

Utilization of Emergency Psychiatry Service in a Tertiary Care Centre in North Eastern India: A Retrospective Study

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ABSTRACT

Background: In a developing country like India, with a lot of psychosocial stressors and ample stigma toward psychiatry, we studied the sociodemographic pattern of the patients coming to a tertiary care center for emergency psychiatry services and also evaluated the types and pattern of emergency services provided to them. We also assessed the predominant presenting complaints with which patients presented at the emergency department, “reasons for referral” in an emergency by other departments, and types of psychiatric diagnoses in the patients. **Subjects and Methods:** Data were extracted retrospectively from the general emergency and psychiatry emergency register of Silchar Medical College and Hospital for 1 year and analyzed. **Results:** Out of 41,040 patients attending the hospital seeking emergency care, referral rate to the psychiatric emergency was only 2.8%. The commonest presenting complaint of subjects who were referred was “medically unexplained somatic complaints” (47.70%). The main reason for a referral from other departments was “no physical illness was detected” in the patient (38.59%). About 78.8% of the subjects were diagnosed as having a proper psychiatric illness, with the majority presenting with stress-related and somatoform disorders (F40–49) (43.45%). **Conclusion:** This study highlights various important parameters regarding emergency services being provided and their utilization by the patients attending a psychiatric emergency, which could be helpful for future policies and resource allocation for providing superior quality and cost-effective mental health care to the patients.

Key words: *Developing country, emergency psychiatry, presenting complaints, reasons for referral, tertiary care hospital*
Key messages: *There is a necessity of improvement of primary psychiatry delivery system in Barak Valley, Assam, India.*

INTRODUCTION


Emergency psychiatry is the service provided with the intention of providing immediate therapeutic

interventions for “any disturbance in thoughts, feelings, or actions.”^[1] The role of a psychiatrist in an emergency

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setup of a tertiary care center in consultation-liaison is manifold. He/She not only needs to address a person suffering from psychiatric illness but also needs to assess the associated bio-psycho-social problems and provide appropriate opinion or management for immediate redressal.

In a country like India, where psychiatric consultation is associated with a lot of social stigmas, the study of psychiatric emergency services is an interesting and comprehensive way to recognize the subset of people who utilize the psychiatric services and would provide a gross idea about the prevalence of various psychiatric illnesses in the community. It also gives us information about how practitioners from other disciplines handle the patients in need of emergency psychiatric help.^[2] A study like this also provides information about the common presenting complaints of the patients attending a psychiatric emergency, which may vary depending on the sociocultural characteristics of the area. Numerous such studies have been carried out in various countries, namely by Ang *et al.*^[3] in Singapore, Salkovskis *et al.*^[4] in England, and Stebbins and Hardman^[5] at Boston, United States of America. Newer works conducted in this decade include studies done by Shakya *et al.*^[6] in Nepal, Chaput *et al.*^[7] in Quebec, Canada, and Shahid *et al.*^[8] at Karachi, Pakistan. A few such studies have been conducted in India, like research by Kelkar *et al.*^[9] in Chandigarh, Bhatia *et al.*^[10] in Delhi, and Keertish *et al.*^[11] in Tumkur. These kinds of studies provide the much-needed information required for better preparedness and to formulate strategies for emergency psychiatric and liaison-consultation services. However, most of the Indian data on this topic are from pre-1990s and with small sample size.

Thus, with this background, we conducted this study to evaluate the specific important demographic variables and the predominant presenting complaints of the patients attending the emergency psychiatry department, to determine the various reasons for referral of these patients by other departments, and to gain knowledge about the primary psychiatric diagnosis established and the measures or steps taken after diagnosis of the patient. The present study had a large sample size and was done over a period of 1 year in a tertiary care center in the northeastern part of India.

SUBJECTS AND METHODS

This study was carried out in a tertiary care teaching hospital providing health services to most southern part of Assam, along with the neighboring states of Tripura, Meghalaya, Mizoram, and Manipur. This hospital provides a 24-h walk-in general emergency service in most of the medical disciplines including psychiatry. At

first, the patient is attended by a postgraduate resident doctor on duty at emergency, where he/she evaluates the patient, provides the initial basic treatment, maintains a record of the workup, and, if required, refers the patient to appropriate specialty departments for further evaluation and treatment. Thus, when the patient comes to the psychiatry department, he/she is further evaluated by the resident doctor and the postgraduate resident of psychiatry on duty. Initial workup and evaluation of the patient are done, after which appropriate treatment or opinion is provided, and a record is kept in the departmental register.

The psychiatry department emergency register contains data which include patients' hospital number, basic sociodemographic information, date and time of emergency visit, patients' complaint, the reason for referral, department from which the patient was referred, provisional diagnosis, medication prescribed, and, if required, department to which the patient is referred.

This was a retrospective chart review study conducted after obtaining hospital ethics committee approval. Data were extracted from the general emergency and psychiatry department emergency register for 1 year from 1 November 2014 to 31 October 2015.

RESULTS

A total of 41,040 patients, including the patients asking for psychiatric interventions, attended the general emergency of Silchar Medical College and Hospital during the study period. The data were tabulated in Microsoft Excel spreadsheet under appropriate columns. Pivot charts were created in Microsoft Excel, and the data were grouped accordingly. The psychiatric diagnosis made provisionally was categorized according to the International Classification of Diseases version 10. The chief complaints of the patients were grouped appropriately. SPSS version 22 was used to evaluate the basic descriptive statistics.

The total number of patients referred to psychiatry emergency – either directly from the emergency department or from various other departments – was 1153. Referral rate to psychiatry emergency was found to be 2.8%.

The distribution of the specific important demographic variables of the patients is tabulated in Table 1. About 52.21% of the subjects were females while 47.78% were males. Table 2.1 shows the distribution of the total number of referrals from various departments. The predominant complaints with which the patients presented in the general emergency department are

grouped and shown in Table 2.2. It shows that almost 47.70% of the patients presented with some sort of somatic complaints (any physical symptom that could not be explained by any detectable physical disorders excluding headache). The next most common presentation was abnormal behavior (13.79%). The

reasons for which the first responder physician referred the patient from general emergency to psychiatry emergency are tabulated in Table 2.3, which shows that maximum referrals were for cases where “no physical illness was detected” in the patient (38.59%).

Table 1: Distribution of the specific important demographic variables of the total number of subjects

	Female (%)	Male (%)	Total patients (%)
Total	602 (100.00)	551 (100.00)	1153 (100.00)
Age			
1-10	3 (0.50)	3 (0.54)	6 (0.52)
11-20	189 (31.40)	87 (15.79)	276 (23.94)
21-30	203 (33.72)	196 (35.57)	399 (34.61)
31-40	108 (17.94)	119 (21.60)	227 (19.69)
41-50	63 (10.47)	86 (15.61)	149 (12.92)
51-60	25 (4.15)	36 (6.53)	61 (5.29)
61-70	9 (1.50)	17 (3.09)	26 (2.25)
71-80	2 (0.33)	7 (1.27)	9 (0.78)
Religion			
Christian	0 (0.00)	2 (0.36)	2 (0.17)
Hindu	300 (49.83)	318 (57.71)	618 (53.60)
Muslim	297 (49.34)	222 (40.29)	519 (45.01)
Others	5 (0.83)	9 (1.63)	14 (1.21)
Domicile			
Rural	357 (59.30)	355 (64.43)	712 (61.75)
Urban	245 (40.70)	196 (35.57)	441 (38.25)

Table 2.1: Distribution of the patients according to the various referring department

Department	Number of patients (%)
Direct referral from general emergency	855 (74.15)
Medicine	267 (23.16)
ENT	9 (0.78)
OBG	7 (0.61)
Surgery	7 (0.61)
Pediatrics	4 (0.35)
Ophthalmology	2 (0.17)
Orthopedics	2 (0.17)

OBG: Obstetrics & gynaecology; ENT: Ear, nose, and throat

Table 2.2: Distribution of the predominant presenting complaints with which the patient presented to the emergency department

Presenting complaints	Number of patients (%)
Abnormal behavior	159 (13.79)
Feeling tensed/anxious	135 (11.71)
Altered sensorium	104 (9.02)
Excitement and violence	88 (7.63)
Headache	38 (3.30)
Inability to concentrate	8 (0.69)
Inability to remember	10 (0.87)
Insomnia	34 (2.95)
Somatic complaints	550 (47.70)
Suicidal attempt	16 (1.39)
Voluntarily came for de-addiction	11 (0.95)

Table 2.4 shows the diagnostic evaluations of the total sample. Out of the total 1153 cases referred, a provisional diagnosis of proper psychiatric illness could be made in 909 cases (78.8%), whereas in 182 patients, the diagnosis was deferred (15.78%), and in 62 patients (5.3%), a provisional diagnosis other than a psychiatric diagnosis was made. The outcome of those referrals is tabulated in Table 2.5.

The provisional diagnosis according to ICD-10 categories across both the genders made by the attending psychiatrist or psychiatry resident at the psychiatry emergency department is tabulated in Table 3. Table 4 shows the distribution of the individual psychiatric diagnoses according to gender as per ICD-10 criteria.

DISCUSSION

Specific important demographic characteristics and their association with various ICD-10 diagnoses

We found that the maximum number of patients attending the emergency in need of psychiatric consultation are in their third decade of life (34.61%) and the mean age of the subjects was 30.88 ± 13.38 years. The majority of cases (78.75%) having an ICD-10 psychiatric diagnosis were from the age range of 1–40 years as compared to 41–80 years (21.24%). Majority of the cases in the category F10–19 were from the age range of 1–40 years (74.46%). Since most of the people are likely to begin abusing drugs including tobacco, alcohol, and illegal and prescription drugs during adolescence and young adulthood, various studies^[12,13] suggest that by the time they are seniors in school, almost 70% of high school students will have tried alcohol, half will have taken an illegal drug, nearly 40% will have smoked a cigarette, and more than 20% will have used a prescription drug for a nonmedical purpose. Out of the category F40–49, we found that 83.63% of the cases were from the age range of 1–40 years. In this study, anxiety disorders have emerged as the most prevalent mental disorders in the general population. Martin^[14] observed that anxiety disorders are more prevalent in the younger age groups due to the presence of high stress during this period, which is similar to our study.

Genderwise, we found that the maximum number of cases with an ICD-10 psychiatric diagnosis were

Table 2.3: Distribution of the various reasons for referral from various departments

Reason for referral	Number of patients (%)
Management of associated psychiatric symptoms	258 (22.38)
Organic illness insufficient to explain symptoms	63 (5.46)
Predominant psychiatric symptoms	387 (33.56)
No physical illness detected	445 (38.59)

Management of associated psychiatric symptoms - provisional diagnosis regarding physical illness was made along with which there were associated psychiatric illnesses confirmed by previous records of patient. Organic illness insufficient to explain symptoms - organic illness, mostly neurological, was confirmed but the associated behavioral abnormality could not be explained by this organic illness. Predominant psychiatric symptoms - predominant presentation was psychological/behavioral abnormality with or without confirmed previous records with minimal physical illness. No physical illness detected - some behavioral or psychological abnormality present where no physical abnormality was detected to explain the nature and type of psychological/behavioral abnormality

Table 2.4: The diagnostic evaluations of the total sample

Diagnosis of the patient	Number of patients (%)
Provisional diagnosis of proper psychiatric illness	909 (78.8)
Diagnosis deferred	182 (15.78)
Diagnosis other than psychiatric illness	62 (5.3)

Table 2.5: Distribution of measures/steps taken for the patient attending the psychiatric emergency

	Number of patients (%)
Admitted	89 (7.72)
Referred to other departments	316 (27.4)
ENT	13 (1.13)
Medicine	239 (75.63)
Multidepartmental	13 (1.13)
OBG	18 (1.56)
Ophthalmology	5 (0.43)
Orthopedics	8 (0.69)
Pediatrics	3 (0.26)
Surgery	17 (1.47)
Treated and discharged	748 (64.87)
Grand total	1153 (100)

OBG: Obstetrics & gynaecology; ENT: Ear, nose, and throat

Table 3: The distribution of the total cases according to the International Classification of Diseases-10 categories across both the genders

Diagnosis	Female (%)	Male (%)	Total patients (%)
Organic, including symptomatic, mental disorders (F00-09)	5 (0.83)	10 (1.81)	15 (1.30)
Mental and behavioral disorders due to psychoactive substance use (F10-19)	7 (1.16)	87 (15.79)	94 (8.15)
Schizophrenia, schizotypal, and delusional disorders (F20-29)	71 (11.79)	82 (14.88)	153 (13.27)
Mood (affective) disorders (F30-39)	56 (9.30)	68 (12.34)	124 (10.75)
Neurotic, stress-related, and somatoform disorders (F40-49)	340 (56.48)	161 (29.22)	501 (43.45)
Behavioral syndromes associated with physiological disturbances and physical factors (F50-59)	8 (1.33)	11 (2.00)	19 (1.65)
Disorders of adult personality and behavior (F60-69)	0	1 (0.18)	1 (0.09)
Behavioral and emotional disorders with onset usually occurring in childhood and adolescence (F90-99)	0 (0.00)	2 (0.36)	2 (0.17)
Epilepsy (G40)	8 (1.33)	16 (2.90)	24 (2.08)
Migraine (G43)	3 (0.50)	4 (0.73)	7 (0.61)
Other headache syndromes (G44)	14 (2.33)	17 (3.09)	31 (2.69)
Deferred	90 (14.95)	92 (16.70)	182 (15.78)
Grand total	602 (100.00)	551 (100.00)	1153 (100.00)

females (52.21%). Various national and international studies suggest that stress-related neurotic and anxiety disorders are more prevalent in women.^[14,15]

Referral rate and the reason for the referral of patients from other departments

A total of 41,040 patients attended the general emergency of the hospital in the given 1-year period, and 1153 patients were referred to psychiatry emergency. The psychiatry referral rate from the emergency department was found to be 2.8%, and the result is comparable to that of other studies from the subcontinent.^[8-11] Various factors like number of tertiary care centers available, number of specialized psychiatry service centers present in the area, and sociocultural factors affect the pattern of utilization of emergency psychiatry services of a particular center. The doctor at emergency referred the cases mostly when “no physical illness was detected” in the patient, followed by cases where “predominant psychiatric symptoms” were present.

Predominant presenting complaints

Most patients presented to emergency psychiatry with some sort of somatic complaints (47.7%). The next common presentation was abnormal and disorganized behavior (13.79%). The prevailing sociocultural stressors and social unrest, which is going on for the last three decades in this part of the country, maybe indirectly contributing to the increased number of somatoform and stress-related disorders in our study. The above findings also show that patients who are usually referred to psychiatrists from emergency mainly present with somatic symptoms and that physicians of other disciplines want to involve psychiatrists when they do not find any clinically relevant medical/surgical findings to explain the complaints of the patient: 74.15% patients were direct referrals from the Department of Emergency, followed by referrals from Department of Medicine (23.16%).

Table 4: Distribution of the patients within each International Classification of Diseases-10 category across both sexes

Diagnosis	Female (%)	Male (%)	Total patients (%)
F00-09			
Delirium	4 (80.00)	7 (70.00)	11 (73.33)
Dementia	1 (20.00)	3 (30.00)	4 (26.67)
Total	100	100	
F10-19			
F10	5 (71.43)	58 (66.67)	63 (67.02)
F11	0 (0.00)	10 (11.49)	10 (10.64)
F12	1 (14.29)	5 (5.75)	6 (6.38)
F13	0 (0.00)	2 (2.30)	2 (2.13)
F17	1 (14.29)	0 (0.00)	1 (1.06)
F19	0 (0.00)	12 (13.79)	12 (12.77)
Total	100	100	
F20-29			
F20	40 (56.34)	45 (54.88)	85 (55.56)
F22	1 (1.41)	0.00	1 (0.65)
F23	26 (36.62)	28 (34.15)	54 (35.29)
F25	2 (2.82)	7 (8.54)	9 (5.88)
F28	1 (1.41)	1 (1.22)	2 (1.31)
F29	1 (1.41)	1 (1.22)	2 (1.31)
Total	100	100	
F30-39			
F30	14 (25.00)	16 (23.53)	30 (24.19)
F31	11 (19.64)	30 (44.12)	41 (33.06)
F32	31 (55.36)	22 (32.35)	53 (42.74)
Total	100	100	
F40-49			
F40	29 (8.53)	42 (26.09)	71 (14.17)
F43	22 (6.47)	11 (6.83)	33 (6.59)
F44	279 (82.06)	101 (62.73)	380 (75.85)
F45	10 (2.94)	7 (4.35)	17 (3.39)
Total	100	100	
F50-59			
F53	5 (62.50)	0 (0.00)	5 (26.32)
Primary insomnia	3 (37.50)	11 (100.00)	14 (73.68)
Total	100	100	
F60-69			
F60	1 (100.00)	0	1 (100.00)
F90-99			
F90	2 (100.00)	0.00 (0.00)	2 (100.00)

Psychiatric diagnosis

Out of the total 1153 cases referred, a provisional diagnosis of proper psychiatric illness could be made in 909 cases (78.8%). Neurotic, stress-related, and somatoform disorders (F40–49, 43.45%) were the next most common diagnosis. There was a significant difference in gender distribution among the patients of this category (male: female – 1:2.11). Schizophrenia, schizotypal, and delusional disorders (F20–29) group comprised 13.27% of the total number of cases. Mood (affective) disorders (F30–39) were found in 10.75% of the cases, with a male predominance (male:female – 1.21:1). Among the individual types, bipolar affective disorder (F31) was found to be

significantly higher among males (44.12%) than females (19.64%), whereas depressive disorder (F32) was found to be more common in females (55.36%) than in males (32.35%) in this group, which is as per the previously available literature.^[16,17]

About 64.87% of the total patients were provided with emergency care and discharged after temporary observation, and only 7.72% of the total patients needed admission. Regarding the management of the patients at psychiatry department, the routine emergency protocol was adhered to, which included initial management with pharmacotherapy followed by other interventions like brief psychotherapy and psychoeducation to the primary caregiver as well as other family members.

CONCLUSION

This audit of the data, we have obtained here, is to understand the specific important demographic variables and the predominant presenting complaints of the patients attending the emergency psychiatry department, to determine the various reasons for referral of these patients by other departments, and to gain knowledge about the primary psychiatric diagnosis established and the measures or steps taken after diagnosis of the patient, with a larger sample size. Some recommendations that can be made from our observations are that first, there should be proper training of the emergency health-care providers on common psychiatric disorders, as a large bulk of the patients with psychiatric disorder seems to visit the emergency department. Second, most patients with pure psychiatric problems are coming from the rural population. This signifies the necessity of improvement of primary psychiatry delivery system in this region, and finally, since this study highlights various important parameters regarding emergency services provided and their utilization by the patients attending psychiatric emergency, it could be helpful information for future policies and resource allocation for providing superior quality and cost-effective mental health care to the patients.

However, this study had some limitations. As this is a tertiary care hospital-based study, the findings of this study may not reflect the actual pattern of psychiatric illnesses requiring emergency psychiatric care which are prevalent in the community at large. Also, since this is a retrospective descriptive study, the final outcomes of the patients getting emergency services were not evaluated. Further prospective studies are recommended on this topic for better evaluation of various parameters.

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Conflicts of interest

There are no conflicts of interest.

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