

Knowledge and Attitude of Medical Students towards the Corona Virus-19 Pandemic Situation

Ahmad M¹, Rahman FN², Wahab MA³, Anwar ZF⁴, Rahman J⁵

DOI: <https://doi.org/10.3329/jafmc.v16i2.55292>

Abstract

Background: COVID-19 has created a worldwide health emergency status and super spreading in the community of Bangladeshi population causing morbidity and mortality.

Objectives: To find out the knowledge and attitude of medical students towards the Covid-19 pandemic during the lockdown situation.

Methodology: This online cross sectional study was conducted from 1st to 31st May 2020 during the lockdown period in Bangladesh. Sample collection proforma was uploaded on the Google forms and links were shared on different social platforms. Data was analyzed by SPSS IBM version 22.00.

Results: A total of 269 responses were obtained. The majority of the participants 167 (62.1%) were female and 102 (44.6%) belonged to an age group of 20-24 years. Most of the 91(33.8%) participants were 4th years students followed by 87(32.3%) from 3rd year. Majority of participants 230(85.5%) believe COVID-19 affect all age group, 187(69.5%) thinks that it affect the elder people seriously, 115(42.8%) thinks specific treatment may be available for COVID-19, 184(68.4%) says COVID-19 infection is preventable, 242(90%) opted for government lockdown and 225(83.6%) believed physical distancing is needed to prevent spread of this disease. Most of the participants 232(86.3%) complained about absence of diagnostic facilities in their neighboring area, 231(85.9%) thought common sign symptoms included dry cough, fever, fatigue and difficulty in breathing, most 234(87%) of the respondents thinks early supportive and symptomatic treatment can be helpful in cure of COVID-19 infection, 230(85.5%) gave positive opinion about isolation from the people who are infected with the COVID-19 virus is an effective way to reduce the spread of the virus. Regarding 14 days quarantine period 222(82.5%) give positive answer, 169(62.8%) thought COVID-19 would affect world economy badly, 172(63.9%) thought common people are facing problem to collect daily needs, 184(68.4%) gave positive response that COVID-19 pandemic affects mental health of population, 93(34.6%) thought the situation may be controlled soon, majority 97(36.1%) answered they may be satisfied by current practices and initiatives taken by the government, almost all participants 265(97.4%) appreciated

the efforts of healthcare providers for their society, 262(97.4%) of the participants thought there is need of more general awareness about COVID-19 pandemic and 260(96.7%) recommended procedure for repeated washing hands.

Conclusion: An increasing awareness is needed amongst the local population regarding COVID-19 is required. It will lend hands in preventing spread of COVID-19 with minimal secondary transmission. More elaborate 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: COVID-19, knowledge, Attitude, Medical students.

Introduction

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. In Bangladesh, the first confirmed case was reported on 8 March 2020. Infection stayed low until the end of March but saw a steep rise in April 2020¹. However, a number of questions arises regarding the actual number of cases and the lack of testing facilities² and people show concerns about government's ability for effective response to this pandemic³. Reports of different newspaper states COVID-19 is a challenge for the developing economy of Bangladesh and its residents at abroad, which mainly depends on ready-made garments exports and remittances^{4,5}. Bangladesh authority did not impose countrywide lockdown during early period⁶. Newspaper and social media along with government news briefing helped a lot to improve individual awareness and thereby alleviate unnecessary fears and social stigmas⁷.

The history of pandemic by Spanish flu with H1N1 influenza virus in 1918 affected as many as 500 million people across the world with a massive rise in death toll shooting from 17 to 50 million⁸. A similar situation was faced 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. The viral outbreak was first reported in Wuhan City, of Hubei province in the last month of year 2019 and Novel corona virus was identified as the responsible agent. Later the World Health

1. **Col Mushtaq Ahmad**, MBBS, DFM, MCPS, FRSPH, Professor & Head, Department of Forensic Medicine, Armed Forces Medical College, Dhaka (E-mail: mushtaq863@yahoo.com) 2. **Dr Fariat Naima Rahman**, MBBS, DMU, Lecturer, Department of Forensic Medicine, Armed Forces Medical College, Dhaka 3. **Lt Col Md Abdul Wahab**, MBBS, MD, Associate Professor, Dept of Biochemistry, Armed Forces Medical College, Dhaka 4. **Dr Zian Fariba Anwar**, MBBS, MRCP, MRCP (UK) Lecturer, Department of Forensic Medicine, Armed Forces Medical College, Dhaka 5. **Dr Jamiur Rahman**, MBBS, MRCP(UK), Lecturer, Department of Pharmacology, Armed Forces Medical College, Dhaka.

Organization named it as COVID-19. The symptoms coincides with previous outbreaks of severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS)^{9,10}.

Materials and Methods

This cross sectional online study was conducted from 1st to 31st May 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^{11,12}.

Further, sample collection proforma was uploaded on the Google forms and links were shared on different social platforms like WhatsApp, FaceBook, 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. Respondents were students of different medical colleges and they 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. Data was analyzed by SPSS IBM version 22.00.

Results

A total of 269 responses were obtained. The majority of the participants 167 (62.1%) were female and 102 (44.6%) belonged to an age group of 20-24 years. Most of the 91(33.8%) participants were 4th years students followed by 87(32.3%) from 3rd year (Table-I).

Table-I: Demographic profile of the participants (n=269)

Gender (n 269)	Male	Female			
	102 (37.9%)	167 (62.1%)			
Educational qualification	1st year	2nd year	3rd year	4th year	5th year
	23(8.6%)	39(14.5%)	87(32.3%)	91(33.8%)	29(10.8%)
Age	20 years	21 years	22 years	23 years	24 years
	25(9.3%)	37(13.8%)	88(32.7%)	90(33.5%)	29(10.8%)

In this study 230(85.5%) answered COVID-19 affect all age group, 187(69.5%) thought that it affect the older people seriously, 115(42.8%) thinks specific treatment may be available for COVID-19, majority of respondents 184(68.4%) opted that COVID-19 infection is preventable, 242(90%) gave positive opinion regarding lockdown and 225(83.6%) believed physical distancing is helpful to prevent spread of this disease. Most of the participants 232(86.3%) complained about absence of diagnostic facilities in their neighboring area, 231(85.9%) thought common sign symptoms included dry cough, fever, fatigue and difficulty in breathing, most 234(87%) of the respondents thinks early supportive and symptomatic treatment can be helpful in cure of COVID-19 infection, 230(85.5%) gave positive opinion about isolation from

the people who are infected with the COVID-19 virus is an effective way to reduce the spread of the virus. About 14 days self quarantine 222(82.5%) gave positive answer, 169(62.8%) thought COVID-19 would affect world economy badly, 172(63.9%) thought common people are facing problem to collect daily needs, 184(68.4%) gave positive response that COVID-19 pandemic affects mental health of population, 93(34.6%) thought the situation may be controlled soon, majority 97(36.1%) answered they may be satisfied by current practices and initiatives taken by the government, almost all participants 265(97.4%) appreciated the roll of the efforts healthcare providing personnel, 262(97.4%) of the participants thought there is need of more general awareness about COVID-19 pandemic and 260(96.7%) recommended procedure for repeated washing hands (Table-II).

Table-II: Questionnaire regarding knowledge and attitude of the participants (n=269)

Question number	Questions	Yes	No	May Be
1	Do you think all age group are affected by COVID-19 ?	230 (85.5%)	33 (12.3%)	6(2.2%)
2	Only elderly people are seriously affected	187 (69.5%)	45 (16.7%)	37 (13.8%)
3	Specific treatment is now available for COVID-19 Virus	69 (25.7%)	85 (31.6%)	115 (42.8%)
4	COVID-19 infection is preventable	184 (68.4%)	44 (16.4%)	41 (15.2%)
5	Government has declared lockdown to avoid the spread of infection	242 (90%)	---	27 (10.0%)
6	Keep a distance is helpful to prevent spread of COVID-19	225 (83.6%)	2(0.7%)	42 (15.6%)
7	Is there any diagnostic facilities available in your neighbouring area?	37 (13.8%)	232 (86.3%)	---
8	Dry cough, fever, fatigue and difficulty in breathing are the main symptoms of COVID-19 infection	231 (85.9%)	5 (1.9%)	33 (12.3%)
9	Early supportive and symptomatic treatment can be helpful in cure of COVID-19 infection	234 (87%)	3 (1.1%)	32 (11.90%)
10	Isolation from the people who are infected with the COVID-19 virus is an effective way to reduce the spread of the virus.	230 (85.5%)	2(0.7%)	37 (13.8%)
11	People who have interaction with someone having this infection should be immediately isolated for 14 days as an quarantine period.	222 (82.5%)	7(2.6%)	40 (14.9%)
12	COVID-19 pandemic affects the world economy badly	169 (62.8%)	60 (22.3%)	40 (14.87%)
13	In prevailing scenario people are facing trouble in getting their day to day basic necessities (food/rations etc)	172 (63.9%)	39 (14.5%)	60 (22.3%)
14	COVID-19 pandemic affects mental health of population (depression, anxiety, loss of interest etc.)	184 (68.4%)	23 (8.6%)	60 (22.3%)

Most 188 (69.9%) people heard about this disease from news channel, 242 (90%) thought it is caused by a virus, 201 (74.7%) opted for wearing masks to prevent the infection and 201 (74.7%) answered that maintaining personal hygiene can improve mental health (Table-III).

Table-III: Questionnaire with multiple choice answer regarding knowledge and attitude of the participants (n=269)

From where you heard about this disease?	
News Channels	188 (69.9%)
Social Media	53 (19.2%)
Family	5 (1.9%)
Others	23 (8.6%)
In your opinion, the reason of COVID-19 is	
Caused by a virus	242 (90%)
By eating infected food	5 (1.9%)
Public gathering	10 (3.7%)
Poor immunity	12 (4.5%)
What preventive measures you have taken to avoid or spread the COVID-19 infection	
Social/physical distancing	40 (14.9%)
Wearing mask	201 (74.7%)
Hand wash for 20 seconds	28 (10.4%)
Healthy activities adopted by you during quarantine to improve mental health	
Exercise, yoga and walk	69 (25.7%)
Reading	72 (26.8%)
Cooking	30 (11.2%)
Indoor games	12 (4.5%)
Avoid junk food, eating fresh fruits and healthy diet	5 (1.9%)
Maintain personal hygiene	41 (15.2%)
Sleep	40 (14.9%)

Dscussion

This study was targeted for the medical students of 1st year to 5th year of different medical colleges, who had enough time to go through the questionnaire during lockdown period. Current study indicates that the community is well informed and has good knowledge about the COVID-19. News channels and social media like FaceBook, WhatsApp, Twitter, Viber etc have played a significant role in this regard, to make communities familiar with COVID-19 pandemic¹¹⁻¹³. However, this study has several limitations i.e. students who are living in village area and has less access to internet facilities or online portals to fill the form could not be taken as research population. Moreover participants needed to have an account to access the questionnaire and dissemination of the sampling instrument only through an online platform. The same problem faced by researcher in previous studies¹⁴. 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 death¹⁵. The students were 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 because the study was done in the early stage of COVID-19 infection in our country. For COVID-19 infection no specific treatment available and a large number of the respondents agreed on this point¹⁶. 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 showed 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^{17, 18}.

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 knowledge and timely decision. This study has shown that the public is facing difficulties while getting basic necessities like food. For this long time lock down is not considered as a solution^{19, 20}. It is quite impossible to supply food to millions of people during lockdown only by the government. Other than the capital city, diagnostic facilities in different parts of the country are not easily available. Many people use herbal medicines with strong belief for treatment of COVID-19. 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 communities²¹.

COVID-19 pandemic is a challenge to the mental well-being of people. 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 students have adopted healthy activities which include exercise, yoga, playing indoor games, reading, writing, cooking etc^{22,23}. Further launching of many new free online courses in this duration of crisis is also an effective way to keep students busy and has opened new doors of learning²³. 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 like 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 struggle²⁴⁻²⁷. Result of this study coincides with previous study done by other researchers²⁸⁻³⁰.

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.

References

1. Mustazir H, Alif A. Covid-19: Bangladesh records highest 42 deaths in a day, cases cross 65,000 mark. Dhakatribune.com. 2020 [cited 3rd July 2020].
2. India-Pak-Bangladesh: Official Covid-19 numbers disguise undercounting [Internet]. The Daily Star. 2020 [cited 3rd July 2020].
3. Bangladesh cannot afford to close its garment factories [Internet]. The Economist. 2020 [cited 3rd July 2020].
4. Covid-19 infections are rising fast in Bangladesh, India and Pakistan [Internet]. The Economist. 2020 [cited 3rd July 2020].
5. Hasina S, Verkooijen P. Fighting cyclones and coronavirus: How we evacuated millions during a pandemic. The Guardian. 2020 [cited 3rd July 2020].
6. Covid-19 tracker. Bangladesh Computer Council (BCC). Covid19tracker.gov.bd. 2020 [cited 3rd July 2020]. Available from: <http://covid19tracker.gov.bd/>
7. Corona.gov.bd. Coronavirus Disease 2019 (COVID-19): Information Bangladesh. Corona.gov.bd. 2020 [cited 3 July 2020]. Available from: <https://corona.gov.bd/>
8. Arshad A, Afzal S. An update on preventive measures of COVID-19 in Pakistan. Annals of King Edward Medical University. 2020; 26(1):1-2.
9. Sohrabi C, Alsafi Z, O'Neill N et al. World Health Organization declares global emergency: A review of the 2019 novel coronavirus (COVID-19). International Journal of Surgery. 2020; 76:71-6.
10. Lipsitch M, Swerdlow DL, Finelli L. Defining the epidemiology of Covid-19—studies needed. New England Journal of Medicine. 2020; 382:1194-6.
11. Zhong B-L, Luo W, Li H-M et al. Knowledge, attitudes, and practices towards COVID-19 among Chinese residents during the rapid rise period of the COVID-19 outbreak: A quick online cross-sectional survey. International Journal of Biological Sciences. 2020; 16(10):1745-52.
12. Rao ASS, Vazquez JA. Identification of COVID-19 can be quicker through artificial intelligence framework using a mobile phone-based survey in the populations when cities/towns are under quarantine. Infection Control & Hospital Epidemiology. 2020; 41(7):826-30.
13. La V-P, Pham T-H, Ho M-T et al. Policy Response, Social Media and Science Journalism for the Sustainability of the Public Health System Amid the COVID-19 Outbreak: The Vietnam Lessons. Sustainability. 2020; 12(7):29-31.
14. Geldsetzer P. Knowledge and Perceptions of COVID-19 among the General Public in the United States and the United Kingdom: A Cross-sectional Online Survey. Ann Intern Med. 2020:M20-0912.
15. Guo Y-R, Cao Q-D, Hong Z-S et al. The origin, transmission and clinical therapies on coronavirus disease 2019 (COVID-19) outbreak—an update on the status. Mil Med Res. 2020; 7(1):11.
16. Adhikari SP, Meng S, Wu Y-J et al. Epidemiology, causes, clinical manifestation and diagnosis, prevention and control of coronavirus disease (COVID-19) during the early outbreak period: A scoping review. Infectious Diseases of Poverty. 2020; 9(1):1-12.
17. Wilder-Smith A, Freedman D. Isolation, quarantine, social distancing and community containment: Pivotal role for old-style public health measures in the novel coronavirus (2019-nCoV) outbreak. J Travel Med. 2020; 27(2):taaa020.
18. Watkins J. Preventing a covid-19 pandemic. British Medical Journal. 2020; 368:m810.
19. Hina H, Qayyum A. Effect of financial crisis on sustainable growth: Empirical evidence from Pakistan. Journal of the Asia Pacific Economy. 2019; 24(1):143-64.
20. Remuzzi A, Remuzzi G. COVID-19 and Italy: What next? The Lancet. 2020:1225-8.
21. Luo H, Tang Q-I, Shang Y-x et al. Can Chinese medicine be used for prevention of corona virus disease 2019 (COVID-19)? A review of historical classics, research evidence and current prevention programs. Chinese Journal of Integrative Medicine. 2020; 26(4):243-50.
22. Wang C, Pan R, Wan X et al. Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in china. International Journal of Environmental Research and Public Health. 2020; 17(5):1729
23. Qiu J, Shen B, Zhao M et al. A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations. General Psychiatry. 2020; 33(2): e100213.
24. Wang G, Zhang Y, Zhao J, et al. Mitigate the effects of home confinement on children during the COVID-19 outbreak. The Lancet. 2020; 395(10228):945-7.
25. Chan AH, Rutter V, Ashiru-Oredope D et al. Together we unite: the role of the Commonwealth in achieving universal health coverage

through pharmaceutical care amidst the COVID-19 pandemic. *Journal of Pharmaceutical Policy and Practice*. 2020; 13:1-7.

26. Cadogan CA, Hughes CM. On the frontline against COVID-19: Community pharmacists' contribution during a public health crisis. *Res Social Adm Pharm*. 2021; 17(1):2032-5.

27. Unadkat S, Farquhar M. Doctors' wellbeing: Self-care during the covid-19 pandemic. *British Medical Journal*. 2020; 368:m1150.

28. Alqrache AT, Mostafa MM, Atta HM. Knowledge and Attitude

towards COVID-19 among students of King Abdul Aziz University. *Era's J Med Res*. 2020; 7(11):1-9.

29. Sohaira R, Madan H, Madan V et al. Knowledge, Attitude and practice among Medical and Non Medical students in Karachi, Pakistan- A comparative cross sectional study. *iMed Pub*. 2020; 12(5):1-6.

30. Ferdous MZ, Islam MS, Sikder MT et al. Knowledge, attitude, and practice regarding COVID-19 outbreak in Bangladesh: An online-based cross-sectional study. *PLoS One*. 2020; 15(10): e0239254.