

FIRST EPISODE PSYCHOSIS DURING COVID-19 PANDEMIC: STUDY IN A TERTIARY CARE PSYCHIATRIC HOSPITAL

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Abstract

Background: Apart from being suffered from the Coronavirus disease 2019 (COVID-19), the pandemic has been associated with mental health conditions related to the fear of being affected by the virus, relative insufficiency of the healthcare system and the alleviating measures. We aimed to determine the types and associated sociodemographic factors of first episode psychosis (FEP) occurred during COVID-19 pandemic.

Materials and methods: This was a cross-sectional study carried out at the outpatient department of National Institute of Mental Health (NIMH), Bangladesh. Individuals whose psychiatric symptoms were noticed for the first time during the covid outbreak, were included in the study using a convenient sampling technique during September, 2020 - December, 2020. After having informed written consent, data were collected through face-to-face interview of the respondents using a semistructured questionnaire. Psychotic features were elicited and psychiatric diagnoses were assigned by qualified psychiatrists after a thorough assessment 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 24. The institutional review board of NIMH approved the research.

Results: About three-fifths (58.3%) of the respondents suffered from first episode psychosis. Around half (47.0%) of the patients with psychosis was suffering from schizophrenia spectrum and other psychotic disorders and 39.3% from bipolar and related disorders. Majority (36.2%) of the respondents with FEP belonged to the age group of 20-29 years, with the mean age of 28.01±12.859 years. There was a significant association between gender and the presence of psychosis ($p < .05$).

Conclusion: Majority of the FEP were schizophrenia spectrum and other psychotic disorders having a younger age of onset.

Key words: First episode psychosis, COVID-19, Schizophrenia, National Institute of Mental Health

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Introduction

The ongoing Coronavirus disease 2019 (COVID-19) pandemic has been associated with adverse mental health conditions related to the morbidity caused by the disease. Apart from that, the fear of contamination, the relative insufficiency of healthcare systems in the prevention and management of the disease, and

the measures taken to alleviate the situation (including quarantine, isolation, lockdown, social distancing and others) were also associated with substantial stress and subsequent mental health problems, especially among at-risk individuals. There is much evidence that many individuals during the COVID-19 pandemic developed psychiatric

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symptoms, such as anxiety, panic attacks, sleep problems, depression, posttraumatic stress disorder, and even self-harm.^{1,2}

Besides the ‘neurotic’ disorders, psychotic disorders require special attention in this pandemic situation. ‘Psychosis’ is used to label conditions that affect the mind with some loss of contact with reality. Psychosis includes paranoia or delusions, hallucinations, disordered thoughts-speech and behavior, and/or negative symptoms.³ After the Spanish Flu pandemic in the eighteenth century, the association between influenza infection and psychosis has been documented. Subsequently acute “psychoses of influenza” have also been reported during other pandemics.⁴ An increase in the rate of psychosis could be associated with exposure to the virus or treatment with steroids, as well as with preexisting vulnerability and psychosocial stress.^{5,6} Psychosocial stress is an important risk factor for both the onset and exacerbation of symptoms of psychotic disorders.⁷ Two British studies found that adverse life events during the preceding six months were associated with psychotic experiences among the general population.^{8,9} ‘Social distancing’ in the form of physical distancing, and other preventive measures can be a particular stress factor for individuals vulnerable to psychosis.¹⁰ The medium and long-term social effects of COVID-19 like unemployment, homelessness, break up of relationships, domestic violence, deteriorating physical health conditions due to difficulty in accessing health care facilities may affect people at risk of psychotic disorder.¹¹ An Italian study suggested a moderate increase of psychotic episodes in the general population during COVID-19 pandemic compared to the previous non-pandemic year.¹² However, overall, the available literature is currently limited regarding the impact of this pandemic on psychotic disorders.

In Bangladesh, the first case of COVID-19 was declared on March 8, 2020. Given the dense population and other factors, COVID-19 has become a major public health concern here. The Government of Bangladesh has introduced various measures to combat the COVID-19, as

did other countries, e.g., diagnosis of suspected cases, quarantine of suspected persons, and isolation of infected patients, local or regional lockdown, closure of all government and private offices and academic institutes, building public awareness and enforcing social distancing, mandatory use of face-mask, penalty for violating health-safety instructions etc. These measures, along with the fear of COVID-19, have created added stress among the general population, which stimulated mental health professionals to predict an increase in incidence rates of psychiatric disorders.¹³

Some studies were done in Bangladesh in the community level to assess the psychological issues during COVID-19 situation. Depression, panic, anxiety, and stress were found in a significant portions of the respondents in those studies.^{14,15,16} However, no study was found yet to assess psychosis among persons in a clinical setting during this pandemic. In the present study, we aimed to enquire about First Episode Psychosis (FEP) during COVID-19 pandemic and associated sociodemographic factors at the outpatient department of a tertiary care psychiatric facility situated in the capital city of Bangladesh.

Materials and methods

This cross-sectional study was carried out among individuals attended at the outpatient department of National Institute of Mental Health, Dhaka (the capital of Bangladesh). 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. Initially, the subjects were approached randomly and screened on the basis of the question - whether or not their symptoms for which they came to the hospital appeared for the first time after 8 March, 2020. The respondents who replied positively were approached for the study. Within 1st September, 2020 to 31st December, 2020, total 325 respondents were invited, but 21 denied to participate in the study. After having informed

written consent of the rest or their guardians, sociodemographic information was collected by a predetermined semistructured questionnaire through face-to-face interview of the respondents and their guardians with a paper and pencil method. The psychiatric diagnoses of the respondents were assigned after thorough assessment by qualified psychiatrists according to Diagnostic and Statistical Manual of Mental Disorders, version 5 (DSM-5).¹⁷ Total 304 respondents were interviewed but during data processing, some responses were dropped due to missing data, inconsistencies, and diagnostic dilemma. Completed data of 288 respondents were analyzed using Statistical Package for Social Sciences (SPSS), version 24. The ethical committee Institutional Review Board (IRB) of National Institute of Mental Health, Bangladesh approved the research. The purpose of the study, procedure, benefits and duration of the study, rights of the participant, benefits or risks to the individual, and right to refuse to participate in the study were mentioned in detail in the written consent form. The study complied with all other ethical issues and regulations including confidentiality of the data.

Results

This cross-sectional study was aimed to determine the proportion and types of first episode psychosis and associated sociodemographic factors among the individuals attended at the outpatient department of National Institute of Mental Health, Dhaka during COVID-19 pandemic. Analysis performed on the data of 288 conveniently selected respondents, showed that, about three-fifths (58.3%) suffered from psychosis (Table I). Around half (47.0%) of the patients with psychosis was suffering from schizophrenia spectrum and other psychotic disorders (Table II).

Table-I
Types of psychiatric disorders (n = 288)

Types of psychiatric disorders	Frequency	Percentage
Psychosis	168	58.3
Others	120	41.7

Among the persons with psychosis, the majority (36.2%) of the respondents belonged to the age group of 20-29 years, with the mean age of 28.01±12.859 years. Near about one third (30.1%) was of adolescent age group (d”19 years). The youngest respondent was of 13 years and the oldest 70 years. Among the respondents, more than half (62.5%) was male. Most of the respondents were Muslim (97.0%). Regarding educational status, the majority (32.1%) belonged to the secondary level of education (class VI – Secondary School Certificate). About one-fourth (25.6%) of the respondents was unemployed and 22% was students. The study found that more than half (51.2%) of the respondents was unmarried. More than three-fourths of the respondents with first episode psychosis had 5 or less number of family members (78%) with nuclear family type (81.5%). Presence of psychosis had no statistically significant association with age, religion, education, occupation, marital status, number of family members, family type, or monthly expenditure (p>.05) (Table III, Table IV). Presence of psychosis was higher among males than females and there was a significant association between gender and the presence of psychosis (p<.05). (Table III)

Table II
Types of psychosis (n = 168)

Types of psychosis	Frequency	Percentage
Schizophrenia spectrum and other psychotic disorder	79	47.0
Bipolar and related disorders	66	39.3
Other psychosis	23	13.7

Table III
Sociodemographic characteristics and presence of psychosis (n = 288)

Sociodemographic characteristics	Presence of psychosis			Test Statistic
	Yes	No	Total	
Age (in years)				
d"19	49 (30.1%)	36 (28.8%)	85 (29.5%)	$\chi^2(4) = 1.700$ p = .791
20-29	59 (36.2%)	40 (32.0%)	99 (34.4%)	
30-39	29 (17.8%)	25 (20.0%)	54 (18.8%)	
40-49	10 (6.1%)	12 (9.6%)	22 (7.6%)	
e" 50	16 (9.8%)	12 (9.6%)	28 (9.7%)	
Gender				
Male	105 (62.5%)	54 (45.0%)	159 (55.2%)	$\chi^2(1) = 8.669$ p = .003
Female	63 (37.5%)	66 (55.0%)	129 (44.8%)	
Religion				
Islam	163 (97.0%)	115 (95.8%)	278 (96.5%)	$\chi^2(1) = .296$ p = .408
Others	5 (3.0%)	5 (4.2%)	10 (3.5%)	
Education				
Illiterate	22 (13.1%)	14 (11.7%)	36 (12.5%)	$\chi^2(4) = 1.724$ p = .786
Primary	40 (23.8%)	36 (30.0%)	76 (26.4%)	
Secondary	54 (32.1%)	35 (29.2%)	89 (30.9%)	
Higher Secondary	28 (16.7%)	21 (17.5%)	49 (17.0%)	
Graduation and above	24 (14.3%)	14 (11.7%)	38 (13.2%)	
Current Occupation				
Unemployed	43 (25.6%)	23 (19.2%)	66 (22.9%)	$\chi^2(5) = 9.551$ p = .089
Homemaker	29 (17.3%)	33 (27.5%)	62 (21.5%)	
Student	37 (22.0%)	35 (29.2%)	72 (25.0%)	
Service-holder	20 (11.9%)	12 (10.0%)	32 (11.1%)	
Businessperson	13 (7.7%)	7 (5.8%)	20 (6.9%)	
Others	26 (15.5%)	10 (8.3%)	36 (12.5%)	
Marital Status				
Married	77 (45.8%)	65 (54.2%)	142 (49.3%)	$\chi^2(2) = 3.338$ p = .188
Unmarried	86 (51.2%)	49 (40.8%)	135 (46.9%)	
Others	5 (3.0%)	6 (5.0%)	11 (3.8%)	

Table-IV
Family characteristics and presence of psychosis (n = 288)

Family characteristics	Presence of psychosis			Test Statistic
	Yes	No	Total	
Number of family members				
≤5	131 (78.0%)	93 (77.5%)	224 (77.8%)	$\chi^2((1) = 1.111$ p = .946
≥6	37 (22.0%)	27 (22.5%)	64 (22.2%)	
Family type				
Nuclear	137 (81.5%)	88 (73.3%)	225 (78.1%)	$\chi^2(1) = 2.764$ p = .096
Non-nuclear	31 (18.5%)	32 (26.7%)	63 (21.9%)	
Monthly expenditure (in BDT)				
≤10000	67 (39.9%)	40 (33.3%)	107 (37.2%)	$\chi^2(3) = 5.880$ p = .208
10001-20000	67 (39.9%)	52 (43.3%)	119 (41.3%)	
20001-30000	18 (10.7%)	20 (16.7%)	38 (13.2%)	
≥30001	16 (9.5%)	8 (6.6%)	24 (8.3%)	

Discussion

To the best of our knowledge, this is the first study regarding First Episode Psychosis during COVID-19 pandemic in Bangladesh in a tertiary care psychiatric setting. In our study, 'psychosis' was used to denote the conditions that affect the mind, in which persons have trouble distinguishing between what is real and what is not. Delusions, hallucinations, disorganized speech, thoughts, or behaviors were regarded as the positive symptoms of psychosis and restricted emotional and facial expression, restricted speech and verbal fluency, difficulty with generating ideas or thoughts, reduced ability to begin tasks, reduced socialization and motivation etc were regarded as negative symptoms [3]. An individual who presented at the psychiatric health care facility with symptoms of psychosis which appeared for the first time in their life, was identified as experiencing their 'first-episode'. Data used here was a part of a larger study regarding the impact of covid-related anxiety on psychiatric disorders. All respondents developed their psychiatric symptoms for the first time after COVID-19 outbreak in the country. Therefore, they can be regarded as the case with first episode psychiatric disorders.

Among the 288 respondents with completed information, about three-fifths (58.3%) suffered from psychosis for the first in lifetime. Other psychiatric disorders include depressive disorders, anxiety disorders, substance use disorders, and other neurotic disorders. The latest national survey on mental health in Bangladesh documented that 16.8% of the adult population had mental disorders where depressive disorders and anxiety disorders were the most common diagnoses.¹⁸ A rural community-based study showed that half of the respondents with psychiatric disorders had depressive disorders and a third had anxiety disorders.¹⁹ The picture is different in hospital-based studies. 'Schizophrenia and schizophrenia-like psychotic disorders' was the commonest diagnosis in two studies conducted, respectively, in outpatient departments of National Institute of Mental Health (NIMH), Dhaka (37.5%) and a private medical college

hospital outside Dhaka (39.4%).^{20,21} More 8.9% in NIMH study and 12.2% in the study of the private medical college was bipolar disorder which falls under the category of psychosis due to its symptoms.

In our study, around half (47.0%) of the respondents with FEP was suffering from schizophrenia spectrum and other psychotic disorders and 39.3% had bipolar and related disorders. These findings resonate with the outcomes of a study conducted among persons with FEP in Bangabandhu Sheikh Mujib Medical University (BSMMU) and Dhaka Medical College (DMC) in Bangladesh during non-COVID era.²² In the Italian study during COVID-19, 60% of FEP were non-affective psychosis and 31.4% were affective psychosis.¹²

Among the persons with FEP, the majority (36.2%) of the respondents belonged to the age group of 20-29 years, with the mean age of 28.01 ± 12.859 years. This mean age is much lower than the mean age found in the respondents with FEP found in the Italian study (43.5 ± 15.8)¹², but corresponds to two studies done in Bangladesh (27.24 ± 9.671) and India (28.76 ± 10.46) before COVID-19.^{22,23} More 30.1% of our respondents belonged to the adolescent age group (13-19 years). Psychosis usually first appears in a person's late teens or early twenties.³ Our findings of two-thirds respondents to be aged less than 30 years also support the notion.

Regarding religion, most of the respondents were expected to be Muslim as Bangladesh is a Muslim-dominant country with 90.4% Muslim people.²⁴ Educational status of the respondents with FEP was good enough considering the national figure, where 73.9% of the adult population (more than 15 years of age) is literate.²⁴ Perhaps, due to the presence of more respondents from the younger age group, 'student' was the 2nd leading in the list of professional categories, where the unemployment of one-fourth of the FEP patients can partly be explained by their disorders. Regarding marital status, the findings of the majority as unmarried might be due to the inclusion of a considerable rate of younger respondents or due to the premorbid

personality or unrecognized prodrome of the disorder.

During non-COVID period, the Bangladeshi study found that the majority of the FEP patients were male (62%), Muslim (94.0%), unmarried (64%), and studied up to the secondary level (40%), About one-fourth (24%) were unemployed.²² Our study depicted that regarding these sociodemographic factors of persons with FEP, there was not much difference of the findings between pre-COVID and COVID pandemic times. However, this should not be regarded as conclusive because of the differences in the study places (NIMH vs BSMMU and DMC) and the number of individuals with FEP (168 vs 50) between the two studies.

When we compared the socio-demographic factors between respondents with FEP and respondents with other psychiatric disorders, our research could not find any statistically significant association of the presence of FEP with age, religion, education, occupation, marital status, number of family members, family type or monthly expenditure ($p > .05$). There was a significant association between gender and the presence of psychosis ($p < .05$). There is evidence that the incidence and clinical presentation of FEP varies by gender. In the Indian study of pre-COVID-19 time, only education was significantly associated with FEP.²³ In the previous Bangladeshi case-control study, a statistically significant association of FEP was found with habitat, occupation and marital status. In that study, the controls were healthy individuals.²²

Our failure to find an association with any other sociodemographic factors might also be due to comparison of the FEP group with the respondents with other 'neurotic' disorders, instead of healthy individuals, which can be regarded as a limitation of the study. As it was a hospital-based study, it can not be generalized for the community population. It was of a cross-sectional design, which renders determining causality difficult. Convenient sampling and small sample size are the other limitations. The diagnosis of psychiatric disorders in this study was based on clinical interviews and confirmed

by qualified psychiatrists. Although the routine clinical interview conducted by psychiatrists continues to serve as the gold standard for psychiatric diagnosis in a clinical setting, however, the use of a semistructured diagnostic interview in research would be preferable.

Conclusion

This study showed that about three-fifths of the respondents seeking treatment in a tertiary care psychiatric facility for their first episode of psychiatric problems was suffering from psychosis. Around half of the FEP was schizophrenia spectrum and other psychotic disorders having a younger age of onset. Gender had a statistically significant association with FEP. This was the first study describing FEP patients attending the outpatient department of NIMH during the COVID-19 period. However, we could not conclude whether the rate of FEP was increasing or decreasing in tertiary care psychiatric facilities during COVID-19 period or the impact of COVID-19 on the rates of FEP as there was no previous data on persons with FEP in NIMH. We hope that our study findings will be regarded as a baseline data on FEP during the COVID-19 period and any future study can compare or use our findings to determine the trend of the disorder.

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