

### **Knowledge and Attitude toward COVID-19 Pandemic and its Effect on Bangladeshi People: Outcome from A Community Based Survey**

#### **Abstract**

**Background:** In terms of socio-economic, cultural, professional, and communication environment, the Covid-19 pandemic has drastically altered the world. As a developing country, Bangladesh is seeing similar consequences on its citizens.

**Methodology:** A Google form is used to create an online survey questionnaire, which is then distributed around the country via social media and personal relationships. The questionnaire primarily collects three categories of data: demographics, Covid-19 concepts, and changes in the participants' lifestyles.

**Data collection and analysis:** To collect responses, the online form was kept open from July 14, 2020 to July 21, 2020. A total of 1088 respondents took part in the survey, and the results were evaluated using several statistical approaches. The results are presented in a variety of graphs and tables.

**Results and discussion:** Males made up 53.3% of the participants, while females made up 46.7%. The participants came from villages, cities, and semi-urban areas across the country. In terms of educational attainment, 46.6% had completed their undergraduate studies, 26.8% had graduated, 6.5% had completed their postgraduate studies, and 20.1% had not completed their undergraduate studies. The majority of participants said they got information about the Covid-19 pandemic from social media, and they cited 'fever' as a symptom of the sickness. Although the number of meetings with friends and relatives has not dropped much ( $p=1$ ), working conditions and employment status have significantly altered. 53.5% of the participants claimed they have no concerns about the pandemic, 25% have mild stress, and 21.5% have significant concerns and stress.

**Conclusion:** People in Bangladesh from all walks of life rely heavily on social media for up-to-date information about Covid-19. Covid-19 awareness isn't enough to keep the virus from spreading from community to community. Employees' work schedules have also been drastically altered. To prevent transmission, we should all act together as a society.

**Keywords:** Covid-19, Pandemic, Perception, Social media, Stress, Transmission

#### **Introduction**

The socioeconomic level, working schedule, psychological behavior, and overall lifestyle of individuals all over the world have all changed dramatically since the advent of the novel coronavirus disease (n-Cov-19). However, Bangladesh, a developing country in Southeast Asia, is also experiencing such changes in the daily lives of its citizens. The virus was originally discovered in Bangladesh on March 8, 2020, when three COVID-19 positive patients were confirmed<sup>1</sup>. Following that, the Bangladeshi government took a number of steps to prevent the virus from spreading and to give critical medical care to COVID-19 sufferers. All educational institutions were closed as part of these preparations, different hospitals were prepared to isolate COVID-19 patients, all types of public gatherings were prohibited, and various law enforcement agencies collaborated to reduce the virus's spread<sup>2</sup>.

According to a survey conducted on Bangladeshi people, the participants were mentally agitated and worried about the COVID-19 spread in the country. However, various reasons contributed to the concern, including shaky healthcare management systems, low test rates, insufficient healthcare infrastructures, and shaky planning and implementation by Bangladesh's government<sup>3</sup>. According to another report, the country does not practice complete lockdown. As a result, tens of thousands of people are commuting on the streets of Dhaka, Bangladesh's metropolis. According to the study, maintaining social distance for slum inhabitants in the city is very difficult because every 10-16 families share just one bathroom<sup>4</sup>. Bangladesh's healthcare system differs slightly from that of other countries throughout the world. In the same way that European countries run their hospitals, the hospitals in the United States are managed by a single umbrella. The system is disjointed, and government hospitals are rarely equipped with modern technology. Private hospitals provide excellent care, but they are exclusively available to the wealthy. Most private hospitals remained closed because to a lack of Covid-19 prevention equipment<sup>5</sup>.

The following were the study's key objectives:

- (i) Measuring public knowledge of the pandemic
- (ii) Recognizing family crises as a result of the scenario
- (iii) Estimating changes in people's day-to-day lives during the Covid-19 condition
- (iv) Evaluating mental stress as a result of the situation

## **Materials and Methods**

A google form with the survey questions was made and disseminated to people from all walks of life via social media (Facebook, Messenger, Whatsapp) and personal relationships. Facebook-based health research surveys are becoming increasingly popular, and various funding agencies are supporting them<sup>6</sup>. The survey questions were chosen using the 'Covid-19 community response survey guidance'<sup>7</sup> as a guideline, and then changed to fit the country's circumstances. The questionnaire was broken down into three sections: (a) demographic information, (b) participant perceptions of the Covid-19 epidemic, and (c) changes in their overall life as a result of the pandemic. The age, sex, residential information, educational qualification, and work status of participants were all covered in section (a). Participants' basic understanding of Covid-19 and the source of their learned knowledge about the pandemic were discussed in section (b). The changes in people's lifestyles during the epidemic, social distancing, family crises as a result of the pandemic, and changes in employment status (if any) were discussed in section (c).

From July 14, 2020 until July 21, 2020, the Google form was open for answers. During this time, however, 1088 persons from various occupations completed the survey and their responses were recorded. Students, employees (both government and private), businesspeople, and other professions were among the attendees. The questions were written in very simple and easy-to-understand language for simplicity of comprehension. In the questionnaire, there was also a phone number for people who didn't understand any of the terms used in the google form.

## **Data Analysis**

The data collected from the survey was raw, and it required more research to make sense of it. Various statistical operations (t-test, ANOVA test, etc.) were performed on the data using

MS Excel for this purpose. Using the MS Excel program, many graphs and charts were created to better depict numerical data.

## **Ethical Issues**

The survey's goal was clearly indicated in the questionnaire's description, as was the fact that the information provided by the participants would not be utilized for commercial reasons or transferred to a third party. During the survey, no personal information (email address, password, bank account number, personal photo, etc.) was taken from the participants.

## **Results and Discussion**

### **Demographic Information**

Among the total 1088 participants, 53.3% were male and 46.7% were female. Their residents were village, city and semi-urban areas of the country. The actual number of participants of different age range are shown in Table 1.

**Table 1**

However, it was obvious from the statistics that individuals from urban regions were better educated than those from other parts of the country. 5.7 percent of the participants had completed primary school, 5.7% had completed high school but did not pass the secondary school certificate (SSC) examination, 8.6% had completed SSC, 46.6% had completed undergraduate studies, 26.8% had graduated, and 6.5% had completed postgraduate studies. Table 2 shows the educational qualifications of the participants in greater detail.

**Table 2**

To compare the situation, the participants' work status was documented before and after the epidemic. Before the pandemic, 25.1% of the participants were jobless, 16.1% were employed full-time, 10.8% were worked part-time, 31.5% were full-time students, 5.1% were part-time students, and 11.3% were self-employed. The following graph can help you understand your employment situation (Figure 1).

**Figure 1**

### **Knowledge about COVID-19**

Some questions asked throughout the poll were used to gauge people's perceptions about COVID-19. When asked how they acquire information on COVID-19, 11.76 percent of respondents answered they use only social media (Facebook, Twitter, Instagram, etc.) as a source of information. In other circumstances, users combine social media posts with information from many sources (television, newspaper, friends and relatives, and various websites). Table 3 provides detailed information on the source of COVID-19 knowledge (here, only 2 digits responses are shown).

**Table 3**

The most prevalent single response to the inquiry on the symptoms of Covid-19 illness, however, was 'Fever.' Fever is a prevalent symptom in the other responses as well. Table 4 summarizes the most prevalent responses to the disease's symptoms.

**Table 4**

A set of questions were used to assess the participants' understanding of the COVID-19 disease transmission pathway. The virus can be transferred by intimate contact with an

infected person, contact with surfaces touched by the patient, and utilizing the infected person's garments and other items, according to 47.33% of the participants. Figure 2 depicts the overall outcome.

### **Figure 2**

#### **Effects of Covid-19 on peoples' daily life**

The pandemic has altered the daily lives of individuals in the Covid-19 countries. Bangladesh is not immune to these circumstances. Many folks are unable to go out for their daily needs due to the lockdown situation. Men are more impacted by COVID-19<sup>8</sup>, have died from it, and are at a higher risk. Several offices are conducted entirely online, and their staff work from home as well. Due of the epidemic, many employees have been placed on leave. The overall situation of employees are presented in table 4.

### **Table 4**

Social gatherings with friends and relatives have also fallen significantly. The cause for this could be public awareness of the COVID-19 transmission or a government directive. The decrease in social interactions with friends and family is not statistically significant ( $p=1$ ). As a result, people should be more cautious. The detailed information about this along with statistical data is given in Table 5.

### **Table 5**

Personal and familial data were collected from the individuals in order to assess psychological stress. Due to the pandemic condition, 64.79% of the total participants (1088) reported no violence or other stress-related activities among their family members, whereas 23.71% stated that their family members were occasionally short-tempered with one another. In terms of personal mental health, 53.5% of respondents stated they are not worried at all, 25% said they have mild stress and occasional worries, and 21.5% said they have moderate to severe stress and frequent worries. Table 6 summarizes the results of stress-related questions.

### **Table 6**

The Covid-19 pandemic has clearly affected the socio-economic and day-to-day lives of Bangladesh's common people, as evidenced by the facts presented above. The reforms could have a severe impact on the country's social, cultural, and economic infrastructure.

#### **Conclusion**

According to the survey, the majority of people use social media posts and videos to spread information about COVID-19 illness. As a result, the relevant authority should conduct an assessment of the content posted on social media sites relating to the epidemic. It's also critical to establish some rules for sharing content on social media. The frequency of physical meetings with friends and family has remained rather constant. People should be more cautious when leaving their homes for this purpose. According to the WHO, a vibrant and overall society member should be pro-active to prevent further spread of the disease<sup>9</sup>. Although working conditions have improved significantly, many workers are still not receiving adequate compensation. According to an Italian study, health professionals are at a higher risk of contracting the disease because they are required to go out on a daily basis for their jobs<sup>10</sup>. This holds true for Bangladeshis as comorbidities affect the disease badly<sup>11</sup>. The government should take appropriate measures to keep people at home and provide enough personal protective equipment for those who must go out.

**Conflict of interest**

The authors have no conflict of interest.

**Funding**

The work is not funded by any organization.

**Acknowledgement**

The authors are thankful to all the participants of the survey

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## Tables and Figures:

Table

1.

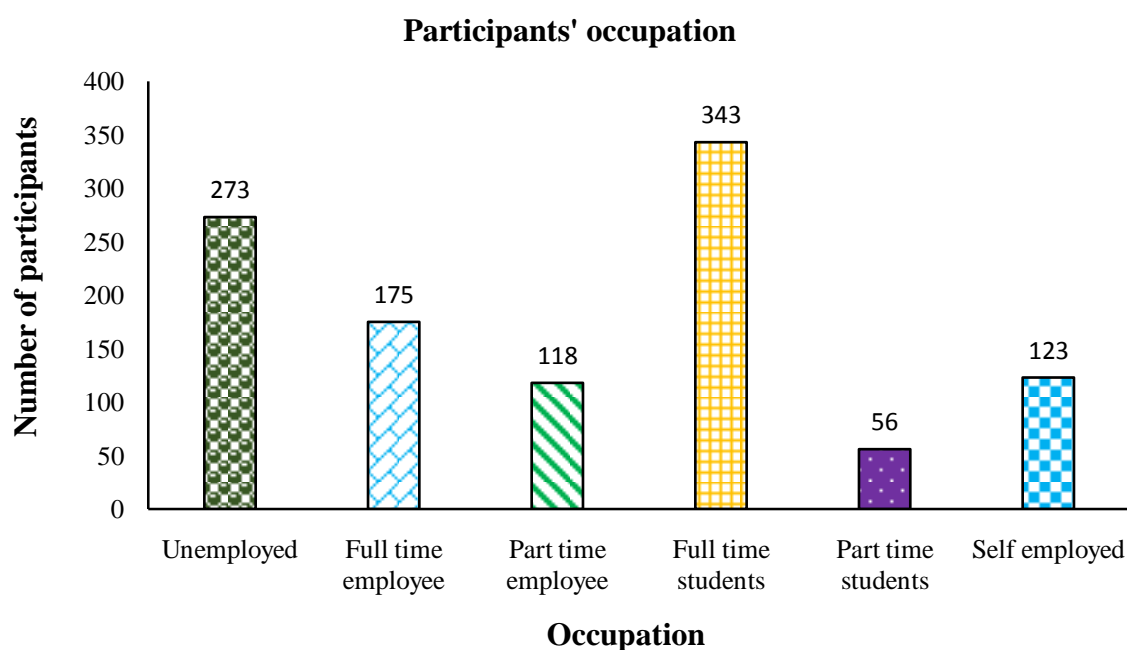
Age Range (year)	Male (580)	Female (508)	Grand total (1088)
10-20	100	102	202
21-30	313	276	589
31-40	73	56	129
41-50	50	35	85
51-60	25	23	48
61-70	14	9	23
71-100	5	7	12

Participants number according to their age and sex

Table 2. Educational and residential information

Residence	Primary School Certificate	High School	Secondary School Certificate	Higher Secondary Certificate	Graduate	Post graduate	Grand Total
City	18	38	44	266	178	41	<b>585</b>
Semi-urban	11	10	16	79	46	16	<b>178</b>
Village	33	14	34	162	68	14	<b>325</b>
Grand Total	<b>62</b>	<b>62</b>	<b>94</b>	<b>507</b>	<b>292</b>	<b>71</b>	<b>1088</b>

Figure 1:



**Figure 1:** Number of participants according to their employment status

Table 3. Participants' source of knowledge about Covid-19

Source of information	Number of participants
Friends and relatives	10
<b>Social media</b> , Newspaper, Television, WHO website	12
IEDCR broad cast	12
<b>Social media</b> , Newspaper, Television, WHO website, IEDCR broad cast	13
<b>Social media</b> , Newspaper, Television, IEDCR broad cast	13
Social media, Newspaper, Television, radio, Friends and relatives, WHO website	14
<b>Social media</b> , Newspaper, Television, radio, Friends and relatives	14
WHO website	14
<b>Social media</b> , WHO website	14
<b>Social media</b> , Television, WHO website, IEDCR broad cast	15
Newspaper, Television, Friends and relatives	15
<b>Social media</b> , Television, IEDCR broad cast	15
<b>Social media</b> , Television, Friends and relatives, WHO website	18
<b>Social media</b> , Newspaper, Television, radio	19
<b>Social media</b> , Newspaper	19
<b>Social media</b> , Newspaper, Television, Friends and relatives, WHO website, CDC website, IEDCR broad cast	22
<b>Social media</b> , Newspaper, Television, Friends and relatives, IEDCR broad cast	25
<b>Social media</b> , Television, WHO website	28
Newspaper, Television	29
<b>Social media</b> , Newspaper, Television, radio, Friends and relatives, WHO website, CDC website, IEDCR broad cast	31
<b>Social media</b> , Newspaper, Television, Friends and relatives, WHO website,	33



IEDCR broad cast	
<b>Social media</b> , Newspaper, Television, Friends and relatives, WHO website	34
Newspaper	37
<b>Social media</b> , Newspaper, Television, Friends and relatives	41
<b>Social media</b> , Television	50
<b>Social media</b> , Television, Friends and relatives	52
Television	80
<b>Social media</b> , Newspaper, Television	81
<b>Social media</b>	128
<b>Total</b>	<b>888</b>

Table 4: Peoples' concept about symptoms of the Covid-19 disease

<b>Symptoms</b>	<b>Participants</b>
Fever, General weakness, Loss of smell, Loss of taste	10
Fever, Shortness of breath at rest, Loss of smell, Loss of taste	10
Sore throat, Fever, Runny nose, Shortness of breath at rest, Chills, Fatigue, General weakness, Loss of appetite, headache	10
Sore throat, Fever, Shortness of breath at rest, General weakness, headache, Loss of smell, Loss of taste	10
Fever, Runny nose	11
Loss of smell	11
Fever, Runny nose, Loss of smell	13
Sore throat, Fever, Loss of smell, Loss of taste	13
Loss of taste	15
Sore throat, Fever	15
Sore throat, Fever, Shortness of breath at rest	15
Fever, Loss of smell	16
Sore throat, Fever, Runny nose, Shortness of breath at rest	16
General weakness	19
headache	22
Fever, headache	23
Sore throat, Fever, Runny nose, Shortness of breath at rest, Chills, Fatigue, General weakness, Loss of appetite, headache, Loss of smell, Loss of taste	26
Sore throat	31
Shortness of breath at rest	32
Fever	156
<b>Total</b>	<b>474</b>

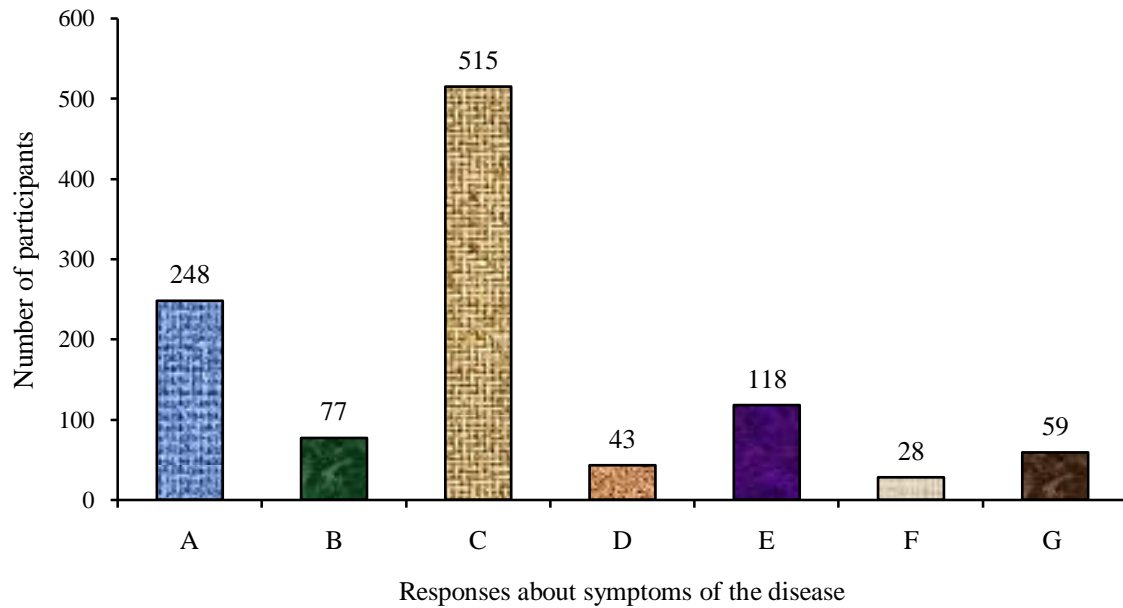


Figure 2: Participant's knowledge about Covid-19 symptoms

Here, panel **A** denotes 'Close contact with infected person', panel **B** denotes 'Close contact with infected person, Contact of surfaces which are touched by patient', panel **C** denotes 'Close contact with infected person, Contact of surfaces which are touched by patient, Using the cloths and other things of infected person', panel **D** denotes 'Close contact with infected person, Using the cloths and other things of infected person', panel **E** denotes 'Contact of surfaces which are touched by patient', panel **F** denotes 'Contact of surfaces which are touched by patient, Using the cloths and other things of infected person' and panel **G** denotes 'Using the cloths and other things of infected person'.

Table 4: Change of employment status due to this pandemic

Working condition	Number of participants
Working for same hour but get reduced salary	45
Suspended from work	81
Going to workplace for reduced time	127
Going to my workplace as before	184
Working from home	432
Total	869

Table 5: Changes in frequency of meeting with friends and relatives before and after of the pandemic

Frequency of meeting per week	Number of participants (Before pandemic)	Number of participants (After pandemic)	ANOVA test of single factor
0-5	399	799	P-value=1
6-10	391	176	F crit=5.9873
11-15	106	65	Df=1 (between groups)

15+	192	48
Total	1088	1088

Table 6: Personal and familial psychological stress condition

<b>Personal stress and Family stress</b>	<b>Number of participants</b>
<b>No personal stress</b>	<b>582</b>
No family stress	493
Family members frequently short tempered with one another	23
Family members occasionally short tempered with one another	57
Physical violence with one another	9
<b>Mild stress such as occasional worries</b>	<b>272</b>
No family stress	119
Family members frequently short tempered with one another	21
Family members occasionally short tempered with one another	125
Physical violence with one another	7
<b>Moderate stress with frequent worries</b>	<b>105</b>
No family stress	40
Family members frequently short tempered with one another	26
Family members occasionally short tempered with one another	36
Physical violence with one another	3
<b>Severe stress such as constant worries, anxiety, sad or angry</b>	<b>129</b>
No family stress	53
Family members frequently short tempered with one another	26
Family members occasionally short tempered with one another	40
Physical violence with one another	10
<b>Total</b>	<b>1088</b>