

# PSYCHIATRIC REFERRAL PATTERN IN A GENERAL HOSPITAL

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## ABSTRACT

Between September 1986 and January 1988, a sixteen-month period, a total of 494 inpatients in Tan Tock Seng Hospital were referred for psychiatric opinion. 181 were referred for suicidal tendency and 313 for other reasons. An analysis of these two groups of referrals was done to study any change in referral trends. The findings show that while the basic diagnostic categories of patients do not differ drastically from an earlier study in Singapore General Hospital by Tsoi and Kok, Tan Tock Seng Hospital had its own pattern of requirements for psychiatric consultation because of its own unique patient characteristics.

**Keywords:** Psychiatric referral pattern, general hospital, consultation-liaison psychiatry.

SINGAPORE MED J 1990; NO 31: 42-45

## INTRODUCTION

The Psychological Medicine Unit in Tan Tock Seng Hospital was set up in August 1986 to establish a general hospital psychiatric unit as well as to meet the need for consultation-liaison psychiatry in patients being treated in the medical and surgical units there. Tan Tock Seng Hospital has 1255 hospital beds of which 639 are for medical and 535 for surgical patients and the rest for the rehabilitation unit and communicable disease centre. A study of the psychiatric referral pattern was done for patients in Singapore General Hospital between 1979 and 1981 by Tsoi and Kok (1). The object of our study was to find out whether there had been any change in referral trends as this may be useful in planning future needs.

## MATERIAL AND METHODS

A total of 494 patients were referred between September 1986 and January 1988 for psychiatric opinion. Out of these 181 were for suicidal tendency and the other 313 for other reasons such as abnormal behaviour and anxiety symptoms. These two groups were analysed separately for the purpose of comparison with the study by Tsoi and Kok. The ICD-9 was used for the diagnostic categories.

## RESULTS

### (A) MAIN DIAGNOSTIC CATEGORIES (n = 313)

Out of these, 140 (44.7%) were males and 173 (55.3%) were females. 76.0% were Chinese, 9.6% Ma-

lay, 12.2% Indian and 2.2% were of other races. The age groups were fairly evenly distributed. Most of the patients were referred from the medical units (80%) when compared to surgical units (20%).

The organic psychotic conditions formed 22.0% of the referrals while the functional psychoses accounted for 29.7% and neurotic disorders formed another 27.2%. Other conditions including personality disorders, drug or alcohol abuse, mental retardation and adjustment reactions formed the remaining 21.1% (see Table I).

### (1) Organic Psychotic Conditions (n = 69)

Acute confusional state (delirium) was found in 37.6% of this group of patients with organic brain syndrome. Dementia was found in 13.0% and alcoholic psychosis (including hallucinosis and delirium tremens) in 4.3%. In addition 22 cases (31.9%) had psychosis associated with systemic lupus erythematosus (SLE) and 7 (10.1%) had epilepsy with psychosis and 2 cases (2.9%) had hyperthyroidism with psychosis (see Table II).

These patients, in more than half the cases, were referred for abnormal behaviour rather than for disorientation or confusion. Disorientation was the reason for referral in 20% of this group of patients.

Some of the patients having delirium were being treated for infection eg. encephalitis, viral myocarditis, viral fever, pulmonary tuberculosis and subacute bacterial endocarditis. Other medical conditions included metabolic acidosis, pancytopenia, cardiomyopathy, parkinsonism and various carcinomas.

### (2) Other Psychoses (n = 93)

Schizophrenia formed more than half (54.8%) of the cases with functional psychoses while affective psychoses formed 29.0%. Paranoid state was found in 15.1% and one case (1.1%) had unspecified psychosis (see Table III).

Contrary to popular belief that functional psychosis often presents with violence, only 12 (12.9%) were referred for this reason. In many instances they presented with abnormal behaviour, depressive or somatic symptoms, or hallucinations and delusions.

### (3) Neurotic Disorder (n = 85)

Both anxiety neurosis and neurotic depression formed the bulk of these disorders, 47.0% and 46.0% respectively. Hysteria was found in 3 cases, obses-

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Table I  
MAIN DIAGNOSTIC CATEGORIES (n = 313)

Diagnostic Groups	Male	Female	No	%
1 Organic Psychotic Conditions	26	43	69	22.0
2 Other (Functional) Psychoses	46	47	93	29.7
3 Neurotic Disorders	28	57	85	27.2
4 Others	40	26	66	21.1
Total	140 (44.7%)	173 (55.3%)	313	100.0

Table II  
ORGANIC PSYCHOTIC CONDITIONS

Diagnostic Group	No.	%
1 Acute Confusional State	26	37.6
2 Dementia	9	13.0
3 Alcoholic Psychosis	3	4.3
4 Psychosis associated with epilepsy	7	10.1
SLE	22	31.9
Hyperthyroidism	2	2.9
Total	69	100.0

Table III  
OTHER (FUNCTIONAL) PSYCHOSES

Diagnostic Group	No.	%
1 Schizophrenia	51	54.8
2 Affective Psychosis	27	29.0
3 Paranoid State	14	15.1
4 Others	1	1.1
Total	93	100.0

Table V  
OTHERS

Diagnostic Group	No.	%
1 Personality Disorder	15	22.7
2 Alcohol Dependence	8	12.1
3 Drug abuse/dependence	2	3.0
4 Adjustment Reaction	12	18.2
5 Mental Retardation	5	7.6
6 No Psychiatric Disorder	19	28.8
7 Others	5	7.6
Total	66	100.0

Table IV  
NEUROTIC DISORDERS

Diagnostic Group	No.	%
1 Anxiety Neurosis	40	47.0
2 Neurotic Depression	39	46.0
3 Hysteria	3	3.5
4 Obsessive-Compulsive Neurosis	2	2.4
5 Hypochondriasis	1	1.1
Total	85	100.0

sive compulsive neurosis in 2 cases and hypochondriasis in 1 case of those referred for psychiatric opinion (see Table IV).

Somatic and depressive symptoms were predominant in these patients, as expected. Interestingly, 3 patients presented with pseudo-hallucinations, attributed to a heightened anxiety level.

(4) **Others** (n= 66)

This group comprised 15 cases (22.7%) with personality disorder, 8 cases (12.1%) with alcohol dependence, 2 cases (3.0%) with drug abuse and 5 cases (7.6%) with mental retardation. 12 cases (18.2%) were found to have adjustment reaction and 19 cases (28.8%) did not have any psychiatric disorder (see Table V).

(B) **ATTEMPTED SUICIDES** (n = 181)

Out of these patients who presented with attempted suicide, 45.3% were males and 54.7% were females. A disproportionate number of them (86.7%) were Chinese, while Malays made up only 3.3%, Indians 7.7% and other races 2.3%.

Overall there were more females to males. But in those under the age of 20 and above the age of 40, the sex ratios were about equal (see Table VI). In the age range 20 to 29 years however, these were about 3 females to 1 male, whereas in the 30 to 39 range the ratio was reversed, with about 2 males to 1 female.

Marital discord and family disputes were given as the cause for the suicidal attempts in more than half of those

Table VI  
**ATTEMPTED SUICIDES (n = 181)**

Age Group	Male	Female	No	%
<20	10	10	20	11.0
20-29	16	50	66	36.6
30-39	35	17	52	28.7
40-49	11	9	20	11.0
50-59	5	5	10	5.5
≥60	5	8	13	7.2
Total	82 (45.3%)	99 (54.7%)	181	100.0

Table VII  
**DIAGNOSTIC CATEGORIES IN ATTEMPTED SUICIDES**

Diagnostic Group	No.	%
1 Organic Psychosis	2	1.2
2 Schizophrenia	23	12.7
3 Affective Psychosis	9	5.0
4 Paranoid State	2	1.2
5 Neurosis — Anxiety Neurosis	2	39.2
6 Neurosis — Neurotic Depression	65	
7 Neurosis — Hypochondriasis	2	
8 Neurosis — Obsessive Compulsive Neurosis	2	
9 Personality Disorder	13	7.2
10 Drug Abuse	1	0.6
11 Alcohol Dependence	6	3.3
12 Adjustment Reaction	30	16.6
13 No Psychiatric Disorder	24	13.3
Total	181	100.0

Table VIII  
**COMPARISON OF PSYCHIATRIC REFERRAL PATIENTS  
 IN SGH AND TTSH**

Diagnostic Group	SGH (Tsoi & Kok, 1983) n = 550	TTSH n = 313
1 Organic Psychotic Condition	18.9%	22.0%
2 Other (Functional) Psychoses	21.1%	29.7%
3 Neurotic Disorder	37.4%	27.2%
4 Others	22.6%	21.1%
Total	100.0%	100.0%

assessed to have social problems, and boyfriend/girlfriend troubles in 20%. Unemployment and financial difficulties were found in another 20% of these cases.

In terms of diagnostic categories, neurotic depression stood out, accounting for almost 40% of the cases (see Table VII).

## DISCUSSION

The pattern of psychiatric referrals in a general hospital would usually reflect the type of patients that are in that hospital, and vary from hospital to hospital in this respect.

While the series in Tsoi and Kok's study showed that neurotic disorders was 38% compared to organic psychoses (19%) and functional psychoses (21%), our study showed that functional psychoses formed a larger proportion of the cases in Tan Tock Seng Hospital (see Table VIII). This reflected the fact that Woodbridge Hospital inpatients who needed emergency medical or surgical treatment were sent to Tan Tock Seng Hospital for admission, and psychiatric referrals were requested for continuation of care.

The organic psychotic conditions comprised a big number of SLE patients (22 cases). Again this reflected the specialisation of a particular medical unit in the treatment of such patients in Tan Tock Seng Hospital.

The high percentage of patients who had affective psychosis (29% of the total number of patients who were diagnosed to be suffering from functional psychosis) is surprising, as compared to the 2.6% reported in Tsoi and Kok's study. This may reflect different diagnostic habits with regards to affective disorder although the ICD - 9 was used in both instances.

With regards to neurotic disorders, the bulk of cases were found under anxiety neurosis and depression in both studies. Hysteria which was found in 23 cases in Tsoi and Kok's study, occurred in only 3 cases in this study.

Coming to the analysis of the referrals for attempted suicides which totalled 181 patients, psychiatric disorder was found in 86.7% of them. This high percentage probably reflected the screening of such cases for psychiatric referral by the physicians. In a study by Chee and Teo in 1984 (2), out of 80 cases, only 14 were assessed to need psychiatric opinion and psychiatric illness accounted for 13.8% of these cases.

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The modal age group was in the range of 20 to 29 and this is similar to 2 other studies on attempted suicides in general hospitals in Singapore (3, 4). The sex ratio overall, as expected, was more females to males, as in many other studies on attempted suicides. Indeed in the modal age group of 20 - 29, females were more than males in the ratio of 3:1. The reversal of this sex imbalance in the age group 30 - 39 is interesting. Neurotic conditions accounted for about half of the males in this age group, and about a quarter had schizophrenia.

The disproportionate number of Indians up to 3 times the expected figure in a 1970 study (3) was not found in our study. The profile of disturbed interpersonal relationships found by Tsoi (3), and Chee and Teo (2) in the area of about 50% of cases was also present in our analysis of suicide attempts.

## CONCLUSION

This study of psychiatric referral patterns in Tan Tock Seng Hospital confirms the need for psychiatric input in all disciplines of medicine and surgery in a general hospital. While the basic diagnostic categories of patients do not differ drastically, each hospital has its unique patient characteristics which may be governed by admission policies and subspecialisation, eg. in rheumatology, oncology, organ transplantation programmes. This will generate its own pattern of requirements for psychiatric consultation. To this end, our study on the trend of psychiatric referrals in Tan Tock Seng Hospital has been useful.

Consultation psychiatry through the referral system is only the tip of the iceberg of what is the potential of psychiatric involvement in general hospital practice. Psychiatric liaison, as in a multi-disciplinary team, contributes another facet to assessment, and management problems may be shared, particularly when psychological factors are prominent and impede the patient's progress (5).

## ACKNOWLEDGEMENTS

We wish to thank Dr Ong Thiew Chai, Consultant Psychiatrist and Head of Psychological Medicine Unit, Tan Tock Seng Hospital, for his advice and encouragement in carrying out this study. We also wish to thank Mr Albert Lee for kindly typing the manuscript.