

COVID-19 Public Stigma in the Context of Government-Based Structural Stigma: A Cross-Sectional Online Survey of Adults in Bangladesh

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The state in Bangladesh has instituted a series of policies and practices during the COVID-19 pandemic that reflects structural stigma. Stigma is now considered a complex phenomenon rather than just one set of beliefs. Thus, the level and correlates of stigma toward individuals and households that have become positive with the Coronavirus are of critical interest and importance. This article describes the nature of the Bangladesh government's unusual labeling practices as a structural stigma and examines the stigma levels among Bangladeshi adults. A web-based cross-sectional study was conducted among 1,056 adult respondents. We used 10 Likert items ($\alpha = 0.630$) to measure the level of stigmatized attitudes related to COVID-19. The data were analyzed using *t*-tests, ANOVA, and correlation coefficients to identify the factors associated with the dependent variable at the bivariate level. The multiple linear regression model was also fitted. The findings of the study show that 90.8% of the respondents had at least one stigmatized attitude. The regression analysis result shows that marital status, educational attainment, place of residence, risk perception, and attitudes toward COVID-19 were the most significant factors of stigmatized attitudes among the population in Bangladesh. This study suggests that state-sponsored labeling of COVID-19 positive people should be stopped immediately, and the privacy and confidentiality of the COVID-19 positive people should be appropriately maintained. Health education programs should also be adopted for all age groups to decrease negative attitudes toward this disease by increasing their knowledge and awareness for preventing COVID-19.

Keywords: COVID-19, Bangladesh, structural stigma, fear, discrimination

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The Coronavirus disease 2019 or COVID-19 outbreak has created fear among the general population due to the high level of uncertainties attached to this novel virus in terms of its contagiousness, asymptomatic nature, fomites in transmission, and the highly variable course due to the disease's newness (Devakumar et al., 2020; Lin, 2020; Sotgiu et al., 2020). The evidence from China shows that when people fear getting infected, they stigmatize those already diagnosed or labeled as COVID-19 positive (Ren et al., 2020) or severe acute respiratory syndrome (SARS) positive (Person et al., 2004). The

stigma is driven by fear (Ransing et al., 2020) and misinformation (Sotgiu et al., 2020; World Health Organization [WHO], 2019). The fear of COVID-19 infection has created a kind of labeling to the COVID-19 positive persons so that "other" people (who are not infected with) cannot get infected from "them" (who are currently infected with COVID-19; Devakumar et al., 2020; He et al., 2020). This labeling is sociologically known as stigma, which leads to the social exclusion of a target group (Goffman, 1963; Link & Phelan, 2001, 2014; Phelan et al., 2008). Stigma not only includes imposing labels toward a particular target group but also triggers stereotyping, separation, status loss, and discrimination by causing social exclusion of that particular group of population (Link & Phelan, 2001). It encloses stereotyped beliefs and values, prejudicial attitudes, and discriminatory behavior of the society members as a structural stigma built-in the social structure of a particular society (Corrigan & Watson, 2002; Hatzenbuehler & Link, 2014; Turan et al., 2019).

Stigma poses significant challenges to control the pandemic as it forces general people to hide the symptoms of illness to avoid discrimination, prevent people from seeking health care, delay in presentation to health care workers (HCWs), discourage people from adopting healthy behavior, desert dear ones, and evict people from their homes (American Psychological Association, 2020; Bangladesh Health Watch, 2020; Turan et al., 2017; International Federation of Red Cross and Red Crescent Societies et al., 2020;

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James et al., 2020; Sotgiu et al., 2020). The stigma also affects the HCWs as evidence shows that the HCWs are stigmatized by the general population, which leads to higher rates of stress and burnout among the HCWs (Islam et al., 2020; McKay et al., 2020; Ramaci et al., 2020; Ren et al., 2020). Thus, stigma related to COVID-19 has become an important topic for research both from public health and human rights perspectives.

The Government of Bangladesh confirmed the first case of COVID-19 on March 8, 2020, and since then, up to January 30, 2021, about 534,407 people have been diagnosed as COVID-19 positive, and 8,094 people have died due to this highly infectious disease (Directorate General of Health Services, 2021). The Government of Bangladesh adopted a countrywide lockdown, isolation, and quarantine approach and other measures for the first 2 months (26 March–31 May) based on other countries' experience of controlling COVID-19 and SARS. The lockdown approach has proved its effectiveness in controlling transmission in China (Tian et al., 2020) and many other countries. The data on the COVID-19 infection rate in Bangladesh shows that the lockdown approach played an insignificant role in controlling the transmission. The failure of lockdown to contain the infection rate can be attributed to state-levels issues, such as the indecisive implementation process of lockdown regarding zone specification, timing and management, lack of monitoring, economic challenges posed by lockdown, and population-level factors such as nonadherence, lack of information and awareness, and also financial urgencies (Mahmood, 2020; Shammii et al., 2020). The unsuccessful effort of lockdown to contain the virus's spread has been reflected in the numbers of people being tested positive after the lockdown period. The data show that after the lockdown period (March 26–May 30, 2020), the rate of infection did not decrease; instead, it continued to increase rapidly, and eventually, it reached to peak on 18th June with 4,008 COVID-19 positive diagnosed patient, which was the highest number of infections in a single day (World Health Organization [WHO], 2020a). On top of that, global evidence shows that the lockdown approach to contain the transmission of the virus has created labeling toward the COVID-19 positive persons in many countries (Devakumar et al., 2020; He et al., 2020).

The Bangladeshi newspapers have reported that misinformation, panic, and fear have spread across the country since the beginning of the community transmission phase of COVID-19. Both state and non-state actors have fueled the fear, worries, and stigma among the mass population toward COVID-19 positive people and their family members (Goushami, 2020; Kamal, 2020; Nasreen & Caesar, 2020; "Protests halt coronavirus hospital construction," 2020; Sakib et al., 2020; "Stigma around COVID-19 hampers the fight against it," 2020; "Youth Suicide in Gaibandha Due to Doubt of Corona," 2020). The state-sponsored labeling, a form of structural and power stigma (Hatzenbuehler & Link, 2014; Link & Phelan, 2001, 2014; Phelan et al., 2008), toward suspected or real COVID-19 positive people included sending the migrants returned from Italy (a Coronavirus epicenter) to their home with advice to go for self-isolation with a printed seal on their forearms which labels them as "return migrant" and hoisting "red flags" to these return migrants houses by the local government people. The state also has locked down the house of COVID-19 positive people and hoisted the "red flag" in front of their houses ("A seal on the arm, and who cares about the HC order," 2020; "Coronavirus: 555 Jashore overseas returnees quarantined in 24 hr," 2020; Hasan, 2020; Khasru, 2020; "Red flags

on 20 houses in Chandpur," 2020; Zaman & Rahman, 2020). The red flags were also hoisted in front of the house where any household member is COVID-19 infected or came in close contact with any other COVID-19-infected people or household. The main motive behind putting red flags was separating these households from others and paying a closer look at their mobility restriction. The red flag was hoisted to create awareness among the mass people to avoid the quarantined people. The government's decision to arrange the burial of the patients who died from COVID-19 at a designated graveyard (Nasreen & Caesar, 2020) is another example of the state-sponsored production of stigma.

The state-sponsored structural stigmata in Bangladesh have influenced the public stigma among the mass population or the nonstate actors to perform discriminatory acts against COVID-19 positive people or their family members through labeling them (COVID-19 positive people) as "dangerous" or "harmful." Moreover, the pressure from the government level to maintain restricted movement from one place to another avoiding physical contact and social distancing was so strict that general people had been forced to pass the lockdown period in a state of anxiety, fear, and stress, which also fueled the stigma (Mahmud & Islam, 2020). The non-state actors' discriminatory acts included (a) the incidences of attacking return migrants, (b) prohibiting return migrants from entering into local shops, (c) attacking and harassing COVID-19 patients, (d) obstructing the burials of the dead body due to COVID-19 infection, (e) harassing health care providers, law enforcing agency members, volunteers, (f) deserting the suspected COVID-19-infected family members, and (g) protesting against the construction of COVID-dedicated hospitals and quarantine centers (Huq & Biswas, 2020; Islam et al., 2020; Jahan & Rashid, 2020; Kamal, 2020; Mahmud & Islam, 2020; Rashid et al., 2020; "Protests halt coronavirus hospital construction," 2020; Zaman & Rahman, 2020).

The above reporting of the structural stigma and mass population's discriminatory acts highlights the importance of researching stigma related to COVID-19. We conducted a literature search to know the situation of stigma related to COVID-19 in Bangladesh in April 2020 in PubMed using the following keywords in the title and found zero results: "Stigma" OR "Stigmatized Attitude" OR "Discrimination" OR "Discriminatory Attitude" AND "COVID-19" AND "Bangladesh." We also conducted a literature search in Google Scholar using the phrase "COVID-19-related Stigma in Bangladesh" and found a preprint brief communication by Hasan et al. (2020). Hasan et al. (2020) wrote their brief communication based on observation and media scanning, and detailed methodology was not possible to ascertain. The literature search results show a dearth of research on stigma related to COVID-19 in Bangladesh. Thus, the present study was conducted to fill this gap, which aimed to determine the level of stigmatized attitudes related to COVID-19 and identify the correlates of the stigmatized attitudes among the adult population in Bangladesh.

Method

Participants and Procedures

This study used a web-based cross-sectional survey design. The criteria for selecting respondents of this research were to be an adult aged 18 years and above and living in Bangladesh and read and write with access to the internet. In Bangladesh, 74.7% of people aged 15 years and above can read and write a short, simple statement about

their everyday life (Bangladesh Bureau of Statistics, 2019). On the other hand, about 61% of the population are internet users in Bangladesh (Internet World Stats, 2020). The questionnaire was developed following the guidelines for conducting the behavioral insights on COVID-19 by the World Health Organization (WHO) (2020b). The tool was customized for the Bangladesh country context. The questionnaire was translated into Bengali (local language) and pretested.

The sample size was proposed as 1,000 adult population based on the WHO (2020b). The data were collected through the online platform-Google Form, which was live on the website for 7 days (May 10–May 16, 2020). The country was partially in lockdown during this period, and the government declared a general holiday. It was not possible to conduct face-to-face interviews for data collection during this period as the population movement was restricted. Thus, a link of the form was created and sent to the prospective participants, either by email or Facebook or WhatsApp, or other social media. All the participants to whom the survey link was sent were requested to share the link in their network to reach more people. The research team members circulated the survey link in their respective professional, personal, and social networks. The participants took on an average of 20 min to complete the questionnaire. The study followed a mix of convenience and snowballed sampling to reach the sample size. The sample size reached 1,059 after the end of May 16, 2020. The participants were only able to start filling up the questionnaire once they provided their consent to participate voluntarily. Three respondents did not provide consent to participate in this survey. Thus, the study’s response rate was 99.7%. The final sample size was 1,056.

Measures

Dependent Variable

The dependent variable of this study was stigmatized attitudes related to COVID-19, which was measured by the stigmatized attitude scale. The stigmatized attitudes were assessed using 10 5-point Likert scale (1 = *strongly disagree*, 2 = *disagree*, 3 = *neither agree nor disagree*, 4 = *agree*, and 5 = *strongly agree*) questions (Table 1). The total score of these 10 items ranged from 10 to

41, with a higher score indicating a higher stigmatized attitude. The internal reliability of these 10 items was found at an acceptable level of Cronbach alpha ($\alpha = .630$).

Independent Variables

The data collection instrument included the following independent variables: age, gender (men and women), educational attainment (up to higher education, graduate, postgraduate, and MPhil/PhD), occupation (working in government and private sectors, professionals, non-government organizations (NGO) workers, students and unemployed, and others), place of residence (rural, urban, and city corporation-highly urbanized areas mostly in divisional headquarters), geographical region (eastern, middle, and western), marital status (married and unmarried), knowing someone as COVID-19 positive among the respondent’s immediate social environment (yes and no), respondent’s COVID-19 status (no and felt but not tested), respondent’s COVID-19-related risk perception, knowledge, and attitudes. Respondent’s risk perception was measured using six 5-point Likert scale (1 = *strongly disagree*, 2 = *disagree*, 3 = *neither agree nor disagree*, 4 = *agree*, and 5 = *strongly agree*) questions. The total score of these six items ranged between 6 and 30, with a higher score indicating a higher level of risk perception. Respondent’s knowledge related to COVID-19 was measured using 25 questions related to transmission, prevention, and symptoms of COVID-19. The original responses to these questions were “1 = *yes*,” “2 = *no*,” and “3 = *do not know*.” These responses were then recoded as “1 = *yes*” and “0 = *no/do not know*.” The total score of these 25 items ranged between 0 and 25, with a higher score indicating a higher knowledge about COVID-19. Finally, respondent’s attitudes toward COVID-19 were measured using eight 5-point Likert scale (1 = *strongly disagree*, 2 = *disagree*, 3 = *neither agree nor disagree*, 4 = *agree*, and 5 = *strongly agree*) questions. The total score of attitudes toward COVID-19 was ranged between 8 and 40, where a higher score indicates a higher level of negative attitude. The items used to measure the knowledge, attitudes, and risk perception related to

Table 1
Items for Measuring Stigmatized Attitudes (%) Related to COVID-19 (Weighted Sample, n = 1,056)

Items	Disagree*	Neither agree nor disagree	Agree**
Dead bodies of COVID-19 positive person spread Coronavirus, so they should not be buried near my locality	88.9	8.9	2.2
I would not like to stay in the same building with doctors, nurses, and polices as they have the possibility of getting infected with COVID-19	92.9	5.1	2.0
I will suggest my neighbors who are currently infected with COVID-19 to go to the hospital instead of staying home	51.0	15.1	34.0
I will protest building isolation camps and COVID-19 treatment hospitals in my residential area	97.0	2.1	0.9
If any of my family members are infected with the Coronavirus, we will not go to the hospital as people may know our Coronavirus status	94.4	3.6	2.0
Persons who returned from abroad should not enter my residential area	70.9	11.6	17.5
The Coronavirus-infected person and his/her family members should be socially boycotted/isolated to avoid transmission	92.2	2.0	5.8
I shall avoid those people who have come from countries where the Coronavirus epidemic occurred	46.0	14.5	39.5
I would prioritize only my health during the Coronavirus outbreak	11.7	4.8	83.5
If anyone of my next door or flat gets infected with Coronavirus, I will try my level best to ensure my safety by closing the doors and windows of my house	30.3	11.5	58.2

Note. The mean score for stigmatized attitudes was 22.4 (SD = 4.9, range: 10–41).

* The percentage includes responses of both strongly disagree and disagree; ** The percentage includes responses of both strongly agree and agree.

COVID-19 can be found in the supplementary material (Supplementary Table 1).

Data Analytic Plan

It has been mentioned above that the study followed a mix of convenience and snowballed sampling to reach the sample size. Thus, the sample was not representative of the overall population of Bangladesh in terms of age, gender, place of residence, education, marital status, and occupation. Hence, at the beginning of data analysis, this study used a raking weighting adjustment technique for the variables age, gender, marital status, and place of residence for its simplicity (Mercer et al., 2018). The weighted sample was then used for statistical analysis. This study used descriptive statistics (percentage, mean, and standard deviation-SD) along with the accuracy test, where the mean score of each scale was divided by the total score. The independent sample *t-test* (if the independent variables had two categories), the one-way ANOVA test (if the independent variables had more than two categories), the Pearson's correlation coefficient (if the independent variables were interval level), and the Spearman's rank-order correlation (if the independent variables were ordinal) were utilized at the bivariate level. After checking the assumptions and multicollinearity, standard multiple regression analysis was followed to identify the correlates of stigmatized attitudes related to COVID-19. The analyses were carried out using Statistical Product and Service Solutions (SPSS) 26.0.

Ethical Approval

The Bangladesh Medical Research Council (BMRC) provided ethical approval for this study (Registration Number: 302 1 1 05 2020). Participation in this research was entirely voluntary, and no monetary incentives were provided to the participants. Relevant information regarding the purpose, requirements, and implications of the study were provided to participants through a written statement. Informed consent was presented in Bengali. Respondents were also ensured about the anonymity and confidentiality of the data. As the data were collected through an online survey; the participants were only able to start filling up the questionnaire once they provided their consent to participate voluntarily.

Results

Sample Characteristics

Table 2 shows both weighted and unweighted sample characteristics of this study. The mean age of the weighted sample was 35.75 years, with a standard deviation (SD) of 12.18. The highest percent (22.7) of the respondents was from the age group of 31–39 years. More than 50% of the respondents (56.4%) had postgraduate (Masters) level education, and another 24.8% had undergraduate level education. About 39% of the respondents were from the middle region (Dhaka, Mymensingh, and Barisal division), while two-thirds (67%) of the respondents from rural areas. Two-thirds (67.7%) of the respondents were married. Nearly, one-third (36.4%) of the respondents knew someone as COVID-19 positive in their immediate social environment. However, none of the respondents was COVID-19 positive though 2.3% felt that they might be carrying the Coronavirus infection but did not test.

Level of Stigmatized Attitudes

Table 1 shows the distribution of the 10 items which were used to measure the stigmatized attitudes related to COVID-19. The findings show that the mean score of stigmatized attitudes was 22.4, with an SD of 4.9 (range: 10–41). The result shows that 34% of the respondents agreed that if their neighbors get infected with COVID-19, they will provoke them to go to the hospital instead of staying home. About 18% of the respondents agreed that persons who returned from abroad should not enter their locality. Nearly, 40% of the respondents agreed that they would avoid people from the countries where the Coronavirus epidemic occurred. Besides, 58.2% of respondents mentioned that they would try their level best to ensure their safety by closing the doors and windows of their house if anyone of their next-door or flat gets infected with Coronavirus. Finally, 83.5% of the respondents favored the statement that they would prioritize their health during the Coronavirus outbreak. Overall, the present study found that 90.8% of the respondents had at least one stigmatized attitude.

Correlates of Stigmatized Attitudes

Table 3 shows that the mean score of the stigmatized attitudes scale was statistically significantly ($p \leq .05$) varied by respondents' marital status, educational attainment, occupation, the region of Bangladesh, place of residence, and knowing someone as COVID-19 positive within their immediate social environment. The stigmatized attitudes score was also statistically significantly correlated with age ($r = -0.245, p \leq .001$), level of COVID-19 related knowledge ($r = -0.063, p = .042$), attitudes toward COVID-19 ($r = 0.291, p \leq .001$), and level of risk perception about COVID-19 ($r = 0.221, p \leq .001$).

The independent variables were then entered into the multiple linear regression model after checking the assumptions and multicollinearity. The weighted sample was used to run this regression model. The age of the respondent was highly positively correlated with education ($r = 0.692, p \leq .001$) and marital status ($r = 0.751, p \leq .001$) of the respondent; thus, age was excluded from the regression model. The full regression model was highly significant ($F_{(18, 1022)} = 14.869; p \leq .001$), with an adjusted R^2 of 0.194 where the following variables remained significant after controlling the effect of other variables: marital status, educational attainment, place of residence, risk perception, and attitudes toward COVID-19 (Table 4). The reduced regression model (only significant variable at full regression model) was also highly significant after controlling the effect of other variables ($F_{(8, 1032)} = 31.768; p \leq .001$), with an adjusted R^2 of 0.194. The unmarried respondents had more stigmatized attitudes ($\beta = 0.140, p \leq .001$) than married respondents. The respondents who had up to higher secondary ($\beta = 0.078; p = .027$) and undergraduate level ($\beta = 0.151; p \leq .001$) of education had a significantly higher stigmatized attitude than that of MPhil/PhD level education. The respondents living in urban ($\beta = 0.074; p = .014$) and rural ($\beta = 0.095; p = .001$) areas had higher stigmatized attitudes than the respondents living in the city corporation areas. The result shows that the level of stigmatized attitudes increased with the increment of risk perception and negative attitude toward COVID-19. We also run a multiple linear regression model using the unweighted sample to see the effect of selection bias, which has been adjusted through the weightage of the sample.

Table 2
Sample Characteristics of the Respondents

Background characteristics	Unweighted sample		Weighted sample		Distribution of national population (%)
	<i>n</i> = 1,056	%	<i>n</i> = 1,056	%	
<i>Age (in years)</i>					
18–24	341	32.3	212	20.1	a
25–30	275	26.0	208	19.7	10.5
31–39	184	17.4	240	22.7	14.4
40–49	178	16.9	195	18.5	12.5
50 years and above	78	7.4	201	19.1	17.1
Mean (SD)	31.6 (10.56)		35.75 (12.18)		
<i>Gender</i>					
Men	688	65.2	529	50.1	b
Women	368	34.8	527	49.9	50.0
<i>Educational attainment</i>					
Up to higher secondary	82	7.8	68	6.6	c
Undergraduate	352	33.3	259	24.8	86.8
Postgraduate (Masters)	532	50.4	587	56.4	13.2
Postgraduate (MPhil/PhD)	90	8.5	127	12.2	
<i>Occupation</i>					
Government and private sector job	181	17.1	178	17.1	
Professional*	211	20.0	242	23.2	
NGO worker	173	16.4	232	22.2	
Students and unemployed	407	38.5	283	27.2	
Others**	84	8.0	106	10.2	
<i>Region of Bangladesh</i>					
The eastern part (Sylhet and Chattogram division)	126	11.9	281	26.6	b
The middle part (Dhaka, Barisal, and Mymensingh division)	775	73.4	409	38.7	28.9
The western part (Khulna, Rangpur, and Rajshahi division)	155	14.7	366	34.7	33.3
<i>Place of residence</i>					
Rural	180	17.0	708	67.0	d
Urban (other than city corporation)	170	16.1	137	13.0	15.7
City corporation	706	66.9	211	20.0	21.7
<i>Marital status</i>					
Married	505	47.8	715	67.7	b, e
Unmarried	551	52.2	342	32.4	67.9
<i>Know someone as COVID-19 positive within the immediate social environment</i>					
No	710	67.2	672	63.6	
Yes	346	32.8	384	36.4	
<i>Own COVID-19 status</i>					
Negative	1033	97.8	1032	97.7	
Felt but not tested for	23	2.2	24	2.3	

Note. * Professional category included teacher, engineer, lawyer, doctor, nurse, paramedics, and pharmacist; ** The Others category included business, agriculture, housewife, and others; (a) Data from the World Population Prospect 2019 (United Nations, 2019); (b) Data from Bangladesh Sample Vital Statistics, 2019 (Bangladesh Bureau of Statistics, 2019); (c) Data from Bangladesh Demographic and Health Survey-2014 (National Institute of Population Research and Training [NIPORT], 2016). (d) Data from World Bank (2020). (e) Marital status for the population aged 10+ years.

However, the findings remained almost identical (Supplementary Table 2).

Discussion and Conclusion

This study aimed to explore the level of stigmatized attitudes related to COVID-19 and its correlates among the adult population in Bangladesh. The study found that 90.8% of the respondents had at least one stigmatized attitude. That means the respondents agreed or strongly agreed with at least one item used to measure the stigmatized attitudes shown in Table 1. The findings of our study showed that the respondents protested the burial of dead bodies of COVID-19 positive people, opposed the construction of COVID-19 treatment hospitals and isolation center in their locality, prevented the entrance of the

return migrant to their residential area, and avoided social interaction with the people who have come from those countries where the Coronavirus epidemic occurred. Our respondents also reported that they would ensure their safety by closing doors and windows of their house if they found anyone around their next door or flat as infected with the Coronavirus. These denials and protests against the COVID-19 positive people occur in response to fear and panic in the community due to the newness and uncertainty attached to this disease (Abdullah, 2020; Stangl et al., 2019; Zaman & Rahman, 2020). These types of fear-driven public stigma have also been observed in mental illness among the Bangladeshi population (Pescosolido et al., 2013). The fear-driven stigmatized attitudes found in our study are not unique for Bangladesh only; refusal to allow the entrance of migrant workers, denial of the burial of the

Table 3
Differentials of Stigmatized Attitudes Related to COVID-19: One-Way ANOVA

Background characteristics	Unweighted sample			Weighted sample		
	Mean	SD	<i>p</i>	Mean	SD	<i>p</i>
<i>Gender</i>			.051			.075
Men	22.6	5.1		22.1	5.0	
Women	23.2	4.9		22.6	4.8	
<i>Educational attainment</i>			.000			.000
Up to higher secondary	24.6	6.1		24.0	6.6	
Undergraduate	24.1	4.8		24.0	4.6	
Postgraduate (Masters)	21.9	4.7		21.8	4.6	
Postgraduate (MPhil/PhD)	20.9	4.9		20.8	4.9	
<i>Occupation</i>			.000			.000
Government and private sector job	22.3	4.6		22.4	4.6	
Professional	21.8	4.8		21.6	4.8	
NGO worker	21.4	4.7		21.1	4.6	
Students and unemployed	24.2	5.1		24.2	4.9	
Others	22.3	5.1		21.9	5.4	
<i>Region of Bangladesh</i>			.002			.000
The eastern part	23.7	4.9		23.3	4.8	
The middle part	22.4	4.9		22.0	4.8	
The western part	23.7	5.4		23.7	5.5	
<i>Place of residence</i>			.000			.000
Rural	24.6	5.6		24.5	5.9	
Urban (other than city corporation)	23.7	4.8		23.6	4.5	
City corporation	22.1	4.7		21.7	4.7	
<i>Marital status</i>			.000			.000
Married	21.7	4.8		21.5	4.8	
Unmarried	23.8	5.0		23.7	4.9	
<i>Know someone as COVID-19 positive within the immediate social environment</i>			.001			.000
No	23.1	5.0		22.8	5.0	
Yes	22.0	4.8		21.6	4.7	
<i>Own COVID-19 status</i>			.807			.075
Negative	22.8	5.0		22.4	4.9	
Felt but not tested for	22.5	6.7		20.6	6.8	
<i>Total</i>	22.8	5.0		22.4	4.9	

victims of COVID-19, and eviction of COVID-19 positive people from their homes were also found in other settings (Abdullah, 2020; Islam et al., 2020; Ramaci et al., 2020; Ren et al., 2020; Sotgiu et al., 2020; Trnka & Lorencova, 2020).

The fear was not only strongly prevailed at the community level but also the state level. The health officials and the high-level state-officials, including the Prime Minister of the country, frequently mentioned that they were “fighting against the COVID-19” as if the Coronavirus is their enemy (“Bangladesh PM urges all to stay at home to fight against coronavirus,” 2020; Hyder, 2020). The mainstream media has also frequently used news headlines like “the war on the COVID-19 virus” (Sarkar, 2020). The state-officials and media have adopted war metaphors to describe the severity of the disease, a “military metaphor” described by Sontag (1978). The fear about Coronavirus has been reached to such a level of militarism in Bangladesh that the government has formed a committee to monitor rumors and fake news about Coronavirus in online portals and social and electronic media. The use of “military metaphor” or “militarism” is not only taking place in Bangladesh but also this is happening across the world (Al-Mahadin, 2020; Musu, 2020). These issues about fear or “military metaphor” should be considered in the background in interpreting our study results as Sontag (1989) has claimed that military metaphors are a critical factor in the stigmatization process of certain diseases and those suffering from these diseases.

Risk communication and community engagement activities are a significant priority to tackle the stigmatization process. On this point, the Government of Bangladesh has taken the initiative to promote anti-stigma campaigns and infodemic reduction through their risk communication and community engagement activities (Rahman et al., 2020; World Health Organization [WHO], 2020c). The Government of Bangladesh has already introduced a website (<http://corona.gov.bd>) to share COVID-related health information and services. The Government has initiated awareness campaigns emphasizing maintaining hand hygiene and preventive practices against COVID-19 (Banik et al., 2020). Besides, as a part of antistigma initiatives, every mobile phone subscribers of Bangladesh has been brought under an awareness campaign, which includes providing a recorded voice message before a phone call gets connected with the receiver of the call stating the necessary information regarding COVID-19 and helpline (“Coronavirus: Expert suggests listening to health professional only,” 2020).

The multivariable analysis of the study shows that risk perception was positively related to stigmatized attitudes among the respondents. This finding suggests that those who had more risk perception regarding COVID-19 also had more stigmatized attitudes. The items used to measure the risk perception mostly covered the fear of getting a COVID-19 infection. Thus, the more fear the respondents had, the more stigmatized attitudes they produced (Yildirim et al., 2020).

Table 4
Correlated of Stigmatized Attitudes: Multiple Linear Regression Analysis (Weighted Sample)

Variables	Full model				Reduced model ^a			
	B	SE B	β	p	B	SE B	β	p
<i>Gender</i>								
Women	0.224	0.296	0.023	.450				
Men (RC)								
<i>Educational attainment</i>								
Up to higher secondary	1.574	0.751	0.079	.036	1.554	0.703	0.078	.027
Undergraduate	1.566	0.582	0.137	.007	1.731	0.536	0.151	.001
Postgraduate (Masters)	0.568	0.473	0.057	.230	0.574	0.441	0.058	.193
MPhil/PhD (RC)								
<i>Occupation</i>								
Government and private sector job	0.254	0.456	0.019	.578				
Professional	0.031	0.435	0.003	.944				
Students and unemployed	0.705	0.562	0.064	.210				
Others	-0.783	0.559	-0.048	.162				
NGO worker (RC)								
<i>Region of Bangladesh</i>								
The eastern part	-0.233	0.471	-0.015	.621				
The western part	-0.250	0.497	-0.016	.615				
The middle part (RC)								
<i>Place of residence</i>								
Rural	1.190	0.506	0.077	.019	1.146	0.465	0.074	.014
Urban (other than city corporation)	1.461	0.414	0.107	.000	1.299	0.390	0.095	.001
City corporation								
<i>Marital status (Ref: Married)</i>								
Unmarried (RC)	0.978	0.397	0.097	.014	1.419	0.330	0.140	.000
<i>Know someone as COVID-19 positive within their immediate social environment</i>								
Yes	-0.566	0.295	-0.055	.055				
No (RC)								
<i>Own COVID-19 status</i>								
Felt but not tested	-1.300	0.935	-0.040	.165				
Negative (RC)								
<i>Knowledge related to COVID-19</i>								
Attitudes toward COVID-19	0.315	0.039	0.239	.000	0.317	0.038	0.241	.000
Risk perception related to COVID-19	0.329	0.046	0.205	.000	0.338	0.045	0.210	.000
Constant	10.224	1.297		.000	9.689	0.984		.000
<i>Model summary</i>								
n	1041				1041			
R	0.485				0.475			
R ²	0.235				0.226			
Adjusted R ²	0.194				0.194			

Note. The unstandardized beta = B; the standard error for the unstandardized beta = SE B; the standardized beta = β; the probability value = p; Reference category = RC; NGO = non-government organizations.
^aUsed only significant variables of full model.

Other studies support this finding in the context of COVID-19 (Abdel Wahed et al., 2020; Singh & Subedi, 2020) and non-COVID diseases (Ali et al., 2019; Cheung, 2015; Gee & Skovdal, 2017).

The negative attitudes toward COVID-19 were found positively related to stigmatized attitudes, which was in line with the findings of different non-COVID diseases (Dahlui et al., 2015; Fekadu et al., 2019; Monjok et al., 2009). The findings from research on stigma related to HIV in Bangladesh suggest that some people consider infectious disease as the moral punishment of the creator and the result of the people’s misdeeds, which ultimately resulted in stigma (Sultana, 2014). Pescosolido et al. (2013) also reported that 75% of Bangladeshi agreed that God’s will caused mental illness. Our findings hold the same belief as it shows that about one-fourth of the respondents had agreed to the notion that Coronavirus is a punishment from the creator. The community people label those

who have got punishment from their creator as “others” consider them as “dangerous” as they can transmit the virus, and thus, these “others” people should be avoided (Goffman, 1963).

Our findings showed that educational attainment was negatively associated with COVID-19-related stigmatized attitudes. Education has a proven role in predicting stigmatized attitudes related to other diseases as well (Adhikari et al., 2014; Dahlui et al., 2015; Datiko et al., 2020; Kaehler et al., 2015; Peluso & Blay, 2011; Shiri et al., 2018). Education helps to develop critical thinking and complex reasoning, which increases people’s knowledge, awareness, compassion, and tolerance toward a particular disease as well as sympathetic attitudes toward the people who are living with stigmatized diseases or behaviors (Dahlui et al., 2015). Thus, it is expected that people with more educational attainment and more knowledge should have less stigmatized attitudes. However, contrary to other studies, our study did not find any

significant effect of knowledge on stigmatized attitudes after controlling the effects of education and other independent variables (Balfour et al., 2010; Hossain & Kippax, 2010, 2011; Kingori et al., 2017; Lee et al., 2019; Ramaci et al., 2020; Sima et al., 2019; Yin et al., 2018). This contradictory finding is perhaps because of the weak correlation between education and knowledge related to COVID-19 ($r = .154$) and knowledge related to COVID-19 and stigmatized attitudes toward COVID-19 ($r = -0.063, p = .042$). However, understanding the pathways between education and stigmatized attitudes was beyond the scope of this study.

The findings of this study also show that stigmatized attitudes were higher among unmarried people. This finding is supported by the studies conducted to assess the stigmatized attitudes related to non-COVID diseases (Letamo, 2003; Li et al., 2017), though, in some other settings, unmarried people had less stigmatized attitudes (Garapati et al., 2018; Lau et al., 2006). In our study, unmarried respondents were relatively less educated and had a lower average age than the married respondents. These two variables, age and educational attainment, were negatively associated with stigmatized attitudes. Thus, unmarried respondents being less educated and younger had less stigmatized attitudes.

The findings of our study also show that people living in both rural and urban areas had more stigmatized attitudes than those who were living in the city corporation area. The possible reason for this finding could be the availability of higher urban facilities in the city corporation areas. The city corporations are located in the large cities of the country where citizen facilities like education, health care facilities, internet facilities, and access to COVID-19-related information through mass media, social media, and other sources are comparatively better, which may make a difference in terms of understanding about COVID-19 from the rural people (NIPORT, 2016; Raju et al., 2017).

It is evident from the findings that both state and non-state actors have fueled the stigmatized attitudes among the mass people toward COVID-19 positive people, which has significant policy implications. On the other hand, due to the existing fear of experiencing stigmatized attitudes and discriminatory behavior, people are now trying to hide their symptomatic illness and delay in seeking health care, which ultimately paves the way for this highly infectious disease to spread nationwide more rapidly. This type of study has significant public health, human rights, and policy implications. Thus, the strength of this study is that it will help to formulate policies regarding types of initiatives that should be adopted to tackle the pandemic like Coronavirus in Bangladesh. However, there are some limitations to this study. First, this study collected data using an online platform where all the respondents were educated and had access to the internet. These homogeneous respondents limit to establish the generalizability of the findings of this study. Second, this study used convenience and snowball sampling, which limits the representativeness of the sample. Third, as this study was an online-based rapid assessment, considering the time and volume of the questionnaire, we had to leave some potential items which could capture a better investigation. Finally, this study is based on self-reported data, which may result in reporting bias.

In conclusion, it can be argued that policy planners and human rights activists will consider the findings of this study as necessary as it will help them to assess the situation of stigmatized attitudes within a culture of gross fear and panic and how these stigmatized

attitudes are affecting the public health and human rights situation of Bangladesh. As this new infectious disease will continue to evolve nationwide, addressing fear-driven stigmatization and the discriminatory response of the people should be a priority concern. According to our findings, it is urgent to stop producing fear by the state and nonstate machinery and provide health education among all age groups to decrease negative attitudes toward this disease by increasing their knowledge and awareness for preventing COVID-19. The government and nongovernment organizations need to reduce both fear and stigma among the mass population regarding COVID-19. The state should appropriately maintain the privacy and confidentiality of COVID-19 positive and symptomatic patients. Both state and nonstate actors should speak out about the stigma and share reliable and correct information to tackle the “infodemic” during this pandemic rather than policing. These activities will increase the trust among mass people, abate both fear and stigma related to the COVID-19. It should be kept in mind that prevention strategies addressing behavioral insights, not stigmatized attitudes, will stop the spread of COVID-19 among the people of Bangladesh.

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