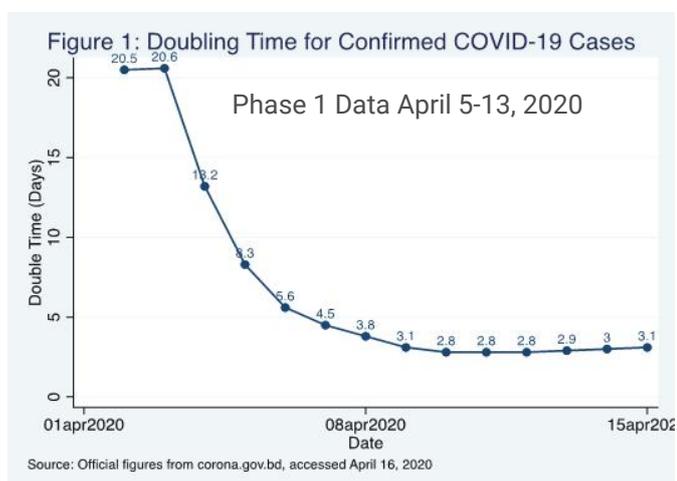




Loss of Mental Well-being at the time of COVID-19 Pandemic

Since WHO announced COVID-19 outbreak as a global pandemic, originally identified in China's Wuhan province, more than 200 countries and territories around the world have been affected by the novel Coronavirus. At the time of preparing this rapid survey brief, more than two million cases have been confirmed and COVID-19 has been associated with more than 130 thousand deaths.

In Bangladesh, first confirmed case was announced on March 8, 2020, and the first death was registered on March 18, 2020. Initially, the testing capacity was fairly low. However, this deficiency was alleviated by early April and number of detected COVID-19 cases shot up. As one can see from Figure 1, the daily doubling rate came down from about 21 days to three days by the second week of the month.



The COVID-19 and its outbreak in Bangladesh is taking a huge toll from both public health and economic points of view. Bangladesh has a large informal sector and a large fraction her population depends on short-term earnings such as daily wage. The health system also has limitations. Only about 3% of total national income is spent on health, placing it one of the lowest in the region.

As a result, the citizens of the country are likely to feel extra mental health duress and face loss of psychological well-being. In this brief, we present results from a rapid survey carried out by the BRAC James P Grant School of Public Health.

The goal of the survey was to provide rapid yet rigorous evidence to first identify some of emerging issues in the context of an unprecedented global public pandemic with very specific local implications.

The first phase of the data collection efforts took place between April 6 and 13, 2020. This also coincided with the rapid fall in doubling time as shown by the shaded region in Figure 1. Hence, this rapid survey allowed us to explore certain health and related outcomes during a very critical time. The survey was conducted over phone maintaining proper ethical standard and respect for the interviewee.

The samples were drawn from the past surveys carried out by the JPG School of Public Health in the late 2018 and 2019. One sample included the sample from a nationally representative survey carried out in 2019. Additionally, we wanted to focus on some specific populations such as RMG workers and urban young men. In future, we will also focus on the populations as different issues emerge in the local context.

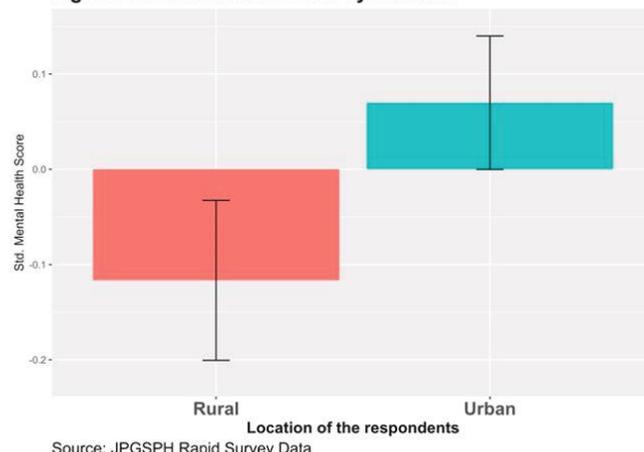
We use data collected between April 5 and April 13 (the shaded region in Figure 1). This allowed us a sample size of 1,309. Male respondents and urban areas were overrepresented in our sample. This reflects our original sample frame and focusing on populations (such as urban young men and RMG workers).

The survey covered a number of domains that we believed were pertinent to the current COVID-19 crisis. We collected information on awareness, knowledge and practices associated with infection and transmission of COVID-19. We also included how the pandemic and the ongoing lockdown have affected income, earnings, as well as consumption and diets. We explored various coping strategies and focused on certain gender aspects of the pandemic.

One particular strength of the rapid survey is that we assessed mental health or psychological well-being of all the respondents. We used two scales to assess psychological well-being. First, we used Patient Health Questionnaire (PHQ). In its original form, it is a nine-item scale, however, we dropped a question on feeling suicidal, which we considered to be too sensitive in the current context, resulting in an eight-item scale. Second, we used Generalized Anxiety Disorder (GAD-7), which is a seven-item questionnaire. Both these scales measure unspecified psychological morbidity and generally used as screening tool because of reasonable sensitivity. These are also widely used to assess mental health and stress in populations through surveys. We combine both these scales by adding the scores from both modified PHQ-8 and GAD-7 and normalize to estimate the z-scores. The last step allows us to compare the strength of associations for different factors as we essentially use the standard deviation (SD) as the unit of measurements.

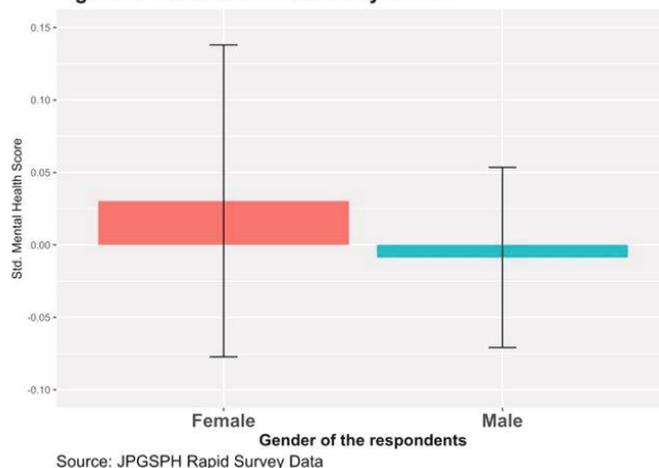
We first look at respondents by their respective locations. We primarily look at the difference in mental health by urban and rural locations and we find that psychological stress is 0.187 SD higher for the respondents in the urban areas compared to their rural counterparts (Figure 2). The initial community transmissions are primarily located in urban centers and these areas are also more congested. Hence, it is quite telling to find a higher loss of mental health among the urban respondents.

Figure 2: Mental Health Score by Location



We find that respondent being a man, or a woman has no bearing on the loss of psychological well-being during the survey period. Women reported slightly higher mental distress by 0.044 SD (Figure 3). The difference is very small and statistically not meaningful. While there is some evidence that men are physically more vulnerable to COVID-19, the pandemic imposes hardship of all family members because of limited income opportunities and possible disease burden, affecting all citizens regardless of gender.

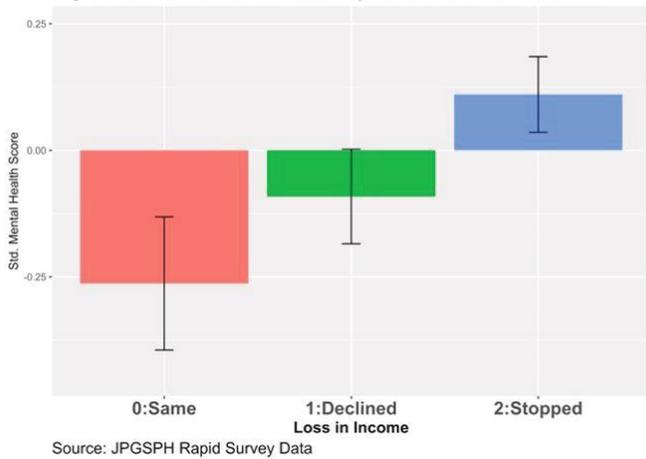
Figure 3: Mental Health Score by Gender



We definitely find that loss of income has adverse impact on the mental health of the respondents. Not only that, we also find that the degree of such loss also matters. For example, as Figure 4 suggests, respondents from the households who reported partial loss in their income reported higher distress (about 0.172 SD) compared to the household who were able to maintain the same level of pre-pandemic income (see Figure 4).

Moreover, households reported a much higher level of mental stress who experienced a total loss of income compared to the households who reported either maintaining the same level of income (0.372 SD) or experiencing partial loss (0.201 SD).

Figure 4: Mental Health Score by Adverse Income Shock

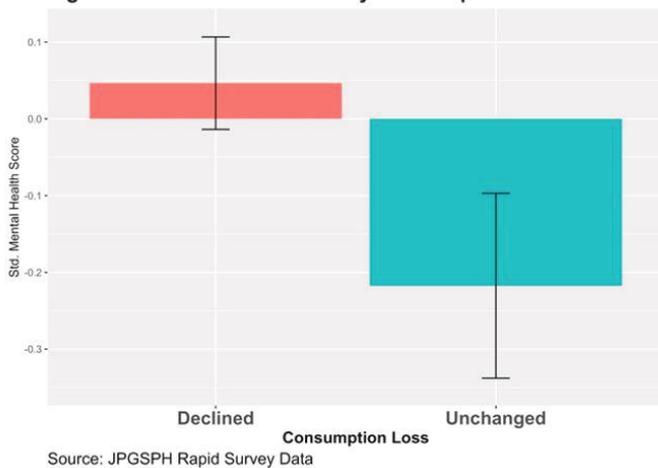


Many of the households without any income during the survey periods relied on informal daily wage works. The massive brunt on the income resulted in an immense economic hardship which imposed a huge psychological stress on these households, as evident here.

The loss of income directly translated into loss of consumption. Many households reduced consumption specially food items, which we focus on here, to cope with the loss in income. This can potentially have a detrimental effect on psychological well-being and our findings actually support this expectation.

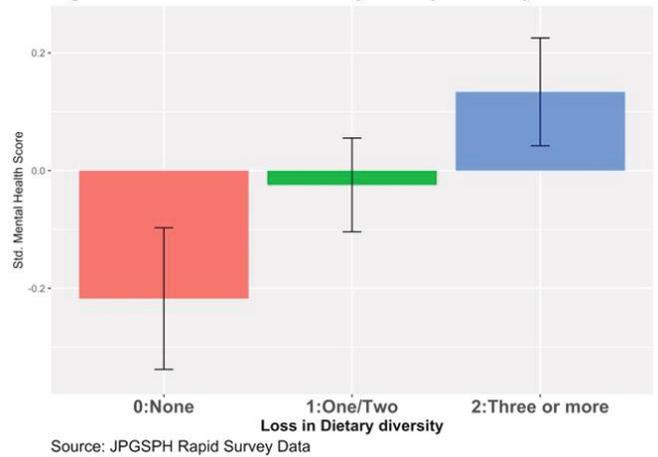
We divide the respondents into two group, ones who reported maintain a similar level of food consumption and those who reported reducing their consumption to cope up with the economic shock of the pandemic-induced lockdown and loss of earnings.

Figure 5: Mental Health Score by Consumption Loss



The households reporting a decline in consumption exhibited a significant decline in mental health (Figure 5). The standardized mental health score for the food consumption compromised households was 0.264 SD higher, suggesting a much worse mental health state.

Figure 6: Mental Health Score by Dietary Diversity Loss

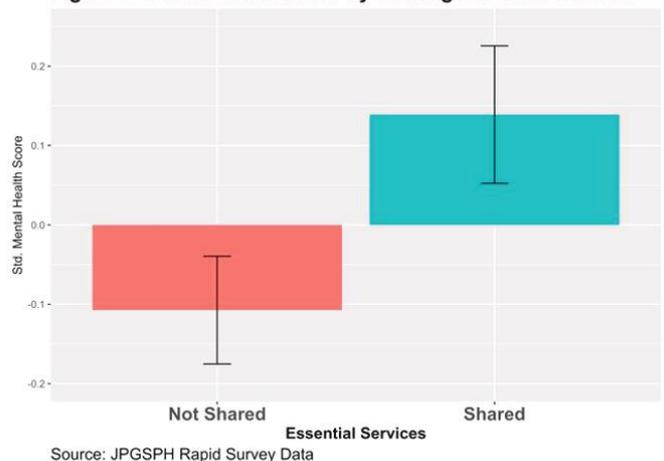


Here, we again find that degree of destitute matters. We aimed to measure nutrition deficiency or insecurity resulting from the COVID-19 pandemic. We asked which broad food groups that the households were consuming less. The food groups included ten items including eating out. We divided the respondents into three categories as shown in Figure 6.

We find that there is a “linear” relationship between degree of loss in dietary diversity and psychological well-being. Compared to respondents from the households without loss in dietary diversity, households who comprised one or two items reported 0.21 SD higher mental distress. Households reporting consuming three or more food items reported event a higher level of loss in psychological well-being (0.368 SD). This suggests losing food or nutritional security can be a big source of mental distress and public support and private donations should aim to address this in the short run.

The controlling community transmission and successful management of the pandemic requires social isolation and following more strict home quarantine protocol in case of the infected individuals. In places like Bangladesh, this may require quarantining all household members. Moreover, many households in rural or urban areas alike require sharing essential services such as bathroom, toilets, clean water sources (e.g. tube-wells), and kitchen.

Figure 7: Mental Health Score by Sharing Essential Services



As Figure 7 suggests, we find that compared to respondents from households who are not required to share such resources, the households who need to share such essential services report much higher mental distress (0.238 SD). This highlights the challenges of maintaining the social isolation in countries like Bangladesh (about 45% of the respondents reported sharing such essential services) and may require public health strategies that more amenable to the local contexts.

This brief rapid survey reports highlight the importance of addressing certain factors that are associated with loss of subjective well-being and mental health of the citizens of Bangladesh during the early days of the pandemic. During the survey period (April 3-13, 2020), the government imposed physical separation and partial lockdown to most areas of the country. Such policies are essential to control the pandemic and avoid the public health disaster. However, our survey findings highlight that the pandemic affect the psychological well-being or mental health differentially.

Households living areas are more prone to the pandemic. Many households, specially the low-income ones, live in congested slums, often sharing many of the essential services. Hence, respondents exposed to such environments face a much higher psychological cost of adhering the public health protocols necessary to reduce community transmission. Hence, they exhibit a higher level of mental distress. Infrastructural support can ameliorate some of the mental tolls of living in the heavily congested environments like urban slums.

Income and earnings have been early and severe victim of the pandemic as all types of economic activities have come to a halt since the end of March 2020 in Bangladesh. Both formal sector jobs and informal works have stopped, resulting in severe compromise in income. The cost of prolonged lockdown can impose a severe toll on consumption, reflected

in higher mental stress among the respondents who are more prone to such shocks.

Restoring mental health to a “normal” level will require a longer view, and possibly without eventual discovery vaccines against Coronavirus, it will require high level policy coordination to get back to normalcy in RMG or any other sectors. We can till propose some broad policy positions on this.

- This necessitates multi-prong approaches to help the resource constrained households of the country. In the short run, both cash and food support can help the households maintaining essential consumption without severely compromising nutritional security. Loss of nutrition is major source of psychological distress and policies should aim to tackle this.
- In the longer run, a more controlled opening up of the economic activities need to be considered. Perhaps cheaper yet rapid random antibody testing to identify individuals who have been exposed to the Coronavirus but developed immunity through antibody can allow people to move more freely and get back to work, possibly jump starting the economy and social activities.
- However, this will require a high level of coordination of different departments of the government, private sector, NGOs, community organizations, civil societies, media, and the population as a whole. But this will be essential to restore the mental health to a normal level and reduce the full brunt of the pandemic.

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