

Assessing Knowledge, Attitude and Practice (KAP) towards COVID-19 among Dhaka City Residents

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Abstract

Background: Bangladesh has adopted some special steps to control the rapid spread of the COVID-19 pandemic situation. However, the local resident's knowledge, attitudes and practices towards COVID-19 play an important role in defining a society's eagerness to accept behavioral change measures from health authorities.

Objective: To assess the level of knowledge, attitude and practice of residents towards the COVID-19 disease.

Methods: This was a online survey which was descriptive cross-sectional in nature regarding the knowledge, attitudes and practices of respondents towards COVID-19. It was conducted from the 1st February 2020 to 31st July 2020. Data were collected by online using Google Forms. A total of 54 participants participated in the study.

Result: Among all the respondents most 29(53.7%) were within 18-30 years age group. Mean age was 31.26(SD ±11.01) years, minimum 18 years and maximum 55 years. Female respondents were more(77.8%) in number than male. A total of 30 questions were asked to assess knowledge, attitude and practice regarding COVID-19 disease. Mean knowledge score was 13(±1.37) and 81.5 % had good knowledge. Mean attitude score was 7.20(±0.07) and 98.1 % had good attitude. Regarding practices 74.1% of the respondent had good practice and mean score was 6.09(±1.03).

Conclusion: Though about 74.1% of total respondents had good practice towards preventive measures of COVID-19 but all of them are Dhaka city resident, so more awareness campaign should be conducted focusing on the residents in rural area to cover their knowledge gaps and motivation for appropriate practice.

Key words: COVID-19 Disease, Pandemic, Knowledge, Attitude, Practice, Dhaka city

Introduction

The knowledge, attitudes and practice towards COVID-19 play an important role in defining a society's eagerness to accept behavioral changes measures from health

authorities.^{1,2} The highly infectious novel corona virus disease that was first identified Wuhan, China, the causative agent was initially named as 2019 novel corona virus (2019-nCoV). Which later was renamed as SARS-CoV-2 and the disease it caused was named as corona virus disease 2019 (2019-nCoV).^{3,5} On 30th January World Health Organization (WHO) declared that the outbreak constitutes a Public Health Emergency of International Concern (PHEIC) and as global pandemic on 11th March 2020.^{5,6} The COVID-19 pandemic is associated with increasing morbidity and mortality and has impacted the lives of the global population.^{5,7} SARS-CoV-2 is an enveloped non-segmented RNA virus.^{3,8} Among the six corona viruses known to infect humans generally are responsible for mild respiratory symptoms similar to that associated with the common cold while SARS-CoV-2, SARS-CoV and MERS-CoV are implicated to cause lethal respiratory infection.⁸ Through the natural reservoir of SARS-CoV-2 remains obscure bat has been implicated to be the source of SARS-CoV-2 based on its 96.2% genomic similarity with the bat corona virus COV Ra T-G 13.^{9,10} The COVID-19 virus is transmitted mainly through close physical contact and respiratory droplets, while airborne transmission is possible during aerosol generating medical procedure.¹¹ SARS-CoV-2 invades lower respiratory tract cells using the angiotensin-converting enzyme 2 (ACE-2) receptor.¹² The incubation period of the SARS-CoV-2 is 1-14 days and individuals with asymptomatic infection were

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found to spread the disease.¹³ SARS-CoV-2 infection could result in mild to severe respiratory illness (often flu like) commonly manifested by dry cough, fever, myalgia and in severe cases by difficulty in breathing and sometimes symptoms referable to other organ system.¹⁴ Global Health Expert and South Asia Governments have expressed concern about the spread of COVID-19 and potential for more than 7.6 million deaths in south Asia if no action taken.⁷ As part of its preparation for facing the pandemic the Government of Bangladesh had put in place several precautionary measures including limitation of on arrival visa, strengthening the health screening services at the point of entries. On the 1st of February, 312 Bangladeshi returned from Wuhan¹⁵ and this group of returnees were placed under 14 days formal institutional quarantine before being allowed to go home. Despite of all efforts taken by the country, Bangladesh reported its first case on March 8, 2020 and number began to rise from April, 2020. The first confirmed case of COVID-19 in Bangladesh was reported on 8th March 2020 there after each day increasing number of COVID-19 patients were detected.^{16, 17} To limit the spread of disease all educational institutes were declared closed from 17th March 2020. In addition different stakeholders initiated awareness building programs using audio-visual methods, radio, television, cable network and social media targeting prevention of COVID-19 throughout the country. Human knowledge and behavior about disease is often critical for the success in efforts for containing a disease outbreak. Pandemic situations are often followed by infodemics, large amounts of fabricated, fictitious information circulate on social media relating to mode of infection, the disease itself and means of disease prevention, in such context knowledge and behavior assessment the public is essential for success of awareness programs¹⁸. People are in general willing to maintain social distance and quarantine which can slow down the infection, although they have high anxiety about possible infection, which can be reduced through increasing awareness and addressing mental health issues. Younger respondents are likely to be asymptomatic when infected and could be unaware they are putting others at risk. On the other hand, chances of infection and the severity of illness are much with aged people. Studying individual awareness can motivate people to practice the preventive measures. Behavioral changes refers to knowledge (what is known), Attitude (what is thought) and practices (what is done). A KAP survey of any community in relation to a particular topics serves as an educational diagnosis of that population through examining what people know, what they believe and how they behave.¹⁹⁻²¹ KAP is a very common tool used in health-seeking research.²² This KAP study explores what Bangladeshi citizens know about COVID-19 symptoms and prevention, how they view the socio-cultural effects of the disease, and what practices they use to prevent the infection. Understanding the KAP of the local citizen might enable the government and other authorities to introduce and implement 'a more efficient process of awareness creation programs' which will more

appropriately address the interventional needs of the community.²² However this finding will be effective and tailored health education programs aimed at improving COVID-19 knowledge, thereby leading to more favorable attitudes and to implementation and maintenance of safe practices.

Materials and Methods

This was a cross-sectional online survey regarding the knowledge, attitudes and practices of citizen towards COVID-19. It was conducted from 1st February 2020 to 31st July 2020. An online survey was prepared using one of the popular Google tools called Google Forms. The link to the questionnaire was shared on various social media applications like Messenger, WhatsApp and Viber. Any residents in Dhaka city, more than 18 years old and minimum SSC pass were included in this study. Participants who gave consent and willingly participate in the survey would be directed to complete the self-administered questionnaire. A total 54 respondents were included in the study. A brief introduction on the objectives, declarations of anonymity and confidentiality was given prior to filling the questionnaire. The questionnaire consists two section including socio-demographics and KAP inquires. Demographic information included age, gender, religion, occupation and level of education. KAP section consisted of 30 questions, among which 15 questions (Response taken as yes/no/don't know) for assessment of knowledge regarding clinical symptoms and transmission route of COVID-19. Total 8 questions (response taken as yes/no/don't know) for assessment of attitude and another 7 questions (response taken as yes/no/occasionally) for assessing practice. A note appeared in the link that a participants was to fill in all items otherwise they would not be able to proceed and on completion they were to click the submit button. Each correct answer was given one point and wrong answer and don't know responses given zero point. Total knowledge score ranging from 0 (no correct answers) to 15 (all correct answers), attitude score ranging from 0 (no correct answers) to 8 (all correct answers) and practice score ranging from 0 (no correct answers) to 7 (all correct answers). Bloom's cut of 80% was used to determine whether the respondent had good or bad knowledge (score 12) positive attitude (score 6.4=6) and good practice (score 5.8=6) or not.²³ After collecting data responses were scored and analyzed through SPSS (Version-26) software.

Result

Table 1: Distribution of the respondents according to age groups (n=54)

Age groups (In years)	Frequency	Percentage
18-32	29	53.7
33-47	21	38.9
48-55	04	7.4
Total	54	100
Mean age was 31.26(SD ±11.01) years, minimum 18 years and maximum 55 years		

Table 1 shows that majority (53.7%) respondents were within 18 to 32 years age group and mean age was 31.26(SD ±11.01) years, minimum 18 years and maximum 55 years.

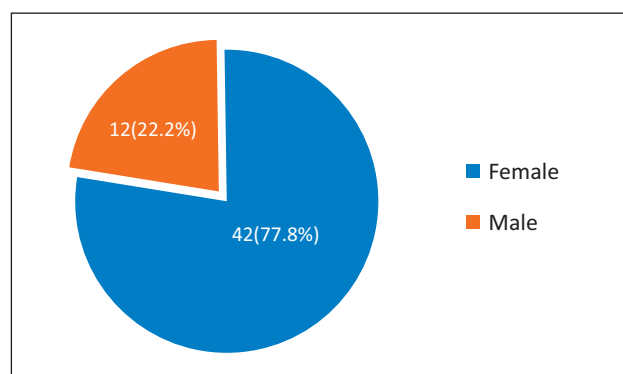


Figure 1: Distribution of the respondents according to sex (n=54)

Figure 1 shows that 42 (77.8%) were female and rest (22.2%) were male.

Table 2: Distribution of the respondents according to religion (n=54)

Religion	Frequency	Percentage
Islam	52	96.3
Hinduism	02	3.7
Total	54	100

Table 2 shows that among all the respondents most i.e. 96.3% were Muslims and rest (3.7%) were Hindu.

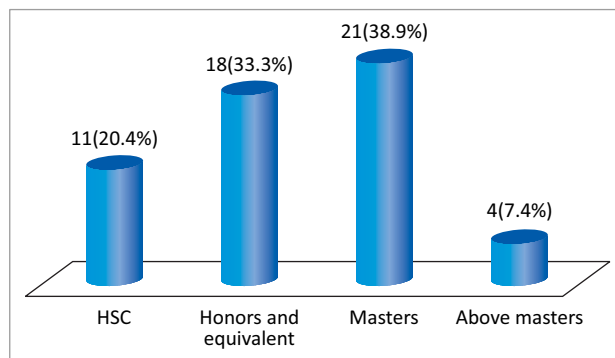


Figure 2: Distribution of the respondents according to educational qualification (n=54)

Figure 2 shows that 21(38.9%) respondents completed master degree, about 20.4% completed HSC and 18(33.3%) completed honors and equivalent level.

Table 3: Distribution of the respondents according to occupation (n=54)

Occupation	Frequency	Percentage
Home Maker	03	5.6
Non-government services	15	27.8
Government services	04	7.4
Business	07	13.0
Student	21	38.9
Others	04	7.4
Total	54	100

Table 3 shows that majority(38.9%) were student and 27.8%, 13.0% & 5.6% were Non-government services holder, Businessman & home maker respectively.

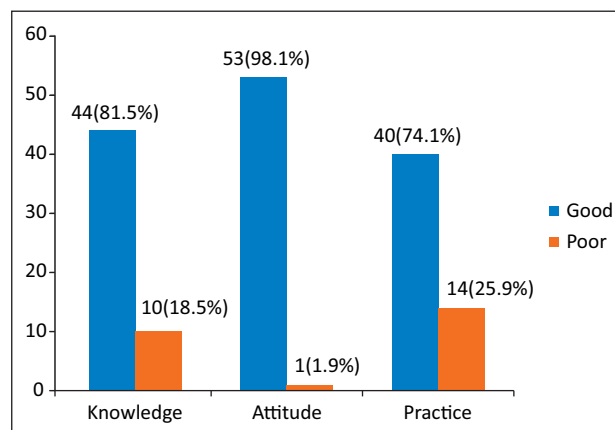


Figure 3: Distribution of the respondents according to level of knowledge, attitude and practice

Figure 3 shows that among the respondents 44 (81.5%) had good knowledge, about 98.1% had good attitude and 74.1% had good practice regarding Covid-19 disease.

Table 4: Association between Gender with knowledge, attitude and practice (KAP)

Attributes	Knowledge			Attitude			Practice		
	Poor f(%)	Good f(%)	p	Poor f(%)	Good f(%)	p	Poor f(%)	Good f(%)	p
Male (n=12)	3 (25.0)	9 (75.0)	0.51	0 (0.0)	12 (100.0)	0.59	5 (41.7)	7 (58.3)	0.15
Female (n=42)	7 (16.7)	35 (83.3)		1 (2.4)	41 (97.6)		9 (21.4)	33 (78.6)	

Table 4 shows that 83.3% female & 75.0% male had good knowledge, on the other hand 100% male & 97.6% female has good attitude and 58.3% male & 78.6% female had good practice regarding Covid-19 disease. There are some differences between male and female respondents but these differences are not statistically significant.

Table 5: Correlation between monthly family income and knowledge, attitude and practice

Attributes		Monthly income after Covid-19	Knowledge	Attitude	Practice
Monthly income after Covid-19	Pearson Correlation	1	0.126	0.176	0.303
	Sig. (2-tailed)		0.366	0.204	0.026*
	N	54	54	54	54
Knowledge	Pearson Correlation	0.126	1	0.105	0.199
	Sig. (2-tailed)	0.366		0.451	0.148
	N	54	54	54	54
Attitude	Pearson Correlation	0.176	0.105	1	0.325
	Sig. (2-tailed)	0.204	0.451		0.017*
	N	54	54	54	54
Practice	Pearson Correlation	0.303	.199	0.325	1
	Sig. (2-tailed)	0.026	0.148	0.017	
	N	54	54	54	54
*Correlation is significant at the 0.05 level.					

Table 5 shows that monthly family income is significantly correlate ($p < 0.05$) with practice.

Discussion

In this cross-sectional study, all of the respondents, showed a good sense of knowledge, attitudes and practices towards the current pandemic of COVID-19. A brief percentage distribution of variables in this study is given. It is observed

that the percentage of female and male respondents are 77.8% and 22.2% respectively, indicating a different level of representation. Female are more willing to participate than male. Other study shows that female participant is more than male.²⁴ Among them 53.7% are within 18-32 years age group due to their eagerness. Another study shows that in this age group are more enthusiastic.²⁴ From religious view 96.3% are Muslim because of it is a Muslim predominant country. Regarding educational qualification, 38.9% completed masters and regarding occupation majority(38.9%) are students. Among all the respondents, 81.5% had good knowledge 98.1% had good attitude and 74.1 % had good practice towards the COVID-19. In the discussion of COVID-19 related knowledge items are higher than the previous studies.^{25,26} And similar to another study which is reported 82.85% had good knowledge.²⁴ In this study there are 54 respondents in total and mean age is 31.26(± 11.01) years. The mean income is decreases during COVID-19 and it may be due to repeated lockdown to prevent the spread of infection & many people are terminated from their job.

Conclusion

The health awareness programs, that are designed after pandemic declaration by WHO, played a vital role in improving the knowledge of the population, attitudes encouragement and sustaining the safer practices towards this COVID-19. In fact this disease played a role of game changer in changing KAP in residents.

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