

## ORIGINAL ARTICLE

# Psychological Impact of COVID-19 on Severely Mentally ill Patients of a Tertiary Care Centre in Western Rajasthan-A Cross- Sectional Study

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### ABSTRACT

**Background:** Pre-existing psychiatric illness is a risk factor for the development of post-traumatic stress disorder (PTSD), depression, anxiety, and illness exacerbation after a disaster. Amid the pandemic of COVID 19, patients diagnosed with Severe Mental Illness were found to have stress under confinement measures, loneliness and despair, and treatment noncompliance responsible for relapse of psychiatric illness.

**Aim:** To find the psychological impact of COVID-19 on patients with severe mental illness.

**Material and methods:** The present study is a hospital-based cross-sectional observational study conducted among 150 patients with severe mental illness included as per inclusion and exclusion criteria and underwent psychiatric assessment as per diagnostic criteria.

**Results:** Treatment compliance and increased Aggressive acts/violence towards caregivers: About 34.3% of patients developed aggressive behavior during the lock-down period leading to the deterioration of their mental and physical functioning. A major reason for this altered behavior was poor compliance as 40 out of 52 patients (79%) missed appointments. Lack of transportation in 69.6% was the main reason for missing appointments while non-availability of medications in 17.7% and absence of mental health professionals 12.6% were other factors for poor compliance and missing appointments during lock-down period. About 90% of patients with inadequate social support experienced Verbal and physical aggression from others in the family and community. Suicidal expressions(7.3%), excessive substance use (9.33%) also found under this study.

**Conclusion:** Patients with a severe psychiatric

illness suffered due to the lack of health care facilities, financial burden, and inadequate social support leading to exacerbations of their illness. A properly targeted approach is needed for these vulnerable populations during the pandemic.

**Keywords:** The Psychological impact, severe mental illness, treatment non-compliance, aggression.

### INTRODUCTION

Being a public health crisis COVID-19 has led to significant disruption. The first case of COVID-19 in India was reported on 30th January 2020. As part of public health interventions, the Government of India implemented a nationwide lockdown from March 25, 2020. The risk for developing mental health problems has been increased by psychological stress related to a pandemic and unprecedented lockdown<sup>1</sup>. Implementation by Government of India of multiple measures like mental health helpline, revised telemedicine guidelines, empowered digital communication platform, all are predominantly focused on the emotional disturbance in infected persons, front line health workers, and the general public with no concern about mentally ill patients. Previous studies have shown that pre-existing psychiatric illness is a risk factor for the development of post-traumatic stress disorder (PTSD), depression, anxiety, and illness exacerbation after a disaster<sup>2</sup>. The current study is focused on the impact of the pandemic on severe mental illness (SMI). The National Institute of Mental Health **defines severe mental illness (SMI) as, "a mental, behavioral, or emotional disorder resulting in serious functional impairment, which substantially interferes with or limits one or more major life activities"**. Schizophrenia, Schizoaffective disorder,

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bipolar affective disorder, major depressive disorder have been adopted in this study. (NIMH, 2017)<sup>3</sup>. During the lockdown, patients diagnosed with SMI had decreased access to health care in psychiatric hospitals<sup>4</sup>. Due to high susceptibility to stress under confinement measures, exacerbation of loneliness and despair, leading to increased rumination and overall reduced ability to cope with stress, low self-esteem, and treatment noncompliance all factors can lead to relapse of psychiatric illness<sup>5</sup>.

Thus, the aim of the study was to find the psychological impact of COVID-19 on patients with severe mental illness.

The objectives were to determine the impact of lock-down on psychiatric symptoms in patients with known psychiatric diagnosis as per inclusion criteria & to determine treatment compliance based on their primary caregiver's report and awareness of patients.

## **METHODOLOGY**

After taking permission from the Institutional Ethical Committee, the study was carried out and patients were recruited from the outpatient department of psychiatry, MDM Hospital through simple randomized sampling. The Sample size was calculated to be 150.

Study design: A cross-sectional observational study.

Informed consent was taken from the patient or caregiver if the patient was not able to give proper written informed consent.

A questionnaire with 23 items administered eliciting issues like awareness about symptoms of COVID-19, perceived social support and perceived verbal and physical aggression (from the patient), the current status of illness, the impact of COVID-19 on their mental status, medication compliance, psychiatric consultation. Duration varied from 20 to 30 minutes with privacy maintained settings.

Duration of the study: 30 days.

### **Inclusion criteria**

1) Patient diagnosed as Severe Mental Illness  
a. Schizophrenia b. schizoaffective c. Bipolar Affective Disorder d. Major Depressive Disorder, who sought treatment at this center

2) Age above 18 yrs with a minimum of the one-

year duration of illness.

3) clinically stable for the previous 3 months (clinical stability was defined as “no major changes in medication and no hospitalization in the 3 months preceding the study” based on clinical records).

### **Exclusion criteria**

Patients diagnosed with severe mental illness with concomitant organic brain syndrome and chronic medical illness.

### **i. Materials**

1. Sociodemographic proforma

2. 23 item questionnaire This questionnaire has been prepared by Partheeban Muruganandama Srinivasan Neelamegama et al and applied to the study done on COVID-19 and Severe Mental Illness: Impact on patients and its relation with their awareness about COVID-19. It was designed after focused group discussion comprising of authors (mental health professionals), specialists from microbiology and community medicine and based on themes identified in the literature related to disaster and mental health. Content validation was done by two independent psychiatrists. The questionnaire elicited issues like awareness about symptoms of COVID-19, need for quarantine, precautions and prevention methods, mode of spread, perceived social support and perceived verbal and physical aggression (from the patient), the current status of illness, the impact of COVID-19 on their mental status, medication compliance, psychiatric consultation, biological functions (from caregivers). Initial pilot-study on 10 subjects and their primary caregivers was conducted to know the feasibility and comprehensibility of the items of the questionnaire.

### **ii. Procedure**

Information obtained from the patients was verified with their caregivers. Face-to-face.

Interviews were conducted with proforma of a questionnaire and psychiatric diagnosis verified according to criteria mentioned in ICD 10. After fulfilling the proformas analysis done to find the frequency of certain variables which were impacted by COVID 19 in the form of psychological distress.

### **iii. Statistical analysis**

By using epi info 7 software various variables frequency computed which are qualitative. The role of

certain variables included which were reported age, gender, education, socioeconomic status, psychiatric illness group, poor compliance status, relapse status, level of social support, and experiencing verbal and physical aggression from others and participants level of awareness. Chi-square p value evaluated for perceived social support, financial burden during a lockdown, and socioeconomic status.

The sample size was computed from the earlier study "COVID-19 and Severe Mental Illness: Impact on patients and its relation with their awareness about COVID-19" by Partheeban Muruganandama et al<sup>6</sup>. with alpha error taken as 0.05 and the power was 99%. So, the sample size computed to be 150.

## RESULTS

**Table 1. Sociodemographic and clinical variables**

N(150)	Male (114)	Female(36)
Age Group	18-76 yrs	
Education	Illiterate 66(44%) Below graduation 44(29.2%)	Graduate 40(26.67%)
Socioeconomic status	Lower 122(81.33%)	Middle 28(16.67%)
Diagnosis	BPAD 19(12.67%) Depression 70(46.67%)	Schizophrenia 54(36%) Schizoaffective 7(4.67%)
Awareness about Covid 19	Present Lower Socioeconomic status 118(96.72%) Absent 4(3.28%)	Present Middle socioeconomic status(100%)
Fear of Covid 19	Often 55(36.6%), Sometimes 12(8%)	Rarely 24(16%) Never 59(39.33%)
Treatment compliance	Missed 80(53.33%)	
Perceived Social Support	Adequate(65.33%),Inadequate(34.67%)	

**Table 2. Psychological symptoms**

1.	Re-emergence of Psychiatric symptoms	38(25.33%)	BPAD 5(26.32%) Depression 27(38.5%) Schizophrenia5(19.26%) Schizoaffective 1(14%)
2.	Aggressive Acts/violence towards caregivers	52(34.3%)	BPAD(10),Depression(34),schizophrenia (7),Schizoaffective(1)
3.	Personal care	52.3% (intact)	
4.	Sleep disturbances	64.6%(97)	Unmanageable(16)
5.	Suicidal expression	7.39%(11)	
6.	Excessive substance use and illegal drugs	9.33%(14)	
7.	Emergence of psychiatric symptoms with substance use	42.24%(6)	

The Source of information for patients: Family and friends

Treatment compliance: Lack of transportation in 69.6% was the main reason for missing appointments while non-availability of medications in 17.7% and absence of mental health professionals 12.6% were other factors for poor compliance and missing appointments during lock-down period.

Perceived Social support: About 90% of patients with inadequate social support experienced Verbal and physical aggression from others in the family and community.

Increased Aggressive acts/violence towards caregivers: About 34.3% of patients developed aggressive behavior during the lockdown period leading to the deterioration of their mental and physical functioning. A major reason for this altered behavior was poor compliance: 40 out of 52 patients (79%) missed appointments.

Financial burden: 81.33% (121) patients developed burden during the lock-down period with 86% (106) belonging to lower socio-economic status with inadequate social support. P-value of chi-square ( $<0.05$ ).

## **DISCUSSION**

This study demonstrates that awareness about covid 19 infection mode and preventive measures have been 96.7% which is quite high. However, an online study conducted in South India concluded that nearly three fourth of patients with SMI had no adequate knowledge about symptoms and precautionary measures of COVID-19<sup>7</sup>. About 45% of patients with severe mental illness reported fear and anxiety about COVID 19 infection which is less than the general population (varying between 25 to 72%)<sup>8</sup>.

For the general population, the study conducted by Ahmed and Aibao et fitted on "Epidemic of COVID-19 in China and associated Psychological Problems" published in the Asian journal of Psychiatry 2020 highlighted the high rates of anxiety, depression amid the pandemic in the general public with a younger population at risk<sup>9</sup>.

Lower Socio-economic status was found to be associated with an increased burden (86%) and suicidal expression (9 out of 11 patients). In this study, the major source of information for COVID 19 was family and

friends. This is in contrast with other studies among the general population which found a major source to be social media<sup>10</sup>.

About 25% had a relapse of psychiatric symptoms during the pandemic lock-down period. The reasons explained in previous various studies were high vulnerability to stress, confinement to closed spaces<sup>11,12</sup>, non-availability of mental health care<sup>13-15</sup>, severity of pre existing psychopathology<sup>16</sup> and financial burden<sup>17,18</sup>. The study conducted by Bojdani, E., Rajagopalan concluded COVID-19 is affecting psychiatry in ways that are profound and constantly evolving. Existing psychiatric patients and all others in the community are being faced with isolation, loneliness, sudden bereavement. All psychiatric care settings are impacted by this pandemic, and its services for people who suffer the mental consequences of having lived through this experience will be needed for years to come<sup>19</sup>.

The major study was done on COVID-19 and Severe Mental Illness by Partheeban Muruganandama, Srinivasan Neelamegama et al which concluded that around thirty percent of stable patients before lockdown had a relapse, nearly three fourth of patients with SMI did not have adequate knowledge about symptoms (72%) and precautionary measures (64%) about COVID-19. Among them, around eleven patients (8.3%) were completely unaware of the ongoing COVID-19 pandemic and one out of five patients was not aware of the mode of transmission of COVID-19.

Inadequate social support was reported in about 35% of patients associated with verbal and physical violence from others. The pandemics might lead to the onset of psychiatric symptoms related to COVID-19 and can cause exacerbation of pre-existing illness in patients with severe psychiatric illness<sup>20</sup>. Aggressive acts with increased substance use and poor compliance for their psychiatric illness will have a significant social impact during this pandemic.

Tele-medicine can lead to new opportunities for addressing the consultation, compliance of patients with severe mental illness<sup>21</sup>. A comparative review from India by Naskar et al.<sup>22</sup> considered its effectiveness even in psychotic patients.

Based on this study we can recommend that vulnerable populations with severe psychiatric illness should be the focus of policy-making during lock-down



especially the patients from lower socioeconomic status, lower literacy levels & those with inadequate social support. It is essential to provide the tele-psychiatric platform to these patients by government authority.

### **CONCLUSION**

Patients with a severe psychiatric illness suffered due to the lack of health care facilities, financial burden, and inadequate social support leading to exacerbations of their illness.

### **Limitation**

Cross-sectional nature of the study with less number of patients recruited to conduct the study. A further follow-up study is required in the future for detailed elaboration.

### **Future directions:**

A properly targeted approach is needed for these vulnerable populations during pandemics.

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