that allow students and teachers to exchange content, ideas, beliefs, concepts, and opinions, through social, individual, and educational involvement (Iqbal et al., 2021).

Regarding the personal data, the current study revealed that the highest percentage of nursing students' age group ranged between (20-21) years old; and for gender more than half of them were females. Moreover, it was noted that there were three-quarters of nursing students lived in rural areas; and the majority of them were single. In the students' academic year, one-third of them were in the second year and the lowest percentages were in the fourth year.

As regards the last certification, it was noted that the majority of them had secondary school certifications. Concerning their last academic achievement, it was found that more than half of them had a "very good degree", while about one-third of them had an "excellent degree".

Regarding total social networking sites usage and its dimensions: this study showed that the highest percentage as more than half of nursing students had a low level and less than half of them had a moderate level of "social networking sites intensity dimension". This may be due to the student's fear to be engaged more than required in using SNSs which may affect their academic achievement, they may have anxiety or stress about the higher use of SNSs. Moreover, lack of students' access to internet resources especially those who live in rural areas which let them be fewer users of SNSs.

This is supported by Silmi, et al., (2020) who, in their study they showed that the students' intensity of SNSs use can be low due to students' fear to have anxiety. While, this result is not in line with the results of Jwaifell, et al. (2013) who, revealed in their study that the majority of students at Jordanian Universities have a high level of SNSs intensity.

As regards the second dimension, there were more than half of the nursing students had a moderate level and two-fifths had a high level of "social interaction ties dimension". This result indicated that nursing students agree with the SNSs' importance in their connection and relationships with other students, peers, friends, and staff member which mean they see the SNSs' benefits in their interaction ties.

This justification is consistent with Ali et al. (2017) who, mentioned that social influence is a leading factor that convinces students for the academically use social media and has interaction ties with it.

As for the "trust dimension," there were nearly two-thirds of students had a moderate level, this could be due to the higher confidence level among students toward faculty educators and administrators which cannot happen without educators' keenness in students' well-being and become more interested in their educational needs and integration with others. The more interaction and participation of students in activities regarding their educational process, the more enhancement of their trust level with staff members and peer colleagues. This finding is supported by Hossain and Adnan (2021) who, indicated that most respondents felt moderately well about using SNSs as a result of their trust factor.

Regarding "Norm of reciprocity" dimension, the study finding showed that there were near to three-quarters of nursing students had a moderate level. From the researcher's point of view, the growth of students' interaction and communication with staff members and other peers via social media and applications or through class activities can improve their expectations about the level of trust, benefits, knowledge exchange, and norm of reciprocity.

This is in the same line with Wiafe et al. (2020) who, reported that the use of social networks increases the students' interaction and relationships with others and they reciprocated knowledge, data, information, and communication.

Also, the current study showed that nearly half of the nursing students had a high and moderate level of "Identification dimension"; this could be due to students' abilities to realize their college values, discipline, and rules that form their identity. Also, social networking integration helps them to act as a nurse and to feel a sense of belonging to their profession.

This result agreed with Yao and Sheng (2022), who, focused on group norms and social identity and identified their impact of them on organizing and managing virtual communities and how social networks influence students' identity.

Regarding the "Shared language dimension", the study finding revealed that there were more than three-quarters of nursing students had a moderate level, this could be from the staff members' ability to use favorable methods of communication and apply new teaching strategies during their interaction with students. This is in the same line with Phillips and Young (2019) who, stated that nursing educators use new educational strategies to actively engage nursing students in learning activities both in academic and clinical settings which increases their shared language.

Regarding the **"social networking sites benefits dimension"** there were more than half of nursing students had a moderate level, this could be due to the increase in students' demands and activities that require easy and fast access to their needs. This can be achieved by using SNSs and social applications that become essential parts of students' academic and social life.

This result is similar to **Raza et al. (2020) and Hoi and hang (2021)** who, mentioned that SNSs provide many benefits to students and a high percentage of students agree with its benefits as the use of SNSs facilitates collaborative learning and motivates students into a more constructive learning engagement. While, this finding is in contrast with **Silmi et al, (2020)** who, noted that if someone spends more time using social media can cause teens to be exposed to negative emotions without realizing it.

The current study showed more than half of nursing students had a moderate level and more than two-fifths have a high level of **"Knowledge sharing dimension"**. This could be an outcome that most students are willing to use SNSs for sending and receiving knowledge related to the educational process, and this can help students to become more aware of how to gain information and share it with educators and peers. This finding is supported by **Koranteng et al. (2019)** who, stated that SNSs make it possible to distribute content quickly within groups of individuals irrespective of their location.

Regarding the **"total social networking sites usage"** the current study showed that the majority of nursing students had a moderate level of SNSs usage. This could be because the application of digital transformation and technologies in education, especially during the Covid-19 pandemic period led students to engage well in using electronic platforms and social applications to be more connected and interacted with others.

This finding is in the same line with **Koranteng et al. (2020)** who, noted that students were the most frequent users of SNSs. Also, **Annalakshmi and Jayanthi (2020)**, reported that the availability of SNSs had a positive impact on the majority (84%) of the students. While this result is argued by **Hamat and Hassan (2019)** who, reported that only a small percentage of undergraduate students use SNSs.

Regarding total students' academic engagement and its dimensions; this study showed that less than two third of nursing students have a moderate level of **"students' practices of academic work dimension"**. This may be a result of students' perception of their tasks and academic-related activities that differentiate between levels of engagement from one student to another. In addition, this could be related to faculty staff member good communication with students which increase students' level of satisfaction and integration into educational activities and courses.

This is supported by **Bartlett, et al. (2021)** who, mentioned in their study that students' practices of academic work and activities increase due to academic or educators' jobs that come from good communication provided by them to students.

The current study showed that less than half of nursing students had a high or a moderate level regarding **"mental activities of academic work dimension"**. This could be due to innovative and motivated teaching and learning techniques and strategies that educators use to encourage students to use their cognitive and mental abilities. Also, there are some of the students marked by their special abilities to

analyze ideas, form new decisions, apply facts, and evaluate events and situations.

This finding is incorporated by **Crabtree (2020)** who, displayed that students have good mental academic activities as there were two-thirds of students participated in logical reasoning and analysis which challenged them academically.

Regarding the **"Non-academic engagement activities dimension"** there were less than half of nursing students had a moderate level and more than a third had a low level. This could be due to students' burnout and heavy tasks related to their clinical academic process which made most of their time devoted to accomplishing day-related educational activities.

This finding is in line with **Crabtree (2020)** who, reported that non-academic engagement was undertaken less frequently than academic engagement. While this result does not align with **Rokach and Boulazreg (2020)** who, suggested that students place highly non-academic and extra-curricular activities that take place outside of a classroom setting.

Regarding the **"Benefits of student engagement activities dimension,"** there were more than half of nursing students had a moderate level and less than half had a high level. This could be due to students' opportunities to gain new skills, knowledge, and practical performances through their engagement in faculty academic-related activities. This finding is supported by **Dumford and Miller (2018)** and **Astatke et al. (2021)** who, reported that engagement can result in many positive, motivational outcomes including focus, involvement, enjoyment, satisfaction, goal achievement, and mastery.

Also, the study showed that more than half of nursing students had a moderate level and two-fifths had a high level regarding the **"students' role within academic engagement dimension"**. This could be due to students' awareness, clarity, and expectation about the value of the nursing profession and faculty academic work which help students to recognize their roles and demands during the educational process.

This finding is in the same line with **Gravett et al. (2020)** who, highlighted the importance of students' role to enhance their self-worth and realize their full potential by studying within higher education.

Regarding the **"Barriers to student engagement dimension,"** there were more than two-thirds of nursing students had a moderate level, while one-third had a high level. Also, the increase in academic work and multitasking activities for students, extra burden commitments, lack of incentives, and learning difficulties can be a barrier to students' engagement. This justification is supported by **Shah and Cheng (2019)** who, suggested that other commitments (work and family) can act as a barrier to students' engagement in their academic activities.

Regarding the **"Positive impact of using social networks on students' academic engagement," dimension** there were more than half of nursing students had a moderate level and about two-fifths had a high level. This could be due to the increase in students' benefits from communicating with faculty members easily and fast at any time; moreover, the speed of communication with peers via educational groups facilitates sharing of knowledge between students.

This finding agreed with **Koranteng et al. (2020)** who, indicated that SNSs have the potential to increase student engagement, which includes undergraduate students in creative and innovative activities. While this finding is argued

by **Bdair (2021)**, who stated that the use of the internet in educational environments, led to students engaging in other distracting activities via the SNSs during class.

Regarding the **"negative impact of using social networks on students students' academic engagement," dimension**, there were less than three-quarters of nursing students had a moderate level. This may be due to the inability of students to control their use of SNSs and mobile applications in and out of academic classes; moreover, the student's strong correlation with these applications during Covid- 19 pandemic.

This result comes in line with **Mngwengwe and Dlamini (2020)** who, reported that heavy use of SNSs can inhibit students to become free for their academic tasks and functioning activities. Moreover, **Tafesse (2022)** stated that social media have both positive and negative impacts on students' academic performance.

The current study showed regarding the total score of students' academic engagement that, there were more than two-thirds of nursing students had a moderate level of academic engagement. This could be due to students' perception of academic engagement benefits and importance which leads to an increase in their motivation and integration into academic activities and achieving a higher outcome.

This finding is congruent with **Yang et al. (2018)** who, stated that three-quarters of students showed a moderate level of academic engagement. While argued by **Subramainan and Mahmoud (2020)**, revealed that Asian students are suffering from low-level class engagement.

Regarding academic achievement; the current study showed that the highest percentage more than half of nursing students had a very good degree of academic achievement; one-third had an excellent degree; and less than one-fifth had a good degree. These results could be due to increase students' commitment and integration with academic-related activities, this occurs because of positive relations between students and their faculty staff members which facilitate their learning process and improve outcomes.

This result is congruent with **Abdallah et al. (2020)** who, stated that the highest percentage of nursing students' academic achievement (41.7%) had a very good degree of academic achievement, and one-third (33.1%) had a good degree; (13.1%) had an excellent degree; while only (10.8) had a fair degree.

The current study showed that there were statistically significant variances between four academic years **regarding the total score of social networking sites usage and students' academic engagement** in favor of first-year students. This may due to the application of using tablet devices to higher school students, before joining the nursing faculty, which impulse students of the first years to interact with modern electronic devices, platforms, websites, and applications more than others.

This finding is supported by **Ang et al. (2019)** who, reported that "94% of first-year college students use social networking websites more. Also, showed that the first-year students relatively had a high level of engagement and they marked relatively high scores on intellectual engagement and class engagement.

Regarding the correlation between social networking sites usage and students' academic engagement, the present study highlighted that there was a highly statistically significant correlation between social networking sites usage and students' academic engagement.

This may be due to the students' uses of SNSs that emphasize collaboration and group engagement that enhance individual learning, thereby allowing students to become active partners and socially engaged in the process of exchanging information, which increases their overall learning and academic performance.

This finding is supported by **Slaughter (2021)** who, stated that the use of SNSs in learning environments increases student engagement and builds communication skills among students and faculty. Also, **Zhou et al., (2022)** noted that students' use of social networking activities for academic purposes is associated with an increase in students' scores level.

While this finding is contraindicated with **Wu et al. (2018) and Savci (2021)** who revealed that the increase in the duration of internet use negatively affects academic engagement and success.

The present study also highlighted that there is **no statistically significant correlation between social networking sites and students' academic achievement**. This may be due to some of the nursing students being away from the presence of common social media and limiting their uses of academic SNSs to necessary only.

This result is in the same line with **Rostaminezhad et al. (2019)** who, revealed that there is no linear relationship between students' weekly social media use and their grade point average or achievement level.

This finding is incongruent with **Khan et al. (2021)** and **Savci (2021)** who, stated that there was a negative relation between the use of SNSs and students' academic achievement.

The present study also highlighted that there is **no statistically significant correlation between students' academic engagement and their academic achievement**. A possible explanation for this result from the researcher's views is that there are many numbers of students especially females and committed students with extra burdens not engaged in all academic activities but can work hard and do their best effort to have a better outcome at the end of the academic year.

This is in line with, **Xie et al. (2020)**, who, found no significant correlation between student engagement and academic achievement. And **Kew and Tasir (2021)**, found that the correlation between cognitive engagement and academic achievement was weak.

While this is not in line with **Barnett et al. (2020)** who, concluded that academic achievement was positively correlated with behavioral and emotional engagement. Also, **Palmgren et al. (2021)** found a positive correlation between cognitive engagement and academic achievement.

Conclusion

It can be concluded from the current study that the majority of nursing students had a moderate level of social networking sites usage, two-thirds of them had a moderate level of students' academic engagement, and more than half of them had a very good degree regarding students' academic achievement. Moreover; there was a highly statistically significant correlation between social networking sites usage and students' academic engagement, while there was no statistically significant correlation between students' academic achievement with social networking sites usage and students' academic engagement.

Recommendations

- Assist students in making significant utilization of social networking sites by joining them in their academic activities. This should be possible by acquainting the students with social networking sites that are entirely for scholarly work and research.
- Encourage students to use social networking sites appropriately to help them improve their academic engagement and achievement.
- Improving students' engagement in classroom activities by providing a flexible learning environment, and recognizing variables that can affect academic engagement and achievement, such as aptitude, motivation, stress, and poor educational objectives.

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