

Trust in the Bangladeshi health system during the COVID-19 pandemic: A mixed-methods exploration

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ABSTRACT

Lack of trust in public health institutions hinders pandemic management. Our aim was to determine levels of impersonal and interpersonal trust in the context of coronavirus disease 2019 (COVID-19) pandemic response in Bangladesh. As this mixed-methods research was conducted during the pandemic, data was gathered via an online survey involving 508 respondents, along with seven online focus group discussions with 50 purposively selected participants. Survey respondents have less trust in the health system than in the service providers. The lowest level of trust was observed in the Fairness content area of trust. While some non-clinical participants blamed doctors for shying away from caregiving during the pandemic, most praised them for providing care, risking their lives, and even sacrificing their lives in the process. Several participants also cited a lack of fairness in pandemic management, such as visible attempts by the decision-makers to protect the business interests without consideration for the safety of the poor. However, both clinicians and non-clinicians concurred on the need for the service providers to improve communication related to COVID-19 management. Health sector stewards in Bangladesh should take a science-based, equity-focused pandemic response to gain both impersonal and interpersonal trust and build a resilient health system in the long run.

Key words: COVID-19, pandemic, trust, resilience, health policy and systems research, Bangladesh

INTRODUCTION

Different disciplines have defined trust differently. In management science literature, trust is the willingness of an individual (trustor) to be vulnerable to the

positive expectation about another party's (trustee) intention and action under the condition of uncertainty and interdependence.¹ In the context of risk management, trust has been classified as social and generalized trust.² Social trust

means the trust in those people who are not known personally, such as institutions and the people therein responsible for risk management.^{2, 3} Generalized trust, on the other hand, refers to differing individual characteristics that lead to willingness in individuals to trust others in general.^{4, 5} Psychologists define trust as a function of personality traits, or characteristics of the person or entity to be trusted, and the context within which the trust related interactions occur.⁶ This type of trust may vary depending on the individual involved in the trust-related interaction (interpersonal trust) or perception regarding the institution with which the individual has experienced interacting (institutional trust).⁷ According to economist Coleman, an individual's trust is the voluntary placement of resources at the disposal of another party without a legal commitment from the latter, expecting that this will eventually pay off.⁸ Fukuyama, another economist, defined trust as the degree to which people believe that others will act responsibly and for the common good.⁹ Sociologists consider trust to be made up of intentional trust (trustee is seen by the trustor to work in trustor's best interest) and competence trust (trustee is seen by the trustor competent enough to achieve the expected outcome).^{10, 11} Political scientists Kittelsen and Keating, on the other hand, questioned many of the earlier trust frameworks, which they called "rationalist models," for assuming that if exposure to a poor health service causes distrust, then provision of an effective one will foster trust in the health system. Drawing on the Ebola epidemic, they suggested that additional underlying assumptions must be explored empirically, namely: 1) nature of the payoffs to engagement with a health system in a health crisis, 2) nature of trust as a generalized or specific phenomenon, and 3) problems associated with the use of hedging as a coping strategy when trust is not entirely conferred in a health system.¹²

Since this article pertains to health policy and systems, we explored the perspective of researchers on trust in this discipline as well. Gilson is one of the pioneers of exploring the relevance of trust to the health system. She attempted to establish a conceptual basis of health systems trust, drawing theoretical perspectives from various disciplines and lines of policy debates.¹³ She argued that the health system is comprised of a complex web of relationships influenced by institutions such as trust. Because of this complexity, the state needs to develop legitimacy within the health system. The notion of legitimacy, that is, whether the government is considered by citizens entitled to be obeyed,¹⁴ is highly relevant in the COVID-19 context, where the government imposes lockdowns or attempts mass vaccination. Gilson also proposes that building trust in the state and its agencies, such as the health systems, is a prerequisite for gaining legitimacy. Building trust within health systems requires harnessing micro-level (e.g., patient-provider relationships, the organizational and managerial context of provider, and relationship among organizational networks supporting healthcare providers) and macro-level (e.g., the relationship of the health system to society and social values) relationships.¹³

Based on our conceptual understanding of the definition of trust in the disciplines of management, psychology, economics, sociology, political science, and health policy and systems research, we posit that the term 'trust' implies an implicit understanding between two or more parties that neither will exploit the interests of others to his/her benefit^{13, 15-17}. To be specific, in the context of the COVID-19 pandemic, trust implies that the health system is expected to protect the population and that those in charge will refrain from exploiting the vulnerability of others. Ozawa and Sripad conducted a systematic

review of 45 health systems trust measures, most of which (n=23) looked at patient-provider relations, followed by broader health systems interactions (n=12). They identified eight content areas of trust (outlined in Table 1) and combined them as the Health Systems Trust Content Area Framework (HSTCAF).¹⁸ This framework provides the theoretical basis for our study because it proposes a simple measure of trust in health system issues, with a clear and practicable definition of all the content areas. Besides, we found an application of

HSTCAF in maternity care in Kenya¹⁹, where researchers defined interpersonal trust as the trust between the service provider and the service seeker, and impersonal trust as the trust in a social system, such as the healthcare system.¹⁹ In our article, we used the term ‘impersonal trust’ to refer to the trust of the Bangladeshi people in the national health system, and ‘interpersonal trust’ as the trust of the general public in health service providers, such as the doctors, during the COVID-19 pandemic.

Table 1 Definition of the Eight Content Areas of Trust

Health System Trust Content Area	Definition
Fidelity	Perception that health systems/service providers would prioritize service to the people above self-interest
Honesty	Perceived level of integrity and openness of health systems/service providers
Systems Trust	Perception that institutions in health system/service providers would provide service according to appropriate processes and policies
Communication	Perception that the institutions in health systems/service providers would provide quality and correct information
Confidentiality	Perception that health systems actors/service providers would maintain privacy of patient information
Confidence	Perception that one could confidently rely on the health systems/service providers
Fairness	Perception that health systems/service providers are treating the disadvantaged and vulnerable groups appropriately
Competence	Perceived ability, qualification and reputation of the health systems/service providers to provide appropriate services

Trust in health systems is important, as it fosters cooperation among diverse stakeholders and contributes to health production,¹³ which is imperative when responding to a pandemic in the short term while allowing development of a resilient health system in the longer term. It plays a critical role in garnering social order within the population^{13, 18} and ensuring good governance.^{20, 21} Trust also improves

communication flows, which is essential for reducing the risk of infection in a pandemic^{22, 23} and for ensuring timely technical and managerial decision-making by experts and managers.^{12,13} Gathering and sharing information on newly infected individuals and their contacts (as a part of contact tracing activities) is a cornerstone of pandemic response, but can only be executed if the public trusts in the health

system and the state governance.^{12, 13, 22} Lack of trust in these institutions may invoke widespread stigma regarding infectious diseases, which severely obstructs case detection, isolation, quarantine, and case management activities.^{24, 25} In contrast, people trusting the health system improves access, utilization, adherence, and continuity of care, which in turn enhances people's satisfaction with the health system and the overall health status.^{12, 18, 25} Moreover, COVID-19 response requires adaptive leadership, i.e., individuals capable of making bold decisions and passing timely regulations based on most recent scientific evidence, which is impossible without trust between decision-makers and all pertinent stakeholders, including general public.²⁶

Life expectancy in Bangladesh has gained 27 years since independence in 1971. During the same period total fertility rate fell from more than seven to 2.1.²⁷ Bangladesh achieved improved health outcomes despite investing much less than most other countries, eventually earning it the acclaim of an exceptional country with “good health at low cost.”²⁸ Bangladesh spends only 2.34% of its gross domestic product (GDP) on health, equivalent to 37 US Dollars per capita per year. In contrast, India, Pakistan, and Nepal spend 3.54%, 3.20%, and 5.84% of GDP, respectively.²⁹ Despite lower health expenditure, Bangladesh's life expectancy at birth is 72 years, while that of India, Pakistan, and Nepal are 69, 67, and 70 years, respectively.²⁹ Public health experts termed this success as “Bangladesh Paradox;”³⁰ however, it is also acknowledged that these achievements have taken place in the context of an ordinary time. In an extraordinary time like the COVID-19 pandemic, Bangladesh failed to demonstrate its health system promises, evident from the following indicators. COVID-19 test positivity rate as of 01 April 2021 in Bangladesh is 17.90%, while in

India, Pakistan, and Nepal, these are 6.30%, 10.50%, and 4.00%, respectively.³¹ Among its South Asian neighbors, Bangladesh actually performed the lowest number of tests per million population (28,497, as of 2 April 2021), save Afghanistan.³² Bangladesh is not alone; during the COVID-19 pandemic, with a few exceptions, even many high-income countries, praised for their strong health systems, actually failed.³³ Both high- and low-income countries, from the north and the south, failed in their own ways,^{34, 35} so, examining the Bangladesh case could be learning for others.

However, while it is undisputed that trust is important in COVID-19 response and developing a resilient health system in the long run, the meaning and the effects of trust (or its absence) in the context of COVID-19 pandemic response remains unexplored. Indeed, a comprehensive literature review conducted as a part of this investigation uncovered only one systematic review focusing on trust measures and their content areas,¹⁸ and a few articles exploring trust in the context of healthcare.^{11, 13, 16, 19, 36} Moreover, as most of these studies have been conducted in the Western countries,²¹ research on the role of trust in pandemic preparedness and response globally is scarce¹² and such research is absent in Bangladesh. The present study was motivated by this gap in the literature, and our aim was quantitatively measuring impersonal and interpersonal trust, and explaining these findings qualitatively in the context of COVID-19 pandemic response in Bangladesh.

METHODS

Study design

Quantitative data for this explanatory mixed-methods study³⁷ was gathered via an online survey probing into the respondents' impersonal and interpersonal trust in the context of

COVID-19 pandemic, while their responses were examined further during focus group discussions (FGDs), providing a qualitative dimension to the survey findings. By triangulating the quantitative and qualitative data, the goal was to obtain a deeper understanding of the construct of trust in the Bangladeshi health system.

Quantitative component

The survey adopted in the present study was designed specifically for this purpose, while drawing upon the eight content areas of trust described in Table 1.¹⁸ The questionnaire was initially developed in English, then translated into Bengali, contextualized for Bangladesh, reviewed by two health system experts, piloted with 20 people, and finalized to ensure respondents understood all the questions. The questionnaire was circulated via the social media platforms used in Bangladesh as well as through the email databases using a Google Forms link. The survey probed into the respondents' demographic information (age, sex, education, occupation, monthly expenditure, and personal COVID-19 status or that of a household member), and their degree of trust in terms of the eight content areas outlined in Table 3. As age and monthly expenditure were continuous variables, to facilitate analysis, these were categorized into < 30 years, 30–50 years, and > 50 years, and 0–5,000 BDT, 5,000–20,000 BDT, 20,000–50,000 BDT, BDT 50,000–100,000 BDT, and >100,000 BDT (Bangladeshi Taka), respectively. Sex (with 'male' and 'female' as the only options) was a dichotomous variable, while education was a categorical variable with illiterate, primary, secondary, higher secondary, and university as the available responses. Occupation was also a categorical variable, allowing the respondents to select among student, unemployed, public job, private job, and

business owner or self-employed. Finally, COVID-19 status was a dichotomous variable with 'positive' and 'negative' as the response options. The responses related to the impersonal and interpersonal trust content areas were elicited through Likert scales, where 0 denoted a fully negative perception and 10 a fully positive one. Separate questionnaires with clear instructions were used for interpersonal and impersonal trust. The participants' responses were later categorized as Low Trust (0–3), Moderate Trust (4–6), and High Trust (7–10). Two additional variables reflecting the scaled value of impersonal and interpersonal trust scores, respectively, were produced for each respondent by averaging the total obtained scores related to trust.

Data collection, which commenced on June 10th, 2020 and ended on June 12th, 2020, resulted in 517 voluntary responses. After removing faulty entries (those in which >50% of the questions were not answered, or multiple surveys completed by the same respondent), and imputing the missing values (using averages for continuous variables and Hot-Deck imputation method³⁸ for the Likert scale values), 508 datapoints remained and were analyzed using Stata version 16 to obtain the relevant descriptive statistics (mean, standard deviation, frequency) depending on the variable type. Content area-wise comparison between impersonal and interpersonal trust was also performed.

Qualitative component

We conducted seven FGDs between June 15th and June 17th 2020 with individuals who showed interest in the study, which was promoted via a Google Forms link circulated across social media and email databases. Each mixed-gender FGD was conducted and recorded through the video conferencing software Google

Meet and involved 6–10 participants that were purposively selected from the Google Forms list. For the purposes of subsequent analyses, FGD participants were broadly classified into clinicians (graduate students with medical or dental background pursuing degrees in public health at a private university; renowned public health experts with a medical background; and clinicians practicing medicine or dentistry) and non-clinicians (undergraduate students pursuing non-medical degrees such as management, marketing, botany, business, and pharmacy, etc. at a public university; undergraduate students pursuing public health degrees at a public university; undergraduate students pursuing degrees in food and nutrition at a public university; and different professionals such as executives, trainers, managers, and coordinators of public and private organizations).

The FGDs were moderated by the first author, who is a health policy and systems researcher with experience and expertise in qualitative research methods. The second author, trained in economics and experienced in qualitative research, assisted in note-taking. Each FGD lasted 60–105 minutes and was conducted in Bengali, the native language of the respondents and the researchers.

All FGDs were transcribed by the authors before being subjected to content analysis,³⁹ which was deemed the most appropriate method given the paucity of research on the phenomenon being studied,

as it avoids the risk of establishing preconceived themes. We developed the inductive categories through the following steps: data familiarization, coding schema or framework development, data coding, grouping, and data interpretation. In order to increase the validity of the findings yielded, the first and the second author independently coded the dataset, while seeking input from the third author, who is an experienced medical anthropologist, if additional deliberations were needed to reach a consensus.

The research was reviewed and approved by the Ethical Review Committee of the Public Health Foundation, Bangladesh (Reference number: 02/2020).

RESULTS

Quantitative component

Background characteristics of the respondents

The sample comprised of 318 (62.60%) males and 190 (37.40%) females. Majority of the participants (64.76%) were below 30 years of age, and had a university degree (91.93%). However, a significant variation in monthly expenditure was noted, with the mean (M) of BDT 36,705 (USD 432) and standard deviation (SD) of BDT 44,881 (USD 528). Moreover, around 9% of the respondents reported having at least one family member diagnosed with COVID-19, as shown in Table 2.

Table 2 Background Characteristics of the Sample

Variable	Category	Number	Percent age	Mean	Standard Deviation
Gender	Male	318	62.60	-	-
	Female	190	37.40	-	-
Age	Mean (Standard Deviation)			29.67	8.18
	< 30 Years	329	64.76	-	-
	30–50 Years	165	32.48	-	-

Variable	Category	Number	Percent age	Mean	Standard Deviation	
Education	> 50 Years	14	2.76	-	-	
	Illiterate	0	0	-	-	
	Primary	2	0.39	-	-	
	Secondary	7	1.38	-	-	
	Higher Secondary	32	6.30	-	-	
Occupation	University	467	91.93	-	-	
	Student	163	32.09	-	-	
	Unemployed	64	12.60	-	-	
	Public Job	47	9.25	-	-	
	Private Job	185	36.42	-	-	
Monthly Expenditure	Business/Self Employed	49	9.65	-	-	
	Mean (SD)	-	-	BDT 36704.54 (USD 431.82*)	BDT 44881.43 (USD 528.01*)	
	BDT 0–5,000 (USD 0–58.83*)	40	7.87	-	-	
	BDT 5,001–20,000 (USD 58.84–235.29*)	229	45.08	-	-	
	BDT 20,001–50,000 (USD 235.30–588.24*)	120	23.62	-	-	
	BDT 50,001–100,000 (USD 588.25-1176.47*)	96	18.90	-	-	
	> BDT 100,000 BDT (> USD 1176.47*)	23	4.93	-	-	
	COVID-19 Status	Positive	45	8.86	-	-
	Negative	463	91.14	-	-	

*Exchange Rate: United States Dollar (USD) 1 = Bangladeshi Taka (BDT) 85

Mean scores across different content areas of trust

As can be seen from Table 3, the mean score for impersonal and interpersonal trust is 3.77 and 4.95, respectively. The lowest level of trust on both questionnaires is observed in the Fairness content area (3.12 and 3.81, respectively), followed by the Confidence (3.38) on the impersonal trust questionnaire, and Communication (4.83) on the interpersonal trust questionnaire. The highest level of trust is observed in the

Confidentiality content area, with 4.83 obtained for impersonal and 5.53 for interpersonal trust. It is also noteworthy that 45% of respondents reported low levels of impersonal trust, while 53% indicated moderate degree of interpersonal trust. To check for the internal consistency among the impersonal and interpersonal trust questionnaires, we conducted Cronbach's alpha to find the coefficient of reliability, which are 0.96 and 0.94, respectively. According to the rule of thumb, a

coefficient above 0.90 shows “excellent” reliability in terms of internal consistency.⁴⁰

Table 3 Comparison of Mean Values and Impersonal and Interpersonal Trust Levels

Variable	Impersonal Trust				Interpersonal Trust			
	Mean	SD	n	%	Mean	SD	n	%
Average Score Across all Content Areas	3.77	2.60	-	-	4.95	2.48	-	-
Content Area 1: Fidelity	3.66	3.04	-	-	5.10	2.94	-	-
Content Area 2: Honesty	3.92	2.94	-	-	5.32	2.90	-	-
Content Area 3: Systems Trust	3.85	2.86	-	-	5.19	2.92	-	-
Content Area 4: Communication	3.67	2.92	-	-	4.83	2.91	-	-
Content Area 5: Confidentiality	4.83	2.93	-	-	5.53	2.94	-	-
Content Area 6: Confidence	3.38	2.97	-	-	4.93	3.00	-	-
Content Area 7: Fairness	3.12	2.85	-	-	3.81	2.99	-	-
Content Area 8: Competence	3.71	2.97	-	-	4.92	2.82	-	-
Combined	-	-	231	45.47	-	-	122	24.02
Impersonal and Interpersonal Trust Score (Categorical)	-	-	179	35.24	-	-	269	52.95
Low Trust	-	-	98	19.29	-	-	117	23.03
Moderate Trust	-	-	-	-	-	-	-	-
High Trust	-	-	-	-	-	-	-	-

n = number of responses, *SD* = standard deviation

The radar graph shown in Figure 1 depicting the mean scores in each content area indicates that the respondents have less trust in the health system than in the health service providers.

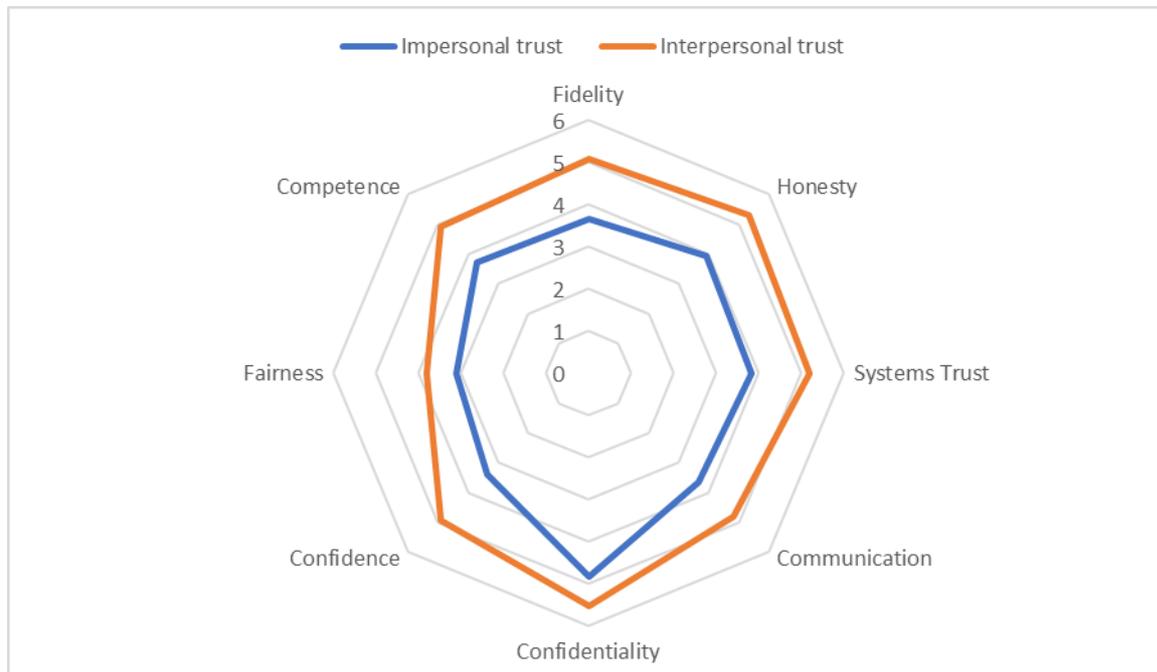


Figure 1 Radar Graph Comparing Content Areas of Interpersonal and Impersonal Trust Questionnaire

Qualitative component

In this section, the main findings from the quantitative survey are examined qualitatively.

Background characteristics of the focus group participants

As noted previously, 50 individuals (28 males and 22 females, aged 19–75

years) took part in seven FGDs (Table 4). Four of these FGDs were held with individuals with a non-clinical background (n = 28) and the remaining three focused on the views of clinicians (n = 22). Nearly 50% of the respondents had training in public health.

Table 4. Characteristics of the FGD participants

FGD Number	Group characteristics	Number of respondents	Age range in years	Male/female	Clinical or non-clinical background
FGD-1	Undergraduate students pursuing degrees in management, marketing, botany, business, and pharmacy at a public university	6	19–21	5/1	Non-clinical

FGD Number	Group characteristics	Number of respondents	Age range in years	Male/female	Clinical or non-clinical background
FGD-2	Graduate students with medicine or dentistry as their undergraduate background pursuing public health degrees at a private university	6	25–34	0/6	Clinical
FGD-3	Undergraduate students pursuing public health degrees at a public university	9	21–26	4/5	Non-clinical
FGD-4	Undergraduate students pursuing food and nutrition degrees at a public university	6	22–25	0/6	Non-clinical
FGD-5	Different professionals such as executives, trainers, managers, and coordinators of public and private organizations	7	24–28	6/1	Non-clinical
FGD-6	Renowned public health experts with medical background	7	45–75	5/ 2	Clinical
FGD-7	Practicing clinicians with either medical or dentistry background	9	28–67	8/1	Clinical

Less trust in the health system than in the health service providers

FGD participants offered diverse views regarding their trust in the health system versus the health service providers. While some non-clinicians blamed doctors for shying away from caregiving during the early days of the pandemic (this finding emerged in two of the four FGDs in which individuals with non-clinical background took part), most praised them for providing care, risking their life despite PPE shortages, and even sacrificing their life in the process (this view was shared in all FGDs in which individuals with non-clinical background took part). One participant observed:

So far, we have been blaming only the doctors for not giving services. Now, we can see how important service management is in coordination with other health actors. Health system cannot be managed by the doctors alone. [FGD-5, service holders of different professions, non-clinical background]

However, in all three FGDs held with the clinicians, there was a prevalent view that people consider doctors or service providers as the sole representatives of the health system, while the doctors are also the victims of the system, as some are even attacked by the members of public. Commenting on the recent murder of a doctor by the aggrieved relative of a deceased patient, one doctor said:

Patients don't believe us when we say that oxygen cylinders are not available. They become violent. They attack us. They don't understand that access to resources is not in the hands of the doctors. They only know the doctors as the representatives of the health system. [FGD-7, practicing clinicians, clinical background]

Lowest trust in terms of Fairness

Qualitative findings on this topic supported the quantitative results. FGD participants mentioned several instances in which lack of fairness in pandemic management was evident, such as imposing lockdown in periphery areas of the country without arranging transport for the patients to the centrally located modern health facilities and visible attempts by the political decision-makers to protect the business interests at the expense of the safety of the poor. These allegations were compounded by the rumors that private hospitals were not discharging cured patients in order to generate more profit, charging astronomical amounts of money for scarce services such as intensive care unit (ICU) or oxygen, and taking patients hostage for money, as explained by one of the participants:

My relative was kept in a private hospital for extra three days after she was found COVID negative. She was even given oxygen. When asked why, they said, it is for extra patient safety. [FGD-3, undergraduate students pursuing a public health degree at a public university, non-clinical background]

During the discussions, some participants commented on circulating stories of high-profile people booking the whole hospital for their family members, some business tycoons leaving the country by air ambulances or chartered flights, and the alleged designation of a public hospital

only for the so-called VIPs. As one participant observed:

Wealthy and the political elites of the ruling party are getting one type of treatment, while the members of general public are getting something different. Some managed to get out of the country via chartered flights, some ministers booked ICUs even before requiring one. Hearing such news, as a middle- or lower-middle-class member of the society, I can't help losing trust in the health system. All facilities are there to protect the upper layer of the society. [FGD-4, undergraduate students pursuing food and nutrition degrees at a public university, non-clinical background]

Low impersonal trust in terms of Confidence

FGD participants also expressed low confidence in the health system due to the pre-existing inadequacies, which were compounded by the mistakes made by those in charge of managing the health system during the pandemic. Several participants observed mismatches between what has been said and done. The health sector reportedly failed to place the right persons in the right positions for optimal pandemic response, as expressed by a professor of public health:

An epidemic is a public health emergency; it is neither clinical nor an administrative issue. So, we must see this problem through the public health lens. ... We the public health professionals should be given the flexibility to do whatever is needed for the country, not something that just pleases the political leadership. [FGD-6, renowned public health experts, clinical background]

Reportedly, lack of preparation was also evident, as exemplified by imposing home quarantine instead of an institutional one at the beginning of the pandemic,

despite knowing that intimate Bangladeshi culture is clearly not conducive to home quarantine. Insufficient testing, delays in providing test results, high cost of diagnosis and treatment in the private sector, and insufficient equipment in the health centers also indicate a lack of forethought among the health system actors, leading to erosion of public confidence, as explained by one participant:

We are not getting the test results in time. My friend's father got his test report after ten days by which time he was already dead. [FGD-3, undergraduate students pursuing a public health degree at a public university, non-clinical background]

Low interpersonal trust in terms of Communication

Both clinicians and non-clinicians concurred that the service providers involved in COVID-19 management needed to improve their communication with the public to avoid further erosion of trust. Many doctors were alleged not to be responsive enough while caring for the COVID-19 patients, as one public university student explained:

In hospitals, especially the government hospitals, doctors don't care about the patients. Doctors should not only provide clinical care, but also explain the disease, talk to the patients with respect, and dedicate more time to each case. [FGD-1, undergraduate students pursuing different degrees at a public university, non-clinical background]

Some doctors allegedly shared information on social and regular media, most of which was later proven to be false. In a 'viral' video posted on the social media, a doctor confidently claimed that coronavirus would go away in the summer, while a respected senior doctor openly advertised use of unproven medicines. A student pursuing a public health degree at a private university, who is also a dental surgeon, commented on this issue:

I found many of my doctor friends posting about different treatments for COVID-19. I think that this may confuse and mislead people, as different doctors are saying different things. [FGD-2, graduate students pursuing a public health degree at a private university, clinical background]

DISCUSSION

The findings yielded by this mixed-methods study indicate that Bangladeshi people do not trust the health system in general, and the management of the COVID-19 pandemic in particular. Most of the participants cited lack of fairness as the most important source of mistrust, which is further compounded by inadequate communication by the service providers. These findings can be used for reorganizing and restructuring the country's response to the COVID-19 pandemic in the short term and developing a resilient health system in the long term.

Our survey also revealed that nearly half of the respondents had low level of trust towards the health system, while nearly quarter of the respondents were mistrustful of the service providers, and these findings were supported by the qualitative evidence. In their qualitative study, Shorey and colleagues found that, even in a relatively well-managed country like Singapore, 35% of the readers' comments in online local media outlets conveyed fear and concern due to the pandemic. People were panic buying and hoarding goods, as they were worried about their future.⁴¹ Elgar and colleagues conducted a time-series analysis of social capital, income inequality and COVID-19 deaths in 84 countries, which revealed that mortality was negatively related to confidence in state institutions.⁴² Drawing upon examples from the past epidemics, Bollyky et al. argued that fighting a pandemic requires public trust which governments have to earn.⁴³ A recent 23-

country study conducted by Han et al. similarly indicates that in countries with higher trust in government people are more inclined to follow rules imposed to stop the spread of the virus, such as washing their hands, avoiding crowded places, and making personal sacrifices.⁴⁴

Lack of fairness (i.e., the perception that health system is not treating the disadvantaged and vulnerable groups appropriately) emerged as the major source of low trust in the Bangladeshi health system during the COVID-19 pandemic. The same sentiment was shared during the FGDs, as many participants commented on discriminatory care for the wealthy and the urban people, and exploitation of the patients by the unregulated for-profit private hospitals. Due to the COVID-19 pandemic, already existing structural inequalities, discrimination, and abuse further exacerbate the mistreatment of persons with disabilities, older persons, children (especially poorer and marginalized children), youth, informal workers, migrants, refugees and internally displaced persons, racial and ethnic minorities, indigenous peoples, LGBTIQ people, and prisoners.⁴⁵ The time-series analysis conducted by Elgar et al. showed that mortality due to COVID-19 is positively related to income inequality.⁴² Vulnerable and disadvantaged populations in 36 African and Asian countries, including Bangladesh, have been found to be at significantly greater risk of mortality, morbidity, food insecurity, and loss of livelihood due to COVID-19.⁴⁶

Since doctors are often seen as the face of a health system, people blame them for health system inadequacies, despite considerable sacrifices most doctors have made throughout the pandemic. So far, around 3,000 doctors in Bangladesh contracted the virus and more than 100 died due to COVID-19.⁴⁷ Allegations of lack of

responsiveness and good communication skills have been reported in Bangladeshi media⁴⁸ as well as in academic publications.⁴⁹⁻⁵¹ Instances of violence against doctors are also reported in studies from Bangladesh⁵² and countries with a similar socioeconomic context,⁵³ and these incidents are not restricted to the COVID-19 pandemic, as they also occur in other times.

The main limitation of this study stems from the use of online survey and focus groups, which resulted in a sample that did not reflect the demographics of the Bangladeshi population (mean age of 30 years and higher level of education). Consequently, the findings reported here cannot be generalized to other social strata or other countries. Second, it is worth noting that the first author was a COVID-19 patient at the time this study was conducted, which could potentially bias the qualitative analysis. However, every effort was made to reduce this risk through data triangulation,⁵⁴ and by engaging multiple research team members in data coding and interpretation. To minimize Common Method Bias (CMB), we kept the questionnaire reasonably short (10 minutes responding time), engaging, and self-explanatory. It did not require any long recall. While the bias due to personality effect might take place, bias due to social desirability is not obvious. The respondents usually provided the responses based on their own experience or the news in the local media, i.e., newspapers, television channels, and social media, amid the pandemic.

RECOMMENDATIONS

A low level of trust, especially in terms of broader health system interactions (impersonal trust), was a major finding. To foster a trusting relationship with the

public, those in charge of the health system should ensure transparency and accountability in every aspect of their functions.⁵⁵⁻⁵⁷ FGD participants have also cited a lack of technical leadership as the source of several pandemic management mistakes. We recommend that decisions regarding pandemic management be context-specific, but that decisions must be a science-based professional response, coming from the relevant experts. Health systems experts argue that scientific and technical inputs in pandemic management inform the decision-making and justify the government response, eventually improving the government's legitimacy.⁵⁶ Gilson showed how establishing legitimacy of state action is necessary for building health system trust,¹³ and ample evidence has now emerged on how trust is imperative in people's policy compliance, especially in a crisis like the COVID-19 pandemic.⁵⁸⁻⁶⁴ As public health systems are the first line of defense against a pandemic,^{65, 66} and scientific leadership is usually ingrained in such a system,⁶⁶ a separate public health career track, which is currently absent in the Bangladeshi health sector, must be developed.⁶⁷

The lowest level of trust in the Fairness content area across both impersonal and interpersonal trust questionnaires hints at inequity and discrimination. Lack of fairness was substantiated by the FGD findings describing indifference towards the health needs of the people living in the country's periphery regions, prioritization of business interest over public health, exploitation by private hospitals, and discriminatory services that benefitted those people with money and with power. To address discrimination, inequity, or lack of fairness, we recommend prioritizing the vulnerable groups with appropriate measures⁶⁵ before imposing lockdown (a fresh weeklong lockdown is imposed in Bangladesh from 5 April 2021, and after a three-day interval,

another 'strict lockdown' for two weeks is planned from 14 April 2021⁶⁸), or organizing any health intervention (e.g., vaccination). Social safety nets must be strengthened,⁵⁷ the private sector must be regulated and brought under public sector leadership,⁶⁶ and an equity-focused longer-term public health policy response must be put in place.⁶⁹ Ismail et al. proposed a long and validated list of such interventions to reduce inequity and improve access to navigate nations out of the pandemic.⁷⁰

CONCLUSIONS

Pandemics have been known to humans since the beginning of the recorded history.^{71, 72} Thus, while COVID-19 may be the first documented coronavirus pandemic,⁷³ it is unlikely to be the last. Bangladesh experienced several local disease outbreaks over the past several years⁷⁴⁻⁷⁷ as well as a dengue epidemic in 2019.⁷⁸ However, due to their lower magnitude compared to the COVID-19 pandemic, the need for a comprehensive overhauling of the health systems has not been felt so deeply until now. Low- and middle-income countries like Bangladesh are particularly vulnerable to pandemics due to their weak governance and limited health system preparedness.⁷⁹ Therefore, to ensure better pandemic management in the future, they have to instate resilient health systems, which demands public trust.²²

This view is confirmed in the present study, as the Bangladeshi people expressed mistrust in the health system and, albeit to a lesser extent, in the health service providers. Lack of fairness in dealing with the COVID-19 pandemic and weak communication skills of the service providers contributed to the mistrust. Based on these findings, we recommend that our health system leaders learn from their mistakes in order to prevent even greater loss of life and economic downturn going forward. We also believe that our health

sector stewards should take advantage of the lessons from other countries, ensure multi-sectoral engagement involving the community and political forces, and empower the public health experts to organize and consolidate a concerted effort in gaining public trust in the short term, while working toward building a resilient and responsive health system in the long term.

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REFERENCES

1. Alexopoulos AN, Buckley F. What Trust Matters When: The Temporal Value of Professional and Personal Trust for Effective Knowledge Transfer. *Group & Organization Management* 2013;38(3): 361-91.
2. Ye M, Lyu Z. Trust, risk perception, and COVID-19 infections: Evidence from multilevel analyses of combined original dataset in China. *Soc Sci Med* 2020;265: 113517.
3. Siegrist M. Trust and risk perception: A critical review of the literature. *Risk Anal.* 2021;41(3): 480-90.
4. Inglehart R. *Modernization and postmodernization: Cultural, economic, and political change in 43 societies*: Princeton university press; 2020.
5. Putnam RD. Bowling Alone: America's Declining Social Capital. *J Democr.* 1995;6(1): 65-78.
6. Earle TC, Cvetkovich G. *Social trust: Toward a cosmopolitan society*: Greenwood Publishing Group; 1995.
7. Mechanic D. Changing medical organization and the erosion of trust. *Milbank Q.* 1996: 171-89.
8. Coleman JS. *Foundations of social theory*. Cambridge, MA: Harvard university press; 1994.
9. Fukuyama F. *Trust: The social virtues and the creation of prosperity*: Free press New York; 1995.
10. Calnan M, Rowe R. *Trust Matters In Health Care*: McGraw. Hill Education; 2008.
11. Kane S, Calnan M, Radkar A. Trust and trust relations from the providers' perspective: the case of the healthcare system in India. *Indian J Med Ethics.* 2015;12(3):157-68.
12. Kittelsen SK, Keating VC. Rational trust in resilient health systems. *Health Policy Plan.* 2019;34(7): 553-7.
13. Gilson L. Trust and the development of health care as a social institution. *Soc Sci Med.* 2003;56: 1453-68.
14. Robertson D. *The Routledge Dictionary of Politics*: Taylor & Francis 2004.
15. Abelson J, Miller FA, Giacomini M. What does it mean to trust a health system? A qualitative study of Canadian health care values. *Health Policy.* 2009;91(1): 63-70.
16. Gilson L. Trust in health care: theoretical perspectives and research needs. *J Health Organ Manag.* 2006;20: 359-75.
17. Platt JE, Jacobson PD, Kardia SLR. Public Trust in Health Information Sharing: A Measure of System Trust. *BioMed Central.* 2018;53: 824-45.
18. Ozawa S, Sripad P. How do you measure trust in the health system? A systematic review of the literature. *Soc Sci Med.* 2013;91: 10-4.
19. Sripad P, Ozawa S, Merritt MW, Jennings L, Kerrigan D, Ndwiga C, et al. Exploring Meaning and Types of Trust in Maternity Care in Peri-Urban Kenya: A Qualitative Cross-Perspective Analysis. *Qual Health Res.* 2018;28: 305-20.

20. Huq S, Biswas RK. COVID-19 in Bangladesh: Data deficiency to delayed decision. *J Glob Health*. 2020;10:1-3.
21. Rockers PC, Kruk ME, Laugesen MJ. Perceptions of the Health System and Public Trust in Government in Low- and Middle- Income Countries: Evidence from the World Health Surveys. *Psychol. Public Policy, Law*. 2012;38: 406-37.
22. Department for International Development. Principles of Health Systems Resilience in the Context of Covid-19 Response. UK: Department for International Development; 2020.
23. The Joint United Nations Programme on HIV and AIDS. Rights in the time of COVID-19: Lessons from HIV for an effective, community-led response. 2020.
24. Biswas RKH, Samin, Aman A. Relaxed Lockdown in Bangladesh During COVID-19: Should Economy Outweigh Health?. *J. Health Policy Manag*. 2020.
25. Roberton T, Carter ED, Chou VB, Stegmuller AR, Jackson BD, Tam Y, et al. Early estimates of the indirect effects of the COVID-19 pandemic on maternal and child mortality in low-income and middle-income countries: a modelling study. *LancetGlob Health*. 2020: 1-8.
26. Ramalingam B, Wild L, Ferrari M. Adaptive leadership in the coronavirus response: Bridging science, policy and practice. London: ODI; 2020.
27. Joarder T, Osman FA. Bangladesh's Health Improvement Strategy as an Example of the Alma-Ata Declaration in Action. In: Bishai D, Schleiff M, editors. *Achieving Health for All: Primary Health Care in Action*. 1st ed. Baltimore, Maryland: Johns Hopkins University Press; 2020. p. 153-79.
28. Koehlmoos TP, Islam Z, Anwar S, Hossain SAS, Gazi R, Streatfield PK, et al. Health transcends poverty: the Bangladesh experience. "Good health at low cost" 25 years on: What makes a successful health system? London: London School of Hygiene and Tropical Medicine; 2011. p. 47-81.
29. The World Bank. World Bank Open Data [Internet]. 2021 [cited 2021 6 April]. Available from: <https://data.worldbank.org/>.
30. Chowdhury AM, Bhuiya A, Chowdhury ME, Rasheed S, Hussain Z, Chen LC. The Bangladesh paradox: exceptional health achievement despite economic poverty. *Lancet* 2013;382(9906): 1734-45.
31. Ritchie H, Ortiz-Ospina E, Beltekian D, Mathieu E, Hasell J, Macdonald B, et al. Coronavirus (COVID-19) Testing [Internet]. 2021 [cited 2021 6 April]. Available from: <https://ourworldindata.org/coronavirus-testing>.
32. Worldometers.info. Worldometers Dover, Delaware, U.S.A.: Worldometers [Internet]. 2021 [updated 6 April 2021; cited 2021 6 April]. Available from: <https://www.worldometers.info/coronavirus/>.
33. Kavanagh MM, Singh R. Democracy, Capacity, and Coercion in Pandemic Response: COVID-19 in Comparative Political Perspective. *J Health Polit Policy Law*. 2020;45(6): 997-1012.
34. Shamasunder S, Holmes SM, Goronga T, Carrasco H, Katz E, Frankfurter R, et al. COVID-19 reveals weak health systems by design: why we must re-make global health in this historic moment. *Glob Public Health*. 2020;15(7): 1083-9.
35. Ibrahim MD, Binofai FA, MM Alshamsi R. Pandemic response management framework based on efficiency of COVID-19 control and treatment. *Future Virol*. 2020;15(12): 801-16.
36. Mechanic D. Changing Medical Organization and the Erosion of Trust. *The Milbank Quarterly* 1996;74:171-89.
37. Creswell JW, Clark VLP. *Designing and Conducting Mixed Methods Research*. 2nd ed: SAGE; 2011.
38. Schonlau M. Stata Software Package, Hotdeckvar.pkg, for Hotdeck Imputation [Internet]. 2006 Available from: <http://www.schonlau.net/stata>.
39. Hsieh H, Shannon S. Three approaches to qualitative content analysis. *Qual Health Research*. 2005;15: 1277-88.
40. Taber KS. The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Res. Sci. Technol. Educ*. 2018;48(6): 1273-96.
41. Shorey S, Ang E, Yamina A, Tam C. Perceptions of public on the COVID-19

- outbreak in Singapore: a qualitative content analysis. *J Public Health*. 2020.
42. Elgar FJ, Stefaniak A, Wohl MJ. The trouble with trust: Time-series analysis of social capital, income inequality, and COVID-19 deaths in 84 countries. *Soc Sci Med*. 2020;263: 113365.
 43. Bollyky TJ, Crosby S, Kiernan S. Fighting a Pandemic Requires Trust: Governments Have to Earn It. *Foreign Affairs*; 2020.
 44. Han Q, Zheng B, Cristea M, Agostini M, Belanger JJ, Gutzkow B, et al. Trust in government regarding COVID-19 and its associations with preventive health behaviour and prosocial behaviour during the pandemic: a cross-sectional and longitudinal study. *Psychol Med*. 2021: 1-32.
 45. Rohwerder B. Social impacts and responses related to COVID-19 in low- and middle-income countries. Brighton, UK: Institute of Development Studies; 2020.
 46. Winskill P, Whittaker C, Walker PG, Watson O, Laydon D, editors. Report 22: Equity in response to the COVID-19 pandemic: an assessment of the direct and indirect impacts on disadvantaged and vulnerable populations in low-and lower middle-income countries. Imperial College London; 2020: Imperial College London.
 47. Bangladesh sees 100th death of doctors from Covid-19. *Dhaka Tribune*; 2020 48.
 48. Joarder T. How can our doctors be more responsive in the time of Covid-19 pandemic?. *The Business Standard*; 2020.
 49. Joarder T, George A, Sarker M, Ahmed S, Peters DH. Who are more responsive? Mixed-methods comparison of public and private sector physicians in rural Bangladesh. *Health Policy and Planning*; 2017.
 50. Zaman S. Poverty and violence, frustration and inventiveness: hospital ward life in Bangladesh. *Soc Sci Med*. 2004;59(10): 2025-36.
 51. Andaleeb SS, Siddiqui N, Khandakar S. Patient satisfaction with health services in Bangladesh. *Health policy and planning* 2007;22(4):263-73.
 52. Hasan MI, Hassan MZ, Bulbul MMI, Joarder T, Chisti MJ. Iceberg of workplace violence in health sector of Bangladesh. *BMC Res Notes*. 2018;11(1): 702.
 53. Sakthivel P, Rajeshwari M, Malhotra N, Ish P. Violence against doctors: an emerging epidemic amidst COVID-19 pandemic in India. *Postgrad Med J*. 2020;2020-138925.
 54. Lewis J, Ritchie J, Ormston R, Morrell G. Generalizing from qualitative research. In: Richie J, Lewis J, Nicholls CM, Ormston R, editors. *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. 2 ed: SAGE Publications; 2013. p. 347.
 55. Rajan D, Koch K, Rohrer K, Bajnoczki C, Socha A, Voss M, et al. Governance of the Covid-19 response: a call for more inclusive and transparent decision-making. *BMJ Glob Health*. 2020;5(5): e002655.
 56. Weible CM, Nohrstedt D, Cairney P, Carter DP, Crow DA, Durnová AP, et al. COVID-19 and the policy sciences: initial reactions and perspectives. *Policy Sci*. 2020;53(2): 225-41.
 57. Baum F, Freeman T, Musolino C, Abramovitz M, De Ceukelaire W, Flavel J, et al. Explaining covid-19 performance: what factors might predict national responses?. *BMJ* 2021; 372.
 58. Saechang O, Yu J, Li Y. Public Trust and Policy Compliance during the COVID-19 Pandemic: The Role of Professional Trust. *Healthcare* 2021;9(2):151.
 59. Helliwell JF, Huang H, Wang S, Norton M. World Happiness, Trust and Deaths under COVID-19. In: Helliwell JF, Layard R, Sachs JD, De Neve J-E, Akinin L, Wang S, et al., editors. *World Happiness Report 2021*. New York: Sustainable Development Solutions Network; 2021. p. 13-56.
 60. Henderson J, Ward PR, Tonkin E, Meyer SB, Pillen H, McCullum D, et al. Developing and Maintaining Public Trust During and Post-COVID-19: Can We Apply a Model Developed for Responding to Food Scares? *Public Health Front*. 2020;8(369).
 61. Falcone R, Coli E, Felletti S, Sapienza A, Castelfranchi C, Paglieri F. All We Need Is

- Trust: How the COVID-19 Outbreak Reconfigured Trust in Italian Front. *Psychol.* 2020;11(2585).
62. Gopichandran V, Subramaniam S, Kalsingh MJ. COVID-19 pandemic: a litmus test of trust in the health system. *Asian Bioeth Rev.* 2020;12: 213-21.
63. Kye B, Hwang S-J. Social trust in the midst of pandemic crisis: Implications from COVID-19 of South Korea. *Res Soc Stratif Mobil.* 2020;68: 100523.
64. Min J. Does social trust slow down or speed up the transmission of COVID-19?. *PLOS ONE* 2020;15(12):e0244273.
65. Collins T, Akselrod S, Bloomfield A, Gamkrelidze A, Jakab Z, Placella E. Rethinking the COVID-19 Pandemic: Back to Public Health. *Ann Glob Health* 2020;86(1).
66. Loewenson R, Accoe K, Bajpai N, Buse K, Abi Deivanayagam T, London L, et al. Reclaiming comprehensive public health. *BMJ Glob Health.* 2020;5(9): e003886.
67. Joarder T, Rawal LB, Ahmed SM, Uddin A, Evans TG. Retaining doctors in rural Bangladesh: A policy analysis. *Int J Health Policy Manag.* 2018;7: 847-58.
68. Strict lockdown from April 14. *The Daily Star*; 2021.
69. Bamba C, Riordan R, Ford J, Matthews F. The COVID-19 pandemic and health inequalities. *J Epidemiol Community Health.* 2020;74(11): 964-8.
70. Ismail SJ, Tunis MC, Zhao L, Quach C. Navigating inequities: a roadmap out of the pandemic. *BMJ Glob Health.* 2021;6(1):e004087.
71. Franchini AF, Auxilia F, Galimberti PM, Piga MA, Castaldi S, Porro A. Covid 19 and spanish flu pandemics: All it changes, nothing changes. *Acta Biomedica* 2020;91:245-50.
72. Morens DM, Daszak P, Markel H, Taubenberger JK. Pandemic covid-19 joins history's pandemic legion. *mBio* 2020;11:1-9.
73. Liu Y-c, Kuo R-l, Shih S-r. The first documented coronavirus pandemic in history. *Biomedical J.* 2020:1-6.
74. Maude RR, Ghose A, Samad R, Jong HKD, Fukushima M, Wijedoru L, et al. A prospective study of the importance of enteric fever as a cause of non-malarial febrile illness in patients admitted to Chittagong Medical College Hospital , Bangladesh. *BMC Infect. Dis.* 2016:1-8.
75. Rahim MA, Uddin KN. Chikungunya: an emerging viral infection with varied clinical presentations in Bangladesh: Reports of seven cases. *BMC Res Notes.* 2017;1:1-5.
76. Rahman M, Hossain M, Sultana S, Homaira N, Khan SU, Rahman M, et al. Date palm sap linked to Nipah virus outbreak in Bangladesh 2008. *Vector Borne Zoonotic Dis.* 2012;12: 65-72.
77. Sharmin S, Viennet E, Glass K, Harley D. The emergence of dengue in Bangladesh: epidemiology, challenges and future disease risk. *Trans R Soc Trop Med Hyg.* 2015;109: 619-27.
78. Mutsuddy P, Jhora ST, Shamsuzzaman AKM, Kaisar SMG, Khan MNA. Dengue Situation in Bangladesh: An Epidemiological Shift in terms of Morbidity and Mortality. *Can J Infect Dis Med Microbiol.* 2019;2019: 3516284.
79. Sriram V, Sheikh K, Soucat A. Addressing Governance Challenges and Capacities in Ministries of Health. Geneva: World Health Organization, UHC Partnership, Alliance for Health Policy and Systems Research, Collaborative HSG; Report No.: 9789240005419; 2020.