A STUDY ON PATTERN OF CONSULTATION LIAISON PSYCHIATRIC SERVICE UTILIZATION IN A TERTIARY CARE HOSPITAL

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ABSTRACT

AIM
To study the pattern of consultation liaison psychiatric service utilization.

METHODS AND MATERIAL
A 6-month retrospective chart review study in the setting of a tertiary care teaching hospital.

RESULTS
Average age of the patients referred to us was 34.69 years. Out of total 748 referrals we received in six month, 441 (58.95%) referrals were males. 351 (46.92%) referrals were from General Medicine, 172 (22.99%) from General Surgery, 75 (10.02%) from Obstetrics & Gynaecology, 60 (8.02%) from Ear, Nose, and Throat (ENT), 22 (8.02%) from Orthopaedics, 18 (2.4%) from Dermatology, 16 (2.13%) from Neurology, 12 (1.60%) from Endocrinology, 10 (1.33%) from Cardiology and 12 (1.60%) were from various other departments including Intensive Care Unit (ICU). Among the various reasons of referrals, 254 (33.95%) were for Deliberate Self Harm, 216 (28.87%) for Substance Use Disorders, 49 (6.55%) for Behaviour Abnormality of Acute Onset, 49 (6.55%) for Behaviour Abnormality during Pregnancy and Post-Partum Period, 21 (2.81%) for Delirium, 11 (1.47%) for Depressive Symptoms, 6 (0.80%) for Medically Unexplained Somatic Symptoms, 5 (0.67%) for Insomnia, 82(10.96%) for Other and Unspecific Reasons and 55 (7.35%) referrals were for Diagnosed Psychiatric Illnesses.

CONCLUSION
We concluded that awareness of using consultation liaison services is most important. We also noticed that it was necessary for physician to have comprehensive knowledge of psychiatric symptoms.

KEYWORDS
Psychosomatic Medicine, Comorbidity, Psychopathology.


INTRODUCTION
Consultation-Liaison Psychiatry (CLP) was used to be regarded as Psychosomatic Medicine in past, and it represented the care delivered by psychiatrists to patients with co-occurring medical and psychiatric problems who were treated primarily in medical settings.

The term Psychosomatic is derived from the Greek words Psyche (Soul) and Soma (Body). The term literally refers to how the mind affects the body.2 In India, the interplay of mind and body is known since antiquity. An ancient Indian medical text, Sushruta Samhita describes a type of insanity borne out of grief, Shokaja, which occurs in a person who is frightened for various reasons.25,36,37

The Department of Psychiatry in a General Hospital setting, has a multidimensional role providing inpatient care, maintaining strong interaction with community psychiatric services and offering specialist services to the general hospital wards either as part of the multidisciplinary approach to patient management or by offering specialist inpatient care to patients already hospitalized in other departments by transferring certain patients to the psychiatry department.20,21,35

The first General Hospital Psychiatry Unit (GHPU) in India was started at RG Kar Medical College and Hospital, Kolkata in 1933. Over the years, the numbers of GHPUs have increased significantly, thus resulting in a greater interaction among psychiatrists, physicians and other specialists. CLP is a growing field in modern days.

It has become an important area of research in order to provide adequate psychiatric services to inpatients admitted in various other specialities. Knowledge of pattern of consultation liaison service utilisation would help us devise better management protocols. In a 2013 study, Makhale et al.23 highlighted the importance of GHPU and need for CLP. They observed that most common reasons for referrals were deliberate self-harm, depression and substance use disorders.

A similar South Indian study by Narayan Keertish et al.27 stressed for multidisciplinary interaction among various...
specialities. They observed to have received most referrals from Department of Medicine with most common reasons being medically unexplained somatic complains, anxiety and abnormal behaviour.

In a United States (US) study in 2005, Bourgeois et al. observed that cognitive disorders were among the common referrals. In a 2010 Taiwan study, Jian-An su et al. observed persisting high rates of under detection of depression.

They stressed over needs of comprehensive postgraduate education for physicians and timely consultation. Cooper et al. in Israel found out that nearly half of the patient with suicidal attempt had only one axis 2 diagnosis (Personality disorder) and they required more intense treatment provided by the consultation liaison unit. Given the importance of CLP, we took this step to assess the pattern of its utilization in a tertiary care hospital.

AIMS AND OBJECTIVES
1. To observe the distribution of the referrals to the Department of Psychiatry from various departments.
2. To observe the various reasons for referrals.
3. To observe the variability of referrals in terms of age and sex.
4. To observe the change of pattern of consultation liaison service utilization over the months throughout the study period.

RESULTS

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Parameter</th>
<th>Total Referrals</th>
<th>Male</th>
<th>Female</th>
<th>Child &amp; Adolescent</th>
<th>Geriatric Referrals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No. of Referrals</td>
<td>748</td>
<td>441 (58.95%)</td>
<td>307 (41.04%)</td>
<td>30 (4.01%)</td>
<td>20 (2.6%)</td>
</tr>
<tr>
<td>2</td>
<td>Avg. age (years)</td>
<td>34.69</td>
<td>40.43</td>
<td>28.96</td>
<td>14.66</td>
<td>68.80</td>
</tr>
</tbody>
</table>

Table 1: Description of referrals as per distribution in age and sex groups

Average age of the patients referred to us was 34.69 years. Out of total 748 referrals we received in six month, 441 (58.95%) referrals were males and 307 (41.04%) referrals were females. Number of referrals for child & adolescent and geriatric patients were 30 and 20 respectively.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the department</th>
<th>Total no. of referrals (748)</th>
<th>Males (441)</th>
<th>Females (307)</th>
<th>Child &amp; Adolescents (30)</th>
<th>Geriatric patients (20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>General Medicine</td>
<td>351 (46.92%)</td>
<td>193 (54.98%)</td>
<td>158 (45.01%)</td>
<td>22 (6.26%)</td>
<td>4 (1.43%)</td>
</tr>
<tr>
<td>2</td>
<td>General Surgery</td>
<td>172 (22.99%)</td>
<td>138 (80.23%)</td>
<td>34 (19.76%)</td>
<td>4 (2.32%)</td>
<td>3 (1.74%)</td>
</tr>
<tr>
<td>3</td>
<td>Obstetrics &amp; Gynaecology</td>
<td>75 (10.02%)</td>
<td>-</td>
<td>75 (100%)</td>
<td>1 (1.33%)</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Ear, Nose and Throat (ENT)</td>
<td>60 (8.02%)</td>
<td>57 (95%)</td>
<td>3 (5%)</td>
<td>-</td>
<td>2 (3.33%)</td>
</tr>
<tr>
<td>5</td>
<td>Orthopaedics</td>
<td>22 (2.94%)</td>
<td>19 (86.36%)</td>
<td>3 (13.63%)</td>
<td>-</td>
<td>4 (18.18%)</td>
</tr>
<tr>
<td>6</td>
<td>Dermatology</td>
<td>18 (2.4%)</td>
<td>10 (55.55%)</td>
<td>8 (44.44%)</td>
<td>1 (5.55%)</td>
<td>-</td>
</tr>
<tr>
<td>7</td>
<td>Neurology</td>
<td>16 (2.13%)</td>
<td>7 (43.75%)</td>
<td>9 (56.25%)</td>
<td>-</td>
<td>2 (12.5%)</td>
</tr>
<tr>
<td>8</td>
<td>Endocrinology</td>
<td>12 (1.60%)</td>
<td>4 (33.33%)</td>
<td>8 (66.66%)</td>
<td>1 (8.33%)</td>
<td>-</td>
</tr>
<tr>
<td>9</td>
<td>Cardiology</td>
<td>10 (1.33%)</td>
<td>8 (80%)</td>
<td>2 (20%)</td>
<td>-</td>
<td>3 (30%)</td>
</tr>
<tr>
<td>10</td>
<td>Others including Intensive Care Unit (ICU)</td>
<td>12 (1.60%)</td>
<td>7 (58.33%)</td>
<td>5 (41.66%)</td>
<td>1 (8.33%)</td>
<td>2 (16.67%)</td>
</tr>
</tbody>
</table>

Table 2: Description of referrals as referred from various departments

General Medicine sent the most calls. Referrals were: 351 (46.92%) from General Medicine, 172 (22.99%) from General Surgery, 75 (10.02%) from Obstetrics & Gynaecology, 60 (8.02%) from ENT, 22 (8.02%) from Orthopaedics, 18 (2.4%) from Dermatology, 16 (2.13%) from Neurology, 12 (1.60%) from Endocrinology, 10 (1.33%) from Cardiology and 12 (1.60%) were from various other departments including ICU.

METHODS AND MATERIALS

The study was conducted in Guwahati Medical College and Hospital (GMCH), Guwahati, a tertiary care teaching hospital for a period of 6 months from January 2015 to June 2015. A retrospective chart review design was adopted to assess all referrals. It included all the patients referred to Department of Psychiatry during the study period. All the patients attending psychiatric services at psychiatry outpatient department (OPD), psychiatry indoor and through psychiatry emergency services at Casualty Department in GMCH were excluded. Descriptive statistics including number, mean, percentage and proportion were used for data analysis.
We received referrals for various reasons. 254 (33.95%) referrals for Deliberate Self Harm, 216 (28.87%) for Substance Use Disorders, 49 (6.55%) for Behaviour Abnormality of Acute Onset, 49 (6.55%) for Behaviour Abnormality during Pregnancy and Post-Partum Period, 136 (18.18%) for Delirium, 110 (14.70%) for Depressive Symptoms, 6 (0.80%) for Medically Unexplained Somatic Disorders, 30 (4.08%) for Insomnia, 30 (4.08%) for Other/Unspecific reasons and 55 (7.35%) referrals were for Diagnosed Psychiatric Illnesses.

There was no much difference in the number of referrals in different months. Maximum number of referrals came up in April. Referrals were 136 (18.18%), 110 (14.70%), 108 (14.44%), 141 (18.85%), 122 (16.31%) and 131 (17.51%) in January, February, March, April, May and June respectively.

**DISCUSSION**

It has been reported that psychopathology in the hospitalised population at any moment, even with conservative estimations, exceed 30% and ranges from 30 to 50%.

The term 'difficult to take care of' usually refers to those patients who present with a variety of, mainly behavioural, problems in addition to their somatic illness, which actually makes them 'not wanted' in any ward.

Some of these problems may have been the reason that led their physicians to refer them for a psychiatric consultation or even discuss a transfer to psychiatry ward in the first place.

Kisely et al. claimed that 30-60% of admitted patients in general hospitals suffer from one major psychiatric disorder. Co-morbid psychiatric disorders negatively affect the course and prognosis of the medical diseases due to changes and irregularities in autonomous nervous, endocrine and immune systems. The management of co-morbid psychiatric and physical illness is an important issue for health services.

As reflected from the results in our study, utilization of consultation liaison services was quite observable. Mean age of the sample was 34.69 years. It indicated the liaison services are critical for mental health of socio-economically most productive age group. We observed the gender difference. 59% male referral, compared the 41% female referral could give some idea of unmet need of mental health among women, though the difference could well be due to differential rate of hospitalization. 30 and 20 of the total referrals for child & adolescent and geriatric age group respectively underlined the importance of liaison services in extreme ages.

Similar to our findings, Bourgeois et al. observed that the group of patients seen by the consultation-liaison service...
was 52% male, though the mean age was 48.59 years. Contrasting to our findings, approximately 64.8% of the patients were females, as reported by Althusial et al.\textsuperscript{1} Ozkan\textsuperscript{25} observed in his study that the demographic profile of the referred patients in terms of gender and age has changed over the years. Demographically, two major findings stood out. First, the ratio of males to females has increased e.g. the number of males referred compared to females has increased, with the number of females relatively declining over the years. Secondly, the mean age of referred patients has steadily increased.

In our study, almost all the departments sent the referrals, though the most common users were General Medicine, General Surgery, Obstetrics & Gynaecology, ENT and Orthopaedics. General Medicine sent almost half of the total referrals (47%) we received. Second in line was department of General Surgery (23%). Departments of super specialities were less frequent then broad specialties to use psychiatric referrals.

Similar results were observed in previous studies too. Ozkan\textsuperscript{25} observed in his study that between the years 1989 and 1991, the distributions of consultations made by various referring clinics were: Internal Medicine (48.99%), Surgery (21.21%), and Neurology (9.43%). In the years 1995 and 1996, the distribution was: Internal Medicine (41.8%), Surgery (31.8%), Physical Therapy and Rehabilitation (7.6%). In the years 1997 and 1998, the highest number of consultations was requested by Internal Medicine (38.8%). This was followed by Surgery (24.1%). In 2003, the distribution was: Internal Medicine (50.1%), Surgery (26.6%), and Physical Therapy and Rehabilitation (10.0%).

In most of the previous similar studies,\textsuperscript{19,30,31,42} the highest proportion of referrals has been from the Department of Internal Medicine. In a review study\textsuperscript{13} a percentage of 47.7%-90% was reported. The range of percentages fell between 10%-90%.\textsuperscript{13,14} The proportion of referrals from the Department of Surgery generally ranks second in General Hospital consultations. In a review carried out in the 1980s, Hengeveld et al.\textsuperscript{13} reported a range of 7%-34.7%. A more recent study\textsuperscript{7} reported a percentage of 25.5. Grant et al.\textsuperscript{9} reported in their study that ICU provided for the second greatest number of requests for consultations. Rothenhauser et al.\textsuperscript{33} reported that Internal Medicine accounted for one-half of all referrals.

Similar observations were seen in the study conducted by Singh et al.\textsuperscript{30} where 49.8% referrals were from Medicine followed by 11.2% Surgery referrals. Christodoulou et al\textsuperscript{15} reported that the majority of the transferred patients to the psychiatry ward came from Medicine (73.1%) and the remainder (26.8%) from Surgery. Forty-five percent of consultations in the study by Althusial\textsuperscript{1} were from Medicine followed by Surgery (25.3%). 77% of the total sample reviewed by Ku et al.\textsuperscript{18} was from the Department of Medicine. Physicians and surgeons are increasingly becoming aware that one third to two thirds of their patients have significant psychiatric symptomatology which is amenable to treatment by psychiatrists.\textsuperscript{25,41} The fact, that psychiatric patients can also present to the medical or surgical units due to antecedent physical illnesses and may need additional care by psychiatrists is being recognised.\textsuperscript{25}

We observed in our study that most referrals were for patients with Deliberate Self Harm (33.95%). Apart from this, other common reasons of referral were Substance Use Disorder, Behaviour Abnormality of Acute Onset, Behaviour Abnormalities developed during Pregnancy and Post-Partum Period, and Delirium. Like previous studies we also observed to have lesser number of referrals for patients with Depression considering the prevalence rate of depression in general population. A good proportion of referrals were sent with unspecified reasons. This led us to observe that many physicians had inadequate understanding of psychiatric symptoms. A good number of referrals were made for further and adequate management of diagnosed cases who were admitted for treatment of other illnesses. It was also deduced that lesser than expected referrals from Neurology could be due to prescription of psychotropic medication by neurologists.

Reasons for referral According to Ozkan\textsuperscript{25} an overall assessment of the patterns of reasons for referral over 14 years revealed that during the first years, consultation requests for differential diagnoses (organic-psychogenic) (25%) were predominant. Consultation requests for anxiety (14.4% in 1989-1991; 17.7% in 2003) and depressive state (14% in 1989-1991; 21.8% in 2003) associated with or accompanying physical illness have meaningfully increased in 14 years. Confusional state (10.3% in 1997-1998; 11.8% in 2003) has become the third most-occurring reason for consultation in the last 6 years. Past psychiatric history has always been regarded as a routine reason for psychiatric consultation.

One of the main objectives and consequences of the consultation liaison service is that psychiatry in medicine is not limited to “functional cases or suicide attempts” and psychiatric disorders of various kinds occur in medical patients (Comorbidity). As the consultation liaison service developed, not only was there an increase in the number of requests for psychiatric consultation, reasons for psychiatric consultations also grew in kind such that psychiatric cooperation was indicated for all kinds of psycho-situational conditions (e.g. organic mental, psychosocial, behavioural, adaptive disturbance) associated with or accompanying physical disorders. The fact that the presence of a confusional state has become the third most prevalent reason for consultation requests implies that physicians have become able to recognize cases of delirium better. Altogether, the data of 14 years imply that the understanding that physical and psychiatric disorders can co-exist has improved.\textsuperscript{20}

Diefenbacher and Strain\textsuperscript{6} reported that the primary reasons for referral remained constant, with “Depression and behavioural management/agitation” being the most frequent. Grant et al.\textsuperscript{3} reported that in a study covering a ten-year period, depression and chemical dependency assessment appeared to be the main reasons for referral. A study from Italy,\textsuperscript{6} indicated the distribution of reasons for psychiatric consultation as defined by the referring physician as: psychological symptoms (63.9%), unexplained physical symptoms (9.3%), suicide attempts (5.9%), history of psychiatric illness (3.1%). In one other study\textsuperscript{1} evaluation of depression was the reason for referral in one-third of the total number of consultations, whereas suspected substance abuse represented only 1.1% (the least).

Ku et al.\textsuperscript{18} found that Suicide assessment was the commonest reason of psychiatric consultation and accounted for about one-third of referrals from Medical, Surgical and...
Orthopaedic units. Altogether, there were 58 (6.0%) out of 968 cases referred for the reason of depressed mood. Neurotic and Somatic symptoms were infrequently quoted as the main reason for psychiatric consultation, and only accounted for 25 (2.6%) and 16 (1.7%) cases respectively. Revision of psychiatric drugs was asked for in 23 cases (2.4%) and most were concerned with side effects of antipsychotic or tricyclic antidepressants. Some referring doctors requested psychiatric consultation by giving unclear or non-specific reasons, such as “Routine assessment”, “Psychiatric assessment” or “Past history of the psychiatric problem” etc. It gave rise to about 20% of all referrals. According to the observation, there was still little emphasis in the interface between physical and mental health, concerning the current practice of CLP.

They found only 16 referrals quoted with somatic symptoms as the main reason of psychiatric consultation. Some patients with significant physical illness might had adjustment problem or depression, but they were usually not referred until gross depression or having suicidal intent. It might reflect the physician’s low awareness of psychiatric morbidity among physically ill patients.

Like similar previous studies, we also observed persistent need for consultation liaison services. Apart from slight decrement of number of referrals during February and March, we had more or less constant referrals throughout the study period.

We also observed the importance of liaison services for Child, Adolescent and Geriatric age group. A good proportion of child and adolescent referrals for Deliberate Self Harm and also an observable number of referrals of geriatric patients for ongoing Diagnosed Psychiatric Illnesses, Unspecified reasons, Delirium and Substance Use Disorder highlighted the importance of consultation liaison in these two group.

We were not without the limitations. Ours being a descriptive study, had a limited statistical analysis. A study for 6 month was shorter than the optimum period which could have offered a bigger sample to understand the pattern of utilization better. Being a retrospective chart review study, we could not observe the difference between the reasons of referrals and the actual psychiatric diagnosis made by the psychiatrist.

**CONCLUSION**

Our study didn’t aim to find out the impact of consultation liaison services. It rather observed the existing background where we can build up a good set up of consultation liaison. We concluded that awareness of using services is most important. We also conclude that it was necessary for physician to have comprehensive knowledge of psychiatric symptoms. A timely intervention should be adopted in referral system.

Important implication of this study is in providing a background for further research. One important area that we would like to explore further is the differences between assessment by the referring physicians and actual psychiatric diagnosis. We would also suggest a study on economic impact of timely and adequate consultation liaison services.

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