Data Article

A nationwide dataset on the mental health of the Bangladeshi population due to the COVID-19 pandemic

Md. Rabiul Islam a,*, Sohel Daria a, Rajesh Das a, Md. Rakib Hasan b

a Department of Pharmacy, University of Asia Pacific, 74/A Green Road, Farmgate, Dhaka 1205, Bangladesh
b Department of Pharmacy, Jahangirnagar University, Savar, Dhaka 1335, Bangladesh

ABSTRACT

The data presented here concerns the article entitled “Impact of COVID-19 pandemic on mental health among general Bangladeshi population: a cross-sectional study” [1]. This article represents a unique dataset on the mental health status among the Bangladeshi population during the early stage of the COVID-19 pandemic. We collected the data from April 15 to May 10, 2020, when the government of Bangladesh imposed lockdown and quarantine approaches. Total 672 (381 men, 291 women) responses were collected using Google survey tools (Google Forms) from the Bangladeshi population aged between 15-65 years. We obtained electronic consent from all participants to participate in this study and publish their anonymous data. We assessed people’s sociodemographic profiles and different psychometric measures in this study. We used UCLA-8, PHQ-9, GAD-7, and PSQI scales to assess loneliness, depression, anxiety, and sleep disturbance, respectively. This article provides a descriptive analysis of variables along with socioeconomic factors. The presented dataset gives a platform for future research for psychometric assessments of subjects using the above scales. We collected the survey data from the whole country regardless of socioeconomic factors. Therefore, policymakers of government and non-government organizations can use the data to

* Corresponding author at: Department of Pharmacy, University of Asia Pacific, 74/A Green Road, Farmgate, Dhaka 1205, Bangladesh.

E-mail addresses: robi.ayaan@gmail.com, mrislam@uap-bd.edu (Md.R. Islam), soheldaria.pharm@gmail.com (S. Daria), rajeshdas4764@gmail.com (R. Das), rakibju38@gmail.com (Md.R. Hasan).

https://doi.org/10.1016/j.dib.2021.107347
2352-3409/© 2021 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/)
develop different programs to promote the mental health of
the Bangladeshi population.

© 2021 The Authors. Published by Elsevier Inc.
This is an open access article under the CC BY-NC-ND
license (http://creativecommons.org/licenses/by-nc-nd/4.0/)

Specifications Table

| Subject          | Public health                  |
|------------------|--------------------------------|
| Specific subject area | Mental health                  |
|                   | Psychology                     |
| Type of data     | Primary data                   |
|                   | Tables                          |
|                   | Figure                          |
| How data were acquired | Data was collected using an online survey platform (Google Forms). |
| Data format      | Raw                             |
|                   | Analysed                        |
| Parameters for data collection | We collected responses from participants aged between 15-65 years who were of Bangladeshi ethnicity and living in Bangladesh. Inclusion criteria were social media users who were willing to participate in this study irrespective of background or socio-demographic variables. |
| Description of data collection | We conducted this concurrent cross-sectional study from April 15, 2020, to May 10, 2020, using Google survey tools (Google Forms). At first, we designed the structured questionnaire to collect general information about the participants. Moreover, we applied different scales (UCLA-8, PHQ-9, GAD-7, and PSQI) for psychometric measurements. We used the purposive sampling technique to collect primary data from the respondents. For doing this, we sent a self-reported questionnaire to the participants through e-mail and social networking sites. We provided the questionnaire as a supplementary file (supplementary file 1). |
| Data source location | Researchers from the University of Asia Pacific, Dhaka, have collected data from across Bangladesh. |
| Data accessibility | We supplied the dataset as a supplementary file (supplementary file 2). |
| Related research article | Das R, Hasan MR, Daria S, Islam MR. Impact of COVID-19 pandemic on mental health among general Bangladeshi population: a cross-sectional study. BMJ Open. 2021;11(4):e045727. https://doi.org/10.1136/bmjopen-2020-045727. |

Value of Data

• The data is essential as it addresses the four major mental health issues such as loneliness, depression, anxiety, and sleep disturbance among the general Bangladeshi population during the COVID-19 pandemic.
• The dataset is useful for researchers in measuring the prevalence of loneliness, depression, anxiety, and sleep disturbance during any public health crisis.
• Provides further insights for researchers to conduct comparative studies on the gravity of mental health issues during and after public health emergencies.
• Provides insights for researchers on mental health status to research the general population in other countries in a public health crisis.
• The dataset ensured rapid data collection during pandemic situations and suitability for context-specific mental health programs.
• The dataset is helpful for policymakers to take suitable measures to grow confidence among the general population in public health emergencies.
1. Data Description

World Health Organization declared coronavirus disease 2019 (COVID-19) as a pandemic on March 11, 2020. The situation is deteriorating by increasing the daily infection and mortality rates [2]. The government of Bangladesh imposed a country-wide lockdown on March 26, 2020, to curb the spreading of the virus. The general population of Bangladesh has witnessed a dramatic shift in their personal life, professional life, and daily activities that severely impacted their mental health status [3,4].

The survey questionnaire was designed in separate sections to assess the mental health status among the general Bangladeshi population by four internationally validated scales: the UCLA Loneliness Scale-8 (UCLA-8), Patient Health Questionnaire-9 (PHQ-9), 7-item Generalized Anxiety Disorder (GAD-7) Scale, and Pittsburgh Sleep Quality Index

Table 1
Distribution of responses based on the UCLA Loneliness Scale-8 (UCLA-8).

| Indicate how often each of the statements below is descriptive of you. | Frequency (n) | Percentage (%) |
|---|---|---|
| 1. In the past 30 days, I lack companionship. | | |
| Never (1) | 177 | 26.34 |
| Rarely (2) | 118 | 17.56 |
| Sometimes (3) | 263 | 39.14 |
| Often (4) | 114 | 16.96 |
| 2. In the past 30 days, there is no one I can turn to. | | |
| Never (1) | 251 | 37.35 |
| Rarely (2) | 120 | 17.86 |
| Sometimes (3) | 252 | 37.50 |
| Often (4) | 49 | 7.29 |
| 3. In the past 30 days, I feel left out. | | |
| Never (1) | 192 | 28.57 |
| Rarely (2) | 139 | 20.68 |
| Sometimes (3) | 255 | 37.95 |
| Often (4) | 86 | 12.80 |
| 4. In the last 30 days, I feel isolated from others. | | |
| Never (1) | 211 | 31.40 |
| Rarely (2) | 105 | 15.63 |
| Sometimes (3) | 204 | 30.36 |
| Often (4) | 152 | 22.61 |
| 5. In the last 30 days, I am unhappy being so withdrawn. | | |
| Never (1) | 170 | 25.30 |
| Rarely (2) | 141 | 20.98 |
| Sometimes (3) | 247 | 36.76 |
| Often (4) | 114 | 16.96 |
| 6. In the last 30 days, people are around me but not with me. | | |
| Never (1) | 211 | 31.35 |
| Rarely (2) | 128 | 19.10 |
| Sometimes (3) | 187 | 27.76 |
| Often (4) | 146 | 21.79 |
| 7. In the last 30 days, I am an outgoing person. | | |
| Never (1) | 291 | 43.30 |
| Rarely (2) | 150 | 22.32 |
| Sometimes (3) | 160 | 23.81 |
| Often (4) | 71 | 10.57 |
| 8. In the last 30 days, I can find companionship when I want it. | | |
| Never (1) | 147 | 21.88 |
| Rarely (2) | 189 | 28.12 |
| Sometimes (3) | 176 | 26.19 |
| Often (4) | 160 | 23.81 |
Prepared a self-reported questionnaire using the google survey tool (Google Forms).

Confirmed about the clarity and understanding of the questionnaire.

Initally, we received 736 responses (aged between 15 and 65 years)

Finally, 672 responses included in the analysis (381 men, 291 women)

Pilot study conducted on small group of people prior to main survey.

The questionnaire was sent to 1,615 respondents via social media.

Excluded 64 responses due to incomplete or partial information

Fig. 1. Flowchart of collecting responses from the participants.

The dataset provides insightful information based on the survey data on the mental health status of the general Bangladeshi population during the pandemic. The data collection was conducted between April 15, 2020, and May 10, 2020, using the Google survey tool (Google Forms) at the early stage of the COVID-19 outbreak in Bangladesh. After screening, we got a total of 672 valid responses (381 men, 291 women) between 15 and 65 years for the analysis. We used two sets of questionnaires in this survey. The first one was a structured questionnaire designed by the researchers to collect sociodemographic information and the second set was a self-reported structured questionnaire of different psychometric assessment scales.

The dataset provides (i) assessment of loneliness (UCLA-8) in Table 1, (ii) assessment of depression (PHQ-9) in Table 2, (iii) assessment of anxiety (GAD-7) in Table 3, (iv) assessment of sleep disturbances (PSQI) in Table 4, (v) distribution of different psychometric parameters among the respondents in Table 5, (vi) the severity of different psychometric parameters among the respondents in Table 6. It also presents a flowchart of the collection and exclusion procedure of survey data from the respondents illustrated in Fig. 1.
Table 2
Distribution of responses based on the Patient Health Questionnaire-9 (PHQ-9).

| Indicate how often each of the statements below is descriptive of you.                          | Frequency (n) | Percentage (%) |
|------------------------------------------------------------------------------------------------|---------------|----------------|
| 1. In the last two weeks, little interest or pleasure in doing things.                        |               |                |
| Not at all (0)                                                                                | 162           | 24.11          |
| Several days (1)                                                                              | 308           | 45.83          |
| Half of days (2)                                                                              | 101           | 15.03          |
| Nearly every day (3)                                                                          | 101           | 15.03          |
| 2. In the last two weeks, feeling down, depressed or hopeless.                               |               |                |
| Not at all (0)                                                                                | 218           | 32.44          |
| Several days (1)                                                                              | 288           | 42.86          |
| Half of days (2)                                                                              | 58            | 8.63           |
| Nearly every day (3)                                                                          | 108           | 16.07          |
| 3. In the last two weeks, trouble falling or staying asleep, sleeping too much.              |               |                |
| Not at all (0)                                                                                | 215           | 31.99          |
| Several days (1)                                                                              | 233           | 34.67          |
| Half of days (2)                                                                              | 54            | 8.04           |
| Nearly every day (3)                                                                          | 170           | 25.30          |
| 4. In the last two weeks, feeling tired or having little energy.                             |               |                |
| Not at all (0)                                                                                | 227           | 33.78          |
| Several days (1)                                                                              | 264           | 39.29          |
| Half of days (2)                                                                              | 84            | 12.50          |
| Nearly every day (3)                                                                          | 97            | 14.43          |
| 5. In the last two weeks, poor appetite or overeating.                                       |               |                |
| Not at all (0)                                                                                | 325           | 48.36          |
| Several days (1)                                                                              | 207           | 30.75          |
| Half of days (2)                                                                              | 62            | 9.25           |
| Nearly every day (3)                                                                          | 78            | 11.64          |
| 6. In the last two weeks, feeling bad about yourself-or that you are a failure or have let yourself or your family down. |               |                |
| Not at all (0)                                                                                | 302           | 44.94          |
| Several days (1)                                                                              | 218           | 32.44          |
| Half of days (2)                                                                              | 50            | 7.44           |
| Nearly every day (3)                                                                          | 102           | 15.18          |
| 7. In the last two weeks, trouble concentrating on things, such as reading the newspaper or watching television. |               |                |
| Not at all (0)                                                                                | 261           | 38.84          |
| Several days (1)                                                                              | 230           | 34.23          |
| Half of days (2)                                                                              | 42            | 6.25           |
| Nearly every day (3)                                                                          | 139           | 20.68          |
| 8. In the last two weeks, moving or speaking so slowly or the opposite-moving around a lot more than usual. |               |                |
| Not at all (0)                                                                                | 356           | 52.98          |
| Several days (1)                                                                              | 204           | 30.36          |
| Half of days (2)                                                                              | 56            | 8.33           |
| Nearly every day (3)                                                                          | 56            | 8.33           |
| 9. In the last two weeks, thoughts that you would be better off dead, or of hurting yourself in some way. |               |                |
| Not at all (0)                                                                                | 490           | 72.92          |
| Several days (1)                                                                              | 95            | 14.14          |
| Half of days (2)                                                                              | 28            | 4.16           |
| Nearly every day (3)                                                                          | 59            | 8.78           |

2. Experimental Design, Materials and Methods

The research conducted a nationwide cross-sectional online survey to assess the impact of the COVID-19 pandemic on mental health among the Bangladeshi population. The online survey was conducted from April 15 to May 10, 2020, using Google survey tools (Google Forms) to construct the dataset at the early stage of the government-imposed lockdown and movement restriction. Here, we applied the purposive sampling technique to collect primary data from the
participants. Initially, we obtained a total of 736 responses. We discarded 64 responses from the analysis due to the partial or incomplete information. After reviewing a brief description of the survey, eligibility requirements, procedures, and electronic consent form, the participant participates in the survey. We used two sets of questionnaires for this self-answered survey. The first section was a structured questionnaire designed by the researchers to obtain the informed electronic consent and sociodemographic information. The second section of the survey was a self-reported structured questionnaire from different psychometric assessment scales.

The second section had four sub-sections for four different psychometric scales. At first, eight questions about how often the respondents feel the below statements in the past 30 days? to figure out their loneliness levels. Each question is scored from 1 to 4, depending on their answer: 1 (never), 2 (rarely), 3 (sometimes), and 4 (often). Then nine questions about how frequently the respondents bothered by any of the below problems since last 30 days? to assess depression. In this case, each question is scored from 0 to 3 depending on the answer: 0 (not at all), 1 (several days), 2 (half of the days), and 3 (nearly every day). The third part contained seven questions about how often the respondents were bothered by the following problems in the last 30 days? to determine the anxiety level among the respondents with the options - 0 (not at
Table 4
Distribution of responses based on the Pittsburgh Sleep Quality Index (PSQI).

| Indicate how often each of the statements below is descriptive of you. | Frequency (n) | Percentage (%) |
|-------------------------------------------------|--------------|----------------|
| 1. During the past month, when have you usually gone to bed at night? | | |
| Before 10.00 PM | 9 | 1.34 |
| 10.01 PM to 12.00 AM | 310 | 46.13 |
| 12.01 AM to 2.00 AM | 166 | 24.70 |
| After 2.00 AM | 187 | 27.83 |
| 2. During the past month, how long (in minutes) has it usually take you to fall asleep each night? | | |
| Less than 15 minutes | 211 | 31.40 |
| 16-30 minutes | 200 | 29.76 |
| 31-60 minutes | 165 | 24.55 |
| More than 60 minutes | 96 | 14.29 |
| 3. During the past month, when have you usually gotten up in the morning? | | |
| Before 5.00 AM | 16 | 2.38 |
| 5.00 AM to 7.00 AM | 169 | 25.15 |
| 7.01 AM to 9.00 AM | 169 | 25.15 |
| After 9.00 AM | 318 | 47.32 |
| 4. During the past month, how many hours of actual sleep did you get at night? | | |
| Less than 4 hours | 27 | 4.02 |
| 4 to 6 hours | 294 | 43.75 |
| 7 to 8 hours | 290 | 43.15 |
| More than 8 hours | 61 | 9.08 |
| 5. During the past month, how many hours do you spend in bed? | | |
| Less than 5 hours | 13 | 1.94 |
| 5 to 7 hours | 246 | 36.61 |
| 8 to 10 hours | 383 | 56.99 |
| More than 10 hours | 30 | 4.46 |
| 6. During the past month, how many times, you cannot get to sleep within 30 minutes? | | |
| Not during last month (0) | 246 | 36.61 |
| Less than once a week (1) | 118 | 17.56 |
| Once or twice a week (2) | 147 | 21.87 |
| Three or more in week (3) | 161 | 23.96 |
| 7. During the past month, how many times, you wake up in the middle of the night or early morning? | | |
| Not during last month (0) | 243 | 36.16 |
| Less than once a week (1) | 170 | 25.30 |
| Once or twice a week (2) | 133 | 19.79 |
| Three or more in week (3) | 126 | 18.75 |
| 8. During the past month, how many times, you have to get up to use the bathroom? | | |
| Not during last month (0) | 205 | 30.50 |
| Less than once a week (1) | 150 | 22.32 |
| Once or twice a week (2) | 171 | 25.45 |
| Three or more in week (3) | 146 | 21.73 |
| 9. During the past month, how many times, you cannot breathe comfortably? | | |
| Not during last month (0) | 442 | 65.77 |
| Less than once a week (1) | 111 | 16.52 |
| Once or twice a week (2) | 73 | 10.86 |
| Three or more in week (3) | 46 | 6.85 |
| 10. During the past month, how many times, you cough or snore ludly? | | |
| Not during last month (0) | 379 | 56.40 |
| Less than once a week (1) | 170 | 25.30 |
| Once or twice a week (2) | 83 | 12.35 |
| Three or more in week (3) | 40 | 5.95 |
| 11. During the past month, how many times, you feel too cold? | | |
| Not during last month (0) | 379 | 56.41 |
| Less than once a week (1) | 148 | 22.02 |

(continued on next page)
Indicate how often each of the statements below is descriptive of you.

| Frequency (n) | Percentage (%) |
|---------------|----------------|
| 89            | 13.24          |
| 56            | 8.33           |

12. During the past month, how many times, you feel too hot?
- Not during last month (0) 321 47.77
- Less than once a week (1) 184 27.38
- Once or twice a week (2) 101 15.03
- Three or more in week (3) 66 9.82

13. During the past month, how many times, you had bad dreams?
- Not during last month (0) 245 36.46
- Less than once a week (1) 243 36.16
- Once or twice a week (2) 116 17.26
- Three or more in week (3) 68 10.12

14. During the past month, how many times, you have pain during sleep?
- Not during last month (0) 440 65.48
- Less than once a week (1) 115 17.10
- Once or twice a week (2) 54 8.04
- Three or more in week (3) 63 9.38

15. During the past month, how many times, you have trouble in sleeping because of any other reasons?
- Not during last month (0) 277 41.22
- Less than once a week (1) 161 23.96
- Once or twice a week (2) 144 21.43
- Three or more in week (3) 90 13.39

16. During the past month, how often have you taken medicine to help you sleep?
- Not during last month (0) 573 85.27
- Less than once a week (1) 36 5.36
- Once or twice a week (2) 41 6.10
- Three or more in week (3) 22 3.27

17. During the past month, how many times you did not sleep due to any program or other important case?
- Not during last month (0) 422 62.80
- Less than once a week (1) 130 19.35
- Once or twice a week (2) 78 11.60
- Three or more in week (3) 42 6.25

18. During the past month, how much of a problem has it been for you to keep up enough enthusiasm to get things done?
- Not during last month (0) 398 59.23
- Less than once a week (1) 135 20.09
- Once or twice a week (2) 77 11.45
- Three or more in week (3) 62 9.23

19. During the past month, how would you rate your sleep quality overall?
- Very good (0) 160 23.81
- Fairly good (1) 349 51.93
- Fairly bad (2) 93 13.84
- Very bad (3) 70 10.42

all), 1 (several days), 2 (more than half of the days), and 3 (nearly every day). The last part also contained nineteen structured questions to assess the overall sleep quality. Then, the nineteen questions were grouped into seven different domains to measure sleep quality. We calculated the frequency and percentage of the collected data and presented them in the tables.
Table 5
Different psychometric parameters among the respondents.

| Psychometric parameters (total responses, N=672) | Frequency (n) | Percentage (%) |
|-------------------------------------------------|---------------|----------------|
| Loneliness                                      |               |                |
| Yes                                             | 478           | 71.13          |
| No                                              | 194           | 28.87          |
| Depression                                      |               |                |
| Yes                                             | 256           | 38.10          |
| No                                              | 416           | 61.90          |
| Generalized anxiety                             |               |                |
| Yes                                             | 429           | 63.84          |
| No                                              | 243           | 36.16          |
| Sleep disturbance                               |               |                |
| Yes                                             | 494           | 73.51          |
| No                                              | 178           | 26.49          |

Table 6
Severity of different psychometric parameters among the respondents.

| Psychometric parameters (total responses, N=672) | Frequency (n) | Percentage (%) |
|-------------------------------------------------|---------------|----------------|
| Loneliness                                      |               |                |
| Mild                                            | 212           | 44.35          |
| Moderate                                        | 196           | 40.00          |
| Severe                                          | 70            | 14.65          |
| Depression                                      |               |                |
| Mild                                            | 162           | 63.28          |
| Moderate                                        | 76            | 29.69          |
| Severe                                          | 18            | 7.03           |
| Generalized anxiety                             |               |                |
| Mild                                            | 203           | 47.32          |
| Moderate                                        | 113           | 26.34          |
| Severe                                          | 113           | 26.34          |
| Sleep disturbance                               |               |                |
| Mild                                            | 334           | 67.61          |
| Moderate                                        | 124           | 25.10          |
| Severe                                          | 36            | 7.29           |

Ethics Statement

Ethical approval has not been sought for this work. The present survey did not investigate and analyze human samples for pathophysiology, genetics, and other medical purposes. Moreover, we secured the informed electronic consent from each respondent before participating in this survey. Also, we obtained informed consent from the legal guardians of the underage participants. The respondent’s participation was voluntary and anonymous. Finally, we can confirm that this manuscript adheres to ethics in publishing standards.

CRediT Author Statement

Sohel Daria, Rajesh Das and Md. Rakib Hasan: Contributed to data collection, analyzed the data, wrote the initial draft of the data manuscript; Md. Rabiul Islam: Conceived and designed the experiments, interpreted the data, revise the data manuscript, gave intellectual inputs on this work, supervised the whole process.
Supplementary Materials

We supplied the survey questionnaire and the answers to the questions in English as a supplementary file.

Declaration of Competing Interest

None.

Acknowledgments

All the authors are thankful to the participants for their cooperation in this study.

Supplementary Materials

Supplementary material associated with this article can be found in the online version at doi: 10.1016/j.dib.2021.107347.

References

[1] R. Das, M.R. Hasan, S. Daria, M.R. Islam, Impact of COVID-19 pandemic on mental health among general Bangladeshi population: a cross-sectional study, BMJ Open 11 (4) (2021) e045727, doi: 10.1136/bmjopen-2020-045727.
[2] S. Mahmud, G.K. Paul, M. Afroze, S. Islam, S. Gupta, M.H. Razu, S. Biswas, S. Zaman, M.S. Uddin, M. Khan, N.A. Cacciola, T.B. Emran, M.A. Saleh, R. Capasso, J. Simal-Gandara, Efficacy of Phytochemicals Derived from Avicennia officinalis for the Management of COVID-19: a Combined In Silico and Biochemical Study, Molecules 26 (8) (2021) 2210, doi: 10.3390/molecules26082210.
[3] M.A.U. Repon, S.A. Pakhe, S. Quaiyum, R. Das, S. Daria, M.R. Islam, Effect of COVID-19 pandemic on mental health among Bangladeshi healthcare professionals: a cross-sectional study, Sci. Prog. (2) (2021 Jun 104) 1–17, doi: 10.1177/00368504211004371.
[4] M.R. Islam, M. Qusar, M.S. Islam, Mental Health of Children Amid COVID-19 Pandemic in Bangladesh: An Exploratory Observation. Asia-Pacific journal of public health, 10105395211004371, Adv. Online Publ. (2021), doi: 10.1177/10105395211004371.
[5] D.J. Buysse, C.F. Reynolds 3rd, T.H. Monk, S.R. Berman, D.J Kupfer, The Pittsburgh Sleep Quality Index: a new instrument for psychiatric practice and research, Psychiatry Res. 28 (2) (1989) 193–213, doi: 10.1016/0165-1781(89)90047-4.
[6] S. Ganguly, M. Samanta, P. Roy, S. Chatterjee, D.W. Kaplan, B. Basu, Patient health questionnaire-9 as an effective tool for screening of depression among Indian adolescents, J. Adolesc. Health 52 (5) (2013) 546–551, doi: 10.1016/j.jadohealth.2012.09.012.
[7] R.D. Hays, M.R. DiMatteo, A short-form measure of loneliness, J. Pers. Assess. 51 (1) (1987) 69–81, doi: 10.1207/s15327752ja5101_6.
[8] R.L. Spitzer, K. Kroenke, J.B. Williams, B. Löwe, A brief measure for assessing generalized anxiety disorder: the GAD-7, Arch. Intern. Med. 166 (10) (2006) 1092–1097, doi: 10.1001/archinte.166.10.1092.