Bangladesh Pharmaceutical Journal ***29****(2): 205-214, 2026 (July)*

COVID-19 and Mental Health Condition: Insight from the Existing Studies Conducted in Bangladesh

Md. Ariful Islam[1], Md. Shafiul Hossen[1,2], Syed Mumtahin Mannan Siam[1,2], Mycal Dutta[3] and Mohammed Ibrahim[1]

[1]Department of Pharmacy, State University of Bangladesh, South Purbachal, Kanchan, Dhaka-1461, Bangladesh
[2]Department of Pharmacy, Noakhali Science and Technology University, Noakhali-3814, Bangladesh
[3]Department of Pharmacy, University of Science and Technology Chittagong, Chattogram-4202, Bangladesh

(Received: December 21, 2025; Accepted: February 24, 2026; Published (web): July 20, 2026)

Abstract

Coronavirus disease 2019 (COVID-19) has become the most challenging global issue and spread across all countries, including Bangladesh. Though very few studies identified the mental health condition in different groups of people; however, there isn't yet a thorough description that covers the whole scenario regarding the COVID-19 and mental health condition in Bangladesh. Therefore, the study was designed to review the literature on COVID-19 and mental health to provide a comprehensive scenario of mental health in Bangladesh due to the pandemic. Information on the relevant topic was retrieved from PubMed, Google Scholar, Web of Sciences, Scopus and other databases between 2020 and 2025. The most prevalent mental health challenges reported among all population of the study, such as healthcare professionals (HCPs), academic community and people working in public places were loneliness, depression, anxiety, stress, and sleep disturbances. Among HCPs, sleep disturbance emerged as the most significant concern, particularly in nurses. However, physicians and pharmacists experienced greater levels of loneliness, depression and anxiety, respectively. Though female, urban HCPs who work in hospitals or clinics were more affected; however, males reported a higher rate in the case of an academic person like a teacher. The majority of students had moderate to poor mental health status. Risk factors like gender, age, family income and size, residential status, disruption of children's education and severe academic delays were responsible for the condition. Moreover, some bankers were psychologically stressed due to losing their current job, the fear of infection, etc. Moreover, some wage earners had moderate to severe anxiety and depression due to financial problems, increased price of daily commodities, inadequate food supply, and children's educational loss. COVID-19 also affected the normal livelihood of construction workers, rickshaw pullers, van pullers, waste workers and other day labourers. The findings of the study will help the government to include mental health care in national public health emergency response plans and prioritise interventions for high-risk populations.

Key words: COVID-19; mental health; outbreak; pandemic; Bangladesh.

Introduction

Coronavirus disease 2019 (COVID-19) is a highly transmissible infectious disease caused by the novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Since its initial emergence in late December 2019 in Wuhan, China, the disease has evolved into a major global public health challenge, spreading rapidly across countries and territories worldwide *(*Puspitasari *et al.,* 2020, Md. S. Hossen *et al.,* 2020). This outbreak was declared as a public health emergency of international concern on January 30, 2020 (Wu *et al.,* 2021). Subsequently, it was characterised as a pandemic by the World Health Organisation (WHO) on March 11, 2020 (Hosen *et al.,* 2021). In Bangladesh, the first COVID-19 case was identified on 8 March 2020. After some of that time, the authority of Bangladesh imposed a countrywide lockdown with the title of 'general

Corresponding author: Mohammed Ibrahim; Email: Ibrahim.phr@sub.edu.bd
DOI: https://doi.org/10.3329/bpj.v29i2.91857

holidays' to mitigate the outbreak at the community level, which was a significant challenge for a lower and middle-income country with limited resources in the healthcare settings (Anwar *et al.,* 2020).

People infected with the SARS-CoV-2 manifest both symptomatic and asymptomatic signs and symptoms, including fever, cough, fatigue, headache, myalgia, muscle pain, breath shortness, acute upper respiratory tract distress, diarrhoea, etc. (Chen *et al.*, 2020). Even though an individual is not infected with SARS-CoV-2, the higher rates of COVID-19-related infection and mortality have an impact on their quality of life, leading to a worsening psychological state (Dsouza *et al.,* 2020, Gualano *et al.,* 2020). Previous studies on the health impacts of outbreaks of infectious diseases, such as severe acute respiratory syndrome (SARS) (Lu *et al.,* 2006, Leung CM. *et al.*, 2012), influenza caused by H1N1 (Matsuishi *et al.*, 2012), middle east respiratory syndrome (MERS) (Jeong *et al.,* 2016) and ebola virus (Kisely *et al.,* 2020), suggested that mental health problems may occur among populations during major public health emergencies (González-Sanguino *et al.,* 2020, Kong *et al.,* 2020, Tang *et al.,* 2020, Zhang *et al.,* 2020).

Moreover, to alleviate the COVID-19 outbreak at the community level, some of the non-therapeutic public health interventions were implemented globally, including countrywide lockdown, home or institution-based isolation or quarantine, shutting down all kinds of public activities, along with closing educational institutions, especially restrictions in social and community movements, etc. (Dsouza *et al.,* 2020, Gualano *et al.,* 2020). Under these circumstances, many people became unemployed with no hope of finding new employment (Bhuiyan *et al.,* 2021). Consequently, the jobless situation led people to suffer from higher rates of mental instabilities (Sultana *et al.,* 2021). Due to mental problems related to unemployment and economic crisis, self-harm and suicidal incidents are also observed in Bangladesh. For instance, a study reported that nearly all COVID-19–related suicide cases during the first three weeks of April 2020 were associated with economic and financial difficulties (Bhuiyan *et al.,* 2021). Moreover, uncertainty regarding the resumption of normal life, fear of infection, social and economic disruption, rising social negligence, and limited access to adequate medical care due to excessive patient load in hospitals etc., collectively exacerbated psychological distress, manifesting as post-traumatic stress disorder (PTSD), insomnia, phobias, fear, anxiety, and depression (M. M. Hossain *et al.,* 2020, Sundarasen *et al.,* 2020, Hosen *et al.,* 2021).

In Bangladesh, epidemiological studies concerning mental health problems to identify risky individuals were recommended (Mamun *et al.,* 2020), and very few studies were conducted across the country to identify the mental health conditions in different groups of people. Though most recent studies focused on six different populations (Hosen *et al.*, 2021); however, comparative studies of multiple populations are still lacking. We conducted the present review to provide a comprehensive perspective of the prevalence of mental health problems such as depression, anxiety, and stress during the COVID-19 pandemic and identify high-risk groups of mental health problems related to the COVID-19 pandemic. The present study will help to explore the real scenario of mental health in different groups of the population due to the COVID-19 pandemic. The findings of the study will help the government to include mental health care in national public health emergency response plans and prioritise interventions for high-risk populations.

Materials and Methods

Data searching and data extraction: Information regarding COVID-19 and mental health conditions in the Bangladeshi population was searched in different online databases such as Scopus, PubMed, Web of Science, Google Scholar, etc. We retrieved articles in English that were published before November 2025. During the literature search, keywords and terms such as COVID-19, Coronavirus Disease 2019, COVID-19 outbreak, mental health conditions, anxiety, and depression were used in combination

with the Bangladeshi population or people of Bangladesh. In order to identify any pertinent missing articles, we looked through the references of the chosen articles and reviews that were written about this topic. We reviewed the papers included in the current study. After a collective discussion among the authors, any anomalies found during data gathering were removed. Basic details of the included papers were noted, including the name of the author, study title, abstract, and findings. During the data extraction procedure, the results of the chosen publications, the comparison study's eligibility, and the current study's eligibility requirements were all taken into account. We also examined the study design, study type, eligibility criteria, publication bias, etc., to assess the quality and reliability of the included studies.

Eligibility criteria: Some inclusion and exclusion criteria were followed during the data collection. We excluded the articles that did not match our predetermined criteria. We included studies that met the following eligibility criteria: (a) Articles related to COVID-19 and mental health conditions in the Bangladeshi population, (b) Studies on the role of COVID-19 in the mental health of the Bangladeshi population, and (c) Articles that were published in English. However, the present study excluded some studies based on the predetermined exclusion criteria, such as: (a) Studies published in local language (b) Editorials, and comments and (c) Papers with inadequate information about COVID-19 and mental health of the Bangladeshi people. After considering the eligibility criteria, we selected 23 articles for this study to explore the COVID-19 and mental health conditions in Bangladesh (Table 1).

Result and Discussion

COVID-19 and the mental health condition of different professionals in Bangladesh

Health care professionals: Healthcare professionals (HCPs) in Bangladesh, including physicians, nurses, pharmacists, and medical technologists, experienced considerable psychological distress during the COVID-19 pandemic. This psychological distress was attributable to escalating workload pressures, heightened risk of infection and prolonged emotional exhaustion. The most prevalent mental health challenges reported among these professionals were loneliness, depression, anxiety, stress, and sleep disturbances (Table 1). Among these, sleep disturbance emerged as the most significant concern across all professional groups, with nurses exhibiting the highest prevalence. Physicians were found to experience greater levels of loneliness compared to other healthcare categories, while pharmacists demonstrated the highest levels of depression and anxiety during this period (Repon *et al.,* 2021). Gender differences were also prominent, with female HCPs showing a higher susceptibility to loneliness, depression, anxiety, stress, and sleep disturbances than their male counterparts. Moreover, these mental health symptoms were more frequent among HCPs working in hospitals or clinics than those employed in other settings. Economic background appeared to be a contributing factor, as individuals from medium-income groups reported higher levels of psychological distress compared to those from higher economic backgrounds. Similarly, HCPs with higher educational attainment demonstrated a greater prevalence of loneliness, depression, anxiety, stress, and sleep disturbances than those with lower education levels. Urban residents exhibited higher rates of these symptoms compared to rural professionals, and non-smokers reported greater psychological distress than smokers (Chowdhury *et al.,* 2021). Moreover, during the pandemic, rehabilitation professionals experienced mental health problems such as depression and anxiety due to the lack of opportunity to practice and loss of income (Ali *et al.,* 2021).

Academic community: During the COVID-19 pandemic, members of the academic community, including professors and students, faced stress, anxiety, sadness, and other psychological issues (Table 1). According to a study involving 382 participants, the overall prevalence of stress, anxiety, and depression among teachers was 6.6%, 43.7%, and 35.4%, respectively (Md. T. Hossain *et al.,*

2022). The prevalence was higher for male teachers in all aspects of mental health than for female teachers. Additionally, evidence from Bangladesh during the COVID-19 pandemic indicates age-related variations in psychological outcomes among teachers: individuals aged 31–40 years reported comparatively higher levels of stress and depressive symptoms, whereas those aged over 40 years exhibited a greater prevalence of anxiety-related symptoms. Depression among the teachers from the urban area was lower than the teachers from rural areas. Teachers reporting low or average health status were significantly more likely to experience depressive symptoms compared with those who perceived their health as good or excellent. College teachers showed less depression compared to school teachers. Teachers who were afraid of COVID-19 showed higher levels of despair than those who were not. Compared to instructors without any physical problem, those with physical illnesses had higher rates of stress, anxiety, and depression (Santamaría *et al.,* 2021, Lizana *et al.,* 2021). Conversely, teachers who utilise social media and electronic media more frequently had lower levels of depression (Md. T. Hossain *et al.,* 2022).

Additionally, during COVID-19 outbreaks, students had varying degrees of mental health issues (Table 1). (Faisal *et al.,* 2022, Dhar *et al.,* 2020, Sayeed *et al.,* 2020, Md. A. Islam *et al.,* 2020, Ashiq *et al.,* 2023, Md. S. Islam *et al.,* 2020, Sultana *et al.,* 2021, Khan *et al.,* 2020, Muzaffar *et al.,* 2022, Safa *et al.,* 2021). The majority of students had mental discomfort (Khan *et al.,* 2020), posttraumatic stress symptoms (PTSS) (Sultana *et al.,* 2021), and moderate to poor mental health status (Faisal *et al.,* 2022). Students in their early twenties, with no physical exercise and lower academic activities, were more depressed and anxious. Female students typically had comparatively higher levels of anxiety and depressive symptoms. Notably, anxiety and depression were more common in medical students who were highly or moderately susceptible to SARS-CoV-2 infection. In a similar pattern, students who reported having trouble focusing during their studies following the COVID-19 outbreak were more likely to experience anxiety. Furthermore, students who exhibited greater emotional agitation during the COVID-19 period compared to the pre-pandemic phase showed a higher likelihood of experiencing anxiety and depressive disorders (Safa *et al.,* 2021).

Risk factors include gender, age group, family income, family size, residential status, education level, major academic delays, and educational discipline may lead to anxiety, stress, PTSS, and depressive symptoms (Sayeed *et al.,* 2020, Faisal *et al.,* 2022) (Table 1). Disruptions in sleep patterns and persistent concerns regarding family members' risk of contracting COVID-19 were identified as contributory risk factors for the development of post-traumatic stress symptoms (PTSS), anxiety, and depressive symptoms (Ashiq *et al.,* 2023, Safa *et al.,* 2021). Symptoms of anxiety, stress, post-traumatic stress symptoms (PTSS), and depression were more prevalent among individuals presenting with COVID-19–like manifestations (e.g., fever, cough, dyspnea, and fatigue) compared with those experiencing non-specific symptoms (e.g., sore throat and diarrhoea) (Dhar *et al.,* 2020, Muzaffar *et al.,* 2022). However, heightened fear of COVID-19 infection and COVID-19–related mortality, concerns regarding inadequate food supply, increased exposure to COVID-19–related news, and engagement in educational activities were associated with a contrasting effect (Sultana *et al.,* 2021, Khan *et al.,* 2020).

In Bangladesh, the mental-health experiences of students during the COVID-19 pandemic closely mirrored global trends. Similar to observations worldwide, prolonged closure of educational institutions, abrupt transitions to online learning, academic uncertainty, and reduced social interaction emerged as major stressors (Racine *et al.,* 2021, Wu *et al.,* 2021). Moreover, consistent with evidence from other low- and middle-income countries, Bangladeshi students faced a disproportionately high mental-health burden, largely attributable to digital inequity, limited access to technological resources, and inadequate institutional and psychosocial support systems (Saragih *et al.,* 2021).

Table 1. Characteristics of included studies and the prevalence of mental health disorders in the Bangladeshi population.

Study ID	Study design	Time	Sample size	Age (Year)	Anxiety (%)	Depression (%)	Stress (%)	Sleep disturbance (%)	Others (%)	Assessment tools	Reference
Health Care Professionals											
Repon MA, et al.	Cross-sectional	July 15 to September 20, 2020	355	40	78	44		87	Lonliness (89%)	DASS-21	(Repon *et al.*, 2021)
Chowdhury SR, et al.	Cross-sectional	22 November to 6 December 2020.	547	26	51.8	50.5	41.7	61.9		DASS-21	(Chowdhury *et al.*, 2021)
Academic community											
Hossain MdT, et al.	Cross-sectional	01 August to 29 August 2021	382	36	43.7	35.4	6.6			DASS-21	(Md. T. Hossain *et al.*, 2022)
Faisal RA, et al.	Cross-sectional	April 10, 2020 to April 24, 2020	874	24	40.2	72.1		53		GAD-7, CESD-R-10, MHI-5	(Faisal *et al.*, 2022)
Sultana MstS, et al.	Cross-sectional	29th May 2020 to 22nd July 2020	3997	26		52.87			PTSS (40.91%)	PHQ-9, IES	(Sultana *et al.*, 2021)
Khan AH, et al.	Cross-sectional	9th to 23rd April 2020	505	22	33.3	46.92	28.5		distress (69.31%)	PHQ-9, IES	(Khan *et al.*, 2020)
Muzaffar R, et al.	Cross-sectional	May 2020 to August 2020	605	24	61.8					GAD-7	(Muzaffar *et al.*, 2022)
Safa F, et al.	Cross-sectional	April 21 to May 10, 2020	425	23	65.9	49.9				HADS 14	(Safa *et al.*, 2021)
Dhar BK, et al.	Cross-sectional	April 21 to May 10, 2020	15543		96.82					GAD-7	(Dhar *et al.*, 2020)
Sayeed A, et al.	Cross-sectional	April 29th to 7th May 2020	589	24	26.66	61.97	57.05			DASS 21	(Sayeed *et al.*, 2020)
Islam MdA, et al.	Cross-sectional	May 6 to May 12, 2020	476	21	87.7	82.4				PHQ-9, GAD-7	(Md. A. Islam *et al.*, 2020)
Ashiq MAR, et al.	Cross-sectional	June 2020 to September 2020	406	23	59.4	64	51.2			DASS 21	(Ashiq *et al.*, 2023)
Islam MdS, et al.	Cross-sectional	Apr-20	3,122	24	71.5	76.1	70.1			DASS-21	(Md. S. Islam *et al.*, 2020)
People working in a public place											
Rahman MdM, et al.	Cross-sectional	Apr-20	151	30			40			DASS-21	(Rahman *et al.*, 2021)
Yasmin S, et al.	Cross-sectional	June 17 2020, to June 25 2020	248	33	10.6	12.1	11.1			DASS-21	(Yasmin *et al.*, 2022)
Sultana MstS, et al.	Cross-sectional	May 2020	707	50	58.6	55.9				PHQ-9 GAD-7	(Sultana *et al.*, 2021)
Haque MdR, et al.	Cross-sectional	Jun-20	176	25	80.6	67.6			Social dysfunction (92.6%), loss of confidence (19.9%)	GHQ-12	(Haque *et al.*, 2022)
Zubayer T, et al.	Cross-sectional	January to December 2020	*227*	42	14.5				Bad sleep quality (25.6 %)	GAD-7	(Zubayer *et al.*, 2025)
Others											
Nabi SG, et al.	Cross-sectional	01 to October 31, 2020	503	45	30.7	42.5	46.7		Insomnia (28.5%)	PHQ-9, GAD-7, ISI-7, and PSS-10	(Nabi *et al.*, 2022)
Yeasmin S, et al.	Cross-sectional	25th April to 9th May 2020	384	10					Severe mental disturbances (7.2%)	MDD-10, GAD-6	(Yeasmin *et al.*, 2020)
Mallik CI,et al.	Cross-sectional	June 2020 to August 2020	294	7					psychiatric disorder (39.7%)	SDQ-25	(Mallik *et al.*, 2021)
Hossen MdT, et al.	Cross-sectional	February to March 2022	1036	50	29.8	22.7				CAS and PHQ-9	(Md. T. Hossen *et al.*, 2024)
Ali M, et al.	Cross-sectional	July 2020 to October 2020	420	31	58.6	51	33.6			DASS-21	(Ali *et al.*, 2021)

People working in public places such as bankers and day labourers: The COVID-19 pandemic exerted a substantial impact on the mental health of individuals engaged in public-facing occupations, including bankers and day labourers. Among bankers, exposure to COVID-19–related information—such as reports of mortality or confirmed infections—elicited heightened nervousness and fear, which adversely affected their ability to concentrate on routine professional activities. In addition, concerns regarding job insecurity and the potential loss of employment during the pandemic contributed to elevated levels of psychological stress (Rahman *et al.,* 2021). According to a study, bankers who had infected coworkers, smoked more, woke up from a nightmare, were afraid of contracting the disease, and used public transit had greater levels of stress, despair, and anxiety. On the other hand, eating a healthy diet and exercising decreased the extent of anxiety, tension, and depression (Yasmin *et al.,* 2022). Moreover, a substantial proportion of wage earners experienced moderate to severe anxiety and depressive symptoms during the pandemic. Key contributing factors included loss of income, financial hardship, rising prices of essential commodities, food insecurity, and disruptions to children's education (Sultana *et al.,* 2021). A study conducted in the USA explored that children who experienced more than 4 weeks with no instruction had worse performance in their academic courses (Blackwell *et al.,* 2024). COVID-19 also severely disrupted the livelihoods of day laborers—such as construction workers, rickshaw and van pullers, trash collectors, and other informal workers—resulting in widespread psychological distress and poor sleep quality. High prevalence of anxiety (80.6%), depression (67.6%), social dysfunction (92.6%), and loss of confidence (19.9%) were reported among this population. In addition, COVID-19–related physical symptoms, including fever, cough, musculoskeletal pain, and sneezing, further exacerbated mental-health problems (Haque *et al.,* 2022).

Others: The groups included children and adolescents affected by COVID-19–related school closures, social isolation, and family stressors, as well as adult populations comprising individuals with type 2 diabetes mellitus and hospitalised COVID-19 patients. Participants represented both community- and hospital-based settings and were characterised by varying sociodemographic factors, gender, comorbidities, and COVID-19–related exposures. Recent evidence indicates that the COVID-19 pandemic was associated with a global increase in long-term mental health problems among children, including heightened anxiety, depression, emotional distress, and behavioral difficulties, largely driven by prolonged school closures, social isolation, and family-related stressors (Fegert *et al.,* 2020). A comparable pattern was observed among children in Bangladesh, who exhibited mental health disturbances ranging from subclinical symptoms to moderate or severe disorders, such as anxiety, depression, stress, and sleep disturbances. The severity of these outcomes in Bangladeshi children was further influenced by factors including parental education, exposure to COVID-19 infection among family members, and the necessity for parents to continue workplace attendance, highlighting both the universal and context-specific determinants of child mental health during the pandemic (Yeasmin *et al.,* 2020, Mallik *et al.,* 2021). Similarly, individuals with type 2 diabetes mellitus experienced an increased prevalence of anxiety and depression, exacerbated by factors such as female gender, older age, lower education, unemployment, urban residency, physical inactivity, inadequate diet, transportation challenges, medication shortages, infected relatives, and financial difficulties (Md. T. Hossen *et al.,* 2024). According to a prior study, patients with multiple comorbidities experienced higher levels of anxiety, despair, and sleeplessness compared to those without them (Nabi *et al.,* 2022). Insomnia, stress, anxiety, and depression ranged from moderate to severe in hospitalised COVID-19 patients. The number of hospitalied infected patients with these mental health issues increased correspondingly with their age. Nonetheless, a variety of characteristics were linked to the variation in the frequency of these issues. For example, those with higher levels of education had far lower rates of anxiety and despair. However, a

higher prevalence of mental illnesses was discovered in infected patients who also experienced several physical issues, including exhaustion, fever, diarrhoea, and chest pain. Additionally, a significant level of anxiety and problems was linked to the existence of COVID-19-positive family members and afflicted neighbours (Nabi *et al.*, 2022).

Conclusion

The present review demonstrates that the COVID-19 pandemic exerted a profound and multidimensional impact on the mental health of the Bangladeshi population, disproportionately affecting specific occupational, academic, and vulnerable groups. Across healthcare professionals, educators, students, public-facing workers, children, and individuals with chronic illnesses, elevated levels of anxiety, depression, stress, sleep disturbances, and post-traumatic stress symptoms were consistently observed. These outcomes were driven by a complex interplay of occupational strain, fear of infection, socioeconomic instability, academic disruption, social isolation, and pre-existing health vulnerabilities.

Notably, frontline healthcare workers experienced substantial psychological burden due to excessive workloads and sustained emotional exhaustion, while educators and students faced heightened distress associated with academic uncertainty, digital inequities, and prolonged institutional closures. Public-facing and informal workers exhibited particularly severe mental-health consequences, largely attributable to income loss, job insecurity, and limited social protection. Furthermore, children, patients with comorbidities, and individuals with chronic diseases emerged as high-risk groups, highlighting the pandemic's enduring psychosocial consequences beyond the immediate effects of infection.

Collectively, these findings highlight that mental-health consequences of the COVID-19 pandemic in Bangladesh mirrored global trends but were intensified by structural constraints characteristic of low- and middle-income settings, including limited healthcare capacity, socioeconomic disparities, and inadequate psychosocial support systems. The evidence underscores an urgent need for multisector mental-health interventions, integrating psychological support into public-health emergency preparedness, workplace policies, educational systems, and community-based services. Establishing national mental-health surveillance systems and evidence-informed policy mechanisms will be critical to monitor population-level psychological outcomes and to enhance resilience against future public-health emergencies.

Conflict of interest

The authors declare no conflict of interest.

Funding

No funding sources

Reference

Ali, M., Uddin, Z. and Hossain, A. 2021. Economic stressors and mental health symptoms among Bangladeshi rehabilitation professionals: A cross-sectional study amid COVID-19 pandemic. *Heliyon* **7**, e06715.

Anwar, S., Nasrullah, M. and Hosen, M. J. 2020. COVID-19 and Bangladesh: Challenges and how to address them. *Front. Pub. Health* **8**, 154.

Ashiq, M.A.R., Gupta, P.S., Jubayer Biswas, M.A.A., Ahmed, N., Sultana, Mst. S., Ghosh, B. and Hasan, M.T. 2023. Depression, anxiety, stress, and fear of COVID-19 among Bangladeshi medical students during the first wave of the pandemic: A mixed-methods study. *Front. Psych.* **14**, 1142724.

Blackwell, C.K., Mansolf, M., Deoni, S.C., Ganiban, J.M., Leve, L.D., Margolis, A.E., McGrath, M., Nozadi, S.S., O'Shea, T.M., Sherlock, P. and Zhao, Q. 2024. The impact of COVID-19 school disruptions on children's learning. *Front. edu.* **9**, 1295910.

Bhuiyan, A.K.M.I., Sakib, N., Pakpour, A.H., Griffiths, M.D. and Mamun, M.A. 2021. COVID-19-Related suicides in Bangladesh due to lockdown and economic factors: Case study evidence from media reports. *Int. J. Men. Health Addic.* **19**, 2110-2115.

Chen, N., Zhou, M., Dong, X., Qu, J., Gong, F., Han, Y., Qiu, Y., Wang, J., Liu, Y., Wei, Y., Xia, J., Yu, T., Zhang, X. and Zhang, L. 2020. Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: A descriptive study. *The Lancet* **395**, 507-513.

Chowdhury, S.R., Sunna, T.C., Das, D.C., Kabir, H., Hossain, A., Mahmud, S. and Ahmed, S. 2021. Mental health symptoms among the nurses of Bangladesh during the COVID-19 pandemic. *Middle East Curr.Psych.* **28**, 23.

Dhar, B.K., Ayittey, F.K., and Sarkar, S.M. 2020. Impact of COVID-19 on psychology among the university students. *Glob. Chall.* **4**, 2000038.

Dsouza, D.D., Quadros, S., Hyderabadwala, Z.J. and Mamun, M.A. 2020. Aggregated COVID-19 suicide incidences in India: Fear of COVID-19 infection is the prominent causative factor. *Psych. Res.* **290**, 113145.

Faisal, R.A., Jobe, M.C., Ahmed, O. and Sharker, T. 2022. Mental Health Status, anxiety, and depression levels of Bangladeshi university students during the COVID-19 Pandemic. *Int. J. Men. Health Addic.* **20**, 1500-1515.

Fegert, J.M., Vitiello, B., Plener, P.L. and Clemens, V. 2020. Challenges and burden of the Coronavirus 2019 (COVID-19) pandemic for child and adolescent mental health: A narrative review to highlight clinical and research needs in the acute phase and the long return to normality. *Child Adole. Psych. Men. Health* **14**, 20.

González-Sanguino, C., Ausín, B., Castellanos, M.Á., Saiz, J., López-Gómez, A., Ugidos, C. and Muñoz, M. 2020. Mental health consequences during the initial stage of the 2020 Coronavirus pandemic (COVID-19) in Spain. *Brain, Behavior, Immunity* **87**, 172-176.

Gualano, M.R., Lo Moro, G., Voglino, G., Bert, F. and Siliquini, R. 2020. Effects of Covid-19 lockdown on mental health and sleep disturbances in Italy. *Int. J. Environ. Res. Pub. Health* **17**, 4779.

Haque, Md. R., Khan, Md. M.A., Rahman, Md. M., Rahman, M.S. and Begum, S.A. 2022. Mental health status of informal waste workers during the COVID-19 pandemic in Bangladesh. *PLOS ONE*, **17**, e0262141.

Hosen, I., al-Mamun, F. and Mamun, M.A. 2021. Prevalence and risk factors of the symptoms of depression, anxiety, and stress during the COVID-19 pandemic in Bangladesh: A systematic review and meta-analysis. *Glob. Men. Health* **8**, e47.

Hossain, M.M., Rahman, M., Trisha, N.F., Tasnim, S., Nuzhath, T., Hasan, N.T., Clark, H., Das, A., McKyer, E.L.J., Ahmed, H.U. and Ma, P. 2020. Prevalence of anxiety and depression in South Asia during COVID-19: A systematic review and meta-analysis. *Heliyon*, **7**, e06677.

Hossain, Md. T., Islam, Md. A., Jahan, N., Nahar, Mst. T., Sarker, Md. J.A., Rahman, Md. M., Deeba, F., Hoque, K.E., Aktar, R., Islam, Md. M., Hossain, M.Z., Siddiqua, L., Mahbub, Z. and Islam, Md. N. 2022. Mental Health Status of Teachers During the Second Wave of the COVID-19 Pandemic: A Web-Based Study in Bangladesh. *Front. Psych.* **13**, 938230.

Hossen, Md. S., Barek, M.A., Jahan, N. and Safiqul Islam, M. 2020. A Review on Current Repurposing Drugs for the Treatment of COVID-19: Reality and Challenges. *SN Compreh. Clinic. Med.* **2**, 1777-1789.

Hossen, Md. T., Shuvo, S.D., Mazumdar, S., Hossain, Md. S., Riazuddin, Md., Roy, D., Mondal, B.K., Parvin, R., Paul, D. K. and Adnan, Md. M. 2024. Determinants of anxiety and depression among type 2 diabetes mellitus patients: A hospital-based study in Bangladesh amid the COVID-19 pandemic. *Cambridge Prisms: Glob. Men. Health* **11**, e13.

Islam, Md. A., Barna, S.D., Raihan, H., Khan, Md. N.A. and Hossain, Md. T. 2020. Depression and anxiety among university students during the COVID-19 pandemic in Bangladesh: A web-based cross-sectional survey. *PLOS ONE*, **15**, e0238162.

Islam, Md. S., Sujan, Md. S.H., Tasnim, R., Sikder, Md. T., Potenza, M.N. and Van Os, J. 2020. Psychological responses during the COVID-19 outbreak among university students in Bangladesh. *PLOS ONE*, **15**, e0245083.

Jeong, H., Yim, H.W., Song, Y.J., Ki, M., Min, J.A., Cho, J. and Chae, J.H. 2016. Mental health status of people isolated due to Middle East Respiratory Syndrome. *Epidemiol. Health* **38**, e2016048.

Khan, A.H., Sultana, Mst. S., Hossain, S., Hasan, M.T., Ahmed, H.U., and Sikder, Md.T. 2020. The impact of COVID-19 pandemic on mental health & wellbeing among home-quarantined Bangladeshi students: A cross-sectional pilot study. *J. Affect. Disord.* **277**, 121-128.

Kisely, S., Warren, N., McMahon, L., Dalais, C., Henry, I. and Siskind, D. 2020. Occurrence, prevention, and management of the psychological effects of emerging virus outbreaks on healthcare workers: Rapid review and meta-analysis. *BMJ*, m1642.

Kong, X., Zheng, K., Tang, M., Kong, F., Zhou, J., Diao, L., Wu, S., Jiao, P., Su, T. and Dong, Y. 2020. Prevalence and factors associated with depression and anxiety of hospitalized patients with COVID-19. *MedRxiv*, 2020-03.

Lizana, P. A., Vega-Fernadez, G., Gomez-Bruton, A., Leyton, B. and Lera, L. 2021. Impact of the COVID-19 Pandemic on Teacher Quality of Life: A Longitudinal study from before and during the Health Crisis. *Int. J. Environ. Res. Pub. Health* **18**, 3764.

Lu, Y.C., Shu, B.C., Chang, Y.Y. and Lung, F.W. 2006. The Mental Health of Hospital Workers Dealing with Severe Acute Respiratory Syndrome. *Psychoth. Psychosom.* **75**, 370-375.

Mallik, C.I. and Radwan, R.B. 2021. Impact of lockdown due to COVID-19 pandemic in changes of prevalence of predictive psychiatric disorders among children and adolescents in Bangladesh. *Asian J. Psych.* **56**, 102554.

Mamun, M.A. and Griffiths, M.D. 2020. First COVID-19 suicide case in Bangladesh due to fear of COVID-19 and xenophobia: Possible suicide prevention strategies. *Asian J. Psych.* **51**, 102073.

Matsuishi, K., Kawazoe, A., Imai, H., Ito, A., Mouri, K., Kitamura, N., Miyake, K., Mino, K., Isobe, M., Takamiya, S., Hitokoto, H. and Mita, T. 2012. Psychological impact of the pandemic (H1N1) 2009 on general hospital workers in Kobe. *Psych. Clin. Neurosci.* **66**, 353-360.

Muzaffar, R., Koly, K.N., Choudhury, S., Biswas, M.A.A.J., Kader, S.B., Abdullah, R., Kawser, U., Hasan, M.T., Williams, D., Chowdhury, A.B. and Ahmed, H.U. 2022. Generalized anxiety disorder among Bangladeshi university students during COVID-19 pandemic: Gender specific findings from a cross-sectional study. *Disc. Ment. Health* **2**, 3.

Nabi, S.G., Rashid, Md. U., Sagar, S.K., Ghosh, P., Shahin, Md., Afroz, F., Noor, I.N., Hossain, I., Mondal, D. and Ahmed, H.U. 2022. Psychological impact of COVID-19 pandemic: A cross-sectional study of hospitalized COVID-19 patients in an urban setting, Bangladesh. *Heliyon* **8**, e09110.

Puspitasari, I.M., Yusuf, L., Sinuraya, R.K., Abdulah, R. and Koyama, H. 2020. Knowledge, Attitude, and Practice During the COVID-19 Pandemic: A Review. *J. Multidiscip. Health.* **13**, 727-733.

Racine, N., McArthur, B.A., Cooke, J.E., Eirich, R., Zhu, J. and Madigan, S. 2021. Global Prevalence of Depressive and Anxiety Symptoms in Children and Adolescents During COVID-19: A Meta-analysis. *JAMA Pediatrics*, **175**, 1142.

Rahman, Md. M., Uddin, Md. B., Chowdhury, Md. S. and Rahaman, Md. S. 2021. Psychological Status of Private Commercial Bank Employees in Bangladesh during COVID-19. *J. Busi. Strat. Finance Manag.* **3**, 66-73.

Repon, M.A.U., Pakhe, S.A., Quaiyum, S., Das, R., Daria, S. and Islam, M.R. 2021. Effect of COVID-19 pandemic on mental health among Bangladeshi healthcare professionals: A cross-sectional study. *Sci. Prog.* **104**, 003685042 11026409.

Safa, F., Anjum, A., Hossain, S., Trisa, T.I., Alam, S.F., Abdur Rafi, Md., Podder, V., Koly, K.N., Azad, D.T., Ahmad, W.U., Nodi, R.N., Ashraf, F., Quamrul Akhter, S.M., Ahmed, H.U. and Hasan, M.T. 2021. Immediate psychological responses during the initial period of the COVID-19 pandemic among Bangladeshi medical students. *Child. Youth Ser. Rev.* **122**, 105912.

Santamaría, M.D., Mondragon, N.I., Santxo, N.B. and Ozamiz-Etxebarria, N. 2021. Teacher stress, anxiety and depression at the beginning of the academic year during the COVID-19 pandemic. *Glob. Men. Health* **8**, e14.

Saragih, I.D., Tonapa, S.I., Saragih, I.S., Advani, S., Batubara, S.O., Suarilah, I. and Lin, C.J. 2021. Global prevalence of mental health problems among healthcare workers during the Covid-19 pandemic: A systematic review and meta-analysis. *Int. J. Nur. Stud.* **121**, 104002.

Sayeed, A., Kundu, S., Banna, Md. H.A., Hasan, M.T., Begum, M.R., and Khan, M.S.I. 2020. Mental health outcomes during the COVID-19 and perceptions towards the pandemic: Findings from a cross sectional study among Bangladeshi students. *Child. Youth Ser. Rev.* **119**, 105658.

Sultana, Mst. S., Khan, A.H., Hossain, S., Ansar, A., Sikder, M.T., and Hasan, M.T. 2021. Prevalence and predictors of post-traumatic stress symptoms and depressive symptoms among Bangladeshi students during COVID-19 mandatory home confinement: A nationwide cross-sectional survey. *Child. Youth Ser. Rev.* **122**, 105880.

Sultana, Mst. S., Khan, A.H., Hossain, S., Islam, T., Hasan, M.T., Ahmed, H.U., Li, Z. and Khan, J.A.M. 2021. The Association Between Financial Hardship and Mental Health Difficulties Among Adult Wage Earners During the COVID-19 Pandemic in Bangladesh: Findings From a Cross-Sectional Analysis. *Front. Psych.* **12**, 635884.

Sundarasen, S., Chinna, K., Kamaludin, K., Nurunnabi, M., Baloch, G.M., Khoshaim, H.B., Hossain, S.F.A. and Sukayt, A. 2020. Psychological Impact of COVID-19 and Lockdown among University Students in Malaysia: Implications and Policy Recommendations. *Int. J. Environ. Res. Pub. Health* **17**, 6206.

Tang, W., Hu, T., Hu, B., Jin, C., Wang, G., Xie, C., Chen, S. and Xu, J. 2020. Prevalence and correlates of PTSD and depressive symptoms one month after the outbreak of the COVID-19 epidemic in a sample of home-quarantined Chinese university students. *J. Affect. Disord.* **274**, 1-7.

Wing, YK. and Leung, CM. 2012. Mental health impact of severe acute respiratory syndrome: A prospective study. *Hong Kong Med J.* **18**, 24-7.

Wu, T., Jia, X., Shi, H., Niu, J., Yin, X., Xie, J. and Wang, X. 2021. Prevalence of mental health problems during the COVID-19 pandemic: A systematic review and meta-analysis. *J. Affect. Disord.* **281**, 91-98.

Yasmin, S., Alam, M. K., Ali, F. B., Banik, R. and Salma, N. 2022. Psychological Impact of COVID-19 Among People from the Banking Sector in Bangladesh: A Cross-Sectional Study. *Int. J. Mental Health Addic.* **20**, 1485-1499.

Yeasmin, S., Banik, R., Hossain, S., Hossain, Md. N., Mahumud, R., Salma, N. and Hossain, Md. M. 2020. Impact of COVID-19 pandemic on the mental health of children in Bangladesh: A cross-sectional study. *Chil. Youth Ser. Rev.* **117**, 105277.

Zhang, C., Yang, L., Liu, S., Ma, S., Wang, Y., Cai, Z., Du, H., Li, R., Kang, L., Su, M., Zhang, J., Liu, Z. and Zhang, B. 2020. Survey of Insomnia and Related Social Psychological Factors Among Medical Staff Involved in the 2019 Novel Coronavirus Disease Outbreak. *Front. Psych.* **11**, 306.

Zubayer, T., Ahmed, F., Ara, J., Mahmood, M., Rahman Khan, R. and Nurunnabi, M. 2025. Generalized Anxiety Disorder and Sleep Quality of Day Laborers during COVID-19 Pandemic. *Medi. Today* **37**, 218-224.