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Attitude and practices among nursing students toward COVID-19 prevention

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Abstract

Nursing students are the essential part of the healthcare system all over the world, and play a significant role in the nursing job in the future. In crises, such as the present one, nursing students' knowledge, attitudes and practices toward COVID-19 prevention should be considered in the planning for health promotion and disease control especially effective educational implementations for COVID-19.

The aim of study to assess the attitude and practice regarding COVID 19 prevention and associate their relation with socio- demographic characteristics of nursing college students.

The result of the present study showed that nursing students had a favorable attitude (75.6%), and moderate level of practices (62, 6%) toward COVID-19 prevention.

Keywords: Attitude; Practice; Nursing Students; COVID-19; Prevention

1. Introduction

Coronavirus Disease 2019 (COVID-19) is acute and severe respiratory infection. It was first discovered in China (Wuhan) and later it spread around the world and became pandemic, causing increased mortality and morbidity [1].

Similar to other countries, Iraq has been affected by this pandemic virus as well. Some measures have been taken in Iraq to control the transmission of the disease. These comprised closing public places, social distancing, and paying attention to positive and suspicious cases. Due to the fast transmission of the disease, it was needful to profit from the proficiency of other countries.

The effectiveness of these measures depends to a large extent on the cooperation among all members of society. Community members' compliance with precautions is strongly influenced by their knowledge, attitudes and practices about COVID-19. Healthcare professionals must have the good knowledge and attitude about COVID-19 because they are the most influential society in health issues [2].

Nurses perform a very significant role locally and globally in the COVID-19 pandemic. They are on the first lines for patients caring and have a critical role in controlling infection. High infection rates for nurses and healthcare providers are a serious concern, as infected staff must miss at least 15 days of work. Therefore, it puts a heavy burden on nurses who already have an overworked workforce [1].

There are few published studies on students' knowledge, attitudes and practices toward COVID-19. Two studies conducted in Palestine, the first one was performed among students at Birzeit University showed that students had

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varying degrees of knowledge about COVID-19, and most of them relied on the official media briefs as a source of information. The majority of them carried out positive and cautious practices regarding the COVID-19 epidemic [3]. While the other study done at two colleges of nursing of Arab American and Al-Quds University revealed that students had an adequate level of knowledge about COVID-19 and negatively attitude toward it [1].

Another study done in Morocco displayed that most of the Moroccan nursing students had a suitable level of knowledge, very good attitudes and practices within adequate limits towards COVID-19 [4]. Similar findings in a study completed among Indonesian nursing students where they have a reliable knowledge about COVID-19 and are generally favorable in their view of overcoming the pandemic, leading to affirmative attitudes and implementing and maintaining safe practices [5].

The results of a study done in India (among nursing students) revealed amazing knowledge, decent practices and appropriate attitude towards COVID 19 [6]. Whereas a study completed in Nepal exhibited that more than 50% of the nursing students had adequate knowledge, good practices about corona virus infection and a small number of them had mild to moderate anxiety level [7].

A study conducted in the university of Palermo (Italy) suggest that nursing students had a decent level of knowledge, suitable attitudes, and appropriate practices towards COVID-19 for the period of COVID-19 outbreak [8].

A study was conducted in a North-Eastern Nigerian state to determine the level of knowledge, attitude, and practices of nursing and midwifery students towards COVID-19 displayed decent knowledge, positive attitudes, and decent practices [9]. While a study among Chinese healthcare students (including nursing) revealed that the students had favorable attitudes toward disease treatment but were poor knowledge about COVID-19 and preventative practices with respect to containing the spread of the disease [10].

In Saudi Arabia, a study was done among student nurses from seven government universities revealed that Saudi student nurses were fully aware of COVID-19 and its prevention, as well as affirmative perceptions about the government and the Ministry of Health's effort in reacting to the COVID-19 crisis [11].

A study was accomplished at four nursing faculties in Egypt was revealed decent knowledge and a proper attitude among the students concerning COVID-19 [12]. Teachers are the main caregivers and the first line of protection for school children. Their role complements that of parents. During school hours, school teachers are actually the first-respondent in cases of disasters or emergencies. They must be able to deal properly with health emergencies both in normal children, and those children with special health care needs [14].

Objectives

To assess the attitude and practice regarding COVID 19 prevention and associate their relation with socio- demographic characteristics of nursing college students.

2. Methodology

Design and setting: Present study was a cross-sectional web study.

Sample and sample size: 176 undergraduate students who are enrolled in of College Nursing of in Basrah.

Data collection: The questionnaire used in the study was administered online. Google Form formed and students were invited to complete and submit the form. The researcher sent a number of reminders to encourage all students to complete the study. The data was collected in September 2021.

The questionnaire used comprised three parts; the first one was relates to sociodemographic data of study participators such as gender, marital status, region of residence and stage. The Second part of the questionnaire includes 25 questions related to students' attitude toward COVID-19. By proving numerical value each question was answered as (yes =3 /No =1) basis with an additional "I don't know" option=2. Third part of the questionnaire includes 14 questions related to practices toward COVID-19 .Each question was answered as yes=3 always /never=1 with an additional "sometimes"=2.

Data lower than the mean for both attitude and practice considered as unfavorable attitude or poor practice

Data were evaluated using the Statistical Program (SPSS) version 23 and excel. Descriptive statistics used to state frequency and percentage.

Chi square test used to estimate the relationship between both attitudes and practice and participants demographic characteristics. $P < 0.05$ account as statistically significant.

Ethical considerations: Data was collected online. Researchers confirmed that student participation was voluntary and the questionnaire was anonymous, ensuring that the participants were confidential in their responses.

3. Results

Table 1 Socio - demographic characteristics of the sample (n=176)

Characteristics of participants	Categories	No.	%
Gender	Male	62	35.2
	Female	114	64.8
Age	18-20	91	51.7
	21+	85	48.3
Region of the residence	City center	67	38.1
	Districts	109	61.9
Academic Stages	1 st stage	43	24.4
	2 nd stage	48	27.3
	3 rd stage	45	25.6
	4 th stage	40	22.7
Marital state	Single	147	83.5
	Married	29	16.5

Table 1 showed that the majority of the sample was females (64.8%), (83.5%) of them were single and (61.9%) live in district areas. There was no much difference in the response rate with respect to academic stages.

Table 2 Students' attitude to COVID-19 (n=176)

	Questions regarding the attitude	Yes		Don't know		No	
		No.	%	No.	%	No.	%
1	Do you think that COVID-19 is a preventable disease	136	77.3	18	10.2	22	12.5
2	Are you afraid and worried about the spread of the Corona virus?	108	61.5	8	4.5	60	34
3	Do you think that the spread of COVID-19 can be averted by wash up hands with soap frequently	95	53.9	21	11.9	60	34.2
4	Do you agree that it is important to use a face mask in a crowded place?	170	96.6	0	0	6	3.4
5	Do you think social spacing is necessary to prevent the spread of COVID-19?	164	93	3	1.7	9	5.3
6	Do you avoid close contact with people who appear to be ill with flu-like symptoms?	154	87.5	8	4.5	14	8

7	Are you afraid of contracting covid-19?	119	67.6	14	7.9	43	24.5
8	You're worried that a member of your family could get infected.	146	82.9	6	3.4	24	13.7
9	Do you agree that it is important to inform the health authorities of a suspected case?	100	56.8	33	18.7	43	24.5
10	Do you think the infection can be treated at home?	135	76.7	14	7.9	27	15.4
11	Do you agree that COVID-19 patients should be isolated?	156	88.6	6	3.4	14	8
12	Do you agree to quarantine / isolate yourself if you have COVID-19 symptoms?	161	91.5	1	0.5	14	8
13	Will you use medication if you or a family member feels one of the common symptoms of Corona disease?	143	81.2	12	6.8	21	12
14	Do you agree to play a part in the care of COVID-19 patients if required?	146	82.9	15	8.5	15	8.6
15	If covid-19 vaccine is available, would you want to get it	138	78.4	13	7.4	25	14.2
16	Do you think society has a big role to play in its commitment to state plans against the Corona Virus?	154	87.5	9	5.1	13	7.4
17	Do you believe health education can play an essential role in COVID-19 prevention	170	96.5	4	2.3	2	1.2
18	Are you satisfied with the government's actions to combat the COVID-19 outbreak	43	24.4	20	11.3	11 3	64.3
19	Do you believe COVID-19 will be effectively controlled at the end?	91	51.7	53	30.1	32	18.2
20	Do you support the imposition of travel bans by governments	98	55.6	21	11.9	57	32.5
21	Do you think there are drugs that prevent corona?	34	19.3	48	27.3	94	53.4
22	Do you think the use of antibiotics is effective in preventing infection?	64	36.4	25	14.2	87	49.4
23	Do you think taking vitamin C supplements play role in preventing corona?	107	60.8	39	22.2	30	17
24	Do you think using of folk medicine and herbal prevents the infection?	37	21	42	23.9	97	55.1
25	Do you think it's important to take vaccines to prevent infection?	142	80.7	12	8.8	22	12.5

Mean of attitude (61.7 ± 4.8 SD) with arrange of 41 to 70; Favorable attitude 133 (75.6%); Unfavorable attitude 24 (24.4%)

The results of study participators concerning attitudes about COVID-19 shown that 96.6% of participators agree that it is essential to use a facemask in a crowded place. In addition, the majority of students 96.5% agree that health education can perform a significant role in COVID-19 prevention and 93% thought that social spacing is necessary to avert the spread of COVID-19.

Only 51.7 of the participants thought that COVID-19 could eventually be effectively controlled, 24.4% of them were satisfied with the government's actions to combat the COVID-19 outbreak, only 21% believed that the use of folk medicine and the use of herbs prevent infection and 19.3% believed that there are medicines prevent corona. Over all 75.6% of the participants displayed favorable attitude as shown in table 2.

Table 3 Students' practices regarding COVID-19 prevention (n=176)

	Questions regarding the practices	Always		Sometimes		Never	
		No.	%	No.	%	No	%
1	Do you avert going to overcrowded places (such as markets and grocery stores)?	69	39.3	58	32.9	49	27.8
2	Do you avert visiting your family and neighbors?	80	45.5	53	30.1	43	24.4
3	Do you clean your hands properly by washing your hands frequently?	141	80.1	23	13	12	6.9
4	Do you use alcohol-based disinfectant often?	118	67	34	19.3	24	13.7
5	Do you wear a facemask when you leave your home?	117	66.5	27	13.3	32	18.2
6	Do you keep a social distance (at least one meter) from other people?	67	38	63	35.8	46	26.2
7	Do you avert shaking hands and kissing when giving greetings?	95	53.9	50	28.4	31	17.7
8	Do you covering your mouth and nose by bending the elbow or with a paper napkin when coughing or sneezing?	151	85.8	15	8.5	10	5.7
9	Do you eat healthy, especially during the spread of disease?	98	55.7	45	25.6	33	18.7
10	Do you obey all government instructions and rules on COVID?	89	50.6	60	34	27	15.4
11	Do you use antibiotics to prevent COVID?	45	25.6	26	14.8	105	59.7
12	Do you take vitamin C supplements for the purpose of preventing infection?	94	53.4	25	14.2	57	32.4
13	Do you use folk medicine for corona prevention?	22	12.5	21	11.9	133	75.6
14	Are you following updates of the drugs used in Corona treatments?	71	40.3	51	29	54	30.7

Mean of practice (32.5±4.3 SD) with arrange of 18to 41; Good practice 110 (62.5%); Poor practice 66 (37.5%)

Regarding practice the majority 85.8 % of students covering their mouth and nose by bending the elbow or with a paper napkin when coughing or sneezing, and 80.1% clean their hands properly by washing their hands frequently. Favorable practice for the prevention of COVID-19 has also been also experienced. Where 12.5% used folk medicine to prevent corona. The use of antibiotics to prevent COVID was mentioned by 25.6% of the participants. Only 38% retain a social distance (at least one meter) from others , 39.3% avert going to overcrowded places (such as markets and grocery stores, 40.3% following updates on medicines used in Corona treatments, and 50.6% of the participants obey all government instructions and rules regarding COVID, in total 62.6% of participants have good practice regarding disease prevention.

Females, younger students, those who live in the districts, and single students have a higher level of favorable attitude. Regarding practice table 4, it was shown that females, younger students, those who live in city center and married students experienced good practices compared to those in districts. While the reverse to attitude, similar finding for married students although the differences were not statistically significant.

Table 4 Differences in attitude and practice by socio - demographic characteristics (n=176)

Characteristics	Attitude		Practice	
	Favorable (%)	X ² (P)	Good (%)	X ² (P)
Overall	133 (75.6)		110 (62.5)	
Gender		2.001(0.157)		2.397 (0.122)
Male	43(69.4)		34 (54.8)	
Female	90 (78.9)		76 (66.7)	
Age		0.187(0.665)		0.948(0.330)
18-20	70 (76.9)		60(65.9)	
21+	63 (74.1)		50(58.8)	
Area of residence		0.052(0.820)		0.464(.496)
City center	50 (74.6)		44(65.7)	
Districts	83 (76.1)		66(60.6)	
Academic Stages		0.498(0.919)		2.460(0.483)
Ist	34 (79.1)		26 (60.5)	
2 nd	36 (75)		34 (70.8)	
3 rd	34 (75.6)		28 (62.2)	
4 th	29 (72.5)		22 (55)	
Marital state		0.187(0.665)		1.456 (0.228)
Single	112 (76.2)		89 (60.5)	
Married	21 (72.4)		21 (72.4)	

4. Discussion

Nursing students are the essential part of the healthcare system all over the world, and play a significant role in the nursing job in the future. In crises, such as the present one, nursing students' knowledge, attitudes and practices toward COVID-19 prevention should be considered in the planning for health promotion and disease control especially effective educational implementations for COVID-19.

The findings of present study revealed that nursing students had a favorable attitude(75.6%), and moderate level of practices (62,6%) toward COVID-19 prevention. These results differ from one reported by study done among Palestinian nursing students (2020) which include a negative attitude regarding COVID-19. 17(7.8%) had a positive attitude [1]. whereas they are similar to results of study also done in Palestine (2020) which revealed positive and cautious practices about COVID- 19[3].

Similar study done among Moroccan nursing students which showed affirmative attitudes and an acceptable level of practices towards COVID-19. This study revealed that (84.8%) of students thought that COVID-19 be well controlled at the end [4]. while in our study only (51.7%) of the students thought that COVID-19 be successfully controlled. However, a study among Indonesian nursing students indicated (94.1%) of participators presumed that COVID-19 would be successfully controlled [5].

The results are somewhat similar to those of our study [6]. where (93.4%) of Moroccan students put on facemask when leaving home, (96.2%) of them said that social distancing is serious for obviating the transmission of COVID-19. Most of students (98.4%) conveyed that they avert overcrowded places. About (90.2%) of them utilized their flexed elbow when coughing or sneezing frequently and only (47.4%) of the students stated that they repeatedly wash their hands. Less

than half stated that they repeatedly use alcohol-based sanitizer during this coronavirus pandemic. Whereas our results displayed that 96.6% of students agree that it is significant to use a facemask in overcrowded place, 93% thought that social spacing necessary to avert the spread of COVID-19. 39.3% of them avert going to overcrowded places (such as markets and grocery stores). 85.8 % of participants used a paper napkin or bending the elbow to cover their mouth and nose when coughing or sneezing, and 80.1% clean their hands properly by washing their hands frequently.

Same as our study a research completed among Indonesian nursing students which indicated positive attitudes and implementing and maintaining safe practices regarding Covid-19. (98.0%) of the students wore masks on the other hand (96.4%) of them had not go to any overcrowded place [5]. While in our study (96.6%) of nursing students used a facemask in a crowded place and only (39.3%) avoid going to crowded places.

Alike study done among Indian nursing students showed that most of the students were having positive attitude and good practices concerning COVID 19 [6].

Conversely, a study carried out in Nepal indicated that (57.5%) of nursing students had adequate knowledge and (58.9%) had good practices regarding corona virus infection [7]. Only (68.7%) of students were wash up their hands with soap and water for 20 seconds, (84.6%) of them put on a facemask while going to the overcrowded, and (78.0%) were averting crowded places. Whereas in the present study 80.1% clean their hands properly by washing their hands frequently, 96.6% of participants agree that it is important to put on a facemask in overcrowded places and 39.3% avert going to overcrowded places. Similarly, the majority of Nepalese nursing students (84.1%) always covered their nose and mouth with a tissue or flexed their elbow while sneezing or coughing.

According to results of a study conducted at the University of Palermo (Italy), nursing students have adequate knowledge, positive attitudes, and good practices concerning COVID-19 during COVID-19 pandemic [8].As well these results are somewhat similar to those of our current study.

Also a similar study was conducted in North Eastern Nigeria[9]. concerning the knowledge, attitude, and practices of nursing and midwifery students about COVID-19 displayed good knowledge, positive attitudes, and good practices. (98.1%) of the participants agreed that the epidemic will finally be under control, a few of them (30.8%) avoided large gatherings of people and most of them put on masks when going out (84.6%) and (73.1%) wash up their hands with soap and water more often. While only 51.7% of the students in our study presumed that COVID-19 would eventually be effectively controlled. 80.1% of them cleaned their hands properly by washing their hands frequently, 39.3 % avert going to overcrowded places, and 96.6% agreed that it is essential to use a face mask in overcrowded place.

Another similar study with different findings done among Chinese healthcare students[10] revealed that 67.8% of the students had positive attitudes about managing the disease but were restricted in their preventative practices with respect to controlling the transmission of the disease. Most of the participators (58.6%) stated “good compliance” with 92.7% of them stating that they always put on a facemask.

While a study done among Saudi student nurses [11]showed different findings and it revealed that students had good perceptions of their COVID-19 knowledge and its prevention, but only (72.3%) of them wash up hands with soap and water for a minimum of 20 and (70.1%) covering the mouth and nose with tissue when coughing or sneezing or utilizing the inside of the elbow.

A study accomplished in Northern Ethiopia, among nurses and the results are somewhat similar to our study as it showed that (67%) had a good prevention practice, and (72%) showed a favorable attitude toward COVID-19 outbreaks [13].

5. Conclusion

The results of the study indicated that the study participators exhibited favorable attitude, and moderate level of practice toward COVID-19 prevention.

Recommendations

This study suggests the importance of emphasis on infectious disease in nursing curriculum.

Limitations

The questionnaire shared through Google form link and the data offered was self-reported and dependent on the participants' honesty and recall ability thus, they may be subject to recall bias.

Compliance with ethical standards

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Disclosure of conflict of interest

No conflict of interest.

Statement of informed consent

Taken from Basra Nursing College ethical and scientific committee.

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