

Knowledge, Attitudes, and Practices of Staff and Students at Sulaimani Polytechnic University towards COVID-19/Iraq

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Abstract

COVID-19 is a highly infectious and pathogenic viral disease, its become a global pandemic infection, which is an airborne disease; transmits directly and indirectly between infected cases and other people. Until now, there has been neither vaccine nor specific antivirus medicine against this disease, the only method to prevent the spread of the virus is a preventive practice against the disease, it depends on the knowledge and attitudes of people towards the disease. The online cross-sectional study was undertaken during the pandemic, to estimate Knowledge, Attitudes, and Practices towards COVID-19 among a sample of staff and students at Sulaimani Polytechnic University. Data of 270 adult individuals were collected during June 2020 and analyzed. The male/female ratio was 1:88. The mean scores of knowledge, attitudes, and preventive practices of the participants were 7.4 (SD 1.68), 5.5 (SD 1.15), and 6.7 (SD 2.1) respectively. The results reported significant differences between respondents' knowledge mean score and their gender, and educational background ($P=0.005$ and $P=0.003$ respectively). The attitudes mean score of the staff was significantly greater than the attitudes mean score of the students ($P=0.021$). Likewise, the attitudes mean score was significantly greater in medical subjects compared to non-medical individuals ($P<0.001$). The respondents with age group ≥ 45 had a significantly higher preventive practice compared to the other age groups ($P<0.001$). Similarly, the practices mean score was significantly greater in the staff compared to the students ($P<0.001$). The vast majority of the participants (88.5%) used social media for obtaining knowledge and advice on the disease. The study indicates that the respondents had sufficient knowledge, positive attitudes, and good practice toward COVID-19.

Keywords: *Knowledge, Attitude, Practice, COVID-19, Staff, Students, Sulaimani Polytechnic University.*

Introduction

Coronavirus disease 2019 (COVID-19) is a quickly expanding pandemic, produced by severe acute respiratory syndrome coronavirus 2 (SARS-COV-2). COVID-19 was first diagnosed in December 2019 among cases with viral pneumonia symptoms in Wuhan, China ⁽¹⁾. The disease causes a wide range of clinical appearances in patients, including fever, dry cough,

myalgia, fatigue, and dyspnea. Approximately one-fifth of Chinese patients with COVID-19 progress to the severe stage ⁽²⁾. Elderly persons as well as those with underlying health conditions are at the highest risk for serious infection and death due to COVID-19 ⁽³⁾. World Health Organization (WHO) recommends the most effective preventive measures, including maintaining physical distance, at least 3 feet away from other persons, the hands must be cleaned promptly after contact with the respiratory tract; stop touching eyes, nose and mouth repeatedly; regular cleaning and disinfecting environment and other repeatedly touched surfaces; living space airflow should be improved by opening as many windows and doors as possible; individuals with fever, cough, and dyspnea, should seek immediate treatment ⁽⁴⁾. Vaccine development is estimated to need

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several months, thus management of the crisis depends mainly on people's obedience to the recommended measures taken. These measures are chiefly affected by individuals' knowledge, attitudes, and practices regarding the disease⁽⁵⁾. KAP studies provide standard information to determine the category of intervention that maybe necessary to change misunderstandings about the virus, as well as the development of preventive policies and health promotion programs⁽⁶⁾. The main aim of the current study is to investigate the level of knowledge, attitude, and practice of the staffs and students of Sulaimani polytechnic University, toward COVID-19 infection.

Methods and Material

Subjects and study design

The online-based cross-sectional study was performed from 1 to 30 June 2020, among the staff and the students of Sulaimani Polytechnic University. This study was carried out using an online self-administrated questionnaire which consisted of background characteristics, knowledge, attitudes, preventive practices of participants, and the sources of getting knowledge on the disease. The questionnaire was arranged into a Google Form, the link of the form was sent to the staff via their Gmail of the university, and distributed to Facebook and Viber groups of the students. The subjects were selected through convenience sampling method. The present study involved 270 individuals. University staff who had university Gmail, as well as students who participated in the students' Facebook or Viber groups, were eligible to take part in this study. Most of the knowledge, attitudes, and practice items were developed from the advice of the World Health Organization on Coronavirus disease (COVID-19) for the public⁽⁷⁾. Regarding the scores of knowledge, attitudes, and practices, each correct answer was worth one mark, whereas zero was given for incorrect answers.

Statistical Analysis

Statistical Package for the Social Science (SPSS version 22, IBM Statistics.inc) was used for data analysis, with consideration procedures to secure the high quality of data and reducing error. These involved testing questionnaires, data entry, regularity checked all data collection and entry. To compare between means

of two samples, an independent-sample t-test was used, and a one-way analysis of variance (ANOVA) was used to compare among more than two means. P-value ≤ 0.05 was used to display a level of significance. Quantitative and qualitative variables were reported respectively as a mean \pm standard deviation (SD) and percentage. Texts, Tables, and Figures were used for showing the results.

Ethical considerations

The individuals, who participated in this study, were informed about the purpose of the study, and they were free to engage in the study, as well as, the participation was voluntary. The privacy of the collected data was guaranteed. The study has been accepted by the presidency of Sulaimani Polytechnic University.

Results

Socio-demographic characteristics concerning mean scores of knowledge, attitudes, and practices

Overall 270 individuals participated in this study, 126 (46.7%) were male and 144 (53.3%) were female; the male-female ratio was 1:88.. The mean score of knowledge, attitudes, and protective practices of the respondents was 7.4 (SD 1.68), 5.5 (SD 1.15), and 6.7 (SD 2.1) respectively. The range of knowledge, attitudes, and preventive practices of the subjects were 9 (1-10), 6 (1-7), and 8 (1-9) respectively. The results indicated significant differences between respondents' knowledge mean score, and their gender, and educational background (P=0.005, and P=0.003 respectively). Regarding attitudes, the mean score of the staff was higher than the mean scores of the students, as well as the mean scores of the medical individuals, which were higher compared with the non-medical individuals. These differences were statistically significant (P=0.021, and $p < 0.001$ respectively). Concerning safe practices, the age group ≥ 45 had a greater safe practice mean score compared to the other age group (P<0.001). Also, the staff had a greater mean score than students (P<0.001).

Participants' knowledge regarding COVID-19

The results reported that the respondents were aware of COVID-19 (Table 1).

Table 1. Participants' knowledge regarding COVID-19 (Number = 270)

Participants' knowledge items	Number	Percent
COVID-19 is transmitted by close contact with the infected person (True)		
True	220	81.5
False	26	9.6
Unsure	24	8.9
Fever, cough, sore throats and shortness of breath are possible symptoms of COVID-19 (True)		
True	218	80.7
False	22	8.1
Unsure	30	11.1
Covid-19 may cause a loss of taste and smell (True)		
True	153	56.7
False	34	12.6
Unsure	83	30.7
Vaccine is available in the markets (False)		
True	32	11.8
False	193	71.5
Unsure	45	16.7
Antibiotics are the first-line treatment (False)		
True	70	25.9
False	123	45.6
Unsure	77	28.5
Washing hands with soap and water, and using face masks can help in the prevention of disease transmission (True)		
True	266	98.5
False	3	1.1
Unsure	1	0.4
Patients with underlying chronic diseases are at a higher risk of infection and death (True)		
True	223	82.6
False	20	7.4
Unsure	27	10.0
Healthcare workers are at a higher risk of contracting COVID-19 (True)		
True	244	90.4
False	10	3.7
Unsure	16	5.9
COVID-19 could be fatal (True)		
True	197	72.9
False	31	11.5
Unsure	42	15.6
The maximum incubation period of the COVID-19 is: (Up to 14 days)		
Up to 7 days	17	6.3
Up to 14 days	187	69.3
Up to 28 days	26	9.6
Don't know	40	14.8

Respondents' attitudes toward COVID-19

Overall, the respondents had a positive attitude toward COVID19 (Table 2).

Table 2: Respondents' attitudes toward COVID-19 (Number = 270)

Respondents' attitudes items	Number	Percent
Infection with the virus is associated with stigma (Disagree)		
Agree	18	6.7
Disagree	244	90.4
Unsure	8	3.0
People can get infected If they contacted an infected patient despite their strong beliefs (Agree)		
Agree	230	85.2
Disagree	15	5.5
Unsure	25	9.3
People can get infected If they contacted an infected patient despite their good immunity (Agree)		
Agree	229	84.8
Disagree	18	6.7
Unsure	23	8.5
Buying medical glove and face masks are necessary for this disease (Agree)		
Agree	237	87.8
Disagree	25	9.3
Unsure	8	3.0
People are worried about family members may get an infection (Agree)		
Agree	240	88.9
Disagree	21	7.8
Unsure	9	3.3
If I feel getting COVID-19, I will visit a hospital (Agree)		
Agree	232	85.9
Disagree	16	5.9
Unsure	22	8.2
People think the media coverage about this disease inflated (Disagree)		
Agree	151	55.9
Disagree	87	32.2
Unsure	32	11.9

Participants' practices towards COVID-19

Majority of the subjects followed safe practices toward COVID-19 (Table 3).

Table 3. Respondents' practices toward COVID-19 (Number = 270)

Practices of the respondents against COVID-19	Number	%
Avoid handshaking (Yes)		
Yes	195	72.2
No	75	27.8
Wash hands with water and soap for at least 20 seconds regularly (Yes)		
Yes	205	75.9
No	65	24.1
Use of disinfectants to clean hands when soap and water was not available for washing hands (Yes)		
Yes	216	80.0
No	54	20.0
Covering mouth and nose when I cough or sneeze (Yes)		
Yes	239	88.5
No	31	11.5
Wearing a face mask and glove when leaving home (Yes)		
Yes	178	65.9
No	92	34.1
Avoid going to crowded places (Yes)		
Yes	230	85.2
No	40	14.8
Avoiding touching my eyes, nose, and mouth with unwashed hands (Yes)		
Yes	218	80.7
No	52	19.3
Keeping at least one meter between me and other persons outside my household (Yes)		
Yes	151	55.9
No	119	44.1
I eat healthy food, such as fruit, vegetables, bean or meat regularly (Yes)		
Yes	164	60.7
No	106	39.3

Sources for getting knowledge

The participants in the current study used more than one source for receiving information on COVID-19. The figure illustrated that the respondents highly used social media followed by television and radio, as well as the ministry of health, for obtaining knowledge (88.5%, 81.1%, and 74.8% respectively) (Figure1).

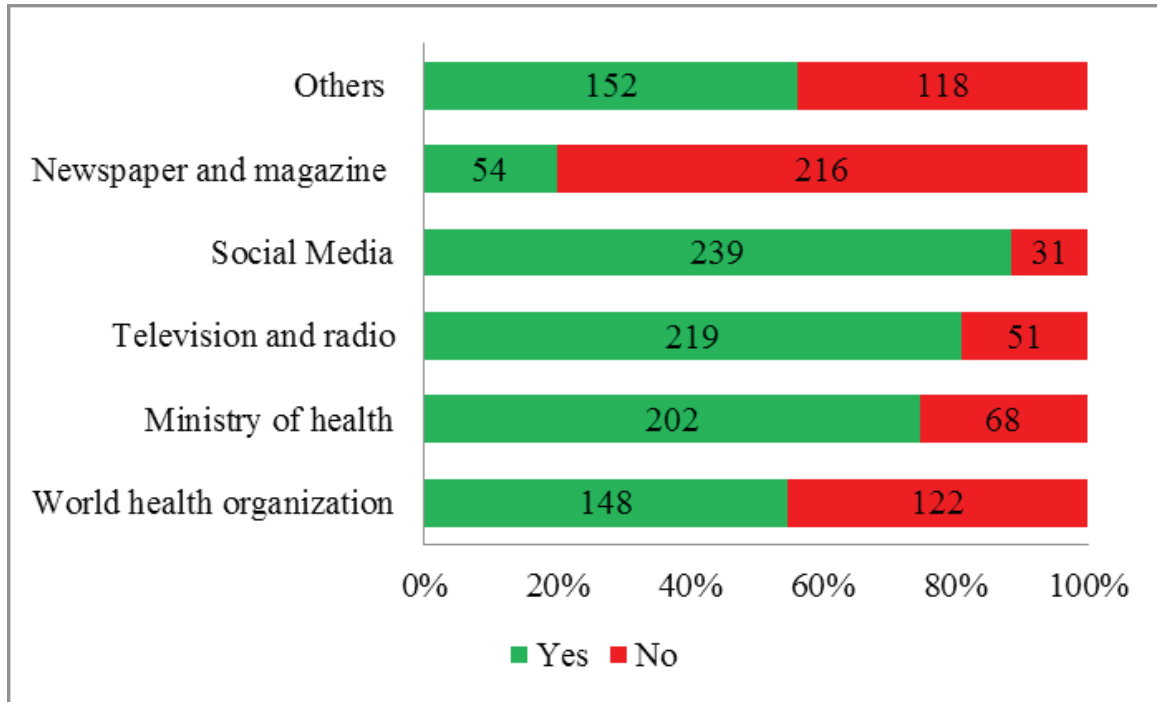


Figure1. Frequency of Knowledge sources

Discussion

Knowledge, attitudes, and practices mean scores of participants regarding their socio-demographic characteristics

The current study indicated that there were significant differences between males and females in relation to knowledge (P=0.005), males had a greater knowledge mean score than females, this finding was in agreement with a result of a study that was carried out in China (8). The present study demonstrated significant differences between mean score among medical and non-medical respondents in related to knowledge and attitudes toward COVID-19, medical individuals had a greater score than non-medical subjects (P=0.021, and p<0.001 respectively), our findings are inconsistent with the results of a study was undertaken in Jordon (9) this is maybe due to the medical individuals in the present study had more enthusiasm toward the disease. The current study reported significant differences between the mean score of safe practices and ages of participants

(P<0.001), this result is in concordance with the finding of a study was conducted in Saudi Arabia(10).

Respondents’ knowledge toward COVID-19

The results indicated that the respondents were aware of COVID-19, this figure is in agreement with the findings of two studies that were conducted in China and Bangladesh (4, 11). Furthermore, a study found that the majority of people were knowledgeable about COVID19(10). This is maybe due to the nature of the disease, which is a severe and fatal disease, and the COVID-19 viruses have the ability to infect any individuals regardless of their age, gender, race, and geographical location. These factors encourage people to seek and ask for scientific information and advice about the main features of the disease, its effects, and how do protect themselves from this malady.

Participants’ attitudes toward COVID-19

Overall the participants had an optimistic attitude

toward the disease. Likewise, the results of two other studies indicated that people had positive attitudes toward COVID-19 ^(1, 10). The participants in our study had adequate knowledge of COVID-19, which had a positive effect on their attitudes. A study found that good knowledge about COVID-19 is associated with positive attitudes and suitable practices toward COVID-19 ⁽²⁾. On the other hand, over half of them believed that media coverage exaggerated the disease. On the contrary, a study was carried out in Egypt that showed, that three-quarters of the subjects believed the media coverage did not overstate COVID-19 ⁽⁵⁾. In a fact, the media are doing well, covering the main aspects of the disease. Frequently broadcasting, scientific information and news on this fatal infectious disease is a good way to encourage people to obey instructions of the Ministry of Health.

Subjects' practices toward COVID-19

Totally, the remarkable number of the respondents, followed protective practices against COVID-19, this finding is in agreement with the result of a study that was carried out in Pakistan ⁽¹²⁾. The majority of the respondents in the current study had a great knowledge score toward the disease, two studies reported that higher knowledge scores related to higher preventive practices toward COVID-19 ^(4, 12). However a bulk number of the subjects followed safe practices toward the disease, yet some participants did not comply with the protective practice against the disease, such as keeping a social distance (44%), wearing face mask and gloves (33.1%), avoiding handshaking (27.8%), washing hands (24.1), and avoid crowding places (14.8). Which increased the chances of spread and transmission of the disease among people ⁽¹³⁾.

Sources for getting knowledge

Social media was the most common source for receiving knowledge about COVID-19, this result is consistent with the findings of two studies that were performed in Egypt and Pakistan ^(5, 12). The Internet has increasingly become an accepted source of health information by connecting people with health content, specialists, and support ⁽¹⁴⁾. In addition, physicians and health professionals give to online health information ⁽¹⁴⁾.

Conclusions

The participants in this study had sufficient knowledge and a positive attitude toward COVID-19. Similarly, the majority of the subjects followed preventive practices against COVID-19. Middle age individuals had a good practice toward the disease. The most common sources for obtaining knowledge were social media, television and radio, and the Ministry of Health.

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Conflict of Interest: Nil

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