The Relationship between Social Media Use and Depression among Nursing Students at Governmental University

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ABSTRACT

Context: Students in the modern world are busy using social media for different purposes and activities. Misuse of social media applications can negatively impact student's psychological health.
Aim: To determine the relationship between social media use and depression among nursing students in governmental universities.
Methods: Descriptive correlational study design was conducted among 267 nursing students in nursing college at a governmental university in Jeddah, Saudi Arabia. Data were collected using the Social Media Use Integration Scale and the Beck Depression Inventory scale to assess the relationship between depression and social media use among nursing students.
Results: Social media use among nursing students was high (50.90%) while 31.1% of them was overuse, while depression level was mild among 26% of study participants and there was a statistically significant relation between social media application used, number of hours spent on social media per day, and level of depression among nursing students at the governmental university.
Conclusions: The collected data analysis revealed a statistically significant positive moderate correlation between used social media and depression among nursing students at the university. Hence, it is essential to establish an educational program through routine checkups for depression levels among nursing students besides arranging for weekly group discussion and consultation to express feelings and thoughts, creating a supportive academic environment.

Keywords: Social media, depression, nursing students, governmental university

1. Introduction

Social media is considered an electronic means of communication that users can use to send and receive letters, write their opinions, call each other, send and accept friend requests, share information and news, and even contact through video calling *(Pierce, 2009)*. Due to multi social media services, people no longer need to rely only on meeting face-to-face to know how another person is doing *(Ahmad et al., 2018)*.

Social media is now becoming the speedy and effortless way of interaction and provides an opportunity for users from different regions of the world, cultures, and languages to interact with one another *(Sawyer & Chen, 2012)*. Social media includes many different types, but Snapchat, WhatsApp, Twitter, Facebook, and Instagram are considered the most popular social media applications among the Saudi population *(Ministry of Communication and Information Statistics, 2017)*.

In Saudi Arabia, social media is beginning to play an important role in people's lives, and its usage has expanded rapidly, where the numbers of social media users nearly doubled from 8.5 million to 18.3 million in recent years. According to the latest statistical report from the Ministry of Communication and Information Technology, it has been indicated that around 58% of the Saudi population is using social media applications. Also, it is estimated that the average time a person spends on social media applications is around 260 minutes per day *(Ministry of Communication and Information Statistics, 2017)*.

The statistical report also shows that the Saudi population's most popular applications are; WhatsApp, Snapchat, Instagram, Facebook, and Twitter, respectively. Saudi Arabia ranked first among Arab countries and second globally on Snapchat users, which reached 13.650 million, and WhatsApp users reached 27 million users. Facebook, Twitter, and Instagram also constitute the largest number of social media users, whereas Facebook users are approximately 11 million, while Twitter users amounted to 9 million and Instagram users reaching 13 million *(Ministry of Communication and Information Statistics, 2017)*.

In the educational field, using social media technologies for learning is very desirable to Saudi University students, where a majority of them have reported that it is difficult to stop using social media technologies to support their learning *(Kutbi, 2015)*. WhatsApp, Twitter, Wikipedia, and YouTube were among the most frequently used applications in Saudi students at a large governmental University to search for information and knowledge *(Aifan, 2015)*.

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Cultural restrictions on females in Saudi Arabia can create a big dilemma on communication, meeting friends, and socializing *(Altuwayjiri, 2019).* In the last decade, social media technology has become very popular among young women in Saudi Arabia as women have started to utilize these applications for different purposes, including socialization, information seeking, marketing of their businesses, and even use those application to claim their rights in work, driving a car and demanding more freedom for women *(Altuwayjiri, 2019).*

Social media was invented to make people's lives less complicated. However, overuse of social media applications can also negatively impact people's psychological wellbeing *(Chen & Yan, 2016).* Recurrent exposure to unrealistic online photos can be considered an example of how social media can negatively affect a person's psychological wellbeing *(Tsitsika et al., 2014).* Research has shown that recurrent exposure to highly unrealistic pictures with excessive editing and airbrushing that hide natural imperfection can, in turn, give people the impression that others are living happier, more connected, and had intimate lives. Thus, it can lead people to feel more socially isolated and experience low self-esteem and an overall increase in life dissatisfaction (*Primack et al., 2017).*

Depression is considered one of the most prevalent psychiatric illnesses as it affects about 121 million people worldwide due to the rapid life development and technological revolution, which contributed to increased social isolation and poor self-esteem *(World Health Organization, 2009).* Depression is classified according to severity level as being either mild, moderate, or severe. Each depression level leads to depressed mood, loss of interest, decreased energy, feelings of guilt, low self-value, disturbed sleep and appetite, poor concentration, extreme social isolation, and severe levels that can lead to suicide *(WHO, 2009).*

Depressive symptoms are signs or indicators lasting more than two weeks that are severe enough to cause observable problems in day-to-day activities *(American Psychiatric Association, 2013).* Depression is highly prevalent among undergraduate nursing students because they face tremendous stressors during their student life, leading to physical and mental health problems and poor academic performance *(Rathnayake & Ekanayaka, 2016).*

Nursing students experience intense training and education during their undergraduate years and later play an important role in caring for patients *(Chernomas & Shapiro, 2013).* Due to the intense nature of their training and educational program, nursing students are required to use the internet daily and social media applications that offer health information to search for new knowledge, which could lead them to spend more time on the internet and may cause them to experience social isolation, sleep disturbance, poor concentration, poor self-esteem putting them at high risk to developing depression *(Song & Lindquist, 2015).*

2. Significance of the study

It is essential to identify the relationship between social media use and depression among nursing students because the outbreak of coronavirus disease (COVID19) make the nursing students depend on social media in learning, which lead them to spend more time using those applications, which in turn expose them to a lot of social isolation *(Zhou et al., 2020).* Moreover, due to negative life event that associated with coronavirus disease, heavy academic pressure, and social distance, resulting in high risk of depressive symptoms, such as a sense of fear, uncertainty, boredom, anger, and loneliness associated with quarantine and challenges due to conflict with parents, changes in learning methods, study pressure, and insufficient outdoor activities *(Zhou et al., 2020).*

Furthermore, to prevent possible future complications by detecting trends in social media overuse and early signs of depression, it might also help the Ministry of Health cut down on the cost and expenses of treating depression. Besides, this study is likely necessary for academic researchers and can be made significant contributions by clarifying social media's role in developing depression; however, previous studies have shown a mix of positive and negative mental health benefits between social media use and depressive symptoms. Additionally, there has been limited research on social media use and depressive symptoms in nursing college students in Saudi Arabia.

3. Aim of the study

The study aimed to determine the relationship between social media use and depression among nursing students in a governmental university.

3.1. Research question

What is the relationship between social media use and depression among nursing students at a governmental University?

4. Subjects and Methods

4.1. Research design

A descriptive-correlational design was used in this study. The purpose of descriptive correlational research is to describe the link between variables instead of inferring cause-and-effect relationships. Correlation research is beneficial in describing how one phenomenon is related to another and indicates how one variable may predict another *(Lappe, 2000).*

4.2. Research Setting

The study was carried out in a large governmental nursing college in Jeddah, Saudi Arabia, affiliated with the Ministry of Education. It was established in 1977 located in the south region of Jeddah. It was the first nursing college providing a bachelor's degree in nursing science in Saudi Arabia.

4.3. Subjects

The study sample involved 400 Baccalaureate/undergraduate level nursing students. Following the inclusion criteria included nursing students from all academic years (Second, third and fourth years), Arabic or English speakers, and students willing to participate. A convenience sample of 267 nursing students voluntarily participated in the study, indicating a response rate of 65%. The sample size was calculated by using the Rao soft power analysis online program. Accordingly, the estimated minimum sample size was 200 nursing students with a 5% margin of error and confidence level of 95%.

4.4. Tools of data collection

Data were collected from participants using sociodemographic characteristics and participants' information about social media use questionnaire, Social Media Use Integration Scale (SMUIS), and Beck Depression Inventory (BDI).

4.4.1. Structured Self-Administered Questionnaire

The researcher developed the structured self-administered questionnaire after reviewing related literature to assess the sociodemographic and participant's information about social media use. The socio-demographics and participant's characteristic questions included two types of questions.

Part one contained five questions regarding age, academic year, marital status, residence, and place of accommodation. Part two contained nine questions about social media use, such as most common social media application used, number of personal accounts on different social media platforms, number of hours spent on social media per day, time of social media usage, the purpose of using social media, usual location while using social media, availability of privacy while using social media, the response rate to social media notification, the effect of social media uses on the relationship with family members.

4.4.2 Social Media Use Integration Scale (SMUIS)

The tool was developed in 2013 by Jenkins-Guarnier and colleagues *(Maree, 2017).* It is a self-administered scale used to determine social media use among students and include items such as "I feel disconnected from friends when I have not logged into social media, I would like if everyone used social media to communicate, I would be disappointed if I could not use social media at all." For the current study instrument, Cronbach's alpha was 0.87, which indicates the tool's high reliability.

The SMUIS contains a total of 10 items, with item 8 being reversely scored. The tool uses a five-point Likert scale: 1 (strongly agree), 2 (agree), 3 (neither agree nor agree), 4 (disagree), 5 (strongly disagree). The total score was calculated and ranged between 10-50 categorized. A score of 10 is considered minimally used, 11-20 considered mild use, 21-30 counted as moderate use, 31-40 is high use, and 41-50 is considered overuse.

4.4.3 Beck Depression Inventory (BDI-II)

It is a self-reported questionnaire evaluating the severity of depression in normal and psychiatric populations. Beck and colleagues developed the questionnaire in 1961 *(Phan et al., 2016).* It underwent revisions in 1978 to become the BDI-IA and in 1996 to become the BDI-II, both copyrighted. For the current study instrument, Cronbach's alpha was 0.95, which indicates the tool's high reliability. The BDI-II contains 21 items on a 4-point Likert scale from 0 (symptom absent), 1 (mild symptoms), 2 (moderate symptoms), to 3 (severe symptoms). All items of the scale are positively scored and therefore do not require any reverse scoring. The total score was 84 that was classified as 0-10 is normal ups and downs, 11-16 considered a mild mood disturbance, 17-20 is a borderline clinical depression, 21-30 seen as moderate depression, 31-40 reflect severe depression, and over 40 was considered extreme depression.

4.5. Procedures

Before conducting the study, data collection tools were translated from English to Arabic and back-translated into English. Both English and Arabic tools were tested for their content validity and relevance by a jury consisting of five experts in the nursing field, and accordingly, there were no necessary modifications for the tools.

A pilot study was carried out to test the study's clarity, applicability, and research process feasibility. The pilot study was conducted on 10% of participants (n=20) from the selected area. These participants were selected randomly and later included in the study because no modifications were added to the study's tools.

Ethical approval was obtained from the Ethical Committee of the Nursing College in Jeddah, Saudi Arabia. Also, voluntary participation was maintained by explaining to the participant the right to enroll and withdraw from the study. The human right to anonymity and confidentiality were protected as the student nurses were not required to reveal their names. The researcher declared to the participants that there are no potential benefits or risks from participation in the study. The collected data's privacy was maintained using a password-protected device for data storage in google forms documents on the researcher's computer.

Data collection took place over three months, from March 10 to June 12, 2020, and the questionnaires were distributed to nursing students electronically using Google forms. The link was shared through a specific WhatsApp group for the students.

4.6. Limitations of the study

The researcher planned to collect the data through paper forms and distribute the questionnaire hand to hand to participants. However, due to the health crisis (COVID-19) that struck the world and led to general lockdown, which included universities and educational systems, certain modifications added to the plan of data collection, and the data was collected online, which lead to an increase in the

length of data collection to 3 months. Furthermore, the outbreak of (COVID19) that faces the study initially creates the negative emotional climate associated with quarantine and may contribute to developing depression among nursing students.

4.6. Data analysis

Data entry and statistical analysis were conducted using the Statistical Package for the Social Sciences (SPSS) version 23. Statistical significance was set at $p \leq 0.05$. Descriptive and inferential statistical techniques were utilized to analyze the collected data. These techniques included (frequencies, percentages, mean value, and standard deviations). Besides, the Chi-Square test was applied to test the relationship between study participants' information about social media use and level of depression. A Pearson correlation was also conducted to test the strength and direction of the relationship between the two variables.

5. Results

Table 1 illustrates the sociodemographic data and sample characteristics of nursing students. More than half of the study participants (55.8%) were in the age group 20-21 years old, and 37.5% were in the third academic year. Most of the participants (90.6%) were singles. Concerning study participants' residence, 62.2% lived inside Jeddah city, and 57.3% shared accommodation with family or friends.

Table 2 refers to the frequency and percentage distribution of study participants according to their social media use information. Regarding the most common social media applications used, there was firstly Snapchat, then Instagram, followed by WhatsApp, Twitter, and lastly Facebook (74.2%, 66.7%, 59.9%, 56.9%, and 11.2%, respectively). About the number of personal accounts, 55.1% of study participants had more than three personal accounts, and 60.7% of them spent more than 5 hours on social media per day, and the majority of them (73.8%) reported that the first thing they do in the morning is to check the social media application/s.

With regards to the purpose of social media use, less than one third (31.1%) of participants reported that they used social media for recreation and humor, while 25.1% of them to get information and knowledge, and less than one quarter (19.9%) used social media for escaping from problems, and only 14.2% used it to socialize. Most study participants (91%) agreed that they use social media at home regarding usual location, and 81.6% of them have privacy while using social media. Almost 65.2 % of them reported that they respond to social media notifications immediately.

Additionally, table 2 refers to the effect of using social media on the relationship with family members, where more than one third (39.7%) of study participants reported that using social media increase the isolation and distance between students and their family member, and 38.6% of them reported that using social media can facilitate communication and understanding between students and their family member. In contrast, only 15.7% said that social media could increase the tension and problems between students and their family members.

Figure 1 presents the percentage distribution of study participants according to the level of social media use. It indicates that more than half of study participants (50.90%) have a high use of social media, while less than one-third (31.10%) overuse social media, and 16.50% moderately use social media, and only 1.50% of them mildly use social media.

Figure 2 presents the percentage distribution of study participants according to their level of depression, where 27% of the study participants had ups and downs, which were considered normal, and 26% of them had mild mood disturbances, while 21% have moderate depression. Furthermore, 18% of them had borderline clinical depression, while 8 % had severe depression.

Table 3 illustrates the relationship between study participants' information about social media use and the level of depression. A Chi-square test was conducted to test the relationship between study participant's information about social media use and level of depression. As shown in table 3, there was a highly statistically significant relationship between depression level and the most common social media applications used, the number of hours spent on social media applications per day, check the social media application/s in the morning, the purpose of using social media, response to social media notification, and the effect of using social media on the relationship with a family member.

On the other hand, table 3 shows no statistically significant relationship between depression levels and the number of personal accounts on different social media applications, usual location while using social media, and privacy while using social media.

Table 4 demonstrates a statistically significant positive moderate relationship between social media use and depression among nursing students at a governmental university ($r=0.336$, $p<0.05$).

Figure 3 illustrates the Q_Q plots for the relationship between social media use and depression. The figure shows a positive relationship between social media and depression.

Table (1): Frequency and percentage distribution of study participants according to their sociodemographic characteristics (n=267).

Sociodemographic characteristic	No.	%
Age		
>20	49	18.4
20-21	149	55.8
22-23	63	23.6
24-25	6	2.2
Academic Year		
Second-year	87	32.6
Third-year	100	37.5
Fourth-year	80	30
Marital status		
Single	242	90.6
Married	22	8.2
Divorce	3	1.1
Residence		
Outside Jeddah city	101	37.8
Inside Jeddah city	166	62.2
Place of accommodation		
University dorm	79	29.6
Private accommodation (Alone)	35	13.1
Shared accommodation (with family or friends)	153	57.3

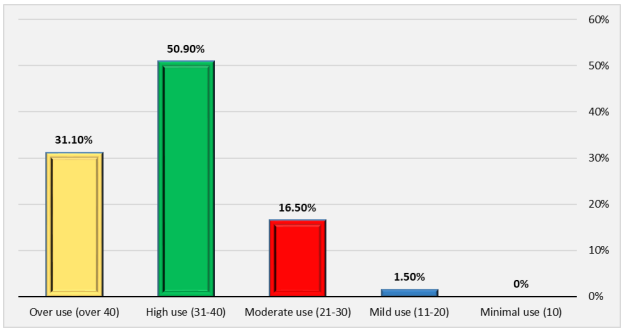

Figure (1): percentage distribution of study participants' level of social media use (n=267).

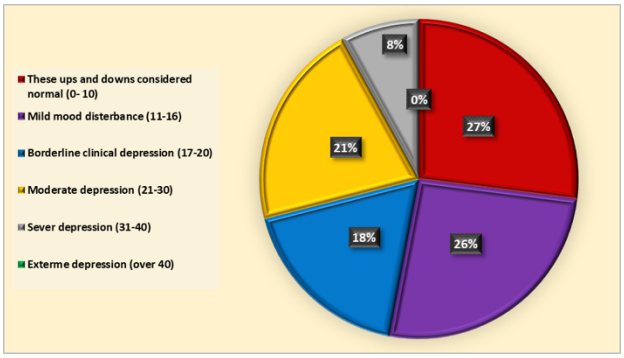

Figure 2: Percentage distribution of study participants' depression level (n=267).

Table (2): Frequency and percentage distribution of study participants according to their information about social media use (n=267).

Social media use information	No.	%
Most Common social media application used*		
Snapchat	198	74.2
Instagram	178	66.7
WhatsApp	160	59.9
Twitter	152	56.9
Facebook	30	11.2
Other (Telegram, Tiktok, Imo,YouTube, WeChat, Jodel)	16	6
All	1	0.4
Number of a personal account on different social media application		
One account	29	10.9
Two accounts	42	15.7
Three accounts	49	18.4
More than three accounts	147	55.1
Number of hours spent on social media per day		
Less than 1 hour	6	2.2
1 to 2 hours	23	8.6
2 to 3 hours	30	11.2
4 to 5 hours	46	17.2
More than 5 hours	162	60.7
The first thing I do in the morning is to check the social media application/s		
No	70	26.2
Yes	197	73.8
Purpose of using social media		
To get information and knowledge	67	25.1
To make friendship with other	38	14.2
For recreation and humor	83	31.1
To escape from problems	53	19.9
Other (To search for problem-solving, for curiosity, attend, meeting and lectures)	26	9.7
Usual location while using social media		
With friend	7	2.6
At the university	15	5.6
At home	243	91
Other places (At hospital, car)	2	0.7
Privacy while using social media		
No	49	18.4
Yes	218	81.6
Response to social media notification		
Immediately	174	65.2
Later	93	34.8
Effect of using social media on a relationship with a family member		
Increase the isolation and distance between students and their family member	106	39.7
Increase the tension and problems between students and their family member	42	15.7
Facilitate communication and understanding between students and their family member	103	38.6
Other (decreased sense of loneliness, decrease satisfaction about my life, increase jealousy and envy, make me seek to imitate the lives of others)	16	6

**In most common social media applications used to question, there was more than a mutually exclusive response.*

Table (3): Relationship between study participants' information about the use of social media and levels of depression (n=267).

Social media use information	Level of depression	
	Test of significance x2	Significance p-value
The most common social media application used	13.59	0.04
Snapchat	14.94	0.02
Instagram	30.13	0.000
WhatsApp	13.62	0.04
Twitter	29.22	0.000
Facebook	13.59	0.04
Number of a personal account on different social media applications	25.62	0.11
Number of hours spent on social media per day	42.90	0.01
The first thing I do in the morning is to check the social media application/s	16.32	0.01
Purpose of using social media	54.53	0.000
Usual location while using social media	17.27	0.51
Privacy while using social media	9.39	0.15
Response to social media notification	18.08	0.006
Effect of using social media on a relationship with a family member	39.69	0.02

Table (4): Pearson correlation between social media use and depression among study participants (n=267).

Variable	Pearson correlation (*r*)	P-value
Social media use Depression	0.336	<0.05

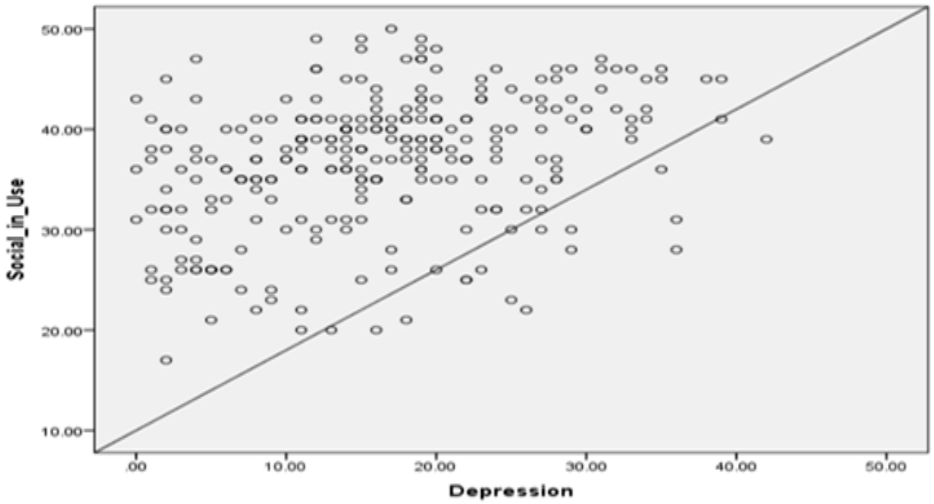

Figure 3: Q-Q plots for the relationship between social media use and depression.

6. Discussion

Social media users have a positive relationship with depression. This relationship is what the result of the current study shows. This finding may be related to the Coronavirus-19 (COVID19) crisis, which has created a negative emotional climate, restricted freedom, and increased social isolation, which are all contributing factors to increasing the possibility of depressed mood and increase social media use during the lockdown environment *(Van Rheenen et al., 2020).* Another reason for this result may be that studying nursing exposes students to more stress and pressure as they had to spend a long time studying and searching for new knowledge, which can increase social isolation and the tendency to develop depression *(Akhu-Zaheya et al., 2015).*

Furthermore, this result is similar to the findings of a study done in Pakistan by *Ahmad et al. (2018)* and another study was done in Germany by *Brailovskaia and Margraf (2018),* who found depression is more prevalent among medical students than other students on a different specialty. Additionally, this result is inconsistent with the finding of a single study done in Saudi Arabia by *Alsabaani et al. (2018),* who found a negative relationship between social media overuse and depression in medical students.

The current research study shows that the overall use of social media was high among nursing students, with only a few identified as mild users. This finding may be related to the fact that most nursing students who participated in the current study are young, ranging between 20-21 years, and this age group is considered to be amongst the higher users of social media applications than other age groups.

Furthermore, nursing is considered a stressful profession, and nursing students may use social media as a way of escaping from problems, as reported by near one-fifth and by more than a third of the students; "for recreation and humor." Another possible explanation for this result is that most nursing students at this university cannot stop using social media to support their learning, and the prevalence of the COVID19 crisis made nursing students dependent on such applications in e-learning. This result agrees with the local study done by *Aifan (2015),* which involved a sample of 510 students in the same university setting. The findings agree with those of another study done in Bengal, India by *Barman (2018)* and a study done in Saudi Arabia by *Alsabaani et al. (2018)* and another study done in Pakistan by *Ahmad et al. (2018)*, who found that medical students have a higher use for social media applications than other students in different specialties.

Regarding the most commonly used social media application, the present study shows that Snapchat, Instagram, WhatsApp, and Twitter are the most popularly used applications among nursing students, while Facebook was not popular. This result may be due in part to the fact that Snapchat, Instagram, WhatsApp, and Twitter applications have a large segment of users in Saudi Arabia and are considered popular applications among adolescents and younger age groups as reported by the Ministry of Communication and Information *(Ministry of Communication and Information Statistics, 2017).*

Another possible factor may be due to the unique cultural values and beliefs in Saudi Arabia that make nursing students respectful of those values and accordingly do not share their social life in public as is the case with Facebook. This result contradicts a study carried out in India by *Barman et al. (2018)* and another study in Germany done by *Brailovskaia and Margraf (2018)* that found that Facebook emerges to be the most popular social media applications among study participants.

Concerning the most common social media application used, there was a statistically significant relationship between social media applications and depression. This result might be because Snapchat, Instagram, WhatsApp, Twitter, and Facebook do not reflect real life and make users feel dissatisfied about their own life, resulting in low self-esteem, increasing the tendency to develop depression. This result is inconsistent with the finding of two studies done in the United States by *Jeri-Yabar et al. (2019)* and *Primack et al. (2009),* also a study done in Germany by *Brailovskaia and Margraf (2018).* Another study was done in Bangladesh by *Al Mamun and Griffiths (2019)* found that students who use Twitter and Facebook show signs of depression, while Instagram and Snapchat users were not found to show signs of depression.

The result of the current study shows that more than half of nursing students have more than three personal accounts; however, no statistically significant relationship was found between depression levels and the number of personal accounts on social media applications. This result may be due to that Saudi culture imposing more restriction on women freedom as a result that having more than one personal account provides opportunities for nursing students to socialize with others, share opinions, ventilate feelings, which can lead to a decrease in social isolation and the tendency to develop signs of depression.

In contrast, a study was done in Germany by *Brailovskaia and Margraf (2018),* who reported that having more than a personal account on social media can help shy students and people with social phobia reduce depression symptoms through the enhancement of their social skills. The current study's result is inconsistent with the findings of a study done in the United States by *Shensa (2017),* and another study was done in Lebanon by *Zeeni et al. (2018).* A study was done in Pakistan by *Ahmad et al. (2018),* and a study was done in India by *Barman et al. (2018)* as these studies all found a relationship between depression and the number of personal accounts on social media among medical students.

The results show a statistically significant relationship between time spent on using social media applications and depression in the current study. This result may be linked to nursing students who spend more time on social media become withdrawn and have more difficulty establishing interpersonal relationships, experiencing insomnia or developing sleep disturbances, eating disorders, dissatisfaction with life, emotional tension, deterioration of physical and mental wellbeing. All factors can contribute to the development of depression. Another factor leading to this result may be that the study participants considered time spent searching on social media: "time wasted," which may negatively influence their mood.

In this respect, this finding is supported by *Wong et al. (2020)*; *Adams et al. (2017)*; *Beyens et al. (2016)*; *Baker et al. (2016); Wolniewicz et al. (2018),* who found that the study participant's spending more time on social media has more of a tendency to have a depressed mood. The result of the current study was in contrast with *Alsabaani et al. (2018)* and *Shensa (2017),* who found that spending more time using social media has no relationship with developing depressive symptoms.

The current study shows a statistically significant relationship between the purpose of using social media applications and depression. This result may be because spending more time searching for information and chatting with friends will increase social isolation and lose face-to-face contact with others, which in turn increases the tendency to develop depression. In this respect, the studies were done by *Morgan and Cotten (2003)* and *Shensa et al. (2017),* who found that students who use social media to search for health-related information did not present with signs of depression as indeed it was found to be beneficial for their psychological health, which contradicted the current research findings.

On the other hand, the result of the present study was inconsistent with the results of *Ahmad et al. (2018)*, who found that students who used social media for searching for health information were more depressed than those who used social media for chatting with friends and family

because they isolated themselves from family and friends for long periods.

The current study results show a moderately significant positive correlation between depression and social media use. Besides, the statistical analysis showed that more than one-fourth of nursing students have mild depression levels. One possible explanation for this result may be related to using social media, which can help certain people with social phobia and personality problems such as being shy and socially anxious students to enhance their social and communication skills. Furthermore, decrease the stress that could occur due to direct contact with people, which leads to decreased social isolation and tendency of depression.

Another possible factor for this result is that social media helps to decrease social isolation that can occur due to Saudi culture restrictions through providing a social outlet to nursing students to be involved in social life besides using those applications to facilitate their daily living activities such as online shopping or order for transportation. This result disagrees with the study done in Germany by *Brailovskaia and Margraf (2018)* and involves 633 university students who found that social media help decrease depression by enhancing social skills besides providing a chance for anxious, shy people to socialize.

On the other hand, this result is inconsistent with the results of two studies done in Sri Lanka by *Manpreet and Maheshwari (2015)*; *Rathnayake and Ekanayaka (2016),* another study conducted in Pakistan by *Ahmed et al. (2018),* and a study done in the United States by J*eri-Yabar et al., (2019),* who found a moderate to severe level of depression and strong positive correlation between depression and social media use among students.

7. Conclusion

Social media use has a positive, statistically significant relationship with depression; these results from the current study proved. Moreover, a current research study shows that social media's overall use was high among nursing students. Furthermore, the present study results also show mild depression levels among nursing students, suggesting that increased use of social media may be associated with more depression.

8. Recommendations

Certain recommendations have been developed from the current study. The recommendations will be illustrated under the following headings: recommendations for educational programs, governmental institutions, and for future research, and they are as follows:

- The Ministry of Education needs to establish routine checkups for depression levels among nursing students to support the early detection of depression and minimize its effect on students' performance.
- Family members should be encouraged to spend time outside the home by participating in activities that do not require smartphones and depend on technology.
- Inform students that they can decrease the number of personal accounts on social media applications to avoid wasting their time browsing those accounts and encourage them to participate in volunteer activities.
- Arrange for weekly group discussion or consultation to encourage the students to express feelings and thoughts, which will create a supportive educational environment.
- Further in-depth research is needed in different Saudi Arabia regions to determine the relationship between the psychological impact of COVID-19 and social media use in large populations.
- Another possible area for future study is evaluating the effectiveness of educational programs about time spent in social media in reducing depression during COVID-19.

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