

## Original Article



# Knowledge, Attitude and Practices Among Medical Students And Their Family Members Towards The COVID-19 Pandemic: An Online Based Cross-Sectional Study

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### Abstract

**Background:** COVID-19 is an emerging infectious disease which has created a global health emergency status.

*It is now super spreading in the community of Bangladeshi population causing morbidity and mortality amongst masses.*

**Objectives:** The aim of this study is to find out the knowledge, attitude and practices of medical college students and their family members towards the Covid-19.

**Materials & Methods:** This online cross sectional study was conducted from the 15 April to 30 April 2020 during the lockdown period in Bangladesh. Collected data was analyzed by using SPSS IBM version 22.0.

**Results:** A total of 517 responses were obtained. The majority of the population 326 (63.06%) were female and 352 (68.09%) belonged to an age group of 21-30 years.

This study has revealed that 412(79.69%) believe COVID-19 affect all age group, 311(60.15%) thinks that it affect the elder people seriously, 215(41.59%) thinks specific treatment is not available for COVID-19, Greater part of respondents 256(49.52%) says COVID-19 infection is preventable, 452(87.43%) gives positive opinion about government lockdown to avoid further spread of infection and 402(77.76%) believes physical distancing is helpful to prevent spread of this disease. Regarding 14 days quarantine period 375(72.53%) give positive answer, 425(82.20%) says COVID-19 affects world economy badly, 298(57.64%) thinks the situation may be controlled soon.

**Conclusion:** Since prevention is better than cure, hence an increasing need of awareness amongst the local population regarding COVID-19 is required. Further extensive survey studies are required in future that can provide supportive data in developing and implementing public health policies regarding COVID-19 pandemic in our country.

**Key words:** Attitude, COVID-19, Knowledge, Practice, Medical Students.

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Bangladesh is one of the top 20 countries in terms of confirmed cases of COVID-19, with a positive case rate of 19.09%-22.91% as of June 1, 2020.<sup>1</sup> However, regarding the actual number of cases and the scarcity of testing facilities a lot of question arises.<sup>2</sup> People also show concerns about Bangladesh's ability to mount an effective response to the COVID-19 pandemic.<sup>3</sup> Reports of different newspaper states that Bangladesh is a developing economy and is mainly dependent on remittances, ready-made garments, and small trades. The country is mid-phase in a few financial mega projects.<sup>4</sup> Natural calamities and COVID-19 pose challenges for the Bangladeshi government and its residents at home and

abroad.<sup>5</sup> Due to economic concerns, Bangladesh did not impose a country wide lockdown from the very beginning.<sup>6</sup> Newspaper and social media along with government news briefing helped a lot to improve the individual awareness and thereby alleviate unnecessary fears and social stigmas.<sup>7</sup>

The history of pandemic has been well known to the people of this world with its first ever encounter through a viral outbreak reported in 1918. This was known as Spanish flu with H1N1 influenza virus being the causative agent. The viral outbreak affected as many as 500 million people across the world with

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a massive rise in death toll shooting from 17 to 50 million.<sup>8</sup> A similar situation was faced in 2009 by the spread of H1N1 Swine flu during 2009-2010. In which around 6.8 billion people were affected and nearly 5 million people died. In recent times, COVID-19 outbreak is accounted as a global issue with a health emergency like situation. This has been closely associated with unprecedented outburst of pneumonia with an etiology previously not known well. The viral outbreak was first reported in Wuhan City, of Hubei province in the last month of year 2019. Following the findings of this disease, a novel corona virus was identified as the sole agent. Later the World Health Organization named it as COVID-19. This has shown close association with previous outbreaks reported under, severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS).<sup>9,10</sup>

### Materials and Methods

This online cross sectional study was conducted from the 15 April to 30 April 2020 during the lockdown period in Bangladesh. At that time physical interaction for questionnaire distribution and filling was not possible to have the community based survey.

For the purpose of sample collection, a two pages questionnaire was generated by consulting the recent published studies.<sup>11,12</sup>

Further, sample collection proforma was uploaded on the Google forms and links were shared on different social platforms like Whats App, Face Book, LinkedIn, Twitter etc. Authors have also sought help from their available reliable connections to distribute this sample collection form in order to get maximum response from the volunteer participants. Only participants who were eighteen years of age or above were allocated for the data collection based on their understanding. No area was confined to allow maximum data collection throughout the region. Respondents had to respond either in "Yes" or "No" or "May Be" in order to confirm their participation voluntarily. Once approval of voluntary participation was confirmed participants were navigated to the sample collection instrument. The sample collection form was divided into the three parts. First section dealt with demographic information including: Name, age, gender, marital status, education and residence. Second section broadly covered knowledge, attitude and practice analysis which included various questions. Third section had some multiple choice answers. Collected data was analyzed by using SPSS IBM version 22.

### Results

A total of 517 responses were obtained. Considering the socio demographic information the majority of the population 326 (63.06%) were female and 352 (68.09%) belonged to an age group of 21-30 years. Most of the 318 (61.51%) participants are HSC pass and majority 346 (72.73%) are unmarried (Table-I).

**Table I:** Demographic profile of the participants ( n=517)

Gender (n 517)	Male 191(36.94%)	Female 326 (63.06%)			
<b>Educational qualification</b>	<b>SSC</b> 30 ( 5.80%)	<b>HSC</b> 318 (61.51%)	<b>Graduate</b> 97 (18.76%)	<b>Post graduate</b> 72 (13.93%)	
<b>Age</b>	<b>21-30yrs</b> 352(68.09%)	<b>31- 40 yrs</b> 39(7.54%)	<b>41-50yrs</b> 42(8.12%)	<b>50- 60 yrs</b> 53(10.25%)	<b>Above 60 yrs</b> 31(6.00%)
<b>Marital status</b>	<b>Married</b> 171 (33.07%)	<b>Unmarried</b> 346 ( 72.73%)			

This study has revealed that 412(79.69%) believe COVID-19 affect all age group, 311(60.15%) thinks that it affect the elder people seriously. Considering treatment 215(41.59%) thinks specific treatment is not available for COVID-19. Greater part of respondents 256(49.52%) says COVID-19 infection is preventable, 452(87.43%) gives positive opinion about government lockdown to avoid further spread of infection (Table-II).

**Table II:** Questionnaire regarding knowledge, attitude, practice of the participants ( n=517)

Question number	Questions	Yes	No	May Be
1	Do you think COVID-19 affect all age group?	412(79.69%)	68(13.15%)	37(7.16%)
2	Only elder people are affected seriously	311(60.15%)	194(37.52%)	12(2.32%)
3	Specific treatment is available for COVID-19 Virus	111(21.47%)	215(41.59%)	191(36.94%)
4	COVID-19 infection is preventable	256(49.52%)	149(28.82%)	112(21.66%)
5	Government has declared lockdown to avoid further spread of infection	452(87.43%)	---	65(12.57%)
6	Physical distancing is helpful to prevent spread of disease	402(77.76%)	56(10.83%)	59(11.41%)
7	Is there any diagnostic facilities available in your neighboring area?	17(3.29%)	456(88.20%)	---
8	Dry cough, fever, fatigue and difficulty in breathing are the symptoms of COVID-19 infection	225(43.52%)	36(6.96%)	256(49.52%)
9	Early supportive and symptomatic treatment can be helpful in cure of COVID-19 infection	241(46.62%)	69(13.35%)	207(40.04%)
10	Isolation from the people who are infected with the COVID-19 virus is an effective way to reduce the spread of the virus.	256(49.52%)	46(8.90%)	215(41.59%)
11	People who have interaction with someone having this infection should be immediately isolated for 14 days as an quarantine period.	375(72.53%)	59(11.41%)	83(16.05%)
12	COVID-19 pandemic affects the In prevailing scenario	425(82.20%)	51(9.86%)	41(7.93%)

13	people are facing trouble in getting their basic necessities (food/rations etc)	222(42.94%)	82(15.86%)	213(60.35%)
14	COVID-19 pandemic affects mental health of population (depression, anxiety, loss of interest etc.)	298(57.64%)	13(2.51%)	206(39.84%)
15	Do you think this infection can be controlled soon?	102(19.73%)	196(37.91%)	298(57.64%)
16	Are you satisfied by current practices and initiatives taken by the government?	156(30.17%)	196(37.91%)	165(31.91%)
17	Herbal plants can be used treat COVID-19	172(33.27%)	199(38.49%)	146(28.24%)
18	People are serious about present situation and following preventive measures advised by authorities	189(36.56%)	201(38.88%)	127(24.56%)
19	You acknowledge the efforts of researchers/healthcare providers (doctors, pharmacist, nurses, allied staff) for their society	401(77.56%)	---	116(22.43%)
20	There is need of more general awareness about COVID-19 pandemic	456(88.20%)	---	61(11.80%)
21	Do you wash hands for 20 seconds for washing hands	397(76.79%)	18(3.48%)	102(19.73%)

Exercise, yoga and walk	65 (12.57%)
Reading	106 (20.50%)
Cooking	23 (4.46%)
Indoor games	25 (4.83%)
Avoid junk food, eating fresh fruits and healthy diet	71 (13.73%)
Maintain personal hygiene	128 (24.76%)
Sleep	99 (19.15%)

Most of participants 298(57.64%) give positive response that COVID-19 pandemic affects mental health of population (depression, anxiety, loss of interest etc.), 298(57.64%) thinks the situation may be controlled soon while 196(37.91%) says it will not be controlled soon. Majority 196(37.91%) are not satisfied by current practices and initiatives taken by the government. Almost all participants 401(77.56%) acknowledge the efforts of researchers/healthcare providers (doctors, pharmacist, nurses, allied health professionals and paramedical staff) for their society, while 116(22.43%) are in dilemma saying may be. Most 456(88.20%) of the participants think there is need of more general awareness about COVID-19 pandemic and 397(76.79%) wash hands for 20 seconds and follow recommended procedure for washing hands (Table-II). Most 398 (76.98%) people heard about this disease from news channel, 450 (87.04%) thinks it is caused by a virus, 295 (57.06%) opted for wearing masks to prevent the infection and 128 (24.76%) answered that maintaining personal hygiene can improve mental health (Table-III).

**Table III:** Questionnaire with multiple choice answer regarding knowledge, attitude, practice of the participants (n=517)

<b>From where you heard about this disease?</b>	
News Channels	398 (76.98%)
Social Media	102 (19.73%)
Family	12 (2.32%)
Others	5 (0.97%)
<b>In your opinion, reason of COVID-19 is</b>	
Caused by a virus	450 (87.04%)
By eating infected food	19 (3.67%)
Public gathering	26 (5.03%)
Poor immunity	22 (4.26%)
<b>infection</b>	
Social/physical distancing	109 (21.08%)
Wearing mask	295 (57.06%)
Hand wash for 20 seconds	113 (21.86%)
<b>Healthy activities adopted during quarantine to improve mental health</b>	

### Discussion

This study was targeted for the medical students and their family members who had enough time to go through the questionnaire during lockdown period. Hence majority of the population in this study is educated. Numbers of female medical students are more than male. Current study indicates that the community is well informed and has good knowledge about the COVID-19. News channels and social media like facebook, whats app, twitter, viber etc have played a significant role in this regard, to make communities familiar with COVID-19 pandemic.<sup>11,13</sup> However, this study has several limitations i.e. only literate people were accessible through online portals and to fill the form. Participants needed to have an account to access the questionnaire and dissemination of the sampling instrument only through an online platform.<sup>14</sup> Majority of the population stated that COVID-19 is transmitted through respiratory droplets, can affect all age groups and elderly people were more prone to develop severe infection which could lead to death.<sup>15</sup> Public was well aware about the signs and symptoms of the COVID-19 infection which included dry cough, fever, fatigue and difficulty in breathing.

Many participants of this study were unsure if COVID-19 infection is preventable and early supportive treatment and isolation of the infected patient is helpful in controlling the spread or not. For COVID-19 infection no specific treatment available and a large number of the respondents agreed on this point.<sup>16</sup> Quarantine or social distancing is helpful in reducing the number of COVID-19 cases. In the prevailing scenario, the government deemed that lockdown could be a best option which may prove beneficial in controlling the infection and declared countrywide lockdown. Many people respect this decision and keep themselves under the lockdown but still there are people who didn't take this health emergency seriously. We often found people are roaming here and there without wearing masks. These people are at high risk to have infection and become a source of spreading COVID-19 infection which may result into a hindrance in achieving the goal i.e. controlling the infection.<sup>17,18</sup>

This survey indicates that a small percentage of the respondents admire government initiatives and practices in order to cope with the current situation while remaining are not satisfied. This is the first time authority have faced such a calamity, so there is lot of mis-communication, lack of proper and timely decision. The present study has also highlighted that the public is facing troubles while getting basic necessities (food/rations etc). Hence it is quite difficult to sustain this lockdown for a longer period otherwise it is supposed that people may face issues to have basic necessities.<sup>19,20</sup> Although government took initiative to distribute relief, but it is quite impossible to serve food to millions of people during lockdown only by the administration. There is lack of diagnostic facilities in different parts of the country other

than the capital city Dhaka. Many people also imply herbal medicines to treat various ailments with strong belief for COVID-19 cure. An investigation has suggested that cure of H1N1 and SARS through Chinese traditional medicine is well documented, based on human evidence and historical data and such medicine could be an alternative approach to prevent COVID-19 in high risk communities.<sup>21</sup>

COVID-19 also poses challenges to the mental well-being and resilience of the societies. This current global health emergency has badly impacted the psychological health (i.e. depression, anxiety, boredom, frustration etc.) of the individuals. To deal with it many people have adopted healthy activities which include exercise, yoga, playing indoor games, reading, writing, cooking etc.<sup>22, 23</sup> further launching of many new free online courses in this duration of crisis is also an effective way to keep people (especially students) busy and has opened new doors of learning.<sup>23</sup> The internet bill is very high in our country and there is no subsidy for students or educational institutes like medical colleges or universities. It should be brought under consideration of concerned authorities. Worldwide frontline heroes including the health care providers (doctors, pharmacists, nurses, allied health care professionals and paramedical staff) and researchers are working tirelessly to fight against the COVID-19 by putting their lives at risk. People globally acknowledge their efforts and struggle.<sup>24-26</sup>

## Conclusion

Present study concludes that people are well informed about COVID-19 however still there is need of awareness amongst masses regarding COVID-19 to counteract the spread. People should rather quarantine themselves in order to prevent infection, catering this as a health emergency by keenly observing precautionary measures. However, to keep a mental and physical balance of health, people should adopt healthy activities during the lockdown.

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