

# Psychiatric Co-morbidity in Medical and Surgical In-patients, Referred for Psychiatric Consultation

Mazhar Malik, Nadeem Abbas, Nadia Azad

Department of Psychiatry, Fauji Foundation Hospital Rawalpindi and Foundation University Medical College Rawalpindi

## Abstract

**Background:** To assess by Liaison Psychiatry the pattern of psychiatric co-morbidity in referred medical and surgical in-patients in a tertiary care hospital.

**Methods:** This was a descriptive study, conducted at Department of Psychiatry, out-patient services in Fauji Foundation Hospital, Rawalpindi. One hundred consecutive hospitalized patients referred to Department of Psychiatry from Medical and Surgical Units of Fauji Foundation Hospital were enrolled in the study during a period of seven months.

A semi structured proforma was used for collection of demographic data and detailed information regarding reasons of psychiatric referral along with current medical and surgical complaints.

**Results:** Mean age of the sample was 39.9 years, 77% of the patients were female and majority of the patients, 62% were married. All the patients belonged to either poor class (61%) or lower middle class (39%). Professional categories showed house wives (54%) comprising the major group and 25% were students. Majority of the patients, 56% were referred from medical departments and the main reason for referral was medically unexplained physical symptoms (36%) of one hundred consultations.

General Health Questionnaire 12 (GHQ-12) screened 89% of cases with psychiatric co-morbidity as compared to 11% non cases without psychiatric symptomatology. Majority (51%) of the patients had diagnosis of depressive episode, mild moderate or severe and 19% of the patients had dissociative (conversion) disorder as the second commonest diagnosis.

**Conclusions:** There is generally a low referral rate despite significant psychiatric morbidity among medical and surgical in-patients. Further studies should be conducted in the field of liaison psychiatry to address other variables such as length of hospital stay, use of laboratory investigations and pattern of prescription medicines.

**Keywords :** Liaison Psychiatry, Co-morbidity, Referral and Consultation, Medical and Surgical in-patients

## Introduction

Liaison psychiatry provides psychiatric treatment to patients attending general hospitals, whether they attend out-patient clinics or accident and emergency departments or are admitted to in-patient wards. It thus deals with the interface between physical and psychological health. Psychiatric services for general hospitals are widely referred to as consultation liaison services.<sup>1</sup> During consultation a psychiatrist is available to respond to the request of physicians and surgeons, but in liaison psychiatry, the psychiatrist is a member of the medical and surgical unit influencing many aspects of management through increased contact with patients or staff or both.<sup>2</sup> Psychiatrist working in this area provides consultation in psychiatric diagnosis and management of medically ill patients, as well as indirect care through staff education and development of integrated care system and research.<sup>3</sup> Psychiatric and medical illnesses are most common coexisting problems in hospitalized patients in any general hospital setting. Thirty to sixty percent of general hospital in-patients have diagnosable psychiatric disorders.<sup>4</sup> Non-psychiatrists frequently feel inadequacy in understanding and managing these psychiatric co-morbid states.

Three categories genuine psychological disorders, diagnostic dilemmas and management problems necessitate psychiatric consultation. A local hospital study revealed that 32% of the referred patients had organic mental disorders, 60% had psychiatric disorders while only 8% had no psychiatric abnormality.<sup>5</sup> The co-morbidity of psychiatric and physical illness, the possible mechanism of interaction between these disorders and the possible impact of psychiatric services for patients with physical problems has been recognized as liaison psychiatry. This entails referring to liaison psychiatrists along with physicians, surgeons and other non psychiatric health care professionals as part of the team.<sup>6</sup> Psychological factors affect the onset and course of physical illness in a number of ways.<sup>7-9</sup>

- Psychological factors and unexplained physical symptoms.
- Psychosocial and psychological factors as cause

- of physical illness-psychosomatic disorders.
- Psychiatric and physical disorders occurring together by chance.
- Psychiatric problems with physical complaints.

The present study was conducted to assess the pattern of psychiatric co-morbidity in liaison referrals.

## Patients and Methods

All in-patients referred to Department of Psychiatry from surgical and medical units for psychiatric consultation were evaluated during the period starting from 10th March 2005 to 15th October 2005.

A total number of 100 patients were enrolled in the study and informed consent was taken. Patients of all age groups and both sexes were included. Semi structured proforma for data collection was filled for all these patients. General Health Questionnaire (GHQ-12) Urdu version was administered to all the patients.

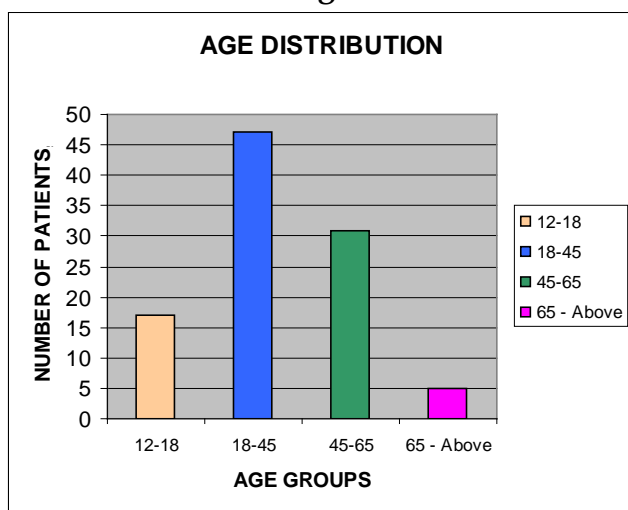
All the patients enrolled in this study were clinically assessed by two independent psychiatrists and clinical diagnosis according to ICD-10 WHO diagnostic criteria given to them. The data was later analyzed on Statistical Package for Social Sciences (SPSS) and descriptive statistics were calculated.

## Results

### Demographic details:

Majority of patients were young adults between 18 -45 years of age (Fig1) Mean age of the sample was 39.39 years

Fig 1



There were 77% female patients and 23% male patients. 62% patients were married and 32% were single. 65 were either divorced or widowed. Majority of the patients belonged to poor class (61%) and the remaining to lower middle class (39%).

Professional categories showed major group comprising of house wives (54%). Different professions of patients are shown in Fig 2.

Regarding educational qualification of the patients, 30% were uneducated and 36% had studied till primary class. 15% were middle, 16% matriculates and only 3% were graduates.

56% of the patients were hospitalized in medical departments and 20% in surgical departments (Table1)

Fig 2

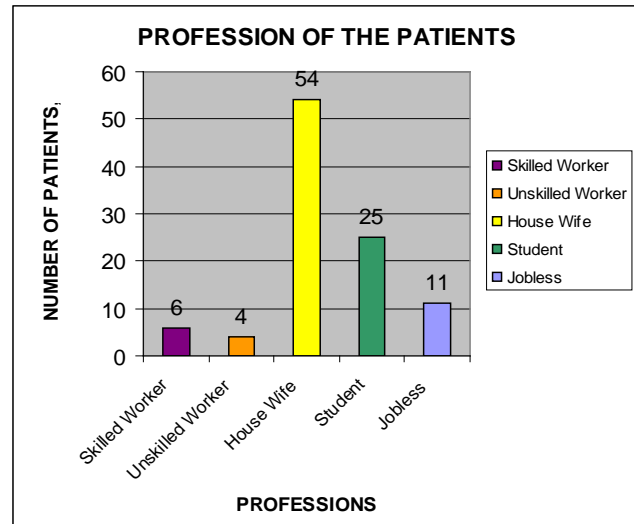


Table 1: Referring Departments

Referring Departments	No of Patients	Percent
Medical Department	56	56.0
Neuro-Surgical Department	5	5.0
Chest Department	5	5.0
Surgical Department	20	20.0
Urology Department	5	5.0
Dermatology Department	6	6.0
Gynaecology Department	1	1.0
ENT Department	2	2.0
<b>Total</b>	<b>100</b>	<b>100.0</b>

Of the 100 consultations received from medical and surgical units 36% had unexplained physical

symptoms, 31% were referred for management of behavioural problems, 22% were for assessment of psychiatric symptoms while 11% were referred as they had past psychiatric history/use of psychotropic medications. (Table 2).

**Table 2: Reasons for referral**

Reasons for referral	No of Patients	Percent
Behavioural and Management Problems	31	31.0
Assessment of Psychiatric Symptoms	22	22.0
Medically Unexplained Physical Symptoms	36	36.0
Past Psychiatric History/use of Psychotropic Medication	11	11.0
Total	100	100.0

General Health Questionnaire GHQ-12, <sup>10, 11</sup> Urdu version was used as a screening instrument. GHQ scoring is shown in Table 3.

**Table 3: General Health Questionnaire (GHQ) Scoring**

GHQ - Scoring	No of Patients	Percent	Cumulative Percent
0	3	3.0	3.0
3	3	3.0	6.0
4	5	5.0	11.0
5	12	12.0	23.0
6	7	7.0	30.0
7	7	7.0	37.0
8	13	13.0	50.0
9	11	11.0	61.0
10	16	16.0	77.0
11	14	14.0	91.0
12	9	9.0	100.0
Total	100	100.0	

The threshold score in this study was kept at 4/5. 89% cases were screened out by the use of GHQ-12 questionnaire with scores higher than threshold as distinction between cases (with psychiatric comorbidity) and non-cases (without psychiatric symptomatology).

The results of independent clinical assessment by two psychiatrists and clinical diagnosis according to ICD-10 WHO diagnostic criteria is shown in Table 4, 5 and 6.

**Table 4: Diagnosis by 1<sup>st</sup> Psychiatrist**

ICD-10 Diagnosis	No of Patients	Percent
Organic mood Disorder	7	7.0
Epilepsy	2	2.0
Dementia	2	2.0
Obsessive Compulsive Disorder	1	1.0
Generalized Anxiety Disorder	1	1.0
Manic Episode	1	1.0
Acute Stress Reaction	3	3.0
Recurrent Depressive Disorder	1	
Mental Retardation	2	2.0
Depressive Episode	51	51.0
No Active Psychiatric illness	3	3.0
Acute Psychotic Disorder	1	1.0
Schizophrenia	2	2.0
Somatization Disorder	1	1.0
Personality and Behavioral Disorder	1	1.0
Dissociative (Conversion) Disorder	19	19.0
Bipolar Affective Disorder	2	2.0
Total	100	100.0

In this study majority (51%) of the patients had the diagnosis of depressive episode, mild

moderate or severe. 19% of the patients received dissociative (conversion) disorder as the second commonest diagnosis.

**Table 5: Diagnosis by 2nd Psychiatrist**

ICD-10 Diagnosis	No of Patients	Percent
Organic mood Disorder	4	4.0
Epilepsy	3	3.0
Dementia	2	2.0
Generalized Anxiety Disorder	2	2.0
Manic Episode	1	1.0
Acute Stress Reaction	1	1.0
Adjustment Disorder	2	2.0
Recurrent Depressive Disorder	1	1.0
Mental Retardation	2	2.0
Depressive Episode	50	50.0
No Active Psychiatric illness	4	4.0
Factitious Disorder	1	1.0
Acute Psychotic Disorder	1	1.0
Schizophrenia	3	3.0
Delirium	1	1.0
Somatization Disorder	1	1.0
Personality and Behavioral Disorder	1	1.0
Dissociative (Conversion) Disorder	17	17.0
Bipolar Affective Disorder	2	2.0
Organic psychosis	1	1.0

## Discussion

Majority of our patients with psychiatric comorbidity were referred from medical department. There were variety of reasons for discrepancy between medical and surgical referrals. These included characteristics of the patients like age, sex, socioeconomic status, presenting complaints and resistance to psychiatric referral. The decision of the referring physicians is also affected by; diagnostic

accuracy, bias towards making psychiatric diagnosis and differences in attitude towards psychiatric symptoms<sup>12,13</sup>

**Table 6: Diagnosis by 2nd Psychiatrist**

Diagnosis according to ICD-10		
Diagnosis	Number of patients diagnosed	Percentage
Affective/ Mood Disorder	55	55.0
Neurotic, Stress Related Disorder	24	24.0
Organic Disorders	12	12.0
Schizophrenia, Psychotic Disorder	03	03.0
Others	03	03.0
No Psychiatric Illness	03	03.0
Total	100	100.0

The demographic data showed females (77%) out numbered males among the referred patients which was in line with the general findings.<sup>14</sup> Similar results were noted in another study in Fiji Island, which examined the characteristic of patients seen on Consultation - liaison psychiatry in the main general hospital. Majority of patients were female and of Indian descent, while the psychiatric hospital patients were predominantly males with more indigenous Fijian origin.<sup>15</sup> The study centre, Fauji Foundation Hospital Rawalpindi (FFH) is a tertiary care, veterans hospital catering for the families of ex-army men, while ex army men are entitled for medical services at military hospitals.

A large number of female patients reporting in our study were due to this reason. Majority of patients (47%) were between the age group of 18-45 years, uneducated 30% and housewives 54% suggesting that these patients were from a particular background, reporting to the study centre from the peripheral rural areas around the districts of Rawalpindi, Chakwal and Attock. The general hospital-liaison psychiatric services can provide an ideal and acceptable setting in which to access and manage psychiatric patients referred from non-psychiatric colleagues. This is important as there is a high rate of physical symptoms

among the psychiatric patients who tend to report to physicians rather than psychiatrist.<sup>8</sup> Over the recent years there has been a shift in the attitudes and responses of hospitals doctors in the management of psychological problems. A questionnaire survey conducted in a general hospital doctors in London found out that majority of doctors believed that psychological factors could influence physical prognosis and should be routinely assessed with greater sense of responsibility for over-doses and dying patients. Most respondents wanted more psychiatric inputs, referrals were avoided due to stigmatization and found emotional and psychological assessment impractical and difficult.<sup>16</sup> The validity of GHQ-12 has already been assessed in a study on a local population in a primary care setting in Pakistan<sup>10</sup>.<sup>11</sup> A study conducted in Manchester, UK to determine the association between physical and psychiatric morbidity among general practice patients also used GHQ-12 as a screening instrument. Ninety four percent of the patients were successfully screened using GHQ-12.<sup>9</sup> The threshold score in our study is kept at 4/5, which is relatively high score as compared to low threshold score of 1/2 frequently used in different studies. Physical illness has been found to be associated with high threshold score with medical in-patients.<sup>11</sup> By using the threshold score of 4/5 in GHQ-12, 89% of patients were screened as cases (with psychiatric co-morbidity) as compared to 11% non cases (with no psychiatric symptomatology) in our study. The pattern of psychiatric co-morbidity showed that most common psychiatric diagnosis in our study is depressive episode (51%), including mild, moderate and severe episodes with or without psychotic features. This is a consistent finding in the literature, both in the local and western studies. In Peshawar, a study conducted at a teaching hospital evaluating in-patient psychiatric consultations found that depressive disorder was the commonest diagnosis (41.8%) followed by somatoform disorder and other anxiety disorder (38.1%). Delirium was diagnosed in (11.8%) and schizophrenia in (6.3%) referred cases.<sup>17</sup> Similar findings were reported by another local study from Karachi, conducted to assess the psychiatric co-morbidity and their rate of referrals. They found married females the majority group and depression out numbered all psychiatric disorders followed by anxiety and somatoform disorders.<sup>18</sup> European consultation liaison workshop (ECLW) collaborative study evaluated consultation liaison services from 11 European countries. A low consultation rate of 1%

showing the discrepancy between the epidemiology and services delivered was assessed. The pattern of psychiatric co-morbidity showed mood disorder and organic mental disorder the most predominant diagnosis (17.7%). Somatoform disorder and dissociative disorder constituted only (7.5%).<sup>19</sup> In Australia, study conducted in a University hospital reported similar results with mood disorder (55%) organic (mental) disorder (35%), adjustment disorder (16%), somatic disorder (16%) and personality disorders (17%). This study also confirmed the association of psychiatric referral and prolonged length of hospital stay in this group of patients.<sup>20</sup> Researchers in USA also reported similar findings as far as the pattern of psychiatric co-morbidity is concerned in western culture. In an academic medical centre, psychiatric diagnosis of 901 patients seen by consultation liaison psychiatrists showed that most frequent diagnosis were mood disorder (40.7%), cognitive disorder (32.0%) and substance use disorder (18.6%).<sup>21</sup> The second common diagnostic entity in our study was dissociative (conversion) disorder (19%). This is peculiar to our setting and is also reported in a number of local studies with somatoform disorder (15.4%) and dissociative (conversion) disorder (42.8%)<sup>17,18</sup>. The studies carried out to access the pattern of psychiatric illness in western nations showed mood disorder as the most common psychiatric diagnosis. Other diagnoses reported were organic disorder, substance use disorder and personality disorder.<sup>20, 21, 22</sup> There are limitations to our study.

The sample selected for the study was through convenience sampling. This is not a representative study and the results can't be generalized. However, the pattern of psychiatric co-morbidity found in our study is similar to those reported in studies conducted both locally and abroad.

In conclusion, there is generally a low referral rate despite significant psychiatric co-morbidity. It requires continuing medical education program (CME) for physicians, surgeons and other non-psychiatric colleagues.

Other professional staff such as psychologists, social workers and psychiatric nurses should be involved actively in the liaison-psychiatric services.

Further studies and research should be encouraged in the field of liaison psychiatry to address other variables related to hospitalization such as length of stay, use of laboratory investigations and pattern of prescription medicine.

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