

## **A DESCRIPTIVE STUDY OF REFERRAL PATTERN IN DEPARTMENT OF PSYCHIATRY IN A TERTIARY CARE HOSPITAL**

**Pavan Kumar K<sup>1</sup>, Sinjoni Roy<sup>2</sup>, Ravinder Anaveni<sup>3</sup>**

Assistant Professor<sup>1</sup>, Post Graduate<sup>2</sup>, Dept of Psychiatry, Assistant Professor<sup>3</sup>, Dept of Community Medicine, Chalmeda Ananda Rao Institute of Medical Sciences, Bommakal, Karimnagar, Telangana.

### **ABSTRACT**

**Background:** Study of referral pattern to a Psychiatry Department helps us to understand the prevalence of psychiatric disorders in in-patients of a tertiary care hospital. It also helps us to assess the need of sensitization of the primary care physicians and for improvement of General Hospital Psychiatric Units (GHPU).

**Objective:** The aim of the study was to assess the nature of referral services to a General Hospital Psychiatric unit

**Material and Methods:** All successive inpatient referrals for a period of nine months were included in the study. Socio demographic characteristics of the patients were analysed, they were classified according to the referring department, the reason for referral and current psychiatric diagnosis.

**Results:** A total of 114 (0.95%) patients were referred to our department over a period of 9 months out of a total of 11948 admissions in the period. The major reason for referral was altered sensorium (24.5%) followed by unexplained medical symptoms with low mood (21%) and suicide attempts by different means including Deliberate Self Harm (DSH) (17.5%).

**Keywords:** GHPU, Consultation Liaison Psychiatry, Co-morbidity, medically unexplained symptoms.

### **INTRODUCTION**

Consultation–Liaison Psychiatry is a subspecialty of psychiatry that incorporates clinical service, teaching, research at clinical service, teaching and research at the borderland of psychiatry and medicine (Lipowski, 1983).

A Consultation Liaison Psychiatrist has two interrelated roles to play according to Lipowski. A Consultation is a request for having an expert opinion and Liaison refers to the duty of the psychiatrist to link the patients to other medical professionals and the patient's bio-psycho-social aspects that may be responsible for the symptoms. In this process he needs to have a personal contact with the family members of the patients.<sup>[1-4]</sup>

#### **General Hospital Psychiatric Units:**

The first General Hospital Psychiatric Unit was started in 1887 at Barnhill Parochial Hospital, Glasgow. The Mental Treatment Act of 1930 and subsequent official encouragement led to opening of psychiatric wards in teaching hospitals and outpatient clinics in several hospitals. A number of hospitals also allowed

psychiatrists to admit their patients to general medical wards. Henry<sup>[6]</sup> discussed general hospital psychiatry in the United States.

The first General Hospital Psychiatric Unit in India was set up by Dr. Girindra Shekhar in R.G. Kar Hospital, Calcutta (now Kolkata) in 1933.<sup>[7]</sup> By 1970, about 90 psychiatric clinics were in operation (Directory of Mental Health Services in India, 1970).

The variety of psychiatric case material seen in general hospital psychiatric units are large when compared to those seen in designated mental health institutes.<sup>[8]</sup> The referrals from in-patients would offer another study design for assessment of psychosomatic illness<sup>[9]</sup>.

#### **Scope of General Hospital Psychiatry Units**

The General Hospital Psychiatry Units (GHPU's) have to exercise the expertise in the diagnosis and treatment of psychiatric disorders and also manage complex medically ill patients.

#### **Typical issues include:**

1. Patients with medical conditions that result in psychiatric or behavioural symptoms, such as **delirium**.
2. Supporting the management of **patients with psychiatric disorders** who have been admitted for the treatment of medical problems.

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#### **Address for Correspondence:**

Dr. Pavan Kumar K, M.D. (Psy),  
Assistant Professor of Psychiatry,  
Chalmeda Ananda Rao Institute of Medical Sciences,  
Bommakal, Karimnagar, Telangana.  
Email: drrag27@gmail.com

3. Assisting with assessment of the capacity of a patient to consent to treatment.
4. Patients who may report physical symptoms as a result of a mental disorder, or patients with **medically unexplained physical symptoms**.
5. Patients who may not have a psychiatric disorder but are **experiencing distress** related to their medical problems.
6. Patients who have **attempted suicide or self-harm**,
7. Assisting with the diagnosis, treatment and functional assessment of people with dementia, including advice on discharge planning or the need for long-term care.
8. Psychiatric disorders that are the direct consequence of a primary medical condition or its treatment.<sup>[5]</sup>

### **Review of Literature:**

Psychiatric co morbidity has been reported to be very high (8 to 53%) in primary health care units in developing countries including India.<sup>[10,11]</sup> The rate of psychiatric co-morbidity in hospitalized physically ill patients at tertiary care unit was high 5% to 50% & 52.5%<sup>[12]</sup> Studies also found out that the prevalence of mental disorder in patients with chronic illness is around 42% compared to 33% who did not have long-term physical illness<sup>[12]</sup>.

A study of referrals from general wards of Guy's Hospital London for one year was compared with earlier study of the same institute by Anstee<sup>[13]</sup> and found referrals had increased from 4 to 16 per cent. In another British study, Maguire et al.<sup>[14]</sup> found Mood disorders were the major diagnosis (80%), followed by Psychosis due to General Medical Conditions (13%). Karasu et al<sup>[15]</sup>, reported 40% of the referral was from medicine, 16% surgery, 9% Neurology, 8% Genitourinary, 5% Obstetrics-Gynaecology, 5% Rehabilitation and 5% Plastic surgery in a study done at New York hospital in 1973.

In one study done by Tsoi and Kok<sup>[16]</sup> at Singapore General Hospital, the psychiatric morbidity was assessed in all the referrals made according to ICD-9 and have found neurotic disorders (37.5%), Organic Psychosis (19%) and other psychiatric conditions (22%).

Ramchandani et al,<sup>[17]</sup> at five urban teaching general hospitals in Philadelphia, New York City, and Providence in 1995 reported several diagnostic categories, e.g. alcohol and drug addiction and organic brain disorders, deliberate self-harm besides other psychiatric disorders being common referrals.

### **Studies from India:**

Researchers have found that the referral rate is lower in India compared to the western world. Jindal et al<sup>[18]</sup> (1980) found referral rate to be around 0.15% in their study when compared to other studies done by Prabhakaran (1.4%) and Parekh et al (0.66%)<sup>[19,20]</sup>. R.S. Murthy stated that the twentieth century has dramatically changed the concept regarding psychological health from mental illness to mental health<sup>[21]</sup>.

A retrospective study was done by Bhogale et al. in which 338 psychiatric referrals over a period of about a year were studied. Socio-demographic data, source and reason for referral, diagnosis and treatment advised were noted. More than two-third of the referrals were male patients and belonged to the productive age group of 16 years to 45 years. 83.17% of the patients were referred from general medicine, medicine allied and medical super specialty departments. Unexplained physical symptoms were the commonest reason for referral (64.44%). The commonest psychiatric diagnosis was neurotic, stress related, somatoform disorders (45.54%)<sup>[22]</sup>.

Kelkar et al,<sup>[23]</sup> carried out a study of emergency psychiatric referrals at the outpatient department of Nehru Hospital attached to Post graduate institute of medical education and research (PGIMER) Chandigarh between July 26<sup>th</sup> and August 31<sup>st</sup>, 1981. The referral rate was 5.4%. Most common reason for referral was predominant psychiatric symptoms (43%), no physical illness detected (18%), previously diagnosed psychiatric illness (15%) etc. Major presenting complaints were somatic symptoms, suicidal attempts; hysterical fits, etc. 51% of the cases were diagnosed with neurosis, 13% with functional psychosis, and 8% with acute situational disturbance. The authors lamented about the lack of privacy during the interview in emergency outpatient departments.

In a study of 520 patients referred for psychiatric consultation in a tertiary care teaching hospital in South India, Keertish et al<sup>[24]</sup> found neurotic, stress related & somatoform disorders most common. This category includes some common psychiatric conditions like panic disorder, generalized anxiety disorder, adjustment disorders and somatoform disorders.

A review of Indian literature by Grover et al<sup>[25]</sup> showed psychiatric referral rates in India to be anywhere between 0.06% to 3.6%.

In one study by Makhil Manabendra and Majumder Uttam<sup>[26]</sup>, they observed referrals made to Psychiatry Department over a period of six months and found a total of 264 referrals were made comprising 0.89% in-

patients. Of these referrals, 89.5% were from Department of General Medicine, followed by Obstetrics and Gynaecology Department (3.8%). The most common reason for consultation was Deliberate Self Harm (DSH) (80, 30.34%), Depression (55, 20.8%), Substance Use Disorder (SUD), (41, 15.5%).

**Effectiveness of Consultation-Liaison Psychiatry Services:**

An evaluation of the Rapid Assessment, Interface and Discharge (RAID) model of liaison psychiatry — employed at City Hospital, Birmingham— estimated that the service saved between 43 and 64 beds per day through reduced lengths of stay and prevention of readmission.<sup>[31]</sup>

In 2011, the Centre for Mental Health published an economic evaluation of the service, estimating savings of around £3.5 million. This was followed in 2012 by the publication of a report recommending that every NHS hospital should have a liaison psychiatry service as standard.

**MATERIAL AND METHODS**

- The study was done in a multispecialty teaching hospital cum tertiary care hospital situated in rural area of Telangana, India.
- The study included all the consecutive cases referred from different Inpatient wards to psychiatry department for consultation, during the nine months period from 1<sup>st</sup> August 2014 to 30<sup>th</sup> April 2015.
- It is a Cross-sectional descriptive study.
- ICD-10 (The International classification of diseases, 10<sup>th</sup> revision) was used to diagnose the referred cases.
- Informed consent/assent which ever applicable was taken from each patient participating in the study

**AIMS AND OBJECTIVES**

- To study the pattern of socio-demographic characteristics.
- To study the magnitude & pattern of psychiatric referrals.

**Statistical Analysis:**

- DESCRIPTIVE ANALYSIS was computed in terms of mean & standard deviation for continuous variables & frequency with percentage for ordinal & nominal variables.
- The SPSS (Statistical package for social sciences), version 16 was used for the analysis of the data of this study.

**RESULTS**

- A total of 114 inpatient referrals were done to the psychiatric unit over a period of 9 months between 1<sup>st</sup> august 2014 to 31<sup>st</sup> April 2015. Out of the total 11948 patients admitted in the hospital during this period, only 114 patients (0.95%) were referred for psychiatric consultation.
- The average age of the patients was 38.75 years with S.D. 19.381; Majority of the patients belonged to the age group 21-30 years. The Male: Female ratio was 1.03, with number of males outnumbering females. The average time taken from admission to referral was 5(S.D. 1.2) days. (Table 1)

**Table 1: showing the sex distribution of the referred patients to Psychiatry Department**

| Sex    | Frequency | Percent |
|--------|-----------|---------|
| Female | 56        | 49.1    |
| Male   | 58        | 50.9    |
| Total  | 114       | 100     |

**Department wise referrals:**

- The major source of referrals (24, 21.1%) was from Acute Medical Care (A.M.C) Unit Followed by General Medicine Wards (21, 18.4%) and third by Orthopaedics department (18, 15.8%).
- The referral rate from other major (Pediatrics, G.Surgery, Obs & Gynae) & minor disciplines was low. (Table 2)

**Table 2: showing Department wise referrals to Psychiatry Department:**

| Department                        | Frequency | Percentage |
|-----------------------------------|-----------|------------|
| Acute Medical Care Unit           | 24        | 21.1       |
| General medicine wards            | 21        | 18.4       |
| Orthopaedics                      | 18        | 15.8       |
| General Surgery                   | 09        | 7.9        |
| Casualty                          | 09        | 7.9        |
| Paediatrics                       | 09        | 7.9        |
| Intensive Cardiac Care unit       | 08        | 7.0        |
| Tuberculosis and Chest Department | 07        | 6.1        |
| Obstetrics and Gynaecology        | 04        | 3.5        |
| Oncology                          | 03        | 2.6        |
| C T Surgery                       | 02        | 1.8        |
| Total                             | 114       | 100        |

**Reasons for referral:**

- Patients with acute onset of altered sensorium, irrelevant talk, behavioural abnormality, formed the major chunk of the reason for referral (28, 24.55%).
- The second most common reason for referral was due to patients complaining of low mood & other depressive/ anxiety symptoms (24, 21%).
- Suicidal attempt by various means like, poisoning, hanging, cut wrist & other means formed the 3<sup>rd</sup> most common reason for referral (20, 17.5%).(Table 3)

**Table 3: Showing reasons for referral to Psychiatry Department:**

| Reasons for referral                                      | Number | Percentage |
|---|--------|------------|
| Altered sensorium   | 28     | 24.5       |
| Low Mood/ Unexplained medical symptoms                    | 24     | 21.0       |
| Suicide attempt by different means                        | 20     | 17.5       |
| Past H/o Psychiatric Illness or on Psychiatric medication | 15     | 13.1       |
| Abnormal behaviour in post-partum period                  | 4      | 3.5        |
| Behavioural problems and school refusal in children       | 9      | 7.8        |
| Patients apparently having neurological symptoms          | 14     | 12.2       |
| Total   | 114    | 100        |

**Final diagnosis:**

The most common diagnosis made in the referrals was Alcohol Withdrawal syndrome. 24 patients (21%) had this diagnosis. This may be because of the traditional use and excessive prevalence of Alcohol in the catchment area of our hospital. The second most common diagnosis, a number of sixteen (14%) were Unipolar Depression. Few patients were already on treatment for Depression, admitted with medical problems. This was followed by medically unexplained symptoms and Anxiety disorders each comprising 15 (13.1%). This could be because of the fact that patients with anxiety disorders tend to consult various other departments like Cardiology, Gastroenterology before they have the psychiatric consultation.

The third commonest reason for referral was suicide attempts by various means. Though Organophosphorous compound ingestion was the commonest form of suicide attempt, wrist slashing, near drowning was also seen. Most commonly these were impulsive

suicidal attempts following relationship issues in adolescents and young adults and financial issues in middle aged group. Referrals from Paediatric Department mainly were for IQ assessment and School refusal. The most common diagnosis we made in Paediatric referrals were Mild to Moderate Mental Retardation 5 (4.3%), Dissociative (Conversion) disorders and in few cases it was Seizure Disorder with transient psychosis. Schizophrenia was observed in 6 patients (5%) in total referral cases.

**Table 4: Showing the Psychiatric Diagnosis according to ICD-10**

| Diagnosis   | Number | Percentage |
|---|--------|------------|
| Alcohol withdrawal Syndrome                                     | 24     | 21         |
| Dementia  | 4      | 3.5        |
| Unipolar Depression   | 16     | 14         |
| Bipolar Affective Disorder                                      | 4      | 3.5        |
| Schizophrenia   | 6      | 5          |
| Anxiety disorders including Panic disorder, GAD, Phobia and OCD | 15     | 13.1       |
| Somatoform disorders  | 15     | 13.1       |
| Dissociative (Conversion) Disorder                              | 8      | 7          |
| Mental retardation  | 5      | 4.3        |
| Conduct disorder  | 1      | 0.8        |
| ADHD  | 1      | 0.8        |
| Personality Disorders   | 4      | 3.5        |
| Polysubstance Abuse   | 3      | 2.6        |
| ADR due to Psychotropic use E.P.S.                              | 3      | 2.6        |
| Post-partum Psychosis   | 3      | 2.6        |
| No Psychiatric Diagnosis  | 2      | 1.6        |

**DISCUSSION**

The referral rate of our institute was around 0.95% which is comparable to study reported by Flemminger and Mallet<sup>[28]</sup>. It was consistent with the findings of Grover et al where they suggested that the referral rate in India varies between 0.06 to 3.6%. Our findings suggest that the referral rate was low in our institute when compared to US study<sup>[29]</sup>. But the referral rate in our institute was higher than the study done by Makhil Manabendra<sup>[26]</sup>. Majority of our patients were middle age group which is consistent with many other studies<sup>[11]</sup>.

Our findings report that majority of the diagnosis the referrals received was Alcohol Withdrawal Syndrome. As many as 21% of our patients received the diagnosis of Alcohol Withdrawal syndrome which is more than any other study reported. The referral rate from surgical branches including General Surgery, Orthopaedics, CT Surgery was around 26.3% which is consistent with earlier Indian studies reporting it to be between 14-28%.<sup>[19,20]</sup> The referrals sought for Suicide attempt by different means/ deliberate self harm also constituted significant portion (20, 17.5%). Though not as high a percentage as reported from western literature which reports around 43% to 59%, our study was comparable to most Indian studies<sup>[26,30]</sup>. Our study yielded a referral rate of 7.9% from Paediatric department which is more than that of a previous Indian study by Prabhakaran et al and Parekh et al<sup>[19, 20]</sup>.

### LIMITATIONS

There are a few limitations of our study which should be considered while interpreting the results. Short duration, absence of longitudinal assessment & purposive sampling could yield Type II errors. The results of this clinic based study cannot be generalized to community settings.

### CONCLUSION

Our study reiterates the importance of utilization of Consultation Liaison Psychiatric Services. The importance of CLP is being recognized by our colleague departments, though at a very slow pace. Our study also signifies the need for sensitization of our colleagues from time to time.

**Source of Support:** Nil

**Conflict of Interest:** None

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