Burden of COVID-19 on health and wellbeing, education, and economy of Bangladesh

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Abstract
The long-term impact of this pandemic will continue in almost all sectors of a country such as health, economic situations, education, mental health, and violence. Therefore, the authors intended to discuss the prolonged effect of COVID-19 on the health along with wellbeing, education, and economy of Bangladesh through a mixed approach. To assess the possible scenario in health sector of Bangladesh, we conducted a short survey through online with a structured questionnaire. The impact of the pandemic is highlighted by graphical presentations and discussed the issues in light of the existing literature. It is realized that health care services and resources are always essential for predominant health conditions and fatal diseases patients. Mental health has also been impacted a lot during this pandemic. Moreover, students of only those schools located in urban areas are attended some online classes but due to the internet interruption and scarcity of devices students from rural areas cannot attend the classes and it will widen the gap between pupils from urban areas and those who live in remote rural areas. Additionally, many students terminate school. The country’s youth unemployment is projected to intensify as a result of the economic effects, which would promote antisocial behavior and cause social discontent among young people. Also, the flow of remittances greatly declined in the last couple of months and a many people were jobless abroad, and the majority of them were sent back home. The demographic dividend’s intended results are expected to be negatively impacted by COVID-19’s overall effect as well as sustainable development goals (SDGs) in Bangladesh. Therefore, many social services systems need strategic backup resources at community, national, and global levels if any basic system may collapse due to COVID-19 and socio-economic as well as geopolitical negligence in handling post-pandemic challenges.

KEYWORDS
Bangladesh, challenges, COVID-19, long-term impact, SDGs
INTRODUCTION

Bangladesh is one of the nations with the highest population densities in the world, and there are huge challenges to cope up with the impact of a pandemic like COVID-19. Before the pandemic, Bangladesh was in a very good position as the economy had been growing approximately seven percent a year on average over the past decade. However, human health has been seriously threatened by the COVID-19 pandemic globally. Therefore, to control the ongoing pandemic, lockdowns have been implemented across high, middle, and low-income countries. Several nations have implemented population-wide lockdowns as a preliminary measure to halt the virus’s spread and allow their health services time to handle. These lockdowns significantly reduced the spread of SARS-CoV-2, however, the potential long-term impact will continue by taking such measures on all aspect of a country. Moreover, economy, education, morbidity, mortality, and societal disruption is affected due to the novel virus SARS-CoV-2 in a global scale. Every aspect of life has been adversely affected by the COVID-19 pandemic outbreak, which poses a major threat to both human health and economic development. The first cases of COVID-19 were confirmed in March 8, 2020, in Bangladesh, and the government announced for shutting of all private and government offices, schools, colleges and universities, industrial and agriculture activities, and road, rail and air travel, and counseling as well as recommending the population to stay at home except for completing crucial responsibilities.

The COVID-19 pandemic has engulfed the entire blue planet and encumbered its regularity at all levels, especially in the healthcare system. As of the October 7, 2022, more than 625 million people have infected, and 6.56 million have died globally because of COVID-19. Most countries are ensuring their maximum efforts to contain the raging situation with available medical resources. However, there are a lot of people with predominant health conditions, including cancer, diabetes, asthma, hypertension, cardiovascular, and other fatal diseases who need regular follow-up or checking as well as emergency medical support at critical condition. Because of the escalating number of COVID-19 patients, they might face difficulties getting a physician’s appointment or hospital admission. Despite the fact that many private hospitals are severely at risk of going out of business because they have stopped or postponed all non-urgent elective surgery and reduced the amount of funding they get and the amount of service they are compensated for providing, and this perhaps restricts them to admit COVID-19 patients. Besides, unwillingness to meet physicians could arise due to the phobia of getting infected in the high-risk zone, such as the hospital environment. A study highlighted that undergraduate pharmacy students have a fair amount of information on coronavirus illness 2019 and a moderate understanding of the risks it poses. We are lucky enough that after one year of pandemic scientists developed the vaccine, however, the participants’ general lack of knowledge and perspective was revealed to have considerably reduced their willingness to receive vaccinations and vaccination program faced challenges because of halting the shipment of the serum institute of India. Developed countries vaccinate their citizens more quickly than low- and middle-income countries (LMICs). Moreover, the most often reported side effects of COVID-19 vaccine were fever, headaches, weariness, and a feeling of being cold at the injection site. However, successfully confronting the new variety is made possible by prior pandemic eradication efforts and large immunization campaigns. The COVID-19 pandemic is interfering with vital immunization programs all across the world, particularly in low-income nations. COVID-19’s effects were seen in practically all sectors in Bangladesh. Researchers highlighted that during the pandemic mental health of people including children was impacted a lot. Researchers mentioned that there has been an alarming rise in the prevalence of diarrhea and dengue virus along with Coronavirus Disease-2019 (COVID-19).

Moreover, the nation-wide preventive actions, that is, lockdown, social-distancing, quarantines, disrupt the usual transportation, and supply chain of medicine and relevant goods. Therefore, as an obvious byproduct, all these scenarios could end up in the shortage of medical support for other prevalent disease groups. Consequently, these impetuous actions can potentially create an uncontrolled situation in the post-pandemic world, and there is a massive chance of mortality touched the spike due to health care negligence. Importantly, the idea is not solely hypothetical rather observational to a limited extent, with a real example from Bangladesh. Thus, the authors aimed to discuss the long-lasting effect of COVID-19 on health and wellbeing, education, and economy of Bangladesh by mixed approach.

METHODS

This paper discussed the impacts of COVID-19 on several sectors of Bangladesh based on the existing literature. We searched the literature in Google and Google Scholar by using some keywords including “COVID-19,” “Impact of COVID-19,” “Health,” “Economy,” “Education,” “Mental health and wellbeing,” “Violence,” “Lockdown,” and “Bangladesh.” However, COVID-19 had a significant and immediate influence on the health sector than others; therefore, we
carried out a quick survey to find out what challenges the respondents experienced. Thus, to assess the possible scenario in health sector of Bangladesh, we conducted a short survey from April 20, to April 28, 2020, with a structured questionnaire through an online survey (Google Form). In this current pandemic situation as well as considering the health condition of the respondents, since it was not possible to conduct a face-to-face survey, information was gathered online via a link to the designed Google form. Prior to their participation in the survey, the authors explain the study’s objectives to them, assure them that their information would be kept private, and obtain their agreement via a Google form. After giving their permission to take part in the survey, respondents were emailed a link to the questionnaire and instructions on how to fill it out. Participants were informed of the online form’s link via social media (Facebook, WhatsApp, and Instagram). The participants have given approval for their data to be used in the research. Initially, this survey has a total of 743 participants. About 87% (n = 647) of data is included in the final analysis after discarding 13% erroneous data. The findings are presented by graphs, and the challenges issues are discussed considering the existing literature.

3 | RESULTS AND DISCUSSION

3.1 | Bangladesh and COVID-19 pandemic

Bangladesh, which has 165 million citizens, is one of the world’s poorest nations and has the tenth-highest population density. Many millions live cheek by jowl in slums, as daily workers, rickshaw-puller, or garments workers where ten or more households share a toilet. Additionally, in Cox’s Bazar, Bangladesh’s far-southeast area, about 1.1 million Rohingya refugees are currently housed in the largest refugee camp in the world. In comparison with Bangladesh’s average density of 1265 individuals per square kilometer, the population density is 40 times higher in the Rohingya camps. Even two pre-pandemic studies reveal that the key mortality and health risks of Rohingya refugees are essentially associated with socio-cultural context among refugees and host communities, limited provision of health services in the refugee camps, food, and water, shelter, clothing, bedding, sanitation, and access to significant information. Although the country is managing COVID-19 quite well, it is likely to become an interesting area in southeast Asia because of exponential growth in infection numbers, especially after the removal of social lockdown measures and approaching winter session. Also in Bangladesh, the refugee population camps are at a higher risk of vulnerability to being infected with COVID-19 outbreaks, as is the case in many other parts of the world.

3.2 | Current challenges in Bangladesh and possible scenarios in health sector

The healthcare system of Bangladesh has been lacking in several points of view such as reliability, empathy, and responsiveness, which has already been proved inadequate to support appropriate health care to the public. Additionally, better medical services are concentrated in metropolitan regions, creating a healthcare gap, and depriving residents in rural communities. The COVID-19 pandemic also reveals numerous inadequacies in the healthcare system, which can be categorized into three domains: (1) “inadequate healthcare facilities,” (2) “poor governance and increased corruption,” and (3) “weak public health communication”. Medical facilities, including the number of beds, intensive care units (ICUs), and ventilators, are far less than the needed amount in both private and government hospitals, as a result, a large portion of the population suffered. A prior study revealed that a critical factor in lowering the overall number of COVID-19 deaths was the amount of hospital beds.
In our survey, 96.5% of participants were aware of the present health care status through their observation, own experience, and from others. Shockingly, overall, 87.6% of participants reported that they had faced complications related to healthcare services due to the COVID-19 pandemic during the survey period. The findings also revealed that people in Bangladesh have been experiencing challenges in getting doctor’s appointment (64.2%), hospital admission (49.2%), diagnosis (42.7%), medicine unavailability (36.2%), shortage of medical personnel/equipment (65.8%), and staff’s negligence/mistreat (38.9%) as shown in Figure 1. Such observation is not surprising during a pandemic period. The interruption of routine health treatments may have a disproportionately negative impact on children and women who are of reproductive age.37

Due to possible health system disruptions, the COVID-19 pandemic could result in a 45% increase in mortality rates for children under the age of five and a 38% rise in maternal mortality in countries with low and moderate incomes.38 In past epidemics, health systems had trouble keeping up with routine services, and has decreased the utilization of services.39 These negligence can accumulate into a post-pandemic challenge if not handled wisely. According to 83% of respondents, the healthcare system will collapse if there is a continuation of these scenarios, while 57.3% predicted the possibility of spike mortality in the common disease group (Figure 2). The outcome of the survey was in line with our anticipation and projected our thoughts into the necessary steps that can take to ameliorate the upcoming post-pandemic effect.

In this regard, the community clinics can be utilized as the emergency health care centers with at least 2–3 days of weekly opening schedules where intern doctors and nurses can be immediately recruited if necessary. Alternatively, either there should be a separate intensive care unit in all hospitals or making one exclusive if there is more than one hospital in an area for patients with predominant health conditions. In either case, the supply chain of medicine and necessary medical equipment should have more accessibility. Therefore, to implement a balanced health care service, the policy-makers should pay heed to the suggested remedial actions in resolving the post-pandemic crisis.

3.3 Challenges in education

Bangladesh has a greater education system having 38.6 million students and approximately a million teachers as well as personnel involved in this sector in Bangladesh.40 In addition, 76% of secondary schools in Bangladesh are situated in rural areas. According to the report, 60% of kids attend primary schools run by the government, most of which are situated in rural areas. The worldwide education system is experiencing unprecedented disruption as a result of the ongoing deadly COVID-19 pandemic, and the impact in low- and middle-income nations like Bangladesh is substantial. The immediate effect of the COVID 19 is the interruption directly from learning of about 36.8 million students in Bangladesh.41 Given the destructive spread of the coronavirus, the Bangladeshi government ordered the closure of all educational institutions, residence halls, coaching facilities, and tuition on March 16, 2020.42 The closure duration was intermittently prolonged until it persisted due to growing public concern. This prolonged closure has a detrimental effect on the children’ capacity to learn generally.43 During the closure period, students are detached from studying but are involved in numerous types of activities throughout the day such as assist their parents in household activities, gossiping with friends, family members, and relatives, sports, mobile phone browsing, and the internet as well as online games. In addition, they are also practicing with bad habits of late wake-up and early sleeping. All working people in South Asian countries are affected by the global economic recession, but in Bangladesh, the lower middle and lower social classes are the most affected. Due to the possibility of becoming child laborers in order to fight poverty, children from lower class households in Bangladesh are more likely to drop out of their respective schools.

All elementary school examinations in the nation were postponed immediately, and the Higher Secondary School Certificate (HSC) Examination (Grade-12 or similar terminal exam) was suspended for the academic year. The Bangladeshi government has ordered state-owned radio and television stations to broadcast live and recorded courses in an effort to mitigate the epidemic’s interruption of education. Additionally, teachers are told to text students with course-related information. On the contrary, the private schools quickly adopt online learning methods during this period, recommending lectures delivered via different social media platforms such as Zoom, Google Meet, Google Classroom, and YouTube.44 While the government’s initiatives to reach students seem to have been successful in urban areas, students in rural areas worry that they will be left behind because of the lack of digital equipment, qualified/trained teachers, high-speed data connectivity, and other facilities
that prevent many rural students from accessing these programs. Urban pupils are more likely to have access to necessary technologies at home since their parents are more likely to be computer proficient and the schools there are better equipped and prepared. In a recent research, it was said that 59% of Bangladesh’s rural households lacked access to cellphones, while 54% of those households lacked internet connection. Therefore, classes are attended by children from the wealthier households in the country who were enrolled in those metropolitan schools, widening the achievement gap between rural and urban pupils living in distant places. Along with the financial and social imbalance crisis, the lack of proper education-based technology is the first barrier, the second barrier is the scarcity of trained teachers and other relevant personnel, and the third barrier is the limited technological practice during the class period. The drop-out rate will increase as a result of the pandemic and its negative effects on household income, particularly for girls and poor/disadvantaged households. The result of this circumstance will probably result in a rise in adolescent fertility rates, as well as more early marriages and child labor. Additionally, male students from low-income homes are more likely to experience pressure to support their families’ livelihoods, which may lead them to drop out of school. Moreover, the lack of assistive technology, increased technological difficulty, and inaccessible learning modes for people with vision or hearing impairments have a negative effect on students with disabilities, who are poor, the pandemic, and school closures. Researchers noted that many university students in Bangladesh struggle with severe session jam fear, poor e-Learning instruction, and ensuing psychological discomfort.

Furthermore, a number of non-formal learning facilities, including prevocational, vocational, and technical training facilities, as well as other non-formal modes of education and skill development training, have been forced to close due to the epidemic and will likely have a negative impact as they have limited capacities of providing online education and it is not possible to enhance the practical skill through remote learning. Currently, some pre-recorded lessons are broadcasting through Television for pre-primary to primary grades, however, there are constraints due to TV programming not touching a huge percentage of children who do not have access to TV as well as distraction due to load shedding or some other hazards. In addition to these, prior research indicated that during the lockdown in Bangladesh, a significant portion of kids experience mental health issues and an increase in suicide rates. Therefore, in light of the aforementioned discussion, it can be stated that the loss or disruption of the academic year during the pandemic in Bangladesh causes a certain level of psychological stress on the students. We should thus look after them.

### 3.4 Challenges in economy

The GDP growth rate in Bangladesh has an upward trend compared to other South Asian countries in the last few years, however, the growth rate dropped from 8.2% in 2019 to 7.8% in 2020 as the demand for the major garments export is shrink away. Even though Bangladesh’s macroeconomic growth has been significant over the past ten years, 15 million of its 160 million citizens still live in absolute poverty and make less than US$1.90 per day. However, median monthly income is dropped in Bangladesh during the ongoing pandemic. Hamadani et al., (2020) pointed out that in their study population, the extreme poverty was infrequent prior to the lockdown, however during the epidemic and subsequent lockdown it was discovered that the income of about half of families fell below US$1.90 per day, which may have an influence on food supply chains and food security. By the end of 2020, it is anticipated that the percentage of people living in poverty will have doubled from its current level of 20%. The contributing sectors of the economy like bank and financial institutions, transport and communication, tourism, and wholesale and retail trade, and community and social services have faced financial loss. The pandemic will put the banking sector into future stress because of declining margins in a regulated interest rate regime, decreasing demand for loanable funds, and so on. More than 33% of all loans made by banks could default as a result of the COVID-19 epidemic, and banks could never be able to get any of the money back. Also, several industries face a problem of importing the raw materials due to worldwide travel restriction.

Rahman, et al., (2020) also found an evidence of declines in household income as well as food security among the families who lived in both urban and rural areas across Bangladesh before in the lockdown. A study found that 75% and 62% respondents are suffered an income drop in urban and rural, respectively, and the income shock also contribute to a shrinkage in food consumption, for example, expenditure on food was decreased by 28% and 22% by urban and rural respondents respectively. According to a study, a one-day total lockdown results in an equal economic loss of US$64.2 million, excluding the lost wages of workers earning daily wages. The country’s youth unemployment is projected to get worse as a result of the economic effects. Due to the rise in the opportunity cost of education, impoverished kids from low- and middle-income families will be severely impacted by the
interruption or loss of the academic year. Youth social unrest and a rise in antisocial behavior could result from this. Additionally, the COVID-19 has a significant negative influence on Bangladesh’s health care system, particularly with regard to maternal and child health, and the general economic situation is deteriorating as a consequence. The COVID-19 pandemic has substantial influences on several indicators of Bangladesh’ economy, especially, foreign remittance, readymade garments sector, bank and financial institutions, local and foreign trade (export and import), GDP, food and agriculture, SDGs, government revenue, and employment. Bangladesh’s economy has already started to suffer significantly as a result of the COVID-19; for instance, international trade orders, particularly in the ready-made garment industry, are being drastically reduced. About 2.28 million textile workers in Bangladesh had their employment impacted by the cancellation of numerous export orders totaling US$3.18 billion till August 2020. From March to April of 2020, nearly about 9 million people returned to Bangladesh due to the impact of COVID-19 and as a result of the flow of remittance extremely declining in the last couple of months.

The government of Bangladesh has offered social security to 9.9 million individuals (socioeconomically disadvantaged, widowed, elderly, and breastfeeding mothers), as well as financial and food aid to lower-income households. All families experiencing a decrease in income, even those who were not at the poverty threshold, must receive this form of support. Furthermore, the government of Bangladesh has already launched a number of stimulus plans for the industrial sector in an effort to strengthen the economy and offer financial support. However, several small businesses were closed down due to financial crisis and in the future, not only individuals but also the country will be sufferer as a whole.

3.5 | Effect on domestic/intimate partner violence

Domestic violence (DV) is violent behavior that occurs in a family or couple relationship and assumes that the parties are living together. Unemployment, low income, financial strain, inadequate housing, melancholy, emotional unrest, and social isolation are all risk factors for violence against partners and can lead to violent episodes in the family. Several of these issues could be worsen in the period of COVID-19. Among these stressors, the economic impacts are very serious. There will be a change of increasing fear among people as they will lose their jobs in the next year. Though, others have no likelihood of losing their job, but have suffered a reduction in their income or are working under particularly stressful conditions as essential workers which will have an impact on domestic violence. During the pandemic, verbal and physical assaults were seen in Bangladesh. Also, due to nationwide long-term school closures brought on by the epidemic, the rate of child marriage has grown by at least 13%. In Bangladesh, unprovoked aggression or violence sparked by a financial problem were the two most often cited causes of physical or sexual abuse by a husband, with 55% and 48.7% of women in rural and urban regions, respectively, reporting having experienced such abuse. There are a large number of reported as well as unreported cases of domestic violence in Bangladesh. Many people may be losing their jobs and income as a result of the epidemic, which could cause stress, worry, and also cause for embarrassment, loss of vocational identity, rises in depressive mood, as well as a sense of powerlessness about the situation. These emotions may change the perpetrators’ capacity for future wrath toward their wives and kids. The most vulnerable women and children must therefore be provided with the essential safety net services. Bangladesh may see the COVID-19 depart, but the effects of the violence may remain. The government authorities should make sure that the COVID-19 pandemic lockdown measures will not prevent sexually abused women from receiving legal assistance. Furthermore, the joint efforts of law enforcement officials and public education can help Bangladeshi women experience less sexual violence. Undoubtedly, the current state of Bangladesh as shown in the aforementioned sections indicates that the nation will face tremendous obstacles in order to combat the COVID-19 epidemic that will likely strike the nation in the future.

4 | LIMITATIONS OF THE STUDY

This study has some limitations. Firstly, the author conducted a short and quick survey to find out what challenges the respondents experienced. The survey’s results have shown the situation at that period, which has significantly improved over the course of a few months. Secondly, due to lack adequate data on the variables, hence we are unable to use any econometrical methods to establish any relationship among variable. In a later study, a detailed survey will be carried out to determine the effects of COVID-19 on various sectors utilizing statistical and econometric modeling.

5 | CONCLUSION

This paper has tested a timely argument and concludes that the post-pandemic effect on health and wellbeing,
education, and economy will very likely to spike due to the burden of COVID-19 and its associated undoable policy measures as well as negligence and/or mismanagement. The findings of the observational analysis from a south-east Asian country Bangladesh have revealed that about nine out of each ten patients experienced complications to access basic healthcare services due to the COVID-19 pandemic. Around two-thirds of them experienced difficulties getting a doctor’s appointment, while half of the participants experienced difficulties in hospital admission (Figure 1). Like many other countries, a shortage of medical personnel or equipment and staff’s negligence or mistreating have been apparent. One of the lessons that sociopolitical and health policy-makers can learn from this calamity is that health care services and resources are always essential for predominant health conditions and fatal diseases patients, so health system should build up some hospital care capabilities and reserves for an unusual tsunami because rare events also happen in health and biosecurity.

Furthermore, we should be aware that the overall disruptive effect of COVID-19 will still be unmeasurable for at least the next several years. Just for an example here, COVID-19 pandemic could lead to increase child and maternal mortality substantially in low and middle-income countries because of potential disruptions of health systems, lack and risk of foods accessibility, job loss and financial insecurity, social unrest, domestic violence, mental health, and even potential risk of famine in some countries or communities such as refugees. It is apparent that many basic services systems, including health systems, have struggled to sustain routine services. We have seen some recent examples in Spain, Italy, Brazil, and the United States. Therefore, another lesson that we all can learn from observing this disaster is that many social services systems need strategic backup resources at community, national and global levels if any basic system may collapse due to COVID-19 and socio-economic as well as geopolitical negligence to handling post-pandemic challenges.

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CONFLICT OF INTEREST
None declared.

DATA AVAILABILITY STATEMENT
The survey data will be available upon reasonable request to the corresponding author.

CONSENT
Written informed consent was obtained from the participants to publish this report in accordance with the journal’s patient consent policy.

PATIENT AND PUBLIC INVOLVEMENT
Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

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