

Letter to the Editor

Clinical profile and correlates of hospital stay in patients with severe mental illness



To the Editor,

Severe mental illness (SMI) often refers to schizophrenia spectrum disorders and bipolar affective disorders. Patients with severe mental illness often face challenges in their life. Many of these patients fail to attain optimal pre-morbid level of functioning as a consequence of suffering from these ailments. Severe mental illness (SMI) compromises the decision taking ability of the individual, thereby causing impairment in real world functioning (Cáceda et al., 2014). Patients with severe mental illnesses are at higher risk of substance abuse and risky sexual behaviour (Bishop et al., 2016). Patients with severe mental illnesses are more likely to have life style related disorders like- obesity, cardiovascular disorders, sexual dysfunctions, respiratory illnesses, metabolic syndrome as well as infections and cancers, in comparison to general population (Bressington et al., 2013; Hert et al., 2011). Poor life style, medication side effects as well as poor access to health care facilities play a major role for these medical co-morbidities (Hert et al., 2011). The aim of the study was to evaluate the clinical profile and correlates of hospital stay in institutionalized patients with severe mental illness.

A retrospective chart review of patients hospitalized in a particular psychiatric unit of a tertiary care hospital (general hospital psychiatric unit) of North India was done after ethical approval. Data of all patients hospitalized between August 2013 to July 2018, were included in the review. Data of patients diagnosed with schizophrenia spectrum disorders (schizophrenia, ICD-10 code F20; persistent delusional disorder, ICD-10 code F22; schizoaffective disorder, ICD-10 code F25; other non-organic psychotic disorder, ICD-10 code F28; Unspecified psychosis, ICD-10 code F29) and bipolar affective disorder (ICD-10 code F31) and Manic episode (ICD-10 code F30.1 and F30.2) were extracted to a Microsoft excel sheet for analysis. Patients with any mental disorder, other than severe mental illnesses were excluded. Any patient, with missing data were also excluded.

A total of 129 patients were included in evaluation. The mean age of these patients was 31.69 ± 12.14 years and majority of them were males ($n = 93$, 72%). Majority of the patients (85%) belonged to Hindu religion, while rest were Muslims (15%). Also, most of them came from nuclear family ($n = 84$, 65%), 32.5% of patients belonged to joint family ($n = 42$). Three of the study patients were jail inmates at the time of admission, referred to the department either for treatment or medico-legal purposes. Rest of the patients were hospitalized for diagnostic clarification or management of their illness (either they were non-adherent to treatment, absconded from home, developed side effects to medications, psycho-social issues, co-morbid substance use or physical illness, or treatment resistance). Of the 129 subjects with SMI included in our study, 50 subjects (38.76%) were unemployed; 27 (20.93%) were self-employed, 18 subjects (13.95%) were students, another 18 subjects (13.95%) were housewives, 14 subjects (10.85%) were in professional/

government jobs and rest 2 subjects (1.55%) were in other occupations.

Since three of the hospitalized patients were jail inmates and not accompanied by caregivers or family members, reliable information regarding their family history, association of illness with any significant psychosocial stressor was unavailable. Of the rest of the 126 patients, only 19.8% ($n = 25$) had family history of psychiatric illness in first-degree relatives-17 (13.49%) of them having family history of Severe Mental Illnesses (SMI) while 8 (6.34%) patients had history of mental illness other than SMI in their family. A majority (78%) of the patients with SMI in our study had no known history of any mental illness in their family. In majority of patients ($n = 107$, 83%), there was no association with any psychosocial stressor with current episode of illness.

Most of the patients ($n = 79$, 61.24%) were diagnosed with Schizophrenia and related psychotic disorders, while 38.76% ($n = 50$) were diagnosed with Bipolar disorder. The mean duration of hospitalisation for current episode of mental illness among these patients was 23.61 ± 14.29 days. Of the 129 patients whose data were analysed, 92 (71.32%) had single psychiatric diagnosis; of the 37 patients suffering from current psychiatric co-morbidities (other than tobacco use disorder), 25 (19.38% of total) had single current psychiatric co-morbidity while 12 (9.3% of total) had more than one current psychiatric co-morbidity. Among the current psychiatric co-morbidities (other than tobacco harmful use and dependence), current alcohol dependence (6%), current cannabis harmful use and dependence (10.85%), Obsessive compulsive disorder (3.10%) were most common. Depression, Dhat syndrome, Panic disorder, Borderline personality disorder, Paraphilia and mental retardation was present in one patient, each (0.8%).

A significant number of the patients had co-morbid physical illnesses ($n = 59$, 45.74%). 46 of them (35.66%) were suffering from single physical co-morbidity, while 13 (10.08%) patients had more than one physical co-morbidity. The details of physical co-morbidities are mentioned in Fig. 1. Four of the patients were having extrapyramidal symptoms (drug induced) during hospitalization.

Most of these patients (78.22%) had been under some kind of medical treatment prior to the current episode of hospitalisation, while 31.78% ($n = 41$) of them had not received any kind of medical treatment previously. Of those receiving treatment ($n = 88$), 59% ($n = 52$) were compliant to their medications, while 41% ($n = 36$) had irregular compliance. In the catchment area around this tertiary care hospital, seeking for faith healing for treatment of mental ailments is very common. In our study, 57 study subjects (44.2%) had history of seeking faith healing for their mental ailments and 70 subjects (54.26%) had no history of seeking faith healing. No information regarding this aspect was available for two (1.5%) of the patients. A total of 21 patients had received electroconvulsive therapy (number of sessions of electroconvulsive therapy ranged from 2 to 11, with frequency of thrice to twice weekly).

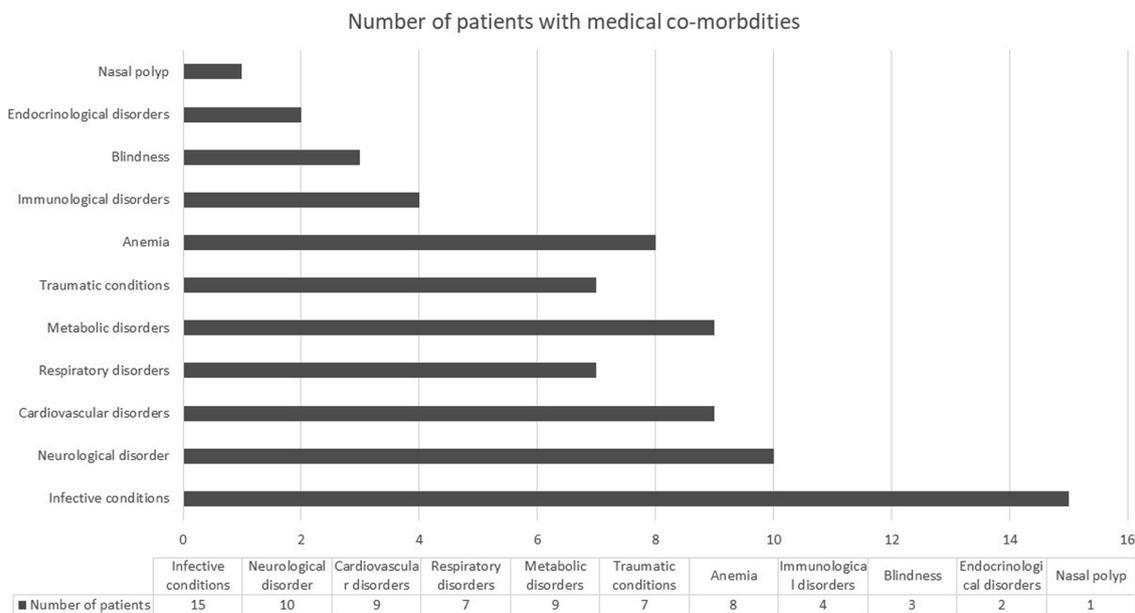


Fig. 1. Medical co-morbidity among patients with severe mental illness.

Table 1
Table showing statistical comparison of mean duration of hospitalisation.

Parameters	Number of patients	Duration of hospitalization (Mean ± S.D)	Test of significance (t-test; t-value, p-value)
1. Medical co-morbidity (N = 129)	Yes (n = 59)	27.16 ± 13.99	1.995 0.0482*
	No (n = 70)	22.18 ± 14.24	
2. Family history of Psychiatric illness (N = 129)	Yes (n = 25)	23.88 ± 13.55	0.103 0.918
	No (n = 104)	23.55 ± 14.53	
3. Tobacco use (life-time) (N = 128)**	Yes (n = 57)	24.21 ± 13.79	0.364 0.7166
	No (n = 71)	23.28 ± 14.82	
4. Stressor (N = 126)#	Yes (n = 19)	29.58 ± 14.52	1.918 0.0574
	No (n = 107)	22.78 ± 14.19	
5. Psychiatric co-morbidity (excluding tobacco use disorder) (N = 129)	Yes (n = 37)	24.36 ± 15.32	0.674 0.5014
	No (n = 92)	22.54 ± 13.25	

* Significant.

** No information is available for one patient, hence N = 128.

No information is available for three patients, hence N = 126.

Coming to the pattern of substance abuse of these subjects during their life-time, 44% (n = 57) had tobacco harmful use or dependence, 21% (n = 28) had history of cannabis harmful use or dependence, followed by alcohol harmful use or dependence in 14% (n = 18) subjects, followed by opioid dependence in 0.78% (n = 1) subjects. The patients of SMI with medical co-morbidities had significantly higher mean duration of hospitalisation than those patients, who had no medical co-morbidities (Table 1).

The recently conducted national mental health survey (NMHS) 2015-16, data suggests that the prevalence of schizophrenia and other psychotic disorders (lifetime: 0.39%; current: 0.09%) is bit lower than that of bipolar affective disorder (lifetime: 0.41%; current: 0.23%) in the community population of Uttar Pradesh, India (Kar et al., 2018). If, we compare the lifetime prevalence of schizophrenia and related psychotic disorders versus bipolar affective disorder, it is almost equal; similarly, comparison between the current prevalence reveal, bipolar affective disorder to be approximately 2.5 times more common than schizophrenia and related psychotic disorders. But when it comes to hospitalization of these patients, more than 60% hospitalizations were

for schizophrenia & related psychotic disorders and less than 40% were due to bipolar affective disorder. This might be due to the fact that schizophrenia and related psychotic disorders were more severe, more disabling and patients spend more time in symptomatic state than those with bipolar affective disorder and hence requiring hospitalization. Nearly one sixth patients in our study had received electroconvulsive therapy, it indicates the severity of their illness, which might be a factor for longer duration of hospitalization in our group of patients.

In our study population, most were males. In another study from a developing country, it was reported that increased hospitalization rates were more among females. However, that study included all patients attending the psychiatric emergency irrespective of their mental illness, which is in contrary to our study population with severe mental illness (Faris et al., 2019).

Co-morbid substance use disorder among patients with SMI was significantly higher than general population as found in our study. As per the national mental health survey (NMHS), community prevalence of tobacco, alcohol and other substance use disorders were found to be 16.06%, 1.52% and 0.47% respectively in the state of Uttar Pradesh (Kar et al., 2018). In the recently, concluded national drug use survey (NDUS), the current prevalence of disorders of use of alcohol (23.8%), cannabis (3.2%), opioids (0.6%) and benzodiazepines (0.2%) were found to be higher (Ambekar et al., 2019). In hospitalized psychiatric patients the life-time prevalence of tobacco, alcohol and other substance dependence and harmful use were 2.74 times, 9.21 times and 46.34 times higher than community prevalence (as per NMHS), respectively. An Indian study on psychiatric inpatients estimated the prevalence of current tobacco use to be 36% and among these current tobacco users, 65% were having dependence to tobacco (Chandra et al., 2005). In a recent study from Thailand, it was seen that the cost of treatment increased due to hospital stay and high-risk drinking among alcohol users (Tanaree et al., 2019). As there is higher prevalence of substance dependence among patients with severe mental illness, it is likely to increase the health care expenses.

Evidences suggest that patients with severe mental illnesses have higher prevalence of medical co-morbidities than general population (De Hert et al., 2009; Phelan et al., 2001; Sokal et al., 2004). Patients with severe mental illness are reported to have more lung disease, diabetes, liver disorders and cardiovascular disorders in comparison to general population. In our study population more than 45% patients had co-morbid physical illness and nearly one third of these patients

had multiple co-morbid physical illnesses. In an Indian study, the prevalence of medical co-morbidities among patients with mental illnesses was found to be 48%, where hypertension is the most common medical co-morbidity followed by respiratory illnesses and anemia (Singh et al., 2006). Evidences support the strong association of physical comorbidities with severe mental illnesses like schizophrenia. Life style related disorders are found to be highly prevalent among patients of schizophrenia (Lambert et al., 2003).

As mental illness adversely influences the help seeking behaviour due to various reasons including stigma (Phelan et al., 2001; Schomerus and Angermeyer, 2008), the co-morbid physical illnesses are also often not properly treated. In our study, patients with SMI with co-morbid medical disorders, required significantly longer hospitalization, as the co-morbid medical illnesses are known to worsen the symptoms of the severe mental illness and add to the disability. Medical and psychiatric co-morbidity have synergistic effect on the severity of disability. Due to the additive effects on the disability, (Scott et al., 2009) these group of patients need more attention and intense intervention. In an Indian multi-centric study, it was found that the health care needs of patients with severe mental illnesses are enormous; those with higher level of symptoms and lower level of functioning have more health care needs (Grover et al., 2015a). The same study found that the health care needs of 1/3 to 1/2 of patients with severe mental illness are not met (Grover et al., 2015b). The findings of this study too suggest that patients with SMI high health care needs due to nature of mental illness as well as associated medical and psychiatric co-morbidities. Hence, this group of patients need more intense evaluation and treatment with regular follow ups. Emphasis also need to be given to address the co-morbidities in the treatment plan and ensuring the treatment compliance. Use of long acting injectable (depot antipsychotics) may be useful for maintaining treatment adherence. Strengthening the psycho-social support and proper psychoeducational interventions during hospitalization might also help in better adherence to treatment and hence better outcome. Patients with SMI have higher prevalence of substance use, other psychiatric morbidities and medical co-morbidities. Patients who had medical co-morbidities had significantly longer hospital stay.

Small sample size, retrospective evaluation of the data and unavailability of symptom severity (on rating scale) were the major limitations of the study. Further studies in a larger population may give better understanding about the institutionalized patients with severe mental illness.

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Declaration of Competing Interest

Nil.

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