Knowledge and Attitude Towards COVID-19 Among Nursing Students: Palestinian Perspective

SAGE

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Abstract

Introduction: The World Health Organization (WHO) declared COVID-19 as a public health emergency of international concern and called for the collaborative efforts of all countries to prevent rapid spread.
Objective: The purpose of this study was to assess the knowledge and attitude towards COVID-19 among Palestinian nursing students.
Methods: This was a cross-sectional study conducted on 218 nursing students from Arab American University and Al-Quds University. The instrument was developed by the researchers after a critical literature review.
Results: The results revealed that the majority of participates were third academic year level (60.6%). Only 84 (38.5%) of respondents had a high level of knowledge and 17 (7.8%) had a positive attitude regarding COVID-19.
Conclusion: The study confirmed that nursing students had a moderate level of knowledge about COVID-19 and a negative attitude toward it.

Keywords

knowledge, attitude, nursing students, COVID-19, cross sectional study

Introduction

Coronavirus 2019 (COVID-19) is an emerging serious, severe, acute, respiratory coronavirus infection (Wang et al., 2020). It was first discovered in late December 2019 in Wuhan, Hubei Province, China, and spread worldwide 2 months later (World Health Organization [WHO], 2020a). The clinical appearance is that of a respiratory infection with symptom severity varying from a mild common cold-like illness, to a severe viral pneumonia, leading to acute respiratory distress syndrome that is potentially fatal (WHO, 2020a). COVID-19 had caused more than 13 million confirmed cases and killed at least 580,000 worldwide up to the 17th of July 2020. Cases are expected to increase significantly in the coming months (WHO, 2020a). To date, 8616 COVID-19-infected cases have been confirmed in Palestine, and 52 cases have died due to COVID-19 (WHO, 2020b).

COVID-19 is quickly transmitted by droplets formed when an individual coughs or sneezes around those in close contact (Ali et al., 2020). The World Health Organization (WHO) declared Covid-19 an international

public health emergency on 30 January and called for cooperation from each country, to prevent its rapid spread (Ali et al., 2020). Health care providers are at risk for transmission (Chang et al., 2020). It is essential to protect healthcare professionals, maintain healthcare continuity, and prevent disease transmission to other individuals (Chang et al., 2020).

Like other countries, Palestine was affected by the virus pandemic. Some measures to control the transmission of COVID-19 were adopted by the Palestinian Authority. They included a stop to public transport, closing of public spaces, social distancing, and care of positive and suspected cases. As a result of the rapid

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spread of the disease, it was necessary to benefit from the experience of other countries to prevent the exhaustions of healthcare staff. Therefore, it was important that in Palestine we should ensure the readiness of our nursing students, especially those in their final years of study. Therefore, the purpose of this study was to assess the knowledge and attitude towards COVID-19 among Palestinian nursing students.

Methods

Study Design, Site, and Participants

A cross- sectional study was conducted in two nursing faculties of Arab American University and Al-Quds University. Both faculties prepared students at the level of bachelor in nursing and were composed of students from all districts of Palestine.

Data were collected using an online web-based questionnaire over one month (March 4, 2020, to April 4, 2020). The questionnaire was generated on Google drive and the link was sent to the target nursing students by email through the university learning portal. Also, the targeted students were encouraged to participate by WhatsApp and Facebook posts. The inclusion criteria were all nursing students in third and fourth year from both Arab American University and Al-Quds University.

This sample size was calculated on the basis of Raosoft (2008) software in which the population size was kept as 400, response distribution as 50%, while confidence interval and margin of error was set at 95% and 5% respectively. The recommended sample size was 197. A total of 218 students participated in this study. All the participants were briefed about the purpose of the study.

Study Instrument

The data were collected through a self-administered questionnaire. The study instrument was designed by the authors after critical WHO reports review. The initial draft of the questionnaire was validated by sending it to five researchers and professionals from public health and medical background to give their expert opinion with respect to its simplicity, relativity and importance. The feedback from the experts with no comments, indicating agreement on the content validity. Also, a pilot study was conducted on 20 nursing students who gave their opinions on making the questionnaire simpler and shorter. The participants in the pilot study were excluded from the actual study. The authors made the modifications and then distributed them to the participants for responses. Cronbach's alpha was found to be 0.82.

The questionnaire consisted of three parts. The first part was composed of demographic characteristics of the participants (sex, age, university, and education level). The second part was composed of COVID-19 knowledge such as etiology, symptoms, risk group, consequences, source of transmission, prevention and treatment within the limits of what's known about this disease so far (thirty- three Yes/No or I don't know questions). Knowledge was assessed by assigning 1 to the correct answer and 0 to the wrong or I don't know answers.

The last part determined the attitude of participants towards COVID-19. It consisted of 16 items in which their responses were evaluated using a 5-point Likert scale. A score of 5 was given to strongly agree, 4 to agree, 3 to neutral, 2 to disagree and 1 to strongly disagree.

The scores were transformed into percentage scores by dividing the scores obtained by the respondents with the possible maximum scores and multiplied by 100. The sum score of each outcome was assessed based on Bloom's cut off point (Bloom, 1956).

Based on the sum scores, level of knowledge was classified into low level knowledge (less than 60%), moderate level knowledge (60–80%) and high level knowledge (80–100%).

Meanwhile, the scores were classified into positive attitude (80–100%), neutral attitude (60%–80%) and negative attitude (less than 60%).

Data Analysis

Data was statistically analyzed using SPSS version 23. Descriptive analysis was conducted and data were reported as percentage, frequency, mean and standard deviation (SD).

Ethical Consideration

The study was approved by the Arab American Institutional Review Board (IRB00096814). Access to the survey forms was only possible by the researchers through password protected login. Also, e-written informed consent was included as a part of this survey. Participation in this study was voluntary and the identification information of participants was not recorded anywhere on the questionnaire.

Results

Demographic Characteristics of Participants

Table 1 shows the demographic characteristics of the participants. The mean age of respondents was 22.10 ± 4.185 year. Out of 218 respondents, 143 (65.6%) were female. The majority 154 (70.6%) of respondents were from Arab American University. Concerning the

academic year level, 132 (60.6%) of the respondents were in the third academic year level.

Knowledge Level of Participants

A total of 102 (46.8%) respondents showed moderate level of knowledge regarding COVID-19 while 84 (38.5%) respondents had high level of knowledge.

The greatest subscale of the high level knowledge was precautionary measures 129 (59.2%), followed by actions in dealing with suspected, probable and confirmed cases 127 (58.3%). However, the lowest subscale of high level knowledge regarding COVID-19 was transmission of disease 49 (22.5%), as shown in Table 2.

Table 1. Demographic Characteristics of Participants (N = 218).

Variables	Number of respondents (%)
Gender	
Male	75 (34.4)
Female	143 (65.6)
Academic year	
Third year	132 (60.6)
Fourth year	86 (39.4)
University	
Arab American University	154 (70.6)
Al-Quds University	64 (29.4)

Attitude Level of Participants

The analysis of data revealed that more than half of the participants (114/52.3%) showed negative attitude regarding COVID-19 while only 17(7.8%) respondents had positive attitude. Only 14 (6.4%) had a positive attitude to fear and threats of COVID-19 and 47(21.6%) had beliefs about prevention of COVID-19, as shown in Table 3.

Discussion

The current study assessed the knowledge and attitude towards COVID-19 among Palestinian nursing students. Nurses play a very important role in the COVID-19 pandemic both locally and globally. They are on the front lines caring for patients and have a decisive role in infection control (Jackson et al., 2020; Kharma et al., 2015). Nurses, particularly those specialized in intensive care units, those in management, or those most directly involved in the response to the COVID-19 pandemic, exhibit extraordinary levels of overwork, frequently without adequate time for rest and recuperation, and without support and assistance (Booth & Hills-Evans, 2020). Latest figures show that healthcare workers make up 9% of Italy's COVID-19 cases. The high rate of infection among nurses and other healthcare workers is a serious concern because infected workers must miss at least

Table 2. Students' Knowledge About COVID-19 (N=218).

	Level of knowledge		
Variable	Low level knowledge n(%)	Moderate level knowledge n(%)	High level knowledge n(%)
Total knowledge about COVID-19	32 (14.7)	102 (46.8)	84 (38.5)
Nature of the disease	83 (38.1)	69 (31.7)	66 (30.3)
Transmission of disease	41 (18.8)	128 (58.7)	49 (22.5)
Actions in dealing with suspected, probable and confirmed cases	29 (13.3)	62 (28.4)	127 (58.3)
Precautionary measures by health care providers	40 (18.3)	49 (22.5)	129 (59.2)
Treatment of the disease	89 (40.8)	57 (26.1)	72 (33.0)

Table 3. Students' Attitude About COVID-19 (N=218).

	Level of attitude		
Variable	Negative attitude n (%)	Neutral attitude n (%)	positive attitude n (%)
Total attitude about COVID-19	114 (52.3)	87 (39.9)	17 (7.8)
Fear and threats of COVID-19	120 (55.0)	84 (38.5)	14 (6.4)
Beliefs about prevention of COVID-19	101 (46.3)	70 (32.1)	47 (21.6)

14 days of work, adding to an already overworked workforce (International Council of Nurses, 2020).Therefore, the need for nursing students who are ready in terms of knowledge and attitude towards COVID-19 has emerged to fill the void left by healthcare staff.

The current study included 218 nursing students. The results revealed that only 84 (38.5%) of the students had high level of knowledge regarding COVID-19 infection.

The current results differ from those reported by Clements (2020) who indicated that the average public knowledge score of US residents two months after the disease began in the USA was 80%. Also, a study by Olaimat et al. (2020) which revealed that 80.1% of nursing students in Jordan had good knowledge. Moreover, Nemati et al. (2020) study conducted at the time of the COVID-19 outbreak in Iran found good awareness among nurses. In light of these findings, the relevant institutions should raise awareness of nurses about this disease, despite the fact that the Palestinian Ministry of Health has developed a protocol based on World Health Organization recommendations to combat this pandemic. Also, nursing students require training courses in this area to raise awareness of the importance of being ready in the event of a deterioration in the nursing staff's condition in hospitals.

Generally, most participants had a negative attitude towards COVID-19 infection. The current results were supported by Olum et al. (2020) study that reported about four-fifth of the health care workers had negative attitude toward COVID-19. [15] However, these results were inconsistent with Hussain's et al. (2020) study that most of the health care providers showed a positive attitude toward COVID-19. This could be explained by loss of control on spread of the infection due to wide sector of Palestinian workers who work in the occupied areas by Israeli.

Additional education, intervention, and training programs for nursing students can improve their understanding of the nature of COVID-19 infection and prevention strategies. As a result, nursing students' attitudes toward providing appropriate care to their patients and protecting themselves from this infection may improve.

This study had some limitations. Firstly, the questionnaire was self- reported. Secondly, the sample was small. Therefore, carrying out further large-sample studies from other regions in Palestine are important to explore further awareness and attitude of nursing students at the national level. We recommend follow up studies involving factors that might influence the knowledge and attitude towards COVID-19 among nursing students.

Conclusions

The study confirmed that nursing students had a moderate level of knowledge about COVID-19 and a negative attitude toward it. As a result, students are unable to care for COVID-19 patients if they are formally required to do so.

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