COVID-19 responses among general people of Bangladesh: Status and individual view toward COVID-19 during lockdown period

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Abstract: This cross-sectional study has evaluated the level of the COVID-19 response among the general people of Bangladesh through their COVID-19 basic knowledge, attitude and practice level to reduce the outbreak. A rapid self-administered online survey was conducted during the COVID-19 lockdown period in Bangladesh. Convenience and snowball sampling technique were followed in this study. The online survey was open for all Bangladeshi general people whether they were infected or not. For this study, total 616 Bangladeshi respondents participated where majority of them were from Dhaka city, one of the worst COVID-19 affected cities in the world. Normality of data was checked before statistical analysis. Majority of the respondents reported moderate safety of their current place from COVID-19 with high concern of their mental health during COVID-19 lockdown period. The total COVID-19 responses among these people were moderate along with the alarming high percentages of low COVID-19 responses. The respondents reported moderate COVID-19 knowledge level and moderate attitude level toward...
the COVID-19 control. They demonstrated that they followed practices to prevent the COVID-19 infection. Female respondents were identified with better COVID-19 responses compared to their male counterpart. Dhaka city residents had less confidence on their current place being safe from COVID-19. They also had low COVID-19 responses during the lockdown period compared to the residents living outside Dhaka city.

Subjects: Social Psychology; Health & Society; Community Health

Keywords: General people; lockdown; COVID-19; developing settlement; Dhaka city; Bangladesh

1. Introduction

COVID-19 was first reported in Wuhan, China back in December 2019 (Deng, 2020; Hayat et al., 2020; Hua & Shaw, 2020; Zhang & Shaw, 2020; Zhong et al., 2020). The rapid spread of the responsible Coronavirus has placed the world in an unprecedented situation. The World Health Organization (WHO) declared COVID-19 as pandemic on 11 March 2020 (Hua & Shaw, 2020; Zhang & Shaw, 2020; Zhong et al., 2020). This infectious disease have severely hit China, Europe, United States, Brazil and South-East Asia (Johns Hopkins Coronavirus Resource Center, Johns Hopkins Coronavirus Resource Center, 2020; WHO, 2020a). More than 200 countries’ communities have endured the poignant impact of COVID-19 (Namazi & Kulish, 2020). The COVID-19 registered global cases were 35,079,152 as of the 4 October 2020 (Johns Hopkins Coronavirus Resource Center, Johns Hopkins Coronavirus Resource Center, 2020), whereas 1,036,111 global deaths were also recorded due to this pandemic (Johns Hopkins Coronavirus Resource Center, Johns Hopkins Coronavirus Resource Center, 2020). This ongoing pandemic has spilled over many sectors across various countries where the frontline health care sector had to taste the most bitter part of this pandemic (Ozili & Arun, 2020; Zhang & Shaw, 2020; Zhou et al., 2020). The crises in health sector has already been expanded to the socio-economic and education sector (Ozili & Arun, 2020). This pandemic has also shown massive impact on human behaviour. The developing countries along with their fragile economic, educational and health sector may experience the COVID-19 overwhelming impact if no effective actions are taken (Ali et al., 2020; Hayat et al., 2020; Lai et al., 2020). The predicted extensive impact of this pandemic across the world has produced the term “Coronaphobia” (McKibbin & Fernando, 2020; Nicola et al., 2020; Ozili & Arun, 2020; Sintema, 2020). Many countries had to declare extended lockdown periods to reduce the COVID-19 outbreak. There are requirements for countries to adopt new knowledge, attitude and practice to control this pandemic.

Bangladesh has a history of frequent natural hazards and infectious diseases (Ali, 1999; Anwar et al., 2020; Mutsuddy et al., 2019). Due to the geological condition, numerous natural calamities frequently visit this country. Bangladesh has struggled with the climate change-induced problems as well (Ali, 1999; Banu et al., 2014; Haque, 1995). Along with other South Asian countries like India and Pakistan, Bangladesh likewise has become one of the hardest hit countries in COVID-19 pandemic (Johns Hopkins Coronavirus Resource Center, Johns Hopkins Coronavirus Resource Center, 2020; Mamun & Griffiths, 2020; Shammi, Bodrud-Doza, Towfiqul Islam et al., 2020; WHO, 2020a). This densely populated developing country along with other calamities has been struggling to control this pandemic. It has conducted experiments of several strategies such as full lockdown, partial lockdown, identification of zone depending on the number of COVID-19 cases to control the pandemic. However, not all of these strategies were completely successful and sometimes failed to effectively control the COVID-19 spread (Shammi, Bodrud-Doza, Islam et al., 2020). Bangladesh also experienced challenges to maintain the social distancing, mass COVID-19 testing facilities, travel restriction to control the COVID-19 outbreak (Anwar et al., 2020; Shammi, Bodrud-Doza, Islam et al., 2020). As of 4 October 2020 registered COVID-19 cases were 368,690 in Bangladesh (Johns Hopkins Coronavirus Resource Center, Johns Hopkins Coronavirus Resource Center, 2020). By this period, the nearest neighbouring country India, which has long border with
Bangladesh, has become second worst COVID-19 affected country in the world (Johns Hopkins Coronavirus Resource Center, Johns Hopkins Coronavirus Resource Center, 2020). The overwhelming COVID-19 impact has made the country’s socio-economic condition paralized. Bangladesh maintained lockdown to control COVID-19 outbreak from 26 March 2020 to the end of May 2020 (Anwar et al., 2020). All offices, educational institutions were closed during this lockdown period. However, the rapid increase of COVID-19 cases all across the country has placed the question on the effective implementation of this lockdown period. People have been found ignoring the lockdown period and they were also observed ignoring the COVID-19 precautionary measures, such as wearing mask and avoiding crowded place, in different mass and social media platforms; this has triggered the urgency to evaluate COVID-19 responses among the general people of Bangladesh.

This study intended to assess the COVID-19 responses among these general people during the lockdown period through widely used KAP model (Basir et al., 2020; Chen et al., 2015; Rahman et al., 2021; Zhong et al., 2020). It has attempted to evaluate the COVID-19 responses through their knowledge level about COVID-19, attitude and practices to prevent the COVID-19 infection during lockdown period. This cross-sectional research also considered the association of the Bangladeshi people’s general information with their responses to identify the vulnerable group for COVID-19. The Government of Bangladesh has already taken several approaches and activities to have effective COVID-19 responses both in community and organizational level. On the other hand, authentic information, positive attitude and regular practices of COVID-19 measures are required among the general people of Bangladesh. Public awareness has become one of the most substantial parts of this responses. However, it has also become burning issue whether the general people had effective COVID-19 responses, particularly during lockdown period. The current study had aim to evaluate it. The results of this study can assist the governmental, social and non-governmental organizations to comprehend the features of vulnerable group for COVID-19 through the evaluation of response level among general people of Bangladesh. In addition, these information can also be integrated into the recovery phase of COVID-19 to prepare for any future pandemic.

2. Materials and methods

2.1. Research design and ethical issues

A self-administered rapid online survey-based study was conducted in COVID-19 lockdown period of Bangladesh. Several researches have successfully applied self-administered survey method to conduct their study (Basolo et al., 2009; Bourque et al., 2012; Gillani et al., 2020; Nguyen et al., 2006; Rahman et al., 2021). The study area was divided into two separate locations; the worst COVID-19 affected Dhaka city (IEDCR, 2020) and outside Dhaka city. This study was as a part of approved research project from the corresponding author’s department. Another part was about COVID-19 responses among university students of Bangladesh (Rahman et al., 2021). It has upheld all ethical issues. Author’s University Institutional Review Board has also granted approval for this study. Cover page of the questionnaire clearly described the main objectives of the study. It was also assured the confidentiality of the responses and the responses will only be used for research purpose.

2.2. Survey tool

Questionnaire was developed through literature reviews considering the Bangladesh perspective (Chang et al., 2020; DGHS, 2020; Harapan et al., 2020; Hayat et al., 2020; Li et al., 2020; Rahman et al., 2021; WHO, 2020a). After discussion with the experts and pilot survey, final questionnaire was developed. The questionnaire consisted of 3 main parts: socio-demographic information of the respondents, such as age, gender, marital status, educational attainment, living with family, number of family members, current location, present occupation during COVID-19 lockdown period; confidence on current place and concerned about mental health during COVID-19 lockdown period; and the final KAP section was to measure the respondents’ COVID-19 responses through knowledge, attitude and practice questions. Confidence on current place and concerned about mental health during COVID-19 lockdown period were measured through 5-points (very safe, safe, moderately safe,
unsafe and very unsafe) and 3-points (highly, moderately, lowly) Lickert scale, respectively. This study has only considered the individual view toward COVID-19, no further analysis was considered regarding safety and mental health. Nine (09) closed-ended questions were to measure the COVID-19 knowledge among respondents, such as main clinical symptoms, transmission and preventive mode of COVID-19. 0–1 score range was considered for each question. Confidence on the activities from national and international community against COVID-19 and communication with the community, non-government and governmental organizations were considered in five (05) close-ended questions to measure the respondents’ attitude toward COVID-19. Each question had 5-points Lickert scale (Strongly agree, Agree, Neutral, Disagree and Strongly disagree). The final practices section, to prevent the COVID-19 infection during the lockdown period, had 10 close-ended questions with the binary answers (Yes/No) with 0–1 score range. The questionnaire was in easy English language version considering the online survey, where most of the respondents were expecting to be the students. Any support was also considered if the respondents didn’t understand any question. Accepted Cronbach’s standard alpha value (0.60–0.80) (Ursachi et al., 2015) was measured for the internal consistency and reliability of the binary and Lickert scale type questions. Cut-off scores were considered to categorize the high, moderate and low KAP scores (low score when the value was 25th quartile, moderate score when the value was 26th to 75th quartile and the high score was considered when the value greater than 75th quartile).

2.3. Data collection
Convenience sampling technique was mainly applied for this study. Conversely, in some cases snowball sampling technique was also applied to get more data. Corresponding author’s university students were instructed in Google Classroom to collect data through different online media such as Facebook and WhatsApp. This rapid online survey was conducted from mid of May to the end of May 2020 during the COVID-19 lockdown period of Bangladesh. It was open for all Bangladeshi general people whether they were infected or not. Bangladesh Government has lifted the lockdown on 31st May of 2020.

2.4. Data analysis
All statistical analyses were conducted by “R” software, version 3.6.3 (R Development Core Team, 2019) with 0.05 α level. Descriptive analyses were considered where required. The data were not normally distributed after checking through Shapiro-Wilk and Kolmogorov-Smirnov tests. The association of socio-demographic profile with the confidence of current place during COVID-19 lockdown period, concerned about mental health during COVID-19 lockdown period; knowledge, attitude, practice and total KAP score among respondents were measured through the non-parametric tests such as Kruskal-Wallis or Mann Whitney U test. Chi-square test was also performed to measure the high, moderate and low KAP score toward COVID-19 among the respondents. Dunn’s test for post hoc analysis where Bonferroni correction was considered to adjust the p value. Correlation between total KAP score and total knowledge, attitude and practice score was also measured through Pearson’s correlation test and linear regression model.

3. Results

3.1. Socio-demographic profile
616 respondents participated in rapid online survey during COVID-19 lockdown period of Bangladesh. Table 1 presents the frequencies and percentages of these respondents. Majority of the respondents had age 18–35 years (n = 589, 95.62%) where male respondents were more (n = 360, 58.44%) than the female respondents (n = 256, 41.56%). Single respondents (n = 92, 56.10%) were more than the married respondents (n = 67, 40.85%) among 164 respondents participated in case of marital status question. In case of educational attainment, majority of the respondents had Bachelor degree (n = 436, 80.59%) followed by Master degree (n = 96, 17.74%). Majority of the respondents were living with their family (n = 583, 94.64%) where majority had 2–5 family members (n = 485, 78.73%). Many respondents were living in Dhaka city (n = 356, 57.79%) where other respondents were from
Table 1. Confident on current place and concerned about mental health during COVID-19 lockdown period among the respondents from Bangladesh

| Features                                      | Frequency (n) | Percentages (%) | Confidence on Current Place from COVID-19 (Median (IQR)) | Concerned about Mental Health during COVID-19 Lockdown (Median (IQR)) |
|-----------------------------------------------|---------------|-----------------|----------------------------------------------------------|---------------------------------------------------------------------|
| (1) Age (year)                                |               |                 |                                                         |                                                                     |
| (a) 18–35                                     | 589           | 95.62           | 3.0 (1.00)                                               | 2.0 (1.00)                                                          |
| (a) Less than 18                              | 03            | 0.49            | 4.0 (2.00)                                               | 2.0 (0.50)                                                          |
| • More than 35                                | 24            | 3.90            | 3.0 (1.25)                                               | 3.0 (1.00)                                                          |
| 2. Gender                                     |               |                 |                                                         |                                                                     |
| (a) Male                                      | 360           | 58.44           | 3.0 (1.00)**                                             | 2.0 (1.00)                                                          |
| (a) Female                                    | 256           | 41.56           | 3.0 (1.00)                                               | 3.0 (1.00)                                                          |
| 3. Marital Status                             |               |                 |                                                         |                                                                     |
| (a) Married                                   | 67            | 40.85           | 2.0 (1.00)                                               | 2.0 (1.00)                                                          |
| (a) Others (Separated, Divorced, Widowed)     | 05            | 3.05            | 3.0 (2.00)                                               | 3.0 (1.00)                                                          |
| • Single                                      | 92            | 56.10           | 3.0 (1.00)                                               | 3.0 (1.00)                                                          |
| 4. Educational Attainment                     |               |                 |                                                         |                                                                     |
| (a) Bachelor                                  | 436           | 80.59           | 3.0 (1.00)                                               | 2.0 (1.00)                                                          |
| (a) Master                                    | 96            | 17.74           | 2.0 (1.00)                                               | 2.0 (1.00)                                                          |
| • PhD                                         | 05            | 0.92            | 3.0 (0.00)                                               | 3.0 (1.00)                                                          |
| • SSC or Below                                | 03            | 0.55            | 3.0 (0.50)                                               | 3.0 (0.50)                                                          |
| (a) HSC                                       | 01            | 0.18            | 3.0 (0.00)                                               | 2.0 (0.00)                                                          |
| 5. Living with Family                         |               |                 |                                                         |                                                                     |
| (a) Yes                                       | 583           | 94.64           | 3.0 (1.00)                                               | 2.0 (1.00)                                                          |
| (a) No                                        | 33            | 5.36            | 3.0 (2.00)                                               | 2.0 (1.00)                                                          |
| 6. Number of Family Members                   |               |                 |                                                         |                                                                     |
| (a) Single                                    | 15            | 2.44            | 4.0 (2.00)***                                            | 2.0 (0.50)                                                          |
| (a) 2-5                                       | 485           | 78.73           | 3.0 (1.00)                                               | 2.0 (1.00)                                                          |
| • >5                                          | 116           | 18.83           | 3.0 (1.00)                                               | 2.5 (1.00)                                                          |
| 7. Current Location                           |               |                 |                                                         |                                                                     |
| (a) Dhaka City                                | 356           | 57.79           | 3.0 (1.00)                                               | 2.5 (1.00)                                                          |
| (a) Outside Dhaka City                        | 260           | 42.21           | 3.0 (1.00)**                                             | 2.0 (1.00)                                                          |
| 8. Present Occupation                         |               |                 |                                                         |                                                                     |
outside of Dhaka (n = 260, 42.21%) during the survey. Majority of the respondents were students (n = 452, 73.38%) followed by employee respondents (n = 89, 14.45%).

3.2. Confidence on current place safety and mental health concern during COVID-19 lockdown

Table 1 also presents the confidence on current place safety and mental health concerned during COVID-19 lockdown period of Bangladesh. Many respondents demonstrated moderately safe (n = 237, 38.47%) view of their current place; where other respondents also indicated their unsafe current place (n = 196, 31.82%) condition from COVID-19. In case of mental health concern during the lockdown period, many respondents were highly concerned (n = 296, 48.05%) followed by moderately concerned (n = 280, 45.45%). Male respondents demonstrated significantly more confidence on their current living place’s safety from COVID-19 during the lockdown period of Bangladesh. In case of number of family members, single respondents reported significantly high confidence on their current living place compared to the respondents with family members. Respondents living outside Dhaka city were significantly more confident in their current place’s safety from COVID-19 compared to the Dhaka city residents.

3.3. Knowledge of the respondents during COVID-19 lockdown

Table 2 presents the knowledge of respondents toward COVID-19 during the lockdown in Bangladesh. Many respondents reported unexpected responses in case of the questions regarding main clinical symptoms (fever, fatigue and dry cough) of COVID-19 (54.06%), person (old people with chronic illness) who can develop normally severe COVID-19 cases (46.92%), wearing rubber gloves only is the very effective when to go outside is wrong action for COVID-19 (61.04%) and COVID-19 health assistance emergency number (333) in Bangladesh (48.54%). However, many respondents also reported expected answers regarding the questions about any cure to recover from COVID-19 (68.99%), infection through the pre-symptomatic or asymptomatic (person with COVID-19 but no fever) person and also contact with the infected one (77.92%), mode (via respiratory droplets of infected person) of Coronavirus transmission (61.04%), wear general medical mask, avoid crowded places, regular wash hand can prevent people from coronavirus infection (95.78%) and minimum preventive measures are fine for children and young adults are wrong action for COVID-19 infection (60.23%).

3.4. Attitude of the respondents during COVID-19 lockdown

Table 3 presents the attitude of the respondents toward COVID-19 during lockdown period of Bangladesh. Majority of the respondents reported neutral attitude about the national and

Table 1. (Continued)

| Features                                      | Frequency (n) | Percentages (%) | Confidence on Current Place from COVID-19 (Median (IQR)) | Concerned about Mental Health during COVID-19 Lockdown (Median (IQR)) |
|-----------------------------------------------|--------------|-----------------|----------------------------------------------------------|---------------------------------------------------------------------|
| (a) Employed but not student                  | 89           | 14.45           | 3.0 (1.00)                                               | 2.0 (1.00)                                                          |
| (a) Furlough or laid-off from work due COVID-19 | 22           | 3.57            | 3.0 (1.00)                                               | 2.0 (1.00)                                                          |
| • Seeking for job but not student             | 53           | 8.60            | 3.0 (1.00)                                               | 3.0 (1.00)                                                          |
| • Student                                    | 452          | 73.38           | 3.0 (1.00)                                               | 2.0 (1.00)                                                          |

*p < 0.05; **p < 0.01; ***p < 0.001.
Table 2. Knowledge of the respondents of Bangladesh about COVID-19 during lockdown period

| Statement                                             | Expected Response (n(%)) | Unexpected Response (n(%)) |
|-------------------------------------------------------|--------------------------|----------------------------|
| COVID-19 main clinical symptoms?                       | 283 (45.94)              | 333 (54.06)                |
| Any cure to recover from COVID-19?                    | 425 (68.99)              | 191 (31.01)                |
| Who can normally develop severe cases?                | 327 (53.08)              | 289 (46.92)                |
| Who can infect others with the Coronavirus?           | 480 (77.92)              | 136 (22.08)                |
| How can this virus spread?                            |                          |                            |
| Which one can prevent COVID-19?                       | 590 (95.78)              | 26 (4.22)                  |
| The WRONG action for COVID-19?                        | 371 (60.23)              | 245 (39.77)                |
| The WRONG action for COVID-19?                        | 240 (38.96)              | 376 (61.04)                |
| Emergency number for COVID-19 assistance in Bangladesh? | 317 (51.46)              | 299 (48.54)                |

Table 3. Attitude of the respondents of Bangladesh toward COVID-19 during lockdown period

| Statement                                                                 | *SA (n(%)) | *A (n(%)) | *N (n(%)) | *DA (n(%)) | *SDA (n(%)) |
|--------------------------------------------------------------------------|------------|-----------|-----------|------------|-------------|
| COVID-19 will finally be successfully controlled.                         | 71 (11.53) | 184 (29.87)| 205 (33.28)| 111 (18.02)| 45 (7.31)   |
| Bangladesh will win in the battle against COVID-19.                       | 55 (8.93)  | 162 (26.30)| 212 (34.42)| 122 (19.81)| 65 (10.55)  |
| I have enough communication and support from community/social organization for any emergency support for Coronavirus issue. | 27 (4.38)  | 151 (24.51)| 229 (37.18)| 163 (26.46)| 46 (7.47)   |
| I have enough communication and support from NGO for any emergency support for Coronavirus issue. | 20 (3.25)  | 65 (10.55) | 224 (36.36)| 251 (40.75)| 56 (9.09)   |
| I have enough communication and support from Government organization for any emergency support for Coronavirus issue. | 29 (4.71)  | 118 (19.16)| 225 (36.53)| 189 (30.68)| 55 (8.93)   |

*SA = Strongly Agree, A = Agree, N = Neutral, DA = Disagree and SDA = Strongly Disagree. Expected responses are in bold.
international battle against COVID-19. 29.87% of respondents believed that the COVID-19 will finally be successfully controlled. 40.75% of respondents disagreed about the enough communication and support from NGOs for COVID-19 emergency case. Many respondents reported the lack of communication and support from the organizations in case of emergency COVID-19 case.

3.5. Practice of the respondents during COVID-19 lockdown
Table 4 shows the practices among respondents to prevent the COVID-19 infection during lockdown period in Bangladesh. Majority of the respondents (more than 90%) reported good practices to prevent COVID-19 infection. However, many respondents (26.30%) had lack of practice to avoid touching their eyes, nose and mouth to prevent the main route of Coronavirus into human body. Many respondents (43.06%) also reported that they did not usually call their local health authority in advance for COVID-19 health assistance.

3.6. KAP score of the respondents during COVID-19 lockdown
Table 5 presents the association of respondents’ socio-demographic profile with KAP score categories (high, moderate and low) where Table 6 shows the KAP score’s comparison regarding COVID-19 by socio-demographic profile. Table 6 also presents the association of current place safety (based on the confidence level of respondents) from COVID-19 with the total knowledge, attitude, practice and total KAP scores. Majority of the respondents demonstrated moderate knowledge score category (57.63%) where 28.57% of the respondents reported low knowledge score category toward COVID-19 in lockdown period of Bangladesh. Female respondents reported significantly more high (16.94%) and moderate (61.33%) knowledge score category compared to their male counterpart. Female respondents also reported significantly more total knowledge score (Table 6) than male respondents.

### Table 4. Practices of the respondents of Bangladesh towards COVID-19 during lockdown period

| Statement                                                                 | Yes (n(%) | No (n(%) |
|---------------------------------------------------------------------------|-----------|-----------|
| Regularly and thoroughly use of alcohol-based hand rub or soap and water to wash hands | 598 (97.08) | 18 (2.92) |
| Maintain 1-meter (3 feet) distance from others                             | 573 (93.02) | 43 (6.98) |
| Avoid crowding or crowded places                                          | 589 (95.62) | 27 (4.38) |
| Avoid touching eyes, nose and mouth                                        | 454 (73.70) | 162 (26.30) |
| Cover mouth and nose with bent elbow or tissue during cough or sneeze and then dispose the tissue and wash hands immediately | 574 (93.18) | 42 (6.82) |
| Stay home and self-isolate even with minor symptoms such as cough, headache, mild fever, until recover | 558 (90.58) | 58 (9.42) |
| Always wear mask when go outside                                          | 581 (94.32) | 35 (5.68) |
| Always Wash or Change your Clothes after return from outside              | 579 (93.99) | 37 (6.01) |
| Call in advance the local health authority and follow the directions for medical care early particularly in COVID-19 time | 351 (56.98) | 265 (43.02) |
| Follow the latest information from trusted sources, such as WHO or local and national health authorities Expected responses are in bold. | 580 (94.16) | 36 (5.84) |
Table 5. Socio-demographic profile associations with different Knowledge (K), Attitude (A), Practice (P) and Total (KAP) score categories during COVID-19 lockdown period

| Features | Score (n(%)) |
|----------|--------------|
|          | High         | Moderate     | Low           |
| Knowledge Score | 85 (13.80)  | 355 (57.63)  | 176 (28.57)   |
| 1. Age (year) | a. 18–35 | 83 (14.09)  | 338 (57.39)  | 168 (28.52) |
|           | b. Less than 18 | 0 (0.00)  | 1 (33.33)    | 2 (66.67)   |
|           | c. More than 35 | 2 (8.33)   | 16 (66.67)   | 6 (25.00)   |
| 2. Gender** | a. Male | 43 (11.94)  | 198 (55.00)  | 119 (33.06) |
|           | b. Female | 42 (16.94)  | 157 (61.33)  | 57 (22.27)  |
| 3. Marital Status | a. Married | 7 (10.45)   | 38 (56.72)   | 22 (32.84)  |
|           | b. Others (Separated, Divorced, Widowed) | 1 (20.00)   | 4 (80.00)    | 0 (0.00)    |
|           | c. Single | 16 (17.39)  | 52 (56.52)   | 24 (26.09)  |
| 4. Educational Attainment | a. Bachelor | 63 (14.45)  | 250 (57.34)  | 123 (28.21) |
|           | b. Master | 10 (10.42)  | 54 (56.25)   | 32 (33.33)  |
|           | c. PhD | 2 (40.00)   | 3 (60.00)    | 0 (0.00)    |
|           | d. SSC or Below | 0 (0.00)   | 2 (66.67)    | 1 (33.33)   |
|           | e. HSC | 0 (0.00)    | 1 (100)      | 0 (0.00)    |
| 5. Living with Family | a. Yes | 81 (13.89)  | 334 (57.29)  | 168 (28.82) |
|           | b. No | 4 (12.12)   | 21 (63.64)   | 8 (24.24)   |
| 6. Number of Family Members* | a. Single | 0 (0.00)    | 8 (53.33)    | 7 (46.67)   |
|           | b. 2–5 | 61 (12.58)  | 288 (59.38)  | 136 (28.04) |
|           | c. >5 | 24 (20.69)  | 59 (50.86)   | 33 (28.45)  |
| 7. Current Location* | a. Dhaka City | 38 (10.67)  | 214 (60.11)  | 104 (29.21) |
|           | b. Outside Dhaka City | 47 (18.08)  | 141 (54.23)  | 72 (27.69)  |
| 8. Present Occupation | a. Employed but not student | 14 (15.73)  | 49 (55.06)   | 26 (29.21)  |
|           | b. Furlough or laid-off from work due COVID-19 | 3 (13.64)   | 15 (68.18)   | 4 (18.18)   |
|           | c. Seeking for job but not student | 7 (13.21)   | 30 (56.60)   | 16 (30.19)  |
|           | d. Student | 61 (13.50)  | 261 (57.74)  | 130 (28.76) |
| 9. Attitude Score | a. 18–35 | 116 (19.69) | 293 (49.75) | 180 (30.56) |
|           | b. Less than 18 | 3 (100.00) | 0 (0.00)    | 0 (0.00)    |
|           | c. More than 35 | 5 (20.83)  | 12 (50.00)   | 7 (29.17)   |
| 10. Gender | 2. |  |  |  |
### Table 5. (Continued)

| Features                                      | Score (n(%))          |
|-----------------------------------------------|-----------------------|
| **1. Age (year)**                             |                       |
| a. 18–35                                      | 219 (37.18)           |
| b. Less than 18                               | 2 (66.67)             |
| c. More than 35                               | 14 (58.33)            |
| **2. Gender*                                  |                       |
| a. Male                                       | 133 (36.94)           |
| b. Female                                     | 102 (39.84)           |
| **3. Marital Status**                         |                       |
| a. Married                                    | 24 (35.82)            |
| b. Others (Separated, Divorced, Widowed)      | 2 (27.27)             |
| c. Single                                     | 34 (36.96)            |
| **4. Educational Attainment**                 |                       |
| a. Bachelor                                   | 87 (19.95)            |
| b. Master                                     | 16 (16.67)            |
| c. PhD                                        | 1 (20.00)             |
| d. SSC or Below                               | 1 (33.33)             |
| e. HSC                                        | 0 (0.00)              |
| **5. Living with Family**                     |                       |
| a. Yes                                        | 118 (20.24)           |
| b. No                                         | 6 (18.18)             |
| **6. Number of Family Members**               |                       |
| a. Single                                     | 5 (33.33)             |
| b. 2–5                                        | 93 (19.18)            |
| c. >5                                         | 26 (22.41)            |
| **7. Current Location*                        |                       |
| a. Dhaka City                                 | 60 (16.85)            |
| b. Outside Dhaka City                         | 64 (24.62)            |
| **8. Present Occupation**                     |                       |
| a. Employed but not student                   | 15 (16.85)            |
| b. Furlough or laid-off from work due COVID-19| 6 (27.27)             |
| c. Seeking for job but not student            | 13 (24.53)            |
| d. Student                                    | 90 (19.91)            |
| **Practice Score**                            |                       |
| a. Male                                       | 133 (36.94)           |
| b. Female                                     | 102 (39.84)           |
| **3. Marital Status**                         |                       |
| a. Married                                    | 24 (35.82)            |
| b. Others (Separated, Divorced, Widowed)      | 2 (27.27)             |
| c. Single                                     | 34 (36.96)            |
### Features

#### 4. Educational Attainment

|         | Score (n(%)) |
|---------|--------------|
| a. Bachelor | 167 (38.30)  | 139 (31.88) | 130 (29.82) |
| b. Master   | 39 (60.62)   | 26 (7.08)   | 31 (32.29)  |
| c. PhD      | 1 (20.00)    | 3 (60.00)   | 1 (20.00)   |
| d. SSC or Below | 2 (66.67) | 1 (33.33)   | 0 (0.00)    |
| e. HSC      | 0 (0.00)     | 1 (100.00)  | 0 (0.00)    |

#### 5. Living with Family

|         | Score (n(%)) |
|---------|--------------|
| a. Yes   | 222 (38.08)  | 191 (32.76) | 170 (29.16) |
| b. No    | 13 (39.39)   | 6 (18.18)   | 14 (42.42)  |

#### 6. Number of Family Members*

|         | Score (n(%)) |
|---------|--------------|
| a. Single | 11 (33.33)  | 1 (6.67)    | 3 (20.00)   |
| b. 2–5   | 177 (36.49)  | 154 (31.75) | 154 (31.75) |
| c. >5   | 47 (40.52)   | 42 (36.21)  | 27 (23.28)  |

#### 7. Current Location

|         | Score (n(%)) |
|---------|--------------|
| a. Dhaka City | 142 (39.89) | 118 (33.15) | 96 (26.97) |
| b. Outside Dhaka City | 93 (35.77) | 79 (30.38) | 88 (33.85) |

#### 8. Present Occupation

|         | Score (n(%)) |
|---------|--------------|
| a. Employed but not student | 34 (38.20)  | 24 (26.97)  | 31 (34.83)  |
| b. Furlough or laid-off from work due COVID-19 | 6 (27.27)   | 9 (40.91)   | 7 (31.82)   |
| c. Seeking for job but not student | 20 (37.74)  | 18 (33.96)  | 15 (28.30)  |
| d. Student | 175 (38.72) | 146 (32.30) | 131 (28.98) |

#### Total KAP Score

|         | Score (n(%)) |
|---------|--------------|
| a. 18–35 | 130 (22.40)  | 295 (47.89) | 183 (29.71) |

#### 1. Age (year)

|         | Score (n(%)) |
|---------|--------------|
| a. 18–35 | 130 (22.07)  | 283 (48.05) | 176 (29.88) |
| b. Less than 18 | 1 (33.33) | 1 (33.33) | 1 (33.33) |
| c. More than 35 | 7 (29.17)   | 11 (45.83)  | 6 (25.00)   |

#### 2. Gender

|         | Score (n(%)) |
|---------|--------------|
| a. Male | 79 (21.94)   | 167 (46.39) | 114 (31.67) |
| b. Female | 59 (23.05) | 128 (50.00) | 69 (26.95) |

#### 3. Marital Status

|         | Score (n(%)) |
|---------|--------------|
| a. Married | 12 (17.91)  | 31 (46.27)  | 24 (35.82)  |
| b. Others (Separated, Divorced, Widowed) | 1 (20.00)   | 2 (40.00)   | 2 (40.00)   |
| c. Single | 21 (22.83)   | 45 (48.91)  | 26 (28.26)  |

#### 4. Educational Attainment

|         | Score (n(%)) |
|---------|--------------|
| a. Bachelor | 104 (23.85) | 210 (48.17) | 122 (27.98) |
| b. Master   | 16 (16.67)   | 43 (44.79)  | 37 (38.54)  |
| c. PhD      | 1 (20.00)    | 4 (80.00)   | 0 (0.00)    |
| d. SSC or Below | 1 (33.33) | 0 (0.00)    | 2 (66.67)   |
| e. HSC      | 0 (0.00)     | 0 (0.00)    | 1 (100.00)  |

#### 5. Living with Family*

(Continued)
Table 5. (Continued)

| Features | Score (n(%)| |
| --- | --- | --- | --- |
| a. Yes | 134 (22.98) | 272 (46.66) | 177 (30.36) |
| b. No | 4 (12.12) | 23 (69.70) | 6 (18.18) |

6. Number of Family Members

| a. Single | 2 (13.33) | 9 (60.00) | 4 (26.67) |
| b. 2–5 | 104 (21.44) | 235 (48.45) | 146 (30.10) |
| c. >5 | 32 (27.59) | 51 (43.97) | 33 (28.45) |

7. Current Location

| a. Dhaka City | 74 (20.79) | 165 (46.35) | 117 (32.87) |
| b. Outside Dhaka City | 64 (24.62) | 130 (50.00) | 66 (25.38) |

8. Present Occupation

| a. Employed but not student | 18 (20.22) | 40 (44.94) | 31 (34.83) |
| b. Furlough or laid-off from work due COVID-19 | 6 (27.27) | 8 (36.36) | 8 (36.36) |
| c. Seeking for job but not student | 10 (18.87) | 30 (56.60) | 13 (24.53) |
| d. Student | 104 (23.01) | 217 (48.01) | 131 (28.98) |

*p < 0.05; **p < 0.01; ***p < 0.001.

Table 6. Comparison of total Knowledge, attitude, practice and KAP scores during COVID-19 lockdown period by socio-demographic profile

| Features | Knowledge (Median (IQR)) | Attitude (Median (IQR)) | Practice (Median (IQR)) | Total KAP (Median (IQR)) |
| --- | --- | --- | --- | --- |
| (1) Age (year) | | | | |
| (a) 18–35 | 6.0 (3.00) | 15.0 (5.00) | 9.0 (2.00) | 29.0 (6.00) |
| (a) Less than 18 | 3.0 (2.00) | 21.0 (2.50)** | 10.0 (5.00) | 32.0 (6.50) |
| • More than 35 | 5.5 (1.5) | 15.0 (5.50) | 10.0 (1.00) | 31.0 (6.25) |
| 2. Gender | | | | |
| (a) Male | 5.0 (3.00) | 15.0 (5.00) | 9.0 (2.00) | 29.0 (6.00) |
| (a) Female | 6.0 (2.00)*** | 15.0 (4.25) | 9.0 (1.00) | 29.0 (6.00) |
| 3. Marital Status | | | | |
| (a) Married | 5.0 (2.00) | 15.0 (4.50) | 9.0 (2.00) | 28.0 (5.00) |
| (a) Others (Separated, Divorced, Widowed) | 7.0 (1.00) | 14.0 (3.00) | 9.0 (1.00) | 29.0 (4.00) |
| • Single | 6.0 (3.00) | 15.0 (5.00) | 9.0 (2.00) | 29.0 (6.00) |
| 4. Educational Attainment | | | | |
| (a) Bachelor | 6.0 (3.00) | 15.0 (5.00) | 9.0 (2.00) | 29.0 (6.00) |
| (a) Master | 5.5 (3.00) | 15.0 (6.00) | 9.0 (2.00) | 28.0 (5.25) |

(Continued)
Respondents with more than 5 family members reported significantly more high knowledge score category (20.59%) followed by respondents with 2–5 family members. Residents living outside Dhaka city reported significantly more high knowledge score category (18.08%) than the Dhaka city residents. In case of the association between respondents’ confidence level on current place from

| Features                                      | Knowledge (Median (IQR)) | Attitude (Median (IQR)) | Practice (Median (IQR)) | Total KAP (Median (IQR)) |
|-----------------------------------------------|--------------------------|-------------------------|-------------------------|--------------------------|
| • PhD                                         | 7.0 (2.00)               | 17.0 (3.00)             | 9.0 (0.00)              | 31.0 (1.00)              |
| • SSC or Below                                | 5.0 (1.50)               | 12.0 (4.00)             | 10.0 (0.50)             | 26.0 (3.50)              |
| (a) HSC                                       | 6.0 (0.00)               | 11.0 (0.00)             | 9.0 (0.00)              | 26.0 (0.00)              |
| 5. Living with Family                         |                          |                         |                         |                          |
| (a) Yes                                       | 6.0 (3.00)               | 15.0 (5.00)             | 9.0 (2.00)              | 29.0 (6.00)              |
| (a) No                                        | 6.0 (2.00)               | 14.0 (3.00)             | 9.0 (3.00)              | 30.0 (5.00)              |
| 6. Number of Family Members                   |                          |                         |                         |                          |
| (a) Single                                    | 5.0 (3.50)               | 15.0 (4.50)             | 10.0 (0.50)             | 28.0 (4.00)              |
| (a) 2–5                                       | 6.0 (3.00)               | 15.0 (5.00)             | 9.0 (2.00)              | 29.0 (6.00)              |
| • >5                                          | 6.0 (3.00)               | 15.0 (5.00)             | 9.0 (1.00)              | 29.0 (7.00)              |
| 7. Current Location                           |                          |                         |                         |                          |
| (a) Dhaka City                                | 6.0 (3.00)               | 14.0 (4.00)             | 9.0 (2.00)              | 29.0 (6.00)              |
| (a) Outside Dhaka City                        | 6.0 (3.00)               | 15.0 (5.00)*            | 9.0 (2.00)              | 29.0 (6.00)              |
| 8. Present Occupation                         |                          |                         |                         |                          |
| (a) Employed but not student                  | 6.0 (3.00)               | 15.0 (6.00)             | 9.0 (2.00)              | 28.0 (6.00)              |
| (a) Furlough or laid-off from work due COVID-19| 6.0 (2.00)               | 13.5 (5.75)             | 9.0 (1.75)              | 28.5 (7.50)              |
| • Seeking for job but not student             | 5.0 (3.00)               | 15.0 (5.00)             | 9.0 (2.00)              | 29.0 (4.00)              |
| • Student                                     | 6.0 (3.00)               | 15.0 (5.00)             | 9.0 (2.00)              | 29.0 (6.00)              |
| 9. Confidence on Current Place from COVID-19  |                          |                         |                         |                          |
| (a) Very Safe                                 | 4.0 (3.75)               | 16.0 (3.00)**           | 10.0 (1.00)             | 31.0 (4.75)              |
| (a) Safe                                      | 5.0 (4.00)               | 16.0 (4.00)             | 10.0 (1.00)**           | 31.0 (6.00)**            |
| • Moderately Safe                             | 6.0 (2.00)*              | 15.0 (5.00)             | 9.0 (2.00)              | 29.0 (6.00)              |
| • Unsafe                                      | 6.0 (3.00)               | 14.0 (4.00)             | 9.0 (2.00)              | 28.0 (6.00)              |
| (a) Very Unsafe                               | 6.0 (2.00)               | 12.0 (5.00)             | 9.0 (2.00)              | 28.0 (6.00)              |

*p < 0.05; **p < 0.01; ***p < 0.001.
COVID-19 (Table 6) and total knowledge, attitude, practice and KAP score; significant association was identified. Post hoc analyses were conducted. Respondents who had moderate confident on the safety of their current place from COVID-19, reported significantly more total knowledge score when compared with the total knowledge score of the respondents who reported safe of the current place. However, respondents who reported their current place safe (very safe, safe and moderate safe) from COVID-19 during the lockdown period in Bangladesh, showed significantly high attitude score compared with the attitude score from unsafe and very unsafe current place reporting respondents. In case of total practice and total KAP score, respondents who reported their current place safe showed significantly more score when compared with the score from the unsafe and very unsafe reporting respondents.

Majority of the respondents (49.75%) reported moderate attitude score category where 30.56% of the respondents showed low attitude score category toward COVID-19 in lockdown period of Bangladesh. Significant association was identified between the age of the respondents and the attitude score category. All respondents less than 18 years old reported significantly high attitude score category followed by more than 35 years old respondents. In case of total attitude score among the respondents’ age (Table 6), significant association was also identified. Post hoc analysis was conducted. Respondents of less than 18 years old reported significantly more attitude score. Outside Dhaka city residents reported significantly higher attitude score category (24.62%) compared to the Dhaka city residents toward COVID-19 prevention. Table 6 also presents significantly more attitude score for outside Dhaka city residents during the lockdown period.

38.15% of respondents demonstrated high practice score category followed by moderate practice score category (31.98%) to prevent the COVID-19 infection. Female respondents reported significantly more high practice score category (39.84%) than their male counterpart. In case of number of family members, respondents without family member (single) reported significantly more high practice score category (73.33%) than the respondents with family members.

47.89% of respondents reported more moderate total KAP score category (47.89%) followed by low total KAP score category (29.71%) toward COVID-19 during the lockdown period in Bangladesh. Respondents living with their family reported significantly higher total KAP score category (22.98%) than the respondents who were living without their family during COVID-19 lockdown period.

The interrelationship between knowledge, attitude and practices with total KAP score was identified through Pearson’s correlation analysis. It was also identified knowledge, attitude and practice scores as significant predictors (p < 0.001) for total KAP score through the linear regression model. Attitude score showed as significant predictor (Beta = 0.089, R² = 0.057, p < 0.001) for practice score among the respondents during COVID-19 lockdown period in Bangladesh.

4. Discussion

Bangladesh, with more than 165 million population (Shammi, Bodrud-Doza, Islam et al., 2020) and average of 4.4 persons per household (Bangladesh Bureau of Statistics, 2012; Khan & Prodhan, 2020), had faced difficulties to maintain the non-therapeutic activities such as avoid social gathering, minimal movement, regular washing hands with alcohol-based hand rub or wash, wearing face mask other practices (WHO, 2020b) to control the COVID-19 outbreak. The knowledge, attitude and practice (IEDCR, 2020; WHO, 2020b) to control the COVID-19 outbreak have become new, and in some cases burden for the Bangladeshi people (Rahman et al., 2021). General people of Bangladesh are not accustomed to these knowledge, attitude and practices in their society prior to COVID-19 pandemic(Rahman et al., 2021). Even though lockdown was the only effective preventive measure against COVID-19 (Das & Paital, 2020; Paital, 2020; Paital et al., 2020), it was difficult to maintain in the various areas of Bangladesh (Shammi, Bodrud-Doza, Islam et al., 2020) where people need to go outside for daily income. Particularly the capital city Dhaka with high densely population has experienced the worst impact of COVID-19 (IEDCR, 2020) of Bangladesh.
Majority of the respondents in this study were young of age and students due to the common accessibility to online media among this group. Respondents were living both in Dhaka city and outside Dhaka city during this online survey. Numerous respondents did not have much confidence on their current place from the COVID-19 infection. Rapid transmission of COVID-19 (IEDCR, 2020) and people’s negative attitude to ignore the lockdown might have prompted this situation. Mass media have also been active to disseminate the latest news pointing out the negative attitude among many general people of Bangladesh. Long-term lockdown and negative news or information also could place the respondents to be concerned about their mental health. Previous study also identified the effect of lockdown on mental health during the Severe Acute Respiratory Syndrome (SARS) outbreak (Hawryluck et al., 2004). However, recent study has also suggested some activities based on intra-family interaction and inter-family interaction to pass the lockdown period time in productive ways (Das & Paital, 2020). Male respondents had more confidence on their current living place’s safety against COVID-19 during the lockdown period in Bangladesh. In a developing country’s society like in Bangladesh, females usually experience safety and security issue in case of any emergency situation. This study revealed that the respondents without family member were more confident on their current living place from COVID-19. Probable explanation could be that they might not have thought about the possibility of their family member’s infection. Dhaka city residents were less confident on their current place’s safety due to the rapid COVID-19 transmission in this city. This city’s people, due to frequent urban hazards and high exposure due to the large number of migratory people (Akram, 2019; Chowdhury, 2017; Paul & Bhuiyan, 2010), have always been concerned about the safety issue.

Furthermore, this research revealed that the respondents from Bangladesh during COVID-19 lockdown period had more practices than the knowledge and attitude toward COVID-19 outbreak control. COVID-19 or such pandemic was completely new phenomenon for the Bangladeshi general people. Lots of new information were circulated to prevent the COVID-19 infection. Due to the upsurge of massive information, some basic information was not yet to clear to the general people; this was also recognized in this study. Various respondents even failed to categorize the main clinical COVID-19 symptoms. Likewise, they were not aware that the old people with chronic illness are most vulnerable for this infectious disease. Many respondents failed to ascertain that only hand gloves are not enough to prevent COVID-19 infection and hand wash with hand rub or soap is required even after wearing rubber gloves (WHO, 2020a). This study disclosed that many respondents did not know the emergency number 333 for COVID-19 related health assistance in Bangladesh. The government should take it seriously to make this number more mainstream to and effective for the general people that they can both know and get support regarding COVID-19 health-related issue. This research revealed that many respondents knew that any person, without symptoms, can have Coronavirus and this person could infect others. Studies already identified pre-symptomatic and asymptomatic COVID-19 cases who can be responsible for the virus transmission (He et al., 2020; Oran & Topol, 2020). Majority of the respondents believed the most important basic knowledge such as wearing medical mask; avoid crowded places and regular hand wash can reduce COVID-19 outbreak (DGHS, 2020; WHO, 2020a). The respondents were also concerned about the possibility of children and young people getting infected by COVID-19. This study revealed that more activities were required to disseminate the knowledge to the general people of Bangladesh during COVID-19 lockdown period. Respondents had mostly neutral attitude toward the battle against COVID-19 outbreak. Many respondents had inadequate communication with the relevant organizations during COVID-19 emergency situation. Lack of basic knowledge among this group might be due to the gap between this group and the social, non-governmental and governmental organizations. However, many general people might have shared or received authentic information from different mass media. There are scopes for relevant organizations and stakeholders to work more to disseminate COVID-19 preventive measures information among the general people of Bangladesh, particularly during lockdown period. They also need to aware and educate people to believe on the authentic knowledge which can reduce the COVID-19 outbreak. Many people did not have optimistic attitude even if they showed good knowledge. This may elicit distressing situation where people may not believe what they receive from their relevant authorities. Behavioural change is a must to have optimistic attitude. This study illustrated the good practices among the Bangladeshi respondents to prevent the COVID-19 pandemic.
However, many respondents have not yet adopted the good practice of avoiding to touch their eyes, nose and mouth. People should avoid touching their face which was also instructed to follow strictly during previous infectious diseases (Macias et al., 2009; WHO, 2020a). The lack of practice to call local health authority before going to the hospital in case of COVID-19 symptoms also ascertains previous result where the respondents had lack of communication with the relevant organizations.

Considerably, this study revealed that the respondents during COVID-19 lockdown in Bangladesh showed moderate level of knowledge, attitude and total KAP score along with portraying high level of practice score. Female respondents reported better COVID-19 responses compared to their counterpart male respondents. This result coincides with other COVID-19 relevant researches (Covid-19: 73% of the deceased in Bangladesh are male, The Business Standard, 2020; Walter & McGregor, 2020) indicating male respondents have high risk of COVID-19 infection due to their biological, behavioural and cultural factors. In addition, this social-based exploratory research indicates the risk factors for male respondents due to their neglectful perception towards COVID-19. This social factor should also be considered as an important indicator for COVID-19 infection intensification among male respondents. These findings further ascertain the previous result (Table 1) where female respondents specified their current place being unsafe for COVID-19. These female respondents realized about their unsafe condition and they were concerned about the COVID-19 responses to prevent the infection. If family members are concerned with their family getting infected by COVID-19, they may adopt the knowledge increase and sharing activities among the members of the family. They might also be concerned about transmission of COVID-19 from their regular outgoing family member. Respondents of the present study, who were staying with their family, had better COVID-19 responses during the lockdown period of Bangladesh. Respondents living in Dhaka city tend to experience unsafe current place from COVID-19 in previous result (Table 1). This study further identified that Dhaka city outsiders had better COVID-19 responses compared to the Dhaka city residents. This addresses the worrying scenario for the Dhaka city respondents to control the rapid transmission in this city. Same pattern of result was also detected in case of safety of current place from COVID-19 during the lockdown period, respondents having high confidence on their current place showed better COVID-19 responses compared to the respondents’ COVID-19 responses at unsafe places based on their perception.

The present study did not find the correlation between the respondents’ knowledge level and the attitude level. However, it identified the correlation between the respondents’ attitude and practices toward COVID-19 prevention. Attitude was identified as predictor for practices of the respondents during the COVID-19 lockdown period in Bangladesh.

This study had some limitations considering the COVID-19 lockdown period of Bangladesh. It only considered the personal views about the safety and mental health during the COVID-19 lockdown period to evaluate their responses; no further analysis to measure the safety and mental health was considered. Self-administered online survey due to the pandemic might have some biasness. Even though, the questionnaire followed easy English language to understand with the language support if required, it might create some barriers for the respondents. This study required rapid online survey concentrating on responses during the COVID-19 lockdown period; further data collection was not possible due to the lifting of lockdown period at the end of May 2020. The sample might not reflect the whole country’s populations’ COVID-19 response views in Bangladesh. Along with these limitations, this exploratory study can still provide considerable information for the pertinent social, non-government and governmental organizations and stakeholders where they can disseminate knowledge, generate positive attitude and implement those knowledge in practice among the general people of Bangladesh.

5. Conclusion
The lockdown has been historically considered to be an effective method to control any pandemics (Das & Paikal, 2020; Paikal, 2020; Paikal et al., 2020) as it has been proven to reduce the fast spreading behaviour of pandemic. However, it usually poses significant challenges to maintain properly, particularly in developing country. People in developing country like Bangladesh has to go outside for their livelihood; social system may also be contributing factor for the ineffective implementation of this method. The
society with so much regular face to face gathering has the difficulty to maintain social distancing. Moreover, the community standards to absorb and follow the rules, regulations and guidelines from their authority are also significant to control the COVID-19 outbreak. The community people who were not used to stay home for the long time, deficit of authentic knowledge, lack of positive attitude to prevent the COVID-19 infection and following new practice such as wearing mask have placed the situation challenging to control the COVID-19 outbreak. Government, social and non-governmental organizations have been struggling to come up with effective strategies for such communities. Pertinent authorities need to classify the vulnerable group for COVID-19 and propose comprehensive COVID-19 response and preparedness plan. This study takes into account the perception and individual views among the general people of Bangladesh toward COVID-19. It revealed that the general people of Bangladesh were not enough confident on their current place from COVID-19, many of them were highly concerned about their mental health during the COVID-19 lockdown period. It was necessary to perceive authentic information, positive attitude and regular practices toward COVID-19 prevention. This study figured out that the respondents had moderate COVID-19 related knowledge level and moderate attitude level to control the outbreak. They also reported that they practiced the preventive measures toward the COVID-19 prevention. Respondents of the study’s total COVID-19 responses were moderate where many respondents reported low COVID-19 responses. Even with several limitations, this exploratory study could give vital information for the relevant organizations to track the vulnerable group against COVID-19 based on their knowledge, attitude and practice level during the lockdown period; and it could also assist the comprehensive COVID-19 response and preparedness plan.

Authors' Contributions
M.R., M.S. and M.A. designed the study. All authors were involved in collecting data. M.R. analyzed the data and wrote the manuscript. All authors critically revised and approved the manuscript before final submission.

Acknowledgements
The authors would like to thanks the experts for their valuable comment and suggestion. Authors would also like to mention the students of Bangladesh University of Professionals, Dhaka, Bangladesh to assist during data collection.

Funding
The authors received no direct funding for this research.

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Citation information
Cite this article as: COVID-19 responses among general people of Bangladesh: Status and individual view toward COVID-19 during lockdown period, Md Mostafizur Rahman, Saadmaan Jubayer Khan, Mohammed Sadman Sakib, Md. Abdul Halim, Farzana Rahman, Md Moshiru Rahman, Jannate Mehjabin Jhinuk, Nadia Habib Nobila & Mir Taj Mira Yeasmin, Cogent Psychology (2021), 8: 1860186.

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