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Case Report

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Volume 4 | Issue 2 | December 2021

Table of Contents

Editorial

Clinical guidelines: benefits and limitations 1-2
Mohammad Tariqul Alam

Review Article

Merits and demerits of online undergraduate medical classes during COVID-19: a narrative review 3-6
Md. Sultan-E-Monzur, Zubair Mahmood Kamal

Original Articles

Pattern of psychiatric disorders among individuals facing the consequences of COVID-19 pandemic and attended in a tertiary care psychiatric hospital 7-13
Bidhan Ranjan Roy Podder, Mohammad Muntasir Maruf, Shahana Parveen, Zinat De Laila, Niaz Mohammad Khan, Farzana Rahman, Zubair Mahmood Kamal

Estimation of C-reactive protein level in schizophrenia 14-18
Mortoza Hassan, Jasmin Akhtar, Nazia Afrin Siddiqui

A comparison of the effects of 1.5% glycine and 5% glucose irrigants on plasma serum physiology and the incidence of transurethral resection syndrome during TURP sur-gery 19-25
Mohammad Haris Uddin, Golam Mawla Chowdhury, Forkan Ahmmad, Bishwanath Kun-du

Factors predicting depressive symptoms in patients with chronic kidney disease and end-stage renal failure 26-31
Nazia Afrin Siddiqui, Babrul Alam, Mohammad Haris Uddin, Mohammad Afjal Hossain, Md. Ashraful Alam, S M Nafeez Imtiaz, Md. Raquib Morshed

Prevalence of anxiety and depression among cancer patients in a community hospital of Bangladesh 32-39
Shahina Akther, Shaheen Islam, Md. Reza-A-Rabby

Personality disorders among patients of substance use disorders 40-46
A.K.M Shafiul Azam, Ahmed Riad Chowdhury, Ramendra Kumar Singha Royle, Md. Abdul Motin, Md. Mejbaul khan Forhad, Suchitra Talukdar, Mohammad Tariqul Alam

Case Report

Successful management of Sheehan's syndrome mimicking schizophrenia in a 36 years old female 39-41
Sadia Afrin Shampa, Md. Sultan-E-Monzur, Fahima Sharmin Hossain, Md. Khairul Islam, Muntasir Maruf, Mohammad Tariqul Alam

Instructions for authors A4-8

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Original Article

Pattern of psychiatric disorders among individuals facing the consequences of COVID-19 pandemic and attended in a tertiary care psychiatric hospital

Bidhan Ranjan Roy Podder, Mohammad Muntasir Maruf, Shahana Parveen, Zinat De Laila, Niaz Mohammad Khan, Farzana Rahman, Zubair Mahmood Kamal

Background: Apart from being suffered from the coronavirus disease 2019 (COVID-19) itself, this pandemic has been associated with mental health challenges related to the fear of being affected with the virus, relative insufficiency of the healthcare system and the mitigating measures.

Objectives: We aimed to assess the types of psychiatric disorders among the individuals who faced consequences of COVID-19 and attended at the outpatient department of National Institute of Mental Health (NIMH).

Methods: This was a cross-sectional study carried out during September, 2020–December, 2020. Individuals whose psychiatric symptoms were noticed for the first time after 8 March, 2020, were included in the study. Convenient sampling technique was applied. Data were collected through face-to-face interview using a semi-structured questionnaire. The psychiatric diagnoses were assigned by psychiatrists according to Diagnostic and Statistical Manual of Mental Disorders, version 5 (DSM-5). Completed data of 288 respondents were analyzed using Statistical Package for Social Sciences (SPSS), version 16.

Results: Among the respondents, 3.5% suffered COVID-19, 27.1% was affected by COVID-19 related financial or job loss. Relatives of 4.9% respondents were affected and 1.7% died due to COVID-19. Among the respondents directly or indirectly affected by COVID-19, 33.3% had COVID related anxiety. Majority of the respondents suffered from schizophrenia and spectrum disorder (27.4%) followed by bipolar and related disorder (22.9%), somatic symptom and related disorders (13.2%), anxiety disorders (10.8%) and depressive disorders (10.8%). The proportion of anxiety disorders and depressive disorders was more among the respondents who had COVID-19 related anxiety than the respondents having no anxiety related to COVID-19 (18.8% vs. 6.8% and 12.5% vs. 9.9% respectively).

Conclusions: The most common psychiatric diagnosis among the outpatients in NIMH during COVID-19 pandemic was schizophrenia spectrum and other psychotics disorders. The pattern of psychiatric disorders presented at outpatients of NIMH during COVID situation is not very different from the pre-pandemic era.

Declaration of interest: None

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Keywords: COVID-19; psychiatric disorders, outdoor patients.

Introduction

Coronavirus disease 2019, known as COVID-19, caused by the SARS-CoV-2 virus, is a highly contagious respiratory disease spread from infected persons irrespective of presentations of symptoms.[1] The virus was first identified in Wuhan, China, in December 2019.[2] On March 11, 2020, the World Health Organization declared it a pandemic.[3] The first case of COVID-19 was found in Dhaka, Bangladesh on March 8, 2020.[4] Given the dense population and other factors, COVID-19 has become a major public health concern in Bangladesh, as in other countries. The Bangladesh government has introduced various measures to combat the spread of COVID-19, including lock-down, social distancing, isolation, quarantine, etc. From 26 March to 30 May 2020, the Government announced a nationwide lockdown extending it several times.[5]

The COVID-19 pandemic has been associated with mental health problems related to the morbidity and mortality caused by the disease, anxiety related to the uncertainty and preventive measures, including the impact of physical distancing, quarantine and isolation. Many individuals developed psychiatric symptoms, such as anxiety, depression, panic attacks, sleep problems, and self-harm tendency. Symptoms of anxiety disorders and depressive disorders increased considerably in the United States during April-June of 2020, compared with the same period in the previous year.[6] During the initial stage of the COVID-19 outbreak, a study in China reported that 16.5% of participants had moderate to severe depression, 28.8% had moderate to severe anxiety, and 8.1% had moderate to severe stress.[7] A study conducted among Bangladeshi home-quarantined students showed that 46.92% had depression, 33.28% had anxiety, and 28.5% had stress.[8]

In Bangladesh, the national survey on mental health conducted in 2018-19 documented that 16.8% of the adult population had mental disorders and the prevalence was higher in women than men.[9] A rural community-based study showed an overall prevalence of psychiatric disorders as 16.5%; notably, half of the sufferers had depressive disorders (8%) and a third had anxiety disorders (5%).[10] The picture is different in hospital-based studies. Study conducted in Outpatient department of National Institute of Mental Health (NIMH), Dhaka revealed that more than one third patients were suffering from schizophrenia and schizophrenia like psychotic disorders.[11] In the present study, we aimed to find out the types of psychiatric disorders developed among the persons affected directly or indirectly by COVID-19 pandemic in Bangladesh, and which compelled persons to get treatment from a tertiary care psychiatric hospital.

Methods

This was a cross-sectional study carried out to determine the types of psychiatric disorders among the individuals affected directly or indirectly by COVID-19 pandemic and attended at the outpatient department of National Institute of Mental Health (NIMH), Dhaka from September, 2020 to December, 2020. Included in the study were the individuals whose psychiatric symptoms were noticed for the first time after 8 March, 2020, the date when the first case of COVID-19 was declared in Bangladesh. Convenient sampling technique was applied. After having their consent, COVID-19-related data were collected through face-to-face interview of the respondents and their attendants. The psychiatric diagnoses were assigned by psychiatrists according to Diagnostic and Statistical Manual of Mental Disorders, version 5 (DSM-5).[12] Total 304 respondents were interviewed but during data cleaning, some responses were dropped due to missing data and diagnostic dilemma. Completed data of 288 respondents were analyzed using Statistical Package for Social Sciences (SPSS), version 16. Ethical issues were addressed properly throughout the study.

Results

This cross–sectional study showed that majority (35.1%) of the respondents belonged to the age group ≤ 20 years, with mean age 28.1±13.0 years. The youngest respondent was of 11 years and oldest 70 years. Among the respondents, 55.2% were males and 44.8% were females. Majority of the respondents were Muslim (96.5%), completed secondary level of education (30.9%) and student (25%). About half of the respondents were married (49.3%) (Table 1).

Table 1: Sociodemographic characteristics of the respondents in a study in a tertiary care hospital, Bangladesh (N=288)

Characteristic	Frequency (n)	Percentage (%)
Age (years)		
≤ 20	101	35.1
21-30	96	33.3
31-40	46	16
41-50	24	8.3
51-60	13	4.5
> 60	8	2.8

Characteristic	Frequency (n)	Percentage (%)
Sex		
Male	159	55.2
Female	129	44.8
Religion	24	30
Islam	278	96.5
Others	10	3.5
Educational status		
Illiterate	36	12.5
Primary	76	26.4
Secondary	89	30.9
Higher Secondary	49	17
Graduation	30	10.4
Post-graduation	8	2.8
Current occupation		
Unemployed	66	22.9
Home-maker	62	21.5
Student	72	25
Day-laborer	15	5.2
Service-holder	32	11.1
Business-person	20	6.9
Farmer	3	1
Others	18	6.2
Marital status		
Married	142	49.3
Unmarried	135	46.9
Others	11	3.8

Our study reflected that more than three-fourth respondents belonged to nuclear family (78.1%) with mean number of family members 4.69±1.9. Monthly expenditure was between 10001-20000 BDT for majority (41.3%) of the respondents.

Current study revealed that majority of the respondents suffered from schizophrenia and spectrum disorder (79, 27.4%) followed by bipolar and related disorder (66, 22.9%) and somatic symptom and related disorders (38, 13.2%) (Figure 1).

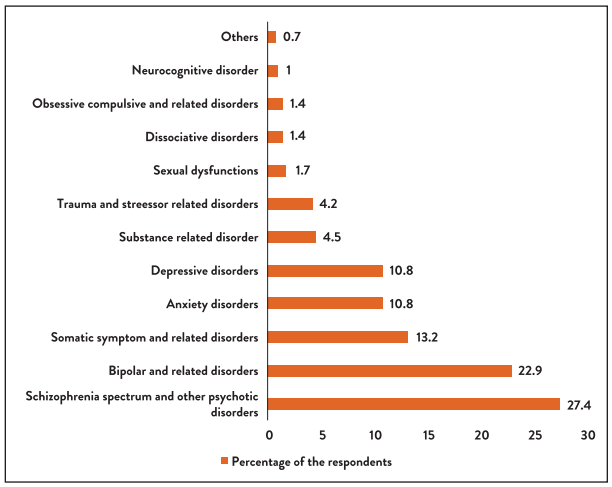

Figure 1: Psychiatric diagnoses of the respondents (N=288)

Among the respondents, 3.5% suffered COVID-19. But 27.1% was affected by COVID- related financial or professional loss. Relatives of 4.9% respondents were affected and of more 1.7% died due to COVID-19. Among the respondents directly or indirectly affected by COVID-19, 33.3% had COVID-related anxiety (Table 2).

Table 2: Effects of COVID-19 on respondents in a study in a tertiary care hospital, Bangladesh (N=288)

Effect of COVID-19	No		Yes	
	n	%	n	%
Respondents suffered COVID-19	278	96.5	10	3.5
Relatives suffered COVID-19	274	95.1	14	4.9
Relatives died due to COVID-19	283	98.3	5	1.7
COVID-19 related loss (professional or financial)	210	72.9	78	27.1
COVID-19 related anxiety	192	66.7	96	33.3

The proportion of anxiety disorders was more among the respondents who had COVID-19 related anxiety than the respondents having no anxiety related to COVID-19 (18.8% vs. 6.8%). The proportion of depressive disorders was also higher among the group with COVID-19 related anxiety (12.5% vs. 9.9%) (Table 3).

Table 3: Psychiatric diagnosis of the respondents with COVID-19 related anxiety disorders in a tertiary care hospital, Bangladesh (N=288)

Psychiatric diagnosis	COVID-19 related anxiety among respondents	
	No n (%)	Yes n (%)
Anxiety disorders	13 (6.8%)	18 (18.8%)
Depressive disorders	19 (9.9%)	12 (12.5%)
Obsessive compulsive and related disorders	2 (1.0%)	2 (2.1%)
Trauma and stressor related disorders	7 (3.6%)	5 (5.2%)
Dissociative disorders	1 (0.5%)	3 (3.1%)
Somatic symptom and related disorders	29 (15.1%)	9 (9.4%)
Sexual dysfunctions	4 (2.1%)	1 (1%)
Schizophrenia spectrum and other psychotic disorders	58 (30.2%)	21 (21.9%)
Bipolar and related disorders	48 (25.0%)	18 (18.8%)
Neurocognitive disorders	2 (1.0%)	1 (1%)
Substance related disorders	8 (4.2%)	5 (5.2%)
Others	1 (0.5%)	1 (1%)
Total	192 (66.7)	96 (33.3%)

Parentheses are column percentages

Discussion

In the current study, more than 2/3rd (68.4%) of the respondents were young adult aged less than or equal to 30 years. In the tertiary psychiatric settings, schizophrenia and bipolar disorder are the most common diagnoses, both of which have an earlier age of onset. Among the respondents, more than half (55.2%) were male. During non-COVID era also, male outnumbered female in attending outpatient department of NIMH.[11]

Most of the respondents were Muslim (96.5%). It was expected as Bangladesh is a Muslim-dominant country with 88.4% Muslim people.[13] Majority of respondents completed secondary level of education (30.9%). Only 12.5% were illiterate. Educational status of the respondents was not bad considering the national figure, where 73.9% of the adult population (more than 15 years of age) is literate.[13] In this study, 22.9% respondents were unemployed and 25% were student. Perhaps, due to presence of more respondents from younger age group, 'student' was leading the list of professional categories.

About half of the respondents were married (49.3%) and

2.7% of the respondents were divorced or separated. But it was not conclusive whether separation or divorces precipitated the symptoms or those were the effects of the disease process. A considerable rate (46.9%) of the respondents was unmarried. It might be due to inclusion of a considerable rate of younger respondents (35.1% belonged to age group ≤ 20 years). More than three-fourth respondents belonged to nuclear family (78.1%). Average number of family members (4.69±1.9) was slightly higher than the national figure (4.2).[13]

Among the respondents, 3.5% suffered COVID-19. Relatives of 4.9% respondents were affected and of 1.7% died due to COVID-19. According to the 'Morbidity and Mortality Weekly Update' of World Health Organization, there were through the last week of 2020 (27 December, 2020), a total of 509,148 Bangladeshi cases confirmed, which included 7,452 people who had died.[14] On the basis of our latest estimated population (164.6 millions) in the 'Report on Bangladesh sample vital statistics 2018',[13] the rate of COVID-19 infection in general population was 0.003% till the last week of 2020 which was much lower than findings of the current study. It might be because we had estimated the proportion in a hospital-based population, not a community sample. Previous study conducted in outpatient department of NIMH, Dhaka revealed that most respondents (37.5%) were suffering from schizophrenia and schizophrenia like psychotic disorders.[11] Our study also showed that schizophrenia spectrum and other psychotics disorders topped the list though rate is somewhat lower (27.4%) than the previous study. On the other hand, rate of bipolar and related disorders (22.9%) was much higher in our study than the previous one (8.9%). Regarding neurotic disorders, somatic symptoms and related disorders were found in higher rate (13.2%) in our study than the somatoform disorders in the previous one (6.6%). Anxiety disorders were found lower (10.8% vs 16.1%).[11] In our study, we assigned for a respondent one psychiatric diagnosis which was of the major concern agreed by both the respondents or their relatives and the psychiatrist. As we have considered the symptoms started for the first time within approximately 6-9 months of the study period, we could not find any case of neurodevelopmental disorders and personality disorders.

Our study found that, 27.1% respondents were affected by COVID related financial or professional loss and 33.3% had COVID-related anxiety. The proportion of anxiety disorders and depressive disorders was more among the respondents who had COVID-19 related anxiety than the respondents having no anxiety related to COVID-19. A Bangladeshi study revealed that 37.3% of participants had generalized anxiety at the initial stage of the pandemic.[15] Online cross-sectional survey conducted among Bangladeshi citizens aged 18 years during June, 2020 found moderate to extremely severe levels of depression, anxiety, and stress was 47.2%, 46.0%, and 32.5%, respectively.[16] In a meta-analysis, pooled prevalence of anxiety was 41.3% and pooled prevalence of depression was 34.1% in South Asia during COVID.[17] In a study among Bangladeshi medical students during the COVID-19 pandemic, 65.9% had different levels of anxiety and 49.9% of the medical students had varying degrees of depressive symptoms.[18]

Pure COVID related disorders are stress related. Other studies showed that stress related disorders were commonly found in individuals directly or indirectly affected by COVID, but we did not find such picture in our study. This may be because, the study was done in a hospital setting, where the representation of patient is different from the community sample. The persons suffering from psychiatric disorders due to COVID-19 in the community may not recognize their symptoms or disorders as psychiatric. They might feel stigma to visit a tertiary care government psychiatric hospital for their symptoms. Besides, people's perception about our tertiary care facility might not be encouraging for them to seek treatment for the symptoms. From a previous study mentioned earlier and clinical observations, it is seen that mostly the persons suffering from psychosis or major psychiatric disorders attend the outpatient department of NIMH and the set-up and environment of outpatient department seems to be focused on such type of disorders. The persons with minor psychiatric disorders like depression or anxiety might feel uncomfortable or dejected in seeking treatment in such environment. To explore the actual reason, further in-depth study is needed.

The study has several limitations. As it is a hospital-based study, the impact of COVID-19 in the mental health of the community people may not be found. The sample size was small and convenient sampling technique was used. So, there was chances of bias. Moreover, respondents' claim about sufferings or loss related to COVID-19 could not be verified by other than their or their attendant's replies. No scale was used to measure their COVID-related anxiety.

Conclusions

The most common psychiatric diagnosis among the outpatients in NIMH during COVID-19 pandemic was schizophrenia spectrum and other psychotics disorders. The pattern of psychiatric disorders during COVID situation is not very different from the pre-pandemic era. To our best knowledge this is the first study showing the types of psychiatric disorders among the individuals who were directly or indirectly affected by COVID-19 and attended in a tertiary care psychiatric hospital of Bangladesh.

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