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Letter to the Editor

Profile of patients availing psychiatry emergency services pre and post lockdown at a tertiary care center of North India

1. Introduction

The novel Corona Virus has shaken the health care system worldwide. It is not just the patients afflicted with COVID-19, that are bearing the brunt of the pandemic, but the closure of routine health care services has left patients with various illnesses in a lurch (Tandon, 2020). Resources that were allocated for various specialties, emergency departments, skill development, and infrastructure creation, have all been redirected to managing patients infected with COVID-19, and for the testing persons suspected to have COVID-19 infection. As a result of the same, healthcare is becoming even more inaccessible to those who are suffering from other illnesses. The pandemic has challenged the healthcare capacity in developed and developing nations alike. During the lockdown period, health care services were limited to emergency services only.

In India, a nationwide lockdown was imposed from 24th March 2020. As a result of the same, all forms of public transport were suspended and people were restricted to their homes to curb the spread of the virus. This came in as a shock to some of the people with various health conditions, who were planning to consult the health care facilities in the near future. The same was seen in other parts of the world too, with significant fall in emergency room visits, delays in attending emergency rooms as well as outpatient clinics, and undergoing therapeutic interventions (Bernstein and Sellers, 2020; Lazzerini et al., 2020; Masroor, 2020; Rosenbaum, 2020).

Like other specialties, Psychiatry services have also been affected worldwide. Reports emerging from the United States of America, China, and Italy suggest that COVID-19 led to the closure of the psychiatry wards and the need to re-organize systems. In India too, mental health services, both at the institutional level and in the private sector have been affected significantly(Grover et al., 2020a; Grover et al., 2020b). During the lockdown period, there was shrinkage of almost all kind of services, except for Telepsychiatry services, which saw expansion during this period (Grover et al., 2020a, Grover et al., 2020b, Grover et al., 2020c).

Lockdown and the ongoing pandemic also have led to an increase in the prevalence of psychological morbidity (Grover et al., 2020d). Additionally, there are multiple reports of people indulging in self-harming behavior, either due to fear of COVID-19 (Sahoo et al., 2020a), substance withdrawal (Rani et al., 2020), or worsening of primary psychiatric disorder or emergence of new psychiatric ailments (Grover et al., 2020e; Muruganandam et al., 2020). Attending to patients with COVID-19 has also increased the prevalence of psychological morbidity among health care workers, either due to fear of contracting the infection, fear of carrying the infection to home (Gupta et al., 2020; Mehra et al., 2020; Sahoo et al., 2020b), and the use of personal protective equipment (Spoorthy et al., 2020; Dua et al., 2020).

In terms of health care services available to the people requiring the immediate attention of clinicians, besides Telepsychiatry services (Bojdani et al., 2020; Grover et al., 2020a), patients had no other alternative other than coming to the emergency services was available. Accordingly, there is a need to understand the impact of the pandemic on the utilization of emergency services, which has not been studied in the Indian context. Thus, this study aimed to assess the profile of patients attending the Psychiatry Emergency Services at a tertiary care center after the imposition of lockdown and compare the same with the profile of the patients attending the emergency services during the pre-lockdown period.

2. Materials & methods

This study was conducted at the Emergency Services Department of the Postgraduate Institute of Medical Education and Research, Chandigarh, which is a tertiary care hospital in North India. The Psychiatry Emergency Services caters to patients attending medical, surgical, trauma, as well as paediatric services. Before the COVID-19 pandemic, patients referred from the out-patient services for urgent care, other hospitals, as well as those coming by self-referrals were seen in the Emergency Services. During the lockdown period, after the onset of the COVID-19 pandemic, mostly only those patients requiring emergency care, referred from other hospitals, or those who attended on their own, or those initially seen in the telepsychiatry services and considered to require emergency care were attended.

The patients coming to various emergency set-ups of the hospital are initially evaluated by the primary team (i.e., internal medicine, general surgery, orthopaedics, or pediatrics), who based on their evaluation seek psychiatric opinion. The patients referred to the psychiatry emergency team are initially evaluated by a trainee doctor under the supervision of a senior resident and consultants. The patients are managed by the Psychiatry Emergency Services independently or jointly with the medical/surgical teams till they are stabilized, transferred to the wards, or discharged. After initial medical stabilization, a treatment plan is formulated which may constitute investigations and treatment in the emergency services, consultations with various specialties, transfer of the patient to a medical (including psychiatry) or surgical ward, and discharge and follow-up plan. All psychiatric diagnoses are made per the International Classification of Diseases-10 (ICD-10)("WHO | International Classification of Diseases (ICD)," 1993) criteria.

Besides documenting the details of the psychiatric issues in the parent team file, the Psychiatry Emergency team maintains records of all the patients, from the time of admission to discharge which includes the sociodemographic profile, clinical details, diagnosis, and management

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done.

For the purpose of this study, the records of all patients attending the Psychiatry Emergency Services from 1st January 2020 to 25th July 2020 were retrieved. Comparisons were made between the patient profile before the imposition of the nationwide lockdown i.e. from 1st January 2020 to 23rd March 2020 (83 days) and after the imposition of the lockdown i.e. from 24th March 2020 to 25th July 2020 (123 days). A longer duration was considered in the post-lockdown period to have an equal sample size in both the groups.

3. Results

During the study period, a total of 587 patients attended the Psychiatry Emergency Services. In the pre-lockdown period, a total of 291 patients were assessed, while 296 patients were assessed in the post-lockdown period. The average number of patients seen per day was 3.5 before the lockdown, which fell to 2.4 per day after the imposition of the lockdown. The mean age was significantly lower for the patients evaluated in the post-lockdown period ($t = 2.93$; $p = 0.003$**) and there was a reduction in the proportion of elderly patients availing the emergency services, however, it was not statistically significant. Compared to the patients attending the emergency services, during the pre-lockdown period, those attending the service during the post-lockdown period had a significantly higher mean number of years of education ($t = -2.54$;$p = 0.01$*) (Table 1).

Nearly 15 % of the patients in both the time frames had more than one psychiatric diagnosis. Compared to the pre-lockdown period, a significantly higher proportion of patients attending the emergency services after the imposition of lockdown was suffering from an Axis I diagnosis ($\chi^2 = 6.71$; $p = 0.01$*). In the post lockdown period as compared to earlier, a lower proportion had a diagnosis of F0 category ($\chi^2 = 19.14$; $p < 0.001$***), a higher proportion had a diagnosis belonging to the F2 category ($\chi^2 = 4.85$; $p = 0.02$*). A higher proportion of patients were diagnosed to be suffering from Mania with psychotic symptoms ($\chi^2 = 4.50$;$p = 0.03$*). No significant difference was found for other diagnostic categories (Table 2).

Compared to the pre-lockdown period, during the lockdown period there was a significant decline in the proportion of patients diagnosed

Table 1
Sociodemographic profile of the patients seen pre- and post-lockdown.

	Pre Lockdown (01/01/2020-23/03/2020) N(%)/Mean(SD) N=291	Post Lockdown (24/03/2020-25/07/2020) N(%)Mean(SD) N = 296	T Test/ Chi square test (p value)
Patients seen per month	105 (9.86)	72 (20.61)	2.1(0.08)
Patients seen per day	3.5 (1.97)	2.4(1.69)	3.68(<0.001)***
Age in years (Mean)	40.54 (18.22)	36.43(15.69)	2.93(0.003)**
≤18 years	13(4.5)	13(4.4)	0.002(0.96)
18–59 years	223(76.6)	247(83.4)	0.41(0.51)
≥60 years	55(18.9)	36(12.2)	1.82(0.17)
Gender			
Male	191(65.6)	163(55.1)	6.86(0.009)**
Female	100(34.3)	133(44.9)	
Education in years	9.61(4.23)	10.49(4.09)	−2.54(0.01)*
Occupation			
Employed	113(38.8)	101(34.1)	1.40(0.23)
Unemployed	178(61.2)	195(65.9)	

Table 2
Clinical Profile of patients seen before and after the lockdown.

	Pre Lockdown (01/01/2020-23/03/2020) N (%) N = 291	Post Lockdown (24/03/2020-25/07/2020) N (%) N = 296	T Test/ Chi square test (p value)
More than one diagnosis	44(15.4)	39(13.6)	0.003(0.95)
Axis 1	178(61.2)	211(71.3)	6.71(0.01)*
F0 category diagnosis	104(35.7)	58(19.6)	19.14 (<0.001)***
Delirium	86(82.7)	49(84.5)	14.00 (<0.001)***
Dementia	5(4.8)	3(5.2)	0.145(p = 0.70)@
Delirium Superimposed on dementia	3(2.9)	2(3.4)	0.68#
Organic Psychosis & organic personality	10(9.7)	4(1.4)	1.90(0.16)@
F1 category diagnosis	46(15.8)	50(16.9)	0.12(0.72)
Alcohol	20(43.5)	25(50.0)	0.51(0.47)
Opioid	16(34.8)	12(24.0)	0.67(0.41)
Cannabis	3(6.5)	3(6.0)	1.0#
Benzodiazepine	1(2.2)	0	0.49#
Only Tobacco	4(8.7)	2(0.7)	0.44#
More than 1 substance (includes combination of Alcohol, Opioid and tobacco)	2(4.3)	8(16.0)	2.45(0.11)@
F2 Category diagnosis	40(13.7)	61(20.6)	4.85(0.02)*
Schizophrenia	24(60.0)	37(60.7)	2.85(0.09)
Acute and Transient Psychosis	7(17.5)	13(21.3)	1.79(0.18)
Schizoaffective disorder	0	3(4.9)	0.24#
Psychosis NOS	9(22.5)	8(13.1)	0.07(0.77)
F3 Category diagnosis	99(40.0)	116(39.2)	1.68(0.19)
Depressive Illness	60(60.6)	72(62.1)	1.15(0.28)
First Episode	38(63.3)	39(54.1)	0.002(0.96)
Recurrent Depressive Disorder	22(36.7)	33(45.9)	2.25(0.13)
Currently Severe Episode	43(71.7)	45(62.5)	0.02(0.88)
Without Psychotic Symptoms	19(44.2)	28(62.2)	1.71(0.19)
With Psychotic Symptoms	24(54.8)	27(37.8)	0.14(0.70)
Bipolar disorder	39(39.4)	44(37.93)	0.25(00.61)
Hypomania	2(5.1)	0	0.24#
Mania without psychotic symptoms	15(38.4)	9(20.5)	1.67(0.19)
Mania with psychotic symptoms	8(20.5)	19(43.2)	4.50(0.03)*
Mild-moderate depression with/without somatic Symptoms	2(5.1)	3(6.8)	1.00#
Severe depression	7(17.9)	1(2.3)	3.25(0.07)@
Severe depression with psychotic symptoms	2(5.1)	5(11.4)	0.54(0.46)@
Mixed episode	3(7.7)	2(4.5)	0.68#
Remission	0	5(11.4)	3.15(0.07)@
F4 Category diagnosis	42(14.4)	41(13.9)	0.04(0.83)
Dissociation	12(28.6)	18(43.9)	1.15(0.28)
Acute Stress reaction	11(26.2)	3(7.3)	3.70(0.05)@
Adjustment disorder	7(16.7)	7(17.9)	0.001(0.97)
Panic disorder	2(4.8)	1(2.4)	p = 0.62#
Agoraphobia	1(2.4)	0	p = 0.49#
Specific Phobia/ Hypochondriasis (COVID related)	0	1(2.4)	p = 1.00#
Obsessive Compulsive Disorder	6(14.3)	3(7.3)	0.48(0.48)@

(continued on next page)

Table 2 (*continued*)

	Pre Lockdown (01/01/2020-23/03/2020) N (%) N = 291	Post Lockdown (24/03/2020-25/07/2020) N (%) N = 296	T Test/ Chi square test (p value)
Anxiety NOS	3(7.1)	7(17.1)	0.86(0.35)
F6 Category diagnosis	2(0.7)	4(1.4)	0.68#
Cluster B(Borderline and antisocial)	1(50.0)	3(75.0)	p = 0.62#
Cluster C (Anxious)	1(50.0)	1(25.0)	p = 1.00#
F 7 Category diagnosis	3(1.0)	5(1.7)	0.11(0.74)@
Intentional Self harm	38(13.1)	43(14.5)	0.26(0.60)
Overdose/poisoning	32(84.2)	26(60.5)	5.6(0.01)*
Hanging	6(15.8)	11(25.6)	1.16(0.28)
Cutting	0	5(11.6)	2.91(0.08)@
Firearm	0	1(2.3)	p = 1.0#
Catatonia	23(7.9)	16(5.4)	1.47(0.22)
Affective	11	6	0.41(0.52)
Psychotic	8	6	0.03(0.86)
Organic	3	4	p = 0.41#
Others (Obsessive Compulsive Disorder)	1	0	p = 1.0#
Factors preceding the intentional self-harm			
Underlying Mental Illness	16(42.1)	16(37.2)	0.002(0.96)
Not Known	7(18.4)	13(30.2)	1.75(0.18)
COVID related stress	0	2(4.7)	0.49#
Stressor/Impulsive	15(39.5)	12(27.9)	0.40(0.52)
Z63: Other problems related to primary support group, including family circumstances	7(2.4)	14(4.7)	2.29(0.12)
Management Done $			
Drugs	269(92.4)	260(96.6)	3.49(0.06)
Psychotherapy	140(48.1)	122(41.6)	2.82(0.09)
Investigations & referrals	195(67.0)	175(59.1)	3.91(0.04)*
No intervention	3(1.0)	11(3.7)	3.46(0.06)@

*: $p < 0.01$.
***: $p < 0.001$.
@: Chi square test with Yates' correction.
#: Fisher's exact test.
$: The sum of the percentage exceeds one hundred as more than on intervention may have been done in the same patient. F categories: as per the ICD-10.

with delirium, acute stress reaction, number of patients presenting with self-harm by ingestion of poison (Table 2).

The majority of the patients received pharmacotherapy as a part of their treatment along with investigations and referrals to other specialties. Psychotherapeutic intervention was done in more than 40 % of the patients during both the time frames. In the post-lockdown period, a significantly lower proportion of patients underwent investigations and referrals as compared to the pre-lockdown period ($\chi^2 = 3.91$;$p = 0.04$*)

4. Discussion

The closure of regular outpatient services due to COVID-19 pandemic has left the patients in a situation, where they have nowhere to go. However, patients experiencing new-onset severe symptoms, experiencing a relapse, or experiencing suicidal behavior, have no other place to go, other than consulting the emergency services.

Compared to the pre-lockdown period, a significantly higher proportion of female patients attended the emergency services during the lockdown period. This may be a reflection of a higher level of stress for females during the lockdown period. There are many reports of domestic violence, an increase in the interpersonal issues between the couples, and increased workload on the women during the lockdown period (Vora et al., 2020). These all could have led to a more negative impact on women and resultantly seeking psychiatric help more often. In terms of age, there was a reduction in the proportion of elderly seeking psychiatric help, during the lockdown period, when compared to the pre-lockdown period. This is understandable in the background of the fact that elderly people, especially those with multiple physical co-morbidities are more vulnerable to COVID-19 infection and mortality (Leung, 2020). This could have led to them not availing the emergency psychiatry services, despite having psychiatric symptoms requiring urgent attention.

When the number of patients attending the emergency services per day was evaluated, there was a significant reduction in the number of patients seen per day, which is understandable, considering the travel restrictions. In the present study, during the pre-lockdown period, delirium was the most common psychiatric diagnosis and was the major driver of the F0 diagnostic category of ICD-10. Previous studies from our center also suggest that delirium is the most common psychiatric diagnosis, seen in patients evaluated in emergency setting (Grover et al., 2015). However, when the diagnostic profile of patients attending the emergency services during the lockdown period was evaluated, it was seen that there was a significant reduction in the proportion of the patients diagnosed with delirium and a F0 diagnosis. This significant reduction, possibly reflects, reduction in the number of patients with severe physical illnesses, attending the emergency services, as delirium is usually seen in the background of a physical decompensation. This can also be attributed to a possible reduction in referrals from other specialties, as well as overall reduced attendance of patients in the emergency room.

Further, the present study suggests that there was an increase in the proportion of patients with a diagnosis of schizophrenia, availing the emergency services, during the lockdown period. This finding suggests that, in the absence of routine regular services, possibly many patients with schizophrenia experienced a relapse of symptoms and presented to the emergency services. There could be many reasons for relapse, such as difficulty in procuring/purchasing the medication, an increase in the level of stress, and an adverse household environment. Studies done during the lockdown period have provided evidence for all these (Grover et al., 2020a,b; Muruganandam et al., 2020). These findings suggest that people with various mental illnesses are in need of health care services and there is a need to strengthen the emergency services to cater to people with severe mental disorders.

The prevalence of self-harm in both the study periods was similar and comparable to the previous studies. However, the method used showed a change in distribution. Although the use of poison was the most common method, the proportion in the post-lockdown period was lower. A possible reason for this could be lack of access to the same as a result of the restriction of movement and decreased availability at the local shop due to the lockdown. There was an increase in the absolute number of patients presenting with hanging during the lockdown period, however, when compared to the pre-lockdown period, this was not statistically significant. This finding is supported by many reports suggesting an increase in the number of violent suicidal attempts and completed suicides during the lockdown period (Dsouza et al., 2020).

The present study has certain limitations, which include the recording of only a few variables for analysis. Second, we did not evaluate the exact reason for seeking psychiatric help, as understanding this could be more useful in organizing the services and fulfilling the need of the patients attending the emergency psychiatry services.

To conclude, the present study suggests that compared to the pre-lockdown period, during the lockdown period there was a significant reduction in the number of patients seeking emergency psychiatry services. The present study also suggests that the major contributor to this reduction was a lower number of patients with delirium. Additionally, the present study suggests that there was an increase in the number of

patients diagnosed with schizophrenia, presenting to the emergency. These findings have certain implications for the organization of services in the emergency set-up.

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Declaration of Competing Interest

The authors declare that they have no conflict of interest.

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