Awareness and readiness of Covid-19 among Bangladeshi residents

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Abstract
Bangladesh has adopted some special steps to control the quick spread of the COVID-19 pandemic situation. However, the local residents' knowledge, attitudes, and practices towards the disease have a direct impact on the success of the controlling measures taken by the state. This article explores knowledge (K) about preventions, attitude (A) to the disease, and practices (P) of preventing COVID-19 situation of the young age groups residing in Bangladesh. Quantitative data were collected online using a KAP questionnaire from 932 participants. Results show the population is generally aware of the symptoms, keeping social distance by staying home and are concerned about re-spreading after the lock-down period. However, they are quite unsure about the possible medicines frequently talked about in the media and the necessity of avoiding animal protein. One of the major limitations is, these findings should not be generalized due to the low number of participants compared to the total population in Bangladesh.

Keywords: Awareness, Readiness, Covid-19, Bangladesh, Knowledge, Attitude, Practice.

1.   Background

Bangladesh detected her first COVID-19 infected patients on 8 March, which began with three in number. To the date, it has increased to 2456 on day forty-one, which is the sixth week and indicates the fourth phase of infection (Moral, 2020) called 'Sustained Human-to-Human Transmission' (WHO, 2009). The total number of death has reached 100 including ten deaths and around 300 new infections every day, which indicates the rapid rise period. However, the government has locked-down the highly affected areas and a general leave has been declared to keep all the private and public business and service farms remain closed. In spite of all the steps taken by the state, COVID-19 is still an infectious health issue and should be prevented perceptively by the individuals. This is more about a personal preclusion than authority care to reduce the infection. Knowledge, attitudes, and practices towards infectious diseases involve some panic emotions among the population, which might promote complications in preventing the disease and spread (Zhong et al. 2020). Hence, understanding the public awareness level and readiness to manage the outbreak of COVID-19 in Bangladesh is crucial at the rapid rise period.

KAP 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 topic serves as an educational diagnosis of that population through examining what people know, what they believe, and how they behave (Good, 1994; Ribeaux & Poppleton, 1978; Tannahill, 2008). KAP is a very common tool used in health-seeking research (WHO, 2008). This KAP study explores what Bangladeshi residents 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 residents 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 (Kaliyaperumal, 2004).

We performed this study to get and inform a better understanding of residents, which might identify any knowledge gaps, attitudes, and factors influencing beliefs and actions. Since no studies report about the community's KAP of Covid-19 and the information essential to decide steps and select the program priorities, this research could be significantly useful for the local administration to reintegrate more impactful policies and successful measures to control infections and improve protection after the lock-down period. Bangladesh is almost at the peak of infection and the fight against Coronavirus disease is continuing here. To ensure the last victory, "*people's adherence to the control measures are essential, which is largely affected by their knowledge, attitudes, and practices (KAP)*" (Ajilore et al., 2017, Tachfouti et al., 2012).

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 (Roy et al., 2020). Most of the participants are young at the age of this study and 'younger individuals are more likely to be asymptomatic when infected and could be unaware they are putting others at risk' (Dong et al. 2020). On the other hand, chances of infection and the severity of illness are much direr with aged people (Zhou et al., 2020). However, hasty lifting of lock-down can promote a secondary peak while lifting lock-down gradually can flatten it (Prem et al. 2020). Studying individual awareness can motivate people to practice the preventive measures discussed in the research and alert them in turn, in addition to knowing about the practices of a large population to avoid mass contamination.

2.   Research design

This research has been executed in Bangladesh and an online survey was prepared using one of the popular Google tools called Google Forms. The link to the questionnaire was saved for future use. We ensured the participants that the given personal information and opinion will be kept confidential. The research questions include three aspects of the pandemic spreading rapidly in the country:

    a. Information about the symptoms and cure.
    b. Insights about social attitudes and re-spreading of the virus.
    c. Actions performed to practice prevention.

Participants:

Most of these participants have a minimum educational background which is a Higher Secondary School Certificate level and use any one of the below mentioned online platforms. Our goal was to reach a bigger audience in order to elicit maximum responses from the participants.

Tools:

The questionnaire consists of two sections including demographics and KAP inquires. Social demographic variables, such as age, gender, and place of residence (Dhaka vs. other districts in Bangladesh) were sought. Following the clinical and community management of COVID-19 guidelines by the Institute of Epidemiology, Disease Control and Research (IEDCR), Bangladesh, we prepared a COVID-19 awareness questionnaire including twelve questions (Table 1). Five of the questions are regarding clinical arrangements (K1-K4), three are regarding the spreading medium (K5-K7), and five of them involve prevention and control (K8-K12) of the virus. The questions are answered on a yes/no basis with an extra 'not sure' option. We assigned 3 points for the first option, 2 points for the second option, and 1 for every third option. The total knowledge score ranged from 1 to 32, which denotes better knowledge with higher scores. The Cronbach's alpha coefficient was 0.79 indicating acceptable internal consistency of the KAP questionnaire.

Data Collection:
We provided the participants with the link using different online platforms including Facebook, Messenger, Google talk, email, and requested them to share the link with their friends and relatives on any social media so that they can respond as well. Data collection began at 10 a.m. on 17 April 2020 and ended at 10 a.m. on 20 April 2020. In addition, we requested participants' demographic information comprising gender identity, marital status, and place of residence. 565 male and 367 females in a total of 932 participants responded to the online survey. Among all, 574 participants belong to the age group ranging from 18 to 25 years, 349 of them belong to the age group ranging from 26 to 49 years, and only 9 participants are at the age group of 50 years and above. Also, 679 participants identify themselves as single and the remaining 253 of them are married. Besides, 514 respondents live in the Dhaka division which is the most infected region in the country and other 418 participants live outside the Dhaka division.

Data Analysis:
Later the data have been examined and categorized by the percentage of the agreement, disagreement, and personal preferences in each question. Also, data were analyzed using statistical software SPSS with 5% significance level and two sided T-test were considered for statistical analysis. The conclusion evaluates and discusses these referring to the standard choices needed to prevent the fatal disease.

3.   Results and discussion

a. Knowledge
In response to the first question, 78.76% respondents report of the complete awareness about the varied symptoms of COVID-19 and common flu while 14.80% are still unsure and 6.44% are not aware of the differences as shown in Fig. 1, which can be either fatal or stressful for them.
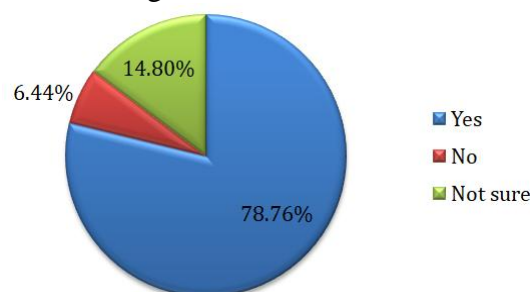

Figure 1: Symptoms of COVID-19 and common flu

Table 1

Respondent Types	Yes (%)	No (%)	Not sure (%)
Gender			
Male	75.22	9.03	15.75
Female	84.2	2.45	13.35
Age groups			
18-25	76.48	14.14	9.38
26-49	81.95	14.05	4.0
50 and over	100	0	0
Place of residence			
Dhaka division	82.30	5.05	12.65
Outside Dhaka division	74.40	8.13	17.46

Females, old age groups (50 years and above), and the population living in greater Dhaka are more aware of the differences between the symptoms of COVID-19 and other common flu than the male, younger, and the population living outside Dhaka who are most confused about the COVID-19 symptoms too.

Overall, gender has no significant correlation with the respondents' knowledge about the COVID-19 symptoms and infection (p = 0.5157) although the perceptions about the differences between flu symptoms and COVID-19 vary along with gender (p = 0.02). Neither the place of residence is, overall, positively correlated to the participant's knowledge (p = 0.84), nor the perceptions about the symptoms are impacted by it. However, age shows a considerable influence on the respondents' general knowledge about the disease (p < 0.001) with no major impact on the concepts of symptoms.

Also, Fig. 2 reveals that the majority of people (59.76%) are unsure about any proposed or available medicines that can be effective to treat the infected persons. 24.36% of them absolutely discard the idea of reliable medicine while 15.88% believe if they are infected, these medicines can help. This confirms the other results demonstrating a particular number of people perceive the severity through media focus, which might be wrong in reality.
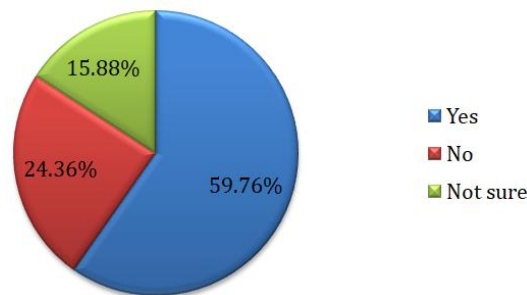

Figure 2: Proposed medicines for COVID-19

Table 2

Respondent Types	Yes (%)	No (%)	Not sure (%)
Gender			
Male	19.47	24.25	56.28
Female	10.35	24.52	65.12
Age groups			
18-25	16.55	22.82	60.63
26-49	15.19	27.22	57..59
50 and over	0	11.11	88.89
Place of residence			
Dhaka division	13.82	24.90	61.28
Outside Dhaka division	18.42	23.68	57.90

However, the knowledge about the proposed medicines differ according to gender (p < 0.001), but age (p = 0.10) and place of residents (p = 0.11) do not influence such awareness. More males, young age groups (18-25), and people from outside Dhaka believe in the medicines presented in media than the female, older and Dhaka resident participants while the most hesitant group is the old aged population.

Fig. 3 shows that a great majority of the respondents (77.68%) assure us by keeping 1.5 meters distance apart from other people while 8.91% of them keep less distance and rest 13.41% are unsure, which defines the careless movement in the community.
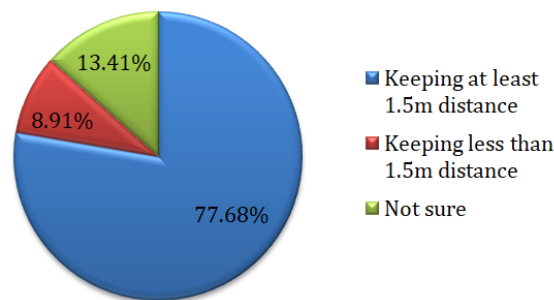
Figure 3: Social distancing

Table 3

Respondent Types	Keeping at least 1.5m distance (%)	Keeping less than 1.5m distance (%)	Not sure (%)
Gender			
Male	74.87	10.27	14.87
Female	82.02	6.81	11.17
Age groups			
18-25	77.53	8.19	14.29
26-49	77.65	10.03	12.32
50 and over	88.89	11.11	0
Place of residence			
Dhaka division	78.99	8.56	12.45
Outside Dhaka division	76.08	9.33	14.59

Both males and females maintain the right social distancing equally and similar pattern (p = 0.42) and the place of residents does not impact this knowledge of distancing while the age has influences on this (p = 0.01). Again female, old, and non-Dhaka residents groups are keeping more social distance than male, young, and Dhaka-residents groups who are most confused about maintaining the infection detachment.

Figure 4 suggests 64.48% of respondents believe getting closer to infected persons is the most potent source of COVID-19 transmission in Bangladesh while secondary contact through infected person's used items is the next possible risk of contamination. And, 5.48% of participants are concerned with air transmission, which indicates this group's extreme awareness about the virus's existence in the environment.
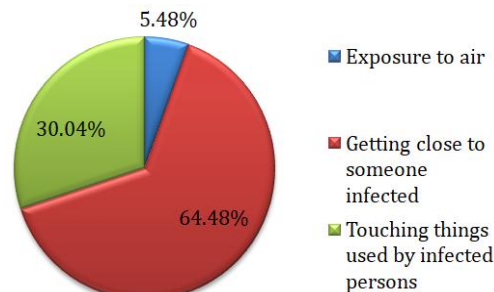

Figure 4: Source of contamination

Table 4

Respondent Types	Exposure to air (%)	Getting close to someone infected (%)	Touching things used by infected persons (%)
Gender			
Male	4.25	66.90	28.85
Female	7.36	60.76	31.88
Age groups			
18-25	5.75	65.51	28.75
26-49	5.16	62.75	32.09
50 and over	0	66.67	33.33
Place of residence			
Dhaka division	6.23	63.62	30.16
Outside Dhaka division	4.55	65.55	29.90

However, the knowledge about potential sources of contamination differs according to gender (p = 0.02) and age (p < 0.001) while the place of residence has no considerable impact on it (p = 0.36). 18-25 and 26-49 age groups have comparable beliefs about the local sources of contamination, although female participants tend to believe more in air transmission and touching things used by infected persons than males. The old age group completely ignores the possibility of air transmission.

Figure 5 shows that the greater majority of the respondents (42.51%) prefer to take all preventive measures than testing (54.81%) if they discover COVID-19 symptoms in them. The worst risk is still 2.67% of respondents plan to hide about the potential infection from others, which can be detrimental for their surroundings.
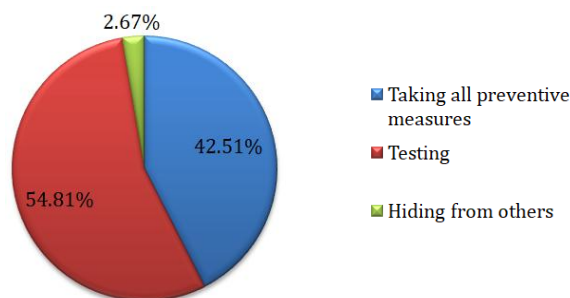
Figure 5: Measures after infection

Table 5

Respondent Types	Taking all preventive measures (%)	Testing (%)	Hiding from others (%)
Gender			
Male	42.22	54.89	2.89
Female	43.10	54.88	2.02
Age groups			
18-25	57.97	39.34	2.69
26-49	47.88	49.42	2.70
50 and over	66.67	33.33	0.0
Place of residence			
Dhaka division	43.98	52.58	3.44
Outside Dhaka division	40.76	57.48	1.76

The measures taken by the males and females do not differ (p = 0.66) after being infected, neither place of residence (p = 0.01) has any impact although the participants of different ages take different measures (p < 0.001). Both male and female groups are equally interested in trying the preventive measures, testing, and hiding about it if they are found infected. The old age group is most interested in preventive measures; non-Dhaka residents are aware of testing most; Dhaka-residents are prone to hide most. However, the old age group is not at all interested in hiding.

b. Attitude

The research participants are generally anxious about the negative social attitudes, negligence, and rudeness showed towards the COVID-19 patients in Bangladesh. Figure 6 shows that 48.06% of them are frustrated, 40.24% are afraid and 11.70% are angry to see such insolence and humiliation including abundance, refusal, and limited access to treatment, avoidance, and rejection from both family and society.
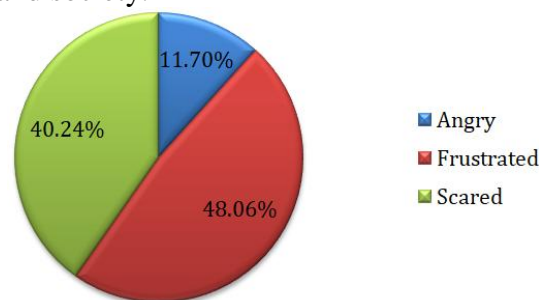

Figure 6: Social negligence to the infected persons

Respondent Types	Angry (%)	Frustrated (%)	Scared (%)
Table 6			
Gender			
Male	10.97	48.85	40.18
Female	12.81	46.87	40.33
Age groups			
18-25	11.15	46.34	42.51
26-49	12.32	50.43	37.25
50 and over	22.22	66.67	11.11
Place of residence			
Dhaka division	13.04	48.05	38.91
Outside Dhaka division	10.05	48.09	41.87

The male and female participants have different attitudes (p < 0.0001) towards the cruelty and negligence shown to the infected persons while the place of residence (p = 0.50) has no impact on such attitudes. Also, young and mature participants differ (p = 0.007) in their reactions to such behavior.

The groups have similar reactions to the negative social attitudes, rudeness, and negligence shown to the Corona patients in Bangladesh, although the old age group is more angry and frustrated, although least scared with this attitude.

Figure 7 shows a great majority of the respondents (49.25%) are concerned that the virus will re-spread as soon as the lock-down is relaxed. A very minor group (13.84%) believes the situation will become normal while 36.91% of them are unsure about the choices.
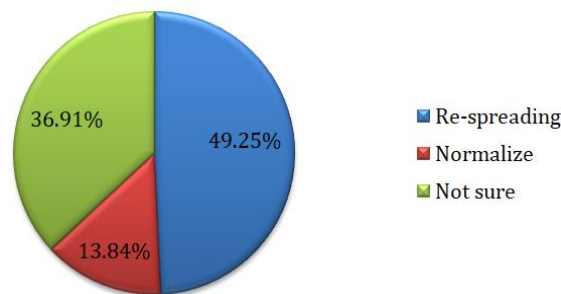

Figure 7: Post-lock-down re-spreading

Response	Table 7		
	Re-spreading (%)	Normalize (%)	Not sure (%)
Gender			
Male	48.67	15.22	36.11
Female	50.14	11.72	38.15
Age groups			
18-25	46.69	15.33	37.98
26-49	53.87	11.75	34.38
50 and over	33.33	0.0	66.67
Place of residence			
Dhaka division	50.39	14.20	35.41
Outside Dhaka division	47.85	13.40	38.76

However, none of the variables including gender (p = 0.92), place of residence (p = 0.33), and age (p = 0.5962) make any differences in the participants' beliefs about post-lock-down respreading. Female participants are more anxious about COVID-19 re-spreading after the lock-down is lifted up and are less optimistic about normalizing the situation than the male respondents. Also, the old age group is least concerned about re-spreading, least hopeful about normalizing, and most confused about choosing any of the options.

Disinfecting things and washing hands will be the second priority to the participants (29.08%) while keeping a social distance is the highest priority (47.42%) as shown in Fig. 8, which the World Health Organization emphasizes. Although wearing safety masks and gloves is least preferred after the lock-down period, this is the most common practice at this rapid rise period.
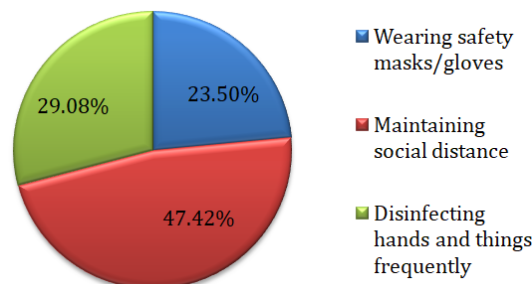

Figure 8: Post-lock-down-safety

Table 8

Respondent Types	Wearing safety masks/gloves (%)	Maintaining social distance (%)	Disinfecting hands and things frequently (%)
Gender			
Male	26.73	49.38	23.89
Female	22.89	44.41	32.70
Age groups			
18-25	23.69	50.70	25.61
26-49	23.21	42.12	34.67
50 and over	22.22	44.44	33.33
Place of residence			
Dhaka division	23.35	43.19	33.46
Outside Dhaka Division	23.68	52.63	23.68

On the other hand, all of the gender (p = 0.0095), place of residence (p = 0.03), and age (p < 0.0001) have a considerable impact on the respondents' attitude to the post-lock-down-safety. However, male participants outperform the female group regarding the post-lock-down awareness and the data shows the male group is more likely to wear safety masks and gloves and maintaining social distance while the female group is prone to washing hands and disinfecting things more frequently than the male group. Also, young groups and non-Dhaka residents outperform the counter old aged and Dhaka-resident groups with more awareness about the upcoming risk.

c. Practice

In spite of being remarkably alert about keeping social distance and not coming in contact with community members, the majority section of the research population (81.65%) are relaxed about eating animal protein including eggs, meat or fish while 7.84% are super conscious about such transmission and have been avoiding eggs and milk as shown in Fig. 9. Also, another group consisting of 10.51% keep away from meat and fish. Therefore, the majority of people are at great risk in case the local animal transmission begins.
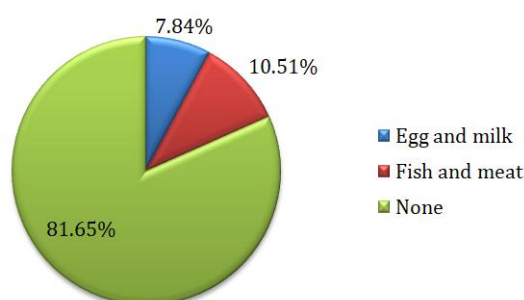

Figure 9: Avoiding animal protein

Table 9

Respondent Types	Egg and milk (%)	Fish and meat (%)	None (%)
Gender			
Male	10.44	11.33	78.23
Female	3.81	9.26	86.92
Age groups			
18-25	8.36	10.80	80.84
26-49	7.16	10.32	82.52
50 and over	0	0	100
Place of residence			
Dhaka division	8.37	10.51	81.13
Outside Dhaka division	7.18	10.52	82.30

Gender and ages have a quite significant influence on the participants' practices regarding protecting themselves from COVID-19 infection and treatment of the disease. Fewer females than males can avoid gender ($p < 0.0001$) and age ($p = 0.006$) make changes in the participants' attitudes to avoiding animal protein while the place of residence ($p = 0.56$) makes no impact. Surprisingly old age groups are least concerned about consuming animal proteins to prevent COVID-19 infection, next comes the female groups who avoid less animal protein than the male, and more Dhaka residents avoid animal protein than non-Dhaka residents.

Since 52.36% of participants are staying home and 34.23% coming out once a week, it seems those 13.41% of participants who go for daily shopping are at a greater risk as described in Fig. 10.
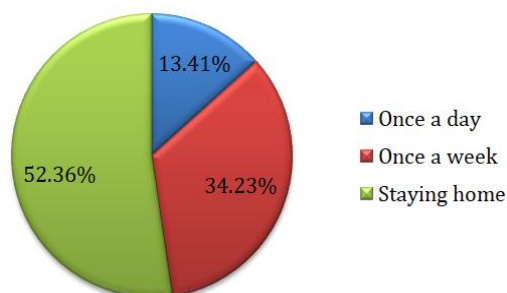
Figure 10: Staying home

Table 10

Respondent Types	Once a day (%)	Once a week (%)	Staying home (%)
Gender			
Male	19.82	43.54	36.64
Female	3.54	19.89	76.57
Age groups			
18-25	11.50	31.01	57.49
26-49	16.62	39.83	43.55
50 and over	11.11	22.22	66.67
Place of residence			
Dhaka division	9.34	35.21	55.45
Outside Dhaka division	18.42	33.01	48.57

The male and female participants do not stay home equally (p < 0.0001), neither the Dhaka residents do it equally (p = 0.0006) as the non-Dhaka residents. However, age (p = 0.09) does not change the home stay of the respondents. As usual, male, mid-young age (26-49 years) and non-Dhaka resident groups come out of the home more frequently than female, early-young and old aged as well as the Dhaka-resident groups while female and old age groups are staying home mostly.

Another positive preventative measure that a great majority of the population (67.17%) avails is always disinfecting things and taking a bath right after returning home. However, 27.04% of respondents take this measure less frequently and 5.79% population do it seldom as shown in Fig. 11, which leaves the risk of infecting the home environment unintentionally and reduces the chance of escaping it.
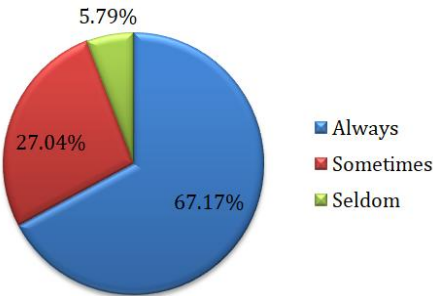

Figure 11: Cleaning and disinfecting

Table 11

Respondent Types	Always (%)	Sometimes (%)	Seldom (%)
Gender			
Male	57.70	34.51	7.79
Female	81.74	15.53	2.72
Age groups			
18-25	64.11	29.44	6.45
26-49	72.49	22.64	4.87
50 and over	55.56	44.44	0
Place of residence			
Dhaka division	74.51	20.82	4.67
Outside Dhaka division	58.13	34.69	7.18

Regarding taking bath and disinfecting things after coming back from shopping, female, mid-young age, and Dhaka-residents are more careful then the counter groups of male, early-young and old as well as non-Dhaka residents, while the male group is the least and old age group, is the most aware regarding the precaution. Also, male and females have different habits of cleaning and disinfecting (p < 0.0001); also the populations living in Dhaka and outside Dhaka have different attitudes to this habit. Although the habit does not differ according to age (p = 0.07)

As Fig. 12 shows, majority of the participants (51.06%) only avoid cold food items and drinks as prevention from the infection, although 44.56% of them are more cautious about drinking warm water to stop the virus living inside the body and 4.38% are only taking steam as they thought it can help them to prevent the virus.
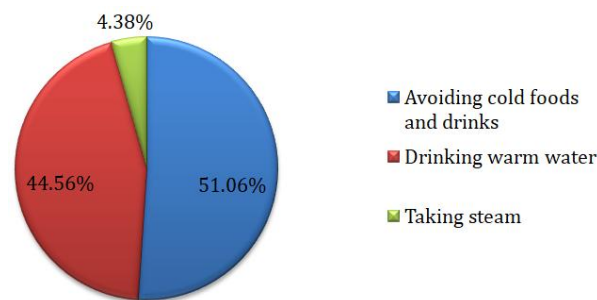
Figure 12: Prevention and Cure

Table 12

Respondent Types	Avoiding cold foods and drinks (%)	Drinking warm water (%)	Taking steam (%)
Gender			
Male	49	45.7	5.3
Female	54.15	42.86	2.99
Age groups			
18-25	50.93	44.93	4.14
26-49	52.45	43.02	4.53
50 and over	0	83.33	16.67
Place of residence			
Dhaka division	48.29	47.80	3.9
Outside Dhaka division	54.36	40.70	4.94

Dhaka and non-Dhaka residents ($p = 0.04$) or young and mature participants ($p = 0.02$) take steps similar to prevent and cure the virus infection while males and females ($p = 0.22$) have different prevention and cure measures. More female, mid-young aged and non-Dhaka resident participants avoid cold food and drinks, more male, old aged and Dhaka-resident participants drink warm water, and more male old aged and non-Dhaka resident respondents take steam to prevent COVID-19 infection than the counter groups. Although female groups are quite aware of avoiding cold foods and drinks, they are least responsive to drinking warm water and taking steam.

The critical part of the findings includes 43.13% of participants rely on home care than 41.63% of those who prefer to shift to hospital initially after finding themselves as COVID-19 positive, as shown in Fig. 13. This involves the local people's reliance on the state and physician's policy for treating COVID-19 patients. However, 15.24% population is indecisive regarding the matter, which could drop them in chaos and delay or cure once they are infected.
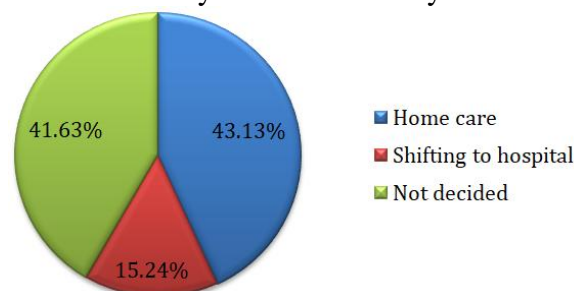

Figure 13: Treatment of infection

Table 13

Respondent Types	Home care (%)	Shifting to the hospital (%)	Not decided (%)
Gender			
Male	42.65	41.59	15.75
Female	43.87	41.69	14.44
Age groups			
18-25	31.71	51.39	16.90
26-49	62.18	26.07	11.75
50 and over	33.33	22.22	44.44
Place of residence			
Dhaka division	46.50	37.35	16.15
Outside Dhaka division	39.0	46.89	14.11

The participants' practices about treating COVID-19 infection vary according to age only ($p < 0.0001$), and gender ($p = 0.60$) or place of residence ($p = 0.24$) have no impact on the choices between home care or shifting to hospital. The mid young age groups are most prone to stay home if infected while early young age groups prefer shifting to hospital in such cases. And, old age groups are the most indecisive which is a risk too. Also, Dhaka residents rely more on home care and non-Dhaka residents prefer to move to the hospital than staying home. However, gender shows no considerable effects on choosing COVID-19 treatment among the respondents.

Regarding social services, such as raising awareness and informing the community, the 77.86% participants mainly use the online platform and social media keeping social distance while 15.16% try to make people aware through practicing the health rules and 6.98% report about demonstrating the safety tasks to instruct people how to save from infecting as presented in Fig. 14.
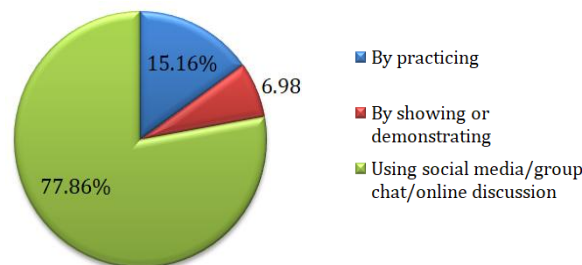
Figure 14: Social awareness work

Table 14

Respondent Types	By practicing (%)	By showing or demonstrating (%)	Using social media/group chat/online discussion (%)
Gender			
Male	14.39	7.19	78.42
Female	16.34	6.65	77.0
Age groups			
18-25	13.36	6.15	80.49
26-49	17.94	8.53	73.53
50 and over	25.0	0.0	75.0
Place of residence			
Dhaka division	15.08	6.35	78.57
Outside Dhaka division	15.25	7.75	77.0

Responses regarding raising mass awareness during the pandemic period demonstrate the groups' almost equal share of work using any particular mode of demonstration. However, old age groups are ahead with practicing preventions, early-young age group is best with online work and mid-age groups demonstrate more than other groups. Similarly, only age ($p < 0.0001$) makes differences in the participants' choice of social awareness work; although gender ($p = 0.88$) and place of residence ($p = 0.44$) do not impact the choice at all.

Conclusion

Findings show Bangladeshi female and old age groups are, on the whole, socially and psychologically connected, although physically distanced and thus, are preventing the risks of infection. However, young age groups are comparatively less aware of the symptoms, social distancing, and outing, which indicates the greater risk involved with the males and population living in the divisions other than Dhaka. Although female participants are more aware regarding many aspects including cleaning, disinfecting, and further outbreak, they are less active in self-care and avoiding animal meat or fish which might be unsafe. The most significant findings of the study reveal that the old age group is the most alert group, males are the most vulnerable with less care, people living outside Dhaka have less knowledge and preventive measures against the deadly virus, young age group is more optimistic while the female respondent group is prepared most of all participants. Hence, the more awareness and preparation programs should be introduced regarding COVID-19 for the people residing in the remote and underdeveloped areas where mass communication through online technology is limited. The overall findings demonstrate that 16-20% of respondents comprising mainly the young male groups are at high risk of infection. Also, the analysis of the survey results confirms a correlation between the knowledge and practice of Covid-19 protection in Bangladesh.

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Appendix A: Questionnaire

1. Your gender:
A. Male, B. Female
2. Your age group:
A. 18-25, B. 26-49, C. 50+
3. Your place of residence:
A. Dhaka division, B. Outside Dhaka division

Knowledge:
K1. Are you confirmed about the differences between the symptoms of COVID-19 and the common flu?
        A. Yes, B. No, C. Not sure
K2. Do you believe any of the proposed medicines could help to fight against COVID-19?
        A. Yes, B. No, C. Not sure
K3. How do you maintain social distance from other people everywhere?
        A. Keeping less than 1.5m distance, B. Keeping at least 1.5m distance, C. Not sure
K4. What is the most possible way to be infected in Bangladesh?
        A. Getting close to someone infected, B. Touching things used by infected persons, C. Exposure to air
K5. What should you do after finding the COVID-19 symptoms in you?
        A. Taking all preventive measures, B. Testing, C. hiding from others

Attitude:
A1. How do you feel to see social attitudes and rudeness towards the COVID-19 positive patients?
        A. Frustrated, B. Scared, C. Angry
A2. What risks do you predict after the lockdown is over?
        A. Respreading, B. Normalize, C. Not sure
A3. What precautions might prevent you from infection after the lockdown?
        A. Wearing safety masks/gloves, B. Maintaining social distance, C. Disinfecting hands and things frequently

Practice:
P1. Which animal protein are you avoiding to keep safe from COVID-19?
        A. Eggs and milk, B. Fish and meat, C. None
P2. How frequently do you go outside for any specific purposes like buying foods/medicines etc?
        A. Once a day, B. Once a week, C. Staying home
P3. Do you disinfect your things and take a bath instantly after coming back from outside?
        A. Always, B. Sometimes, C. Seldom
P4. What safety measures you avail to prevent infection?
        A. Drinking warm water, B. taking steam, C. Avoiding cold foods and drinks
P5. What will you do initially if you are COVID-19 positive?
        A. Home care, B. Shifting to hospital, C. Not decided
P6. How do you raise positivity and awareness among others?
        A. Using social media/group chat/online discussion, B. By practicing, C. By showing or demonstrating

Appendix B: Statistical Data Analysis

No.	Male: 565					Female: 367					
	A	B	C	Mean	SD	A	B	C	Mean	SD	p value
K1	425	51	89	2.595	0.746	309	9	49	2.708	0.689	0.0201*
K2	110	137	318	1.632	0.789	38	90	239	1.452	0.675	0.0003***
K3	58	423	84	1.954	0.500	25	301	41	1.956	0.422	0.9495
K4	378	163	24	2.627	0.565	223	117	27	2.534	0.630	0.0192*
K5	239	310	16	2.395	0.544	158	202	7	2.411	0.530	0.6578
A1	59	64	442	1.322	0.654	14	34	319	1.169	0.466	< 0.0001***
A2	275	86	204	2.126	0.913	184	43	140	2.120	0.933	0.9226
A3	151	279	135	2.028	0.712	84	163	120	1.902	0.740	0.0095**
P1	59	64	442	1.322	0.654	14	34	319	1.169	0.466	< 0.0001***
P2	112	246	207	1.832	0.733	13	73	281	1.270	0.518	< 0.0001***
P3	326	195	44	2.499	0.638	300	57	10	2.790	0.470	< 0.0001***
P4	258	30	277	1.966	0.973	157	11	199	1.886	0.980	0.2217
P5	241	235	89	2.269	0.716	161	153	53	2.294	0.706	0.6006
P6	443	81	41	2.712	0.592	283	60	24	2.706	0.583	0.8792

*p < 0.05, **p < 0.01, ***p < 0.001

No.	Dhaka Division: 514					Outside Dhaka Division: 418					
	A	B	C	Mean	SD	A	B	C	Mean	SD	p value
K1	423	26	65	2.696	0.682	311	34	73	2.569	0.772	0.0078**
K2	71	128	315	1.525	0.726	77	99	242	1.605	0.780	0.106
K3	44	406	64	1.961	0.457	39	318	61	1.947	0.487	0.6517
K4	327	155	32	2.574	0.608	274	125	19	2.610	0.574	0.3569
K5	226	270	18	2.405	0.558	170	240	8	2.388	0.526	0.6352
A1	247	200	67	2.350	0.699	201	175	42	2.380	0.662	0.5048
A2	259	73	182	2.150	0.915	200	56	162	2.091	0.927	0.3307
A3	120	222	172	1.899	0.748	99	220	99	2.000	0.689	0.034*
P1	43	54	417	1.272	0.605	30	44	344	1.249	0.576	0.5555
P2	48	181	285	1.539	0.660	77	138	203	1.699	0.762	0.0006***
P3	383	107	24	2.698	0.552	243	145	30	2.510	0.628	< 0.0001***
P4	246	20	248	1.996	0.981	170	21	227	1.864	0.966	0.04*
P5	239	192	83	2.304	0.732	163	196	59	2.249	0.686	0.241
P6	404	78	32	2.724	0.570	322	64	32	2.694	0.605	0.4371

*p < 0.05, **p < 0.01, ***p < 0.001

| No. | Age group 18-25: 574 | | | | | Age group 26-49: 349 | | | | | |
	A	B	C	Mean	SD	A	B	C	Mean	SD	p value
K1	439	81	54	2.713	0.647	286	49	14	2.643	0.508	0.0851
K2	95	131	348	1.584	0.767	53	95	201	1.499	0.727	0.0963
K3	47	445	82	1.970	0.475	35	271	43	1.880	0.471	0.0052**
K4	376	165	33	2.639	0.603	219	112	18	2.450	0.589	< 0.0001***
K5	333	226	15	2.595	0.553	167	173	9	2.332	0.547	< 0.0001***
A1	266	244	64	2.389	0.679	176	130	43	2.264	0.688	0.0071**
A2	268	88	218	2.120	0.925	188	41	120	2.087	0.904	0.5962
A3	136	291	147	2.012	0.709	81	147	121	1.793	0.740	< 0.0001***
P1	48	62	464	1.296	0.611	25	36	288	1.185	0.563	0.006**
P2	66	178	330	1.565	0.698	58	139	152	1.646	0.715	0.0906
P3	368	169	37	2.618	0.618	253	79	17	2.545	0.564	0.0725
P4	258	24	292	1.972	0.986	150	16	183	1.812	0.954	0.0157*
P5	182	295	97	2.182	0.688	217	91	41	2.381	0.691	< 0.0001***
P6	462	77	35	2.788	0.566	257	63	29	2.523	0.625	< 0.0001***

*p < 0.05, **p < 0.01, ***p < 0.001