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RESEARCH ARTICLE

Student Nurses Attitudes Towards Using Social Media to Raise the Awareness of their Community about the COVID-19 Pandemic in Jordan

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Abstract:

Aims:

The current study investigates the student nurses' attitudes and opinions towards their health promotion role during the COVID-19 pandemic using social media.

Background:

Social media and networking have become the most secure modes of communication among health care providers and their clients during the COVID-19 pandemic all over the world. However, it is the primary means of disseminating health information about disease prevention and control.

Methods:

A cross-sectional study was conducted on 296 student nurses aged 19-49 enrolled at twelve Jordanian universities (6 public and six private) in Jordan. The research team developed the self-administered questionnaire to explore the student nurses' attitudes towards their health promotion role during the COVID-19 pandemic using social media and the Internet.

Results:

Findings revealed that the student nurses had positive attitudes towards their health promotion role during the COVID-19 pandemic. The majority of student nurses are using social media to raise the awareness of their community about COVID-19 prevention.

Conclusion:

The current research findings provide baseline data on the student nurses' attitudes about the proper utilization of social media to enhance their community health about COVID-19. Given the student nurses' positive attitudes about their role in COVID-19 health promotion, we strongly recommend that they be provided with the necessary knowledge and skills to demonstrate effective health education.

Keywords: COVID-19, Student nurses, Social media, Community health promotion, Pandemic, Community.

Article History

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1. BACKGROUND

The spread of COVID-19, the disease caused by the Coronavirus, is a challenge for healthcare systems worldwide.

The first cases in Wuhan were reported to the regional office of WHO in China on 31 December 2019 as pneumonia from unknown causes. On 30 January 2020, the outbreak was declared a Public Health Emergency of International Concern [1]. International efforts have been made to develop vaccines for the COVID-19 disease; WHO approved the use of 6 (Oxford–AstraZeneca, Pfizer–BioNTech, Sinopharm-BBIBP, Moderna, Sinovac, and Janssen) out of 22 vaccines developed

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in different parts of the world [2]. However, precautions such as social distancing, wearing masks, and strict cleanliness and hygiene are recommended for vaccinated and unvaccinated persons [3 - 5].

According to the World Health Organization (WHO), COVID-19 is a global health problem or pandemic which crosses all national boundaries. This emerging pandemic has spread rapidly, having a serious impact on people's lives and, in some cases, leading to death [6]. Preventive measures against COVID-19 include social distancing and hygienic precautions; however, many nations and policymakers do not take these precautions seriously, which might have disastrous consequences worldwide [7]. Erfani *et al.* (2020) found that the majority of Iranian participants had moderate knowledge (46.5%) about COVID-19 [8]. Another study conducted to estimate medical and non-medical students' awareness revealed that 75% of the participants were aware of preventive measures and that 71.2% gave correct answers to specific questions. The highest response was obtained from medical undergraduates (74.1%), including nurses [9].

It is well known that student nurses are trained to promote community well-being in disease prevention and the importance of following international standards to limit the spread of viruses. In response to the WHO declaration of the Public Health Emergency of International Concern, the Jordanian government introduced the National Defense Law to prevent the spread of coronavirus. Social isolation precautions, on the other hand, make it difficult to meet patients face to face in order to provide them with appropriate health information. Thus, social media and the Internet have become the only medium of communication in their community. In addition, the use of social media for health education has reduced geographic distance and increased access to information. The literature indicates that social media facilitate the provision of up-to-date information to improve the knowledge, practice and awareness of the population and healthcare providers [4]. A Jordanian study revealed that student nurses have positive attitudes towards professional use of social media [5]. The current study explores their opinions and attitudes towards controlling COVID-19 using social media and the Internet. Many organizations use social media effectively to achieve their health-promoting goals among their customers. However, social media is limited in terms of the validity and reliability of the information provided, resulting in the spreading of misleading information and misconduct along with violation of professional identity and privacy.

Social media is considered a significant and crucial source of information for COVID-19. About half the participants in a study conducted by Karasneh *et al.* (2020) reported that social media and the Internet were considered as their main sources for disseminating COVID-19 information (94.5%, 95%, CI: 93.3-95.6) [10]. Abdelhafiz *et al.* (2020) investigated Egyptians' knowledge, perceptions, and attitude towards COVID-19, revealing that the main source of information was social media (66.9%) and the Internet (58.3%) [11]. However, the level of knowledge was significantly lower among older, less educated, lower-income participants, and rural residents [11]. Although social media is considered a crucial source of knowledge, not all information is trustworthy or credible.

COVID-19 is still spreading, with high prevalence rates and extremely hazardous consequences for all nations.

Prevention is crucial to save billions of lives. Nursing staff, including students, are at the frontline and are in direct contact with COVID-19 cases.

There is a dearth of information about student nurses' attitudes toward COVID-19 and their health promotion roles using social media and the Internet in Jordan. Therefore, the current study investigates the opinions and attitudes of these students about using social media and the Internet to raise the awareness of their community regarding coronavirus.

The findings of this study might add to existing knowledge about student nurses' attitudes to COVID-19 using social media. Also, our findings can help nursing health educators and policymakers implement appropriate educational programs to fill gaps in the nursing curriculum to improve students' health promotion approaches. These activities can prevent communicable diseases, including COVID-19. All of this might aid them in implementing updated strategies to prevent future pandemics. Furthermore, trustworthy, credible, and updated social media sources should be established and introduced among nursing and medical staff regarding COVID-19 or any other pandemic.

2. METHODS

2.1. Study Design

A cross-sectional design was employed to explore Jordanian student nurses' opinions and attitudes towards their health promotion role in reducing COVID-19 in Jordan using social media. In addition, to explore the differences between the attitudes of the students enrolled in public and private universities, we conducted the study in six public and six private universities.

2.2. Setting

All third- and fourth-year student nurses in the 12 universities were invited to complete an electronic survey. Since the study could not be conducted in a physical setting due to health restrictions imposed by Jordanian law, the data was collected through social media networks. The authors disseminated the survey using Facebook and WhatsApp, the most popular, affordable, and easy-to-use applications in Jordan.

2.3. Study Sample

For 15 observed variables in the instrument, the required sample size was 75 (Knapp and Brown, 1995), although we intended to recruit a larger number of student nurses to compensate for uncompleted questionnaires. A KMO test of sample adequacy was conducted, and the sample was adequate (0.7).

The study included third and fourth-year student nurses enrolled in the current semester or having completed Community Health Nursing courses (theory and clinical) since they prepared them to hold health education sessions with the public.

2.4. Data Collection

After the required IRB approvals were obtained, participants were targeted using Facebook and WhatsApp. The researchers developed the instrument after reviewing available literature. The survey link was well established, and students were asked to participate voluntarily. The completion time was 7-10 minutes. Two hundred ninety-six student nurses completed the survey.

2.5. Instrument

The researchers developed the instrument after reviewing the available literature. The survey had two parts: the first included socio-demographic data (age, gender, GPA, and type of university) (Table 1); the second included questions to assess the student nurses' opinions and attitudes about their health promotion role in reducing the coronavirus outbreak in Jordan, using social media channels. The survey questions on the students' use of social media were: Do they use it or not? Types of social media use? Do they use social media for health education in general? Are they using it for education about COVID-19? On which COVID-19 issues do they focus? The number of posts they shared in the last week about COVID-19? Do they make sure that the information that they share is accurate? What sources do they use to gain information about COVID-19? Do they believe they are qualified to provide such education to the public? What is the best source of information about COVID-19 from their point of view (nurses, physicians, social media, other sources)? Which age group do they consider frequently use social media to learn about COVID-19? What are the barriers to using social media to learn about COVID-19, in their opinion? The instrument also includes five questions about the student nurses' attitudes to using social media to educate their community about COVID-19 (Table 2). The responses to the five questions on attitudes towards using social media were rated on a 5-point Likert scale (from 5 = strongly agree, through agreement, not sure, disagree, to 1 = strongly disagree), giving a total obtainable score of 25. Our sample's minimum and maximum attitudinal scores were 5 and 25, respectively.

A pilot study was conducted on a sample of 15 student nurses, and the instrument was modified accordingly. The participants in the pilot study were excluded from the main

study. The instrument's content validity was evaluated and approved by an expert nursing panel.

2.6. Ethical Considerations

The research team distributed the questionnaire on Facebook and WhatsApp and explained the purpose of the study. All precautions were taken to establish the confidentiality and anonymity of the participants. It is the responsibility of the researcher to protect the participants' confidentiality and be aware of all possible ethical concerns during the study.

At the beginning of the survey, the principal investigator explained the study aims, procedures, and participants' roles. Completion of the questionnaire was considered as an agreement to participate. Students were assured that participation was voluntary and anonymous; only aggregate data were reported, and responses would remain confidential. A code number was given to each subject during the data entry phase; the collected data was only used for research purposes and accessed by the research team and principal investigator. Finally, all data was kept on a password-protected computer and destroyed after the analysis was completed.

All ethical principles of the declaration of Helsinki were followed in this study. In addition, Ethical approval was obtained from the ethics committee of Al-albeit university before data collection. The ethical approval number is 4/2019/2020. Also, informed consent was given to participants before data collection.

3. RESULTS

3.1. Background Characteristics of the Sample

Two hundred and ninety-six student nurses participated from six public and six private universities in Jordan. Their characteristics are listed in Table 1. More than half (69%) of the participants were from public universities. The mean age of the sample was 23.7 years (SD=4.61), ranging from 19 to 49. The majority were females (72%). The Grade Point Average of the participants was 77.35 (SD= 9.88), ranging from 50 to 99.9. All the participants (100%) used social media. About 93% of the participants were using Facebook. The other media used were YouTube (67%), Instagram (63%), and Snapchat (49%).

Table 1. Demographic characteristics of the sample (N=296).

Characteristic	Number (%)
Gender	
Male	82 (28%)
Female	214 (72%)
University	
Private University	92 (31%)
Public University	204 (69%)
Age	
19-20	36 (12.16%)
21 and older	260 (87.84%)
GPA	
Distinguished	14 (4.73%)

(Table 1) contd.....

Excellent	66 (22.30%)
Good	96 (32.43%)
Pass	34 (11.48%)
Very Good	75 (25.34%)
Weak	11 (3.72%)
Social media used	
Facebook	277 (93.58%)
YouTube	199 (67.23%)
Instagram	186 (62.84%)
chat	146 (49.32%)
Snap	146 (49.32%)
Twitter	65 (21.96%)
LinkedIn	27 (9.12%)
WhatsApp	27 (9.12%)
Instant messaging websites, e.g. BBM, MSN	26 (8.78%)
MySpace	24 (8.11%)
Blogs	20 (6.76%)
Pinterest	14 (4.73%)
Ask	5 (1.69%)
Telegram	5 (1.69%)
Tiktok	3 (1.01%)

3.2. Student Nurses' Attitudes Towards Their Health Promotion Role During COVID-19 Using Social Media and the Internet

82% of student nurses used social media for their health education, and 83% to educate society about COVID-19. No significant differences in the attitudes were found between public and private universities students.

The most common topics discussed were encouraging people to abide by the lockdown, prevention methods, and transmission methods. The student nurses shared posts and messages about coronavirus, and 74% used posts disseminated by the Jordanian Ministry of Health (MOH) and WHO. They were confident that they were equipped with the necessary knowledge to raise public awareness about the disease and

other healthcare counterparts.

In particular, all the participants (100%) believed that most of the Jordanians who use social media to obtain information about COVID-19 were aged between 20 and 40; 74% believed that their community is aware of the seriousness of coronavirus. However, one third viewed old age as a barrier to obtaining information through social media. Also, 83% realized the importance of intensifying public awareness about the coronavirus and addressing the misconceptions about this emerging disease, as most participants believed that information on social media related to coronavirus might be incorrect. However, half of the participants reported that they believed social media to be the most popular source used by their clients to gain information regarding COVID-19 (Fig. 1)

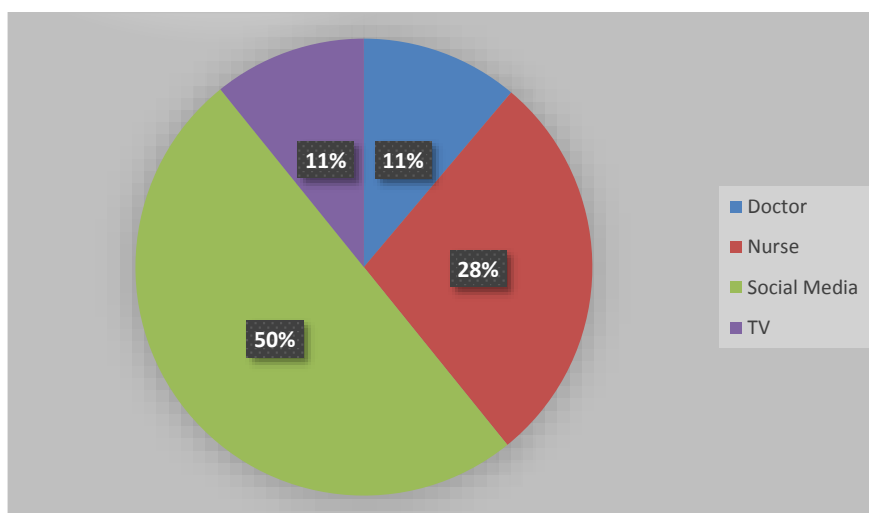


Fig. (1). Sources of information used by the clients to learn about COVID-19 from the participant's point of view.

Table 2. Nursing students' opinions and attitudes about their health promotion role in reducing COVID-19 outbreak using social media (N = 296).

Item	Strongly Agree	Not Disagree	Strongly Agree	Not Disagree	Strongly
Experience using social media to raise awareness on COVID-19 is good and satisfying.	76(25.68%)	70(23.65%)	107(36.15%)	27(9.12%)	16(5.41%)
In my opinion, I can change information misconceptions about COVID-19.	122(41.22%)	93(31.42%)	69(23.31%)	9(3.04%)	3(1.01%)
In my opinion, our society is aware of COVID-19.	77(26.01%)	108(36.49%)	83(28.04%)	19(6.42%)	9(3.04%)
As a student nurse, I think that some of the information that people circulate on social networking sites about the emerging COVID-19 may be inaccurate and lead to adverse outcomes.	134 (45.27%)	73(24.66%)	47(15.88%)	34(11.49%)	8(2.70%)
I can encourage and motivate people to use the media to obtain information about COVID-19.	95(32.09%)	86(29.05%)	85(28.72%)	23(7.77%)	7(2.36%)

Lastly, student nurses showed a positive attitude towards using social media to increase public awareness about coronavirus disease, believing that they can promote the health of the community. Furthermore, 70% agreed or strongly agreed that social media was disseminating false information about COVID-19, and more than half (61%) believed it is vital to encourage people to use social media to obtain information about the virus.

The median and mean scores of the attitude scale were 20

and 19, respectively, and 75% of the student nurses scored 22 or more. The bivariate results revealed that those who used social media to educate their community about health issues in general and COVID-19, in particular, gained higher positive attitude scores than those who did not (t -test = 0.270 and 0.257 at $P < 0.01$), respectively. Also, those believing that they are qualified to educate their community about COVID-19 and those ensuring that the information they share on social media is accurate gained higher positive attitude scores than those who did not (t -test = 0.189, and 0.163, at $P < 0.01$) respectively.

Table 3. Independent Samples Test for using social media (of all kinds) to educate the community about emerging Coronavirus issues.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
My experience using social media to raise awareness on Coronavirus was good and satisfying	Equal variances assumed	1.874	.172	-6.917	294	.000	-1.115	.161	-1.433	-.798
	Equal variances not assumed			-6.197	65.683	.000	-1.115	.180	-1.475	-.756
In your opinion, we can change the misconceptions related to the Coronavirus	Equal variances assumed	9.442	.002	-3.300	294	.001	-.461	.140	-.737	-.186
	Equal variances not assumed			-2.780	62.837	.007	-.461	.166	-.793	-.130
In your opinion, our society accepts awareness through social media	Equal variances assumed	.078	.780	-1.494	294	.136	-.231	.155	-.536	.073
	Equal variances not assumed			-1.495	72.409	.139	-.231	.155	-.540	.077
As a nursing student, do you think some of the information people circulate on social networking sites about the emerging Coronavirus may be inaccurate and lead to adverse outcomes?	Equal variances assumed	.605	.437	-1.226	294	.221	-.216	.177	-.564	.131
	Equal variances not assumed			-1.182	69.886	.241	-.216	.183	-.582	.149
I can encourage and motivate people to use the media to get information about corona	Equal variances assumed	1.280	.259	-3.312	294	.001	-.525	.159	-.838	-.213
	Equal variances not assumed			-3.074	67.573	.003	-.525	.171	-.867	-.184

However, no significant association was found between the demographic variables (age, gender, GPA, or type of university) and the student nurses' attitude.

4. DISCUSSION

In this study, we aimed to assess student nurses' attitudes and opinions towards using social media during the COVID-19 pandemic to raise the awareness of the Jordanian community about the disease. The results showed that a significant percentage have a positive attitude toward using social media to promote their community health in COVID-19 prevention. To our knowledge, the current study is the first in the Middle East to explore this topic. However, some studies have targeted the knowledge and information sources about COVID-19 prevention measures among medical students, including nurses and pharmacists [9, 10, 12, 13]. Their results agree with ours that social media and the Internet are the most common sources of information among healthcare providers. They also found that most participants were equipped with the necessary knowledge about COVID 19 and had positive attitudes towards using social media to support community health.

Although three-quarters (74%) of our participants believed that the Jordanian community is aware of the seriousness of the coronavirus, more than two-thirds (70%) reported the spread of misleading information through social media. This result implied the need to enable all health sciences students to recognize credible, reliable, and trustworthy databases and links to medical information [14]. Indeed, as Olsan *et al.* (2011) reported, the quality of nursing care can be improved by using online health-related information [15].

Our participants also reported that the topics they emphasized in sharing information about COVID-19 were prevention measures, transmission methods, and the importance of commitment to the lockdown instructions. This showed that they were aware of their role in controlling the disease by raising the awareness of their community. However, health education through social media will not be sufficient to counteract the spread of the disease, as one-third of the student nurses reported that old age is a barrier to obtaining information through social media. This finding is crucial as it is well known that older people are at the highest risk of severe COVID-19 symptoms [16]; more emphasis should therefore be placed on providing appropriate health information for older adults.

The findings revealed that most students use social media for their health education purposes (82%) and educate their community about COVID-19 (83%). This emphasizes that electronic resources effectively save time and effort in information exchange. Similarly, Karasneh *et al.* (2020) and Abdelhafiz *et al.* (2020) found that social media is an essential source of information about COVID-19 in Egypt [10, 11]. In addition, most of our student nurses reported that they use accurate information from sources such as Jordanian MOH and WHO. This is strong evidence that student nurses are an integral part of the national and international efforts to control the spread of COVID-19 among their communities, as they are trained to recognize evidence-based health information before they disseminate it via social networking. This finding, however, is consistent with other studies [4, 9].

According to Modi *et al.* (2020), medical students have

adequate knowledge about COVID-19 disease [9]. Similarly, the student nurses in this study have positive attitudes towards using social media to promote community health (three-quarters of the students scored at least 22 out of 25 on the attitude scale). Therefore, their positive attitudes and confidence that they are equipped with the necessary information will increase health education and patient satisfaction.

Finally, students who reported that they used social media to educate the community about their health and COVID-19 were more likely to have positive attitudes; this is similar to Schmitt, Sims-Giddens and Booth (2012), who concluded that electronic resources enhance the professional role of student nurses [17]. The positive attitudes of the student nurses towards promoting their community health may be due to the nature of their academic studies, which focus on the importance of health education. However, in their review of the use of social media among nurses, Cordoş and Bolboacă (2016) found that it was mainly for engagement and communication [18 - 21].

CONCLUSION

This research contributes to the literature, and to the best of our knowledge, it is the only study to investigate the attitudes and opinions of student nurses towards using social media to promote community health during the COVID-19 pandemic. In addition, this study will enable researchers to understand their attitudes towards using social media to control COVID-19.

The findings also revealed that the largest proportion of the student nurses has positive attitudes towards using social media to promote community health regarding COVID-19. Building on the study's findings, the research team recommends that community health curricula be reformed to focus on the students' role in using social media to promote community health during global pandemics such as COVID-19.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Not applicable.

HUMAN AND ANIMAL RIGHTS

No animals/humans were used for studies that are the basis of this research.

CONSENT FOR PUBLICATION

Not applicable.

AVAILABILITY OF DATA AND MATERIALS

Not available.

FUNDING

None.

CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

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