

# Profile of Patients Seeking Psychiatric Treatment from the Adult Public Mental Health Services in Singapore

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## Abstract

*This study examined the characteristics of patients seeking help from public mental health services and changes in the utilisation of the services over time. The sample included 198 consecutive new referrals above the age of 15 years to the adult psychiatric services provided by Woodbridge Hospital and the Institute of Mental Health from 1 January 1995 and followed up over a one-year period.*

*The most common reason for seeking psychiatric treatment was for abnormal behaviour (26%) and the most common diagnostic group was schizophrenia/paranoid disorder (21.1%). The medical sector was the most common source of referral (56%). The primary health care services referred significantly more patients with anxiety disorders while the police and relatives/friends referred significantly more patients with schizophrenia/paranoid disorder. About one-third of the sample made their first contact with the services at the 24-hour Admission Room. One third received inpatient treatment after their first consultation and those with schizophrenia/paranoid disorders were more likely to be admitted ( $P < 0.05$ ). At the end of one year, 23.2% remained in the services. There were significantly more elderly patients and those suffering from schizophrenia/paranoid disorder maintaining contact with the services after one year.*

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**Key words:** *Psychiatric referral, Public mental health services, Service utilisation*

## Introduction

Earlier studies by Tsoi et al<sup>1</sup> and Leong<sup>2</sup> had profiled the characteristics of patients presenting to the public mental health services in Singapore. Both studies examined the use of inpatient services. With the expansion of outpatient clinics and community services, these inpatient data are inadequate in providing the profile of patients using the mental health services. Besides hospital statistics, there is currently no study on the utilisation of public mental health services in Singapore.

The aims of this study were: to examine some of the characteristics of patients presenting to the public mental health services provided by Woodbridge Hospital and changes in the utilisation of the services over time. Specifically, this study examined the following characteristics: sex and age distribution, reason for referral, source of referral, clinical diagnosis, point of entry to the psychiatric services, outcome after first consultation, duration of contact over a one-year period and sex, age and clinical profile of those in contact with the services for a year.

## Materials and Methods

This study examined the adult psychiatric services

provided by Woodbridge Hospital. It included outpatient services at the Institute of Mental Health and the various psychiatric outpatient clinics in the community run by staff from Woodbridge Hospital. For this study, only patients presenting for the first time to the services were included.

The list of new cases presenting to the public mental health services from 1 January 1995 was obtained from the Medical Record Office. This list, which excluded those from the Child Psychiatric Clinic, was sorted according to the date of first registration. Consecutive cases, above 15 years of age presenting for the first time to the services were selected for the study. The case records were traced and relevant data extracted.

Contacts with the services were confined to face-to-face contacts with doctors or paramedical staff—nurses (Community Psychiatric Nurses), psychologists, medical social workers and occupational therapists. It included inpatient care, outpatient consultations, Day Centre attendance and home visits. Contacts by telephone or letters were excluded.

For the study, the observation period was for a year from the date of entry into the services. Hence, for a patient whose first consultation was on 10 January 1995,

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the end of the one-year period would be on 9 January 1996. Those patients with appointment dates after the one-year period and those receiving inpatient care at the end of the one-year period were considered as still being in contact with the services. The duration of contact with the services was obtained by the difference in number of days, between the date of last contact and the date of entry into the services.

The chi-square was used to test for any statistical significance. The 1994 population statistics were used for comparison with the general population.

## Results

Based on the list of new cases generated by the Medical Record Office, a total of 349 case records were traced. One hundred ninety-eight cases satisfied the definition of new cases used in this study, 131 cases were from Woodbridge Hospital (including outpatient clinics at the Institute of Mental Health) and 67 cases from the various psychiatric outpatient clinics. One hundred forty-four cases were not included in the study because the patients had previous history of contact with the services. These cases appeared in the list of new cases for various reasons. For example, patients who lost contact with the services for more than a year were classified as new cases. The remaining 7 casenotes could not be traced.

The 198 new cases, which made up the study sample, made contact with Woodbridge Hospital and the various psychiatric outpatient clinics run by its staff between 1 January 1995 and 23 January 1995. This gives an incidence rate of 3000 new cases in a year, or 1.03 new cases per 1000 population per year.

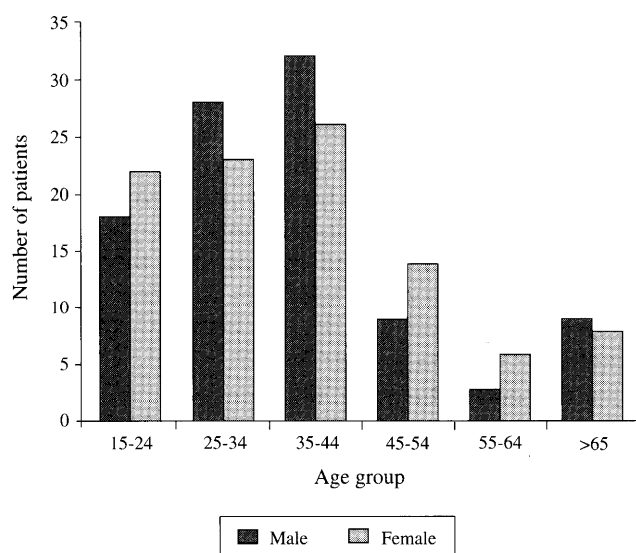


Fig. 1. Distribution by sex and age.

## Sex and Age Distribution

The composition of the sample is similar to the general population in terms of sex ( $P > 0.05$ ) and age ( $P > 0.05$ ) (Fig. 1).

## Reasons for Referral

The two most common reasons for going into psychiatric care were abnormal behaviour and feeling depressed, worried or stressed. Those referred for psychiatric assessment included cases remanded by the courts (Table I).

## Source of Referral

The main source of referrals was from the medical services. For primary health care, the number of referrals from government polyclinics were more than twice the referrals from general practitioners. The police was the second most common source of referrals, followed by relatives and friends (Fig. 2).

## Diagnosis

The three most common diagnostic groups seen were schizophrenia/paranoid disorder, depression, followed by anxiety disorder (Table I). For 23 patients, no mental illness was found, including 4 with mental retardation. No diagnosis was made for another 4 patients. All these patients were grouped under "No mental illness".

Those with schizophrenia/paranoid disorder were mainly referred by the police ( $P < 0.05$ ) and relatives/friends ( $P < 0.01$ ) (Fig. 3). On the other hand, those with depression and anxiety were mainly referred by the medical sector. The differences reached significant level for those with anxiety disorders referred by government



Fig. 2. Distribution by source of referral.

TABLE I: LOCATION BY REASON FOR REFERRAL AND DIAGNOSIS

| Location                          | Total<br>n (%)   | Outpatient<br>Clinics<br>n (%) | Admission<br>Room<br>n (%) |
|-----------------------------------|------------------|--------------------------------|----------------------------|
| Total                             | 198 (100)        | 124(100)                       | 74( 100)                   |
| Reason                            |                  |                                |                            |
| Depressed/Worried**               | 39 (19.7)        | <b>33 (26.6)</b>               | <b>6 (8.1)</b>             |
| Somatic complaints/Insomnia       | 33 (16.7)        | <b>32 (25.8)</b>               | 1 (1.4)                    |
| Suicidal behaviour*               | 25 (12.6)        | 11 (8.9)                       | 14 (18.9)                  |
| Abnormal behaviour* *             | 54 (27.3)        | <b>19 (15.3)</b>               | <b>35 (47.3)</b>           |
| Psychiatric assessment            | 13 (6.6)         | 5 (4.0)                        | <b>8 (10.8)</b>            |
| Others                            | 34 (17.2)        | <b>24 (19.4)</b>               | 10 (13.5)                  |
| Diagnosis                         |                  |                                |                            |
| Organic Brain Syndrome            | 15 (7.6)         | 8 (6.5)                        | 7 (6.5)                    |
| Schizophrenia/Paranoid disorder** | 42 (21.2)        | 18 (14.5)                      | 24 (32.4)                  |
| Depression                        | 41 (20.7)        | <b>30 (24.2)</b>               | 11 (14.9)                  |
| Other psychosis                   | <b>14 (7.1)</b>  | <b>6 (4.8)</b>                 | <b>8 (10.8)</b>            |
| Anxiety                           | <b>26 (13.1)</b> | <b>26 (21.0)</b>               | 0 (0)                      |
| Adjustment/Stress disorder        | 17 (8.6)         | 8 (6.5)                        | 9 (12.2)                   |
| Others                            | 16 (8.1)         | 11 (8.9)                       | <b>5 (6.8)</b>             |
| No mental illness                 | 27 (13.6)        | <b>17 (13.7)</b>               | 10 (13.5)                  |

\*  $P < 0.05$ \*\*  $P < 0.01$ 

outpatient clinics ( $P < 0.01$ ) and general practitioners ( $P < 0.05$ ).

#### Location of First Contact

About two-thirds of the subjects made their first contact with the public mental health services at the various outpatient clinics and the rest at the 24-hour Admission Room in Woodbridge Hospital. Most of the outpatient,

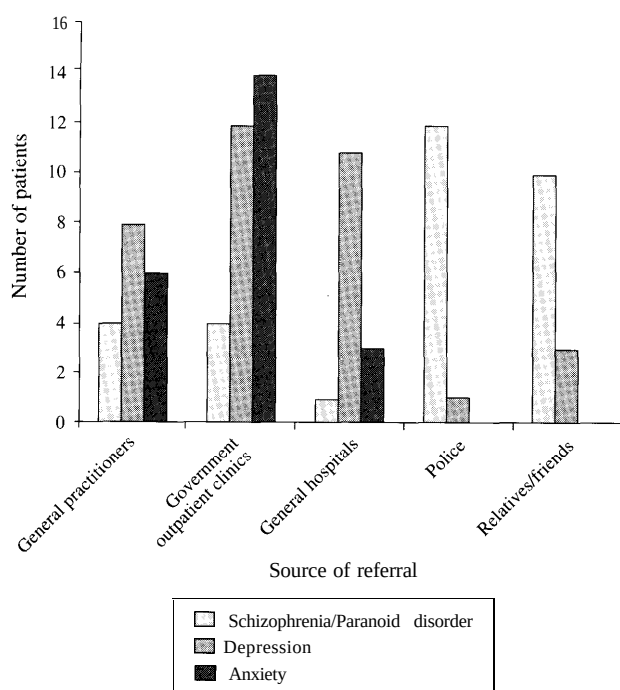


Fig. 3. Distribution of diagnosis by source of referral.

contacts were made at the Institute of Mental Health (Fig. 4).

The Admission Room saw most of the patients presenting with abnormal ( $P < 0.01$ ) and suicidal behaviour ( $P < 0.05$ ). In contrast, 84.6% of those who complained of feeling depressed or worried ( $P < 0.01$ ) were seen at the various outpatient clinics. Only one patient was seen at the Admission Room for somatic complaints/insomnia (Table I). In terms of diagnostic groups, the Admission Room saw more patients with schizophrenia/paranoid disorders ( $P < 0.01$ ). None of the patients with anxiety was seen at the Admission Room.

#### Outcome

After the first contact with the psychiatric services, 62.4% of the cases were given a further outpatient appointment for review, 33% were admitted and 4.6% were discharged from the services. Those admitted were more likely to be seen at the Admission Room ( $P < 0.01$ ), and suffering from schizophrenia/paranoid disorder ( $P < 0.01$ ). None of the patients with anxiety required inpatient treatment (Table II).

#### Duration of Contact

At the end of 1 year, only 46 patients were still in contact with the services. About 50% of the patients left the services by 40 days after their first contact with the services (Fig. 5). Those with adjustment/stress reaction, depression and anxiety left the services earlier, compared to patients with organic brain syndrome and schizophrenia/paranoid disorder.

More females remained in the services after one year, with about 30% of the female patients continuing to use the services compared to 8% of the male patients. A statistically significant proportion of the patients at the

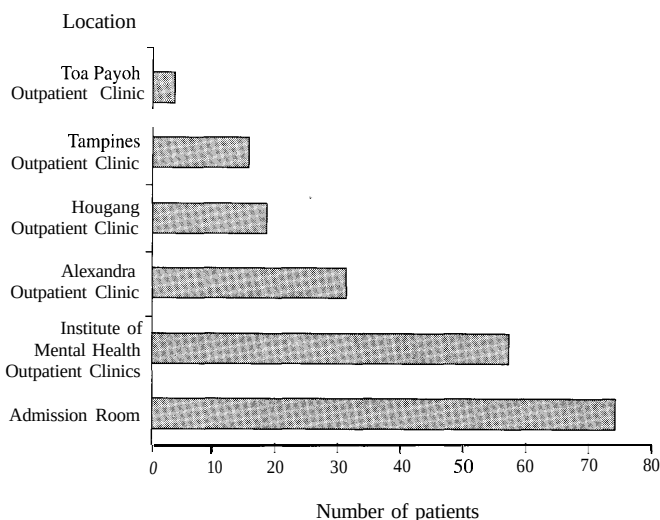


Fig. 4. Distribution by location of first contact.

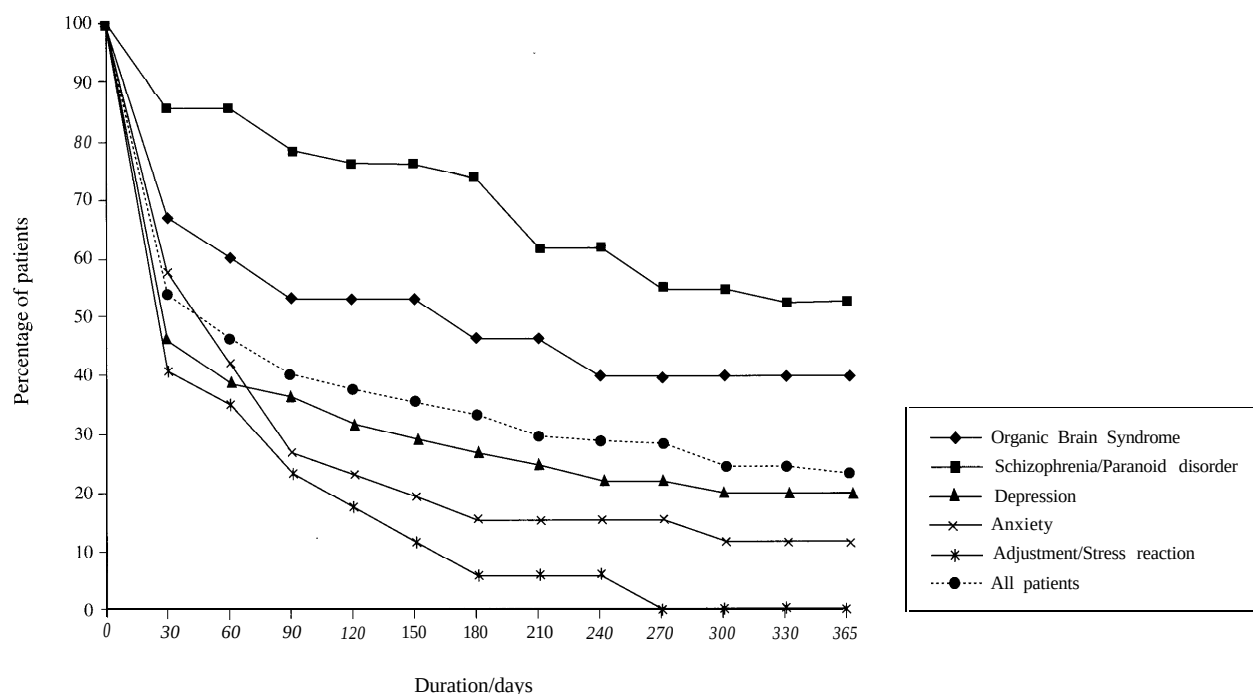


Fig. 5. Duration of contact with the services by diagnosis.

TABLE II: OUTCOME BY LOCATION AND DIAGNOSIS

| Outcome                           | Outpatient Follow-up<br>n (%) | Admission<br>n (%) | Discharged<br>n (%) |
|-----------------------------------|-------------------------------|--------------------|---------------------|
| Total                             | 124 (100)                     | 65 (100)           | 9 (100)             |
| Location**                        |                               |                    |                     |
| Admission Room                    | 14 (11.3)                     | 59 (90.8)          | 1 (11.8)            |
| Outpatient Clinics                | 110 (88.7)                    | 6 (9.2)            | 8 (88.9)            |
| Diagnosis                         |                               |                    |                     |
| Organic Brain Syndrome            | 6 (4.8)                       | 8 (12.3)           | 1 (11.1)            |
| Schizophrenia/Paranoid disorder** | 20 (16.1)                     | 21 (32.3)          | 1 (11.1)            |
| Depression                        | 28 (22.6)                     | 12 (18.5)          | 1 (11.1)            |
| Other psychosis                   | 4 (3.2)                       | 9 (13.8)           | 1 (11.1)            |
| Anxiety                           | 26 (21.0)                     | 0 (0)              | 0 (0)               |
| Adjustment/Stress disorder        | 11 (8.9)                      | 6 (9.2)            | 0 (0)               |
| Others                            | 12 (9.7)                      | 4 (6.2)            | 0 (0)               |
| No mental illness                 | 17 (13.7)                     | 5 (7.7)            | 5 (55.6)            |

\*  $P < 0.05$ \*\*  $P < 0.01$ 

The discharged group was excluded for the test of significance.

end of one year was elderly ( $P < 0.01$ ). Almost half of those in the services at the end of one year had schizophrenia/paranoid disorder, compared with 21.2% of the initial sample ( $P < 0.01$ ) (Table III).

## Discussion

Researches have shown that the majority of those with mental illnesses in the community do not seek help from the mental health care services.<sup>3,4</sup> This may explain the low self referral rate in the sample (8%) and that the most

TABLE III: PROPORTION OF PATIENTS AT FIRST CONTACT AND AT THE END OF ONE YEAR

|                                   | First Contact (%)<br>n = 198 | At 1 Year (%)<br>n = 46 |
|-----------------------------------|------------------------------|-------------------------|
| Sex                               |                              |                         |
| Male                              | 50                           | 34.8                    |
| Female                            | 50                           | 65.2                    |
| Age                               |                              |                         |
| 15 to 24                          | 20.2                         | 8.7                     |
| 25 to 34                          | 25.8                         | 17.4                    |
| 35 to 44                          | 29.3                         | 26.1                    |
| 45 to 54                          | 11.6                         | 15.2                    |
| 55 to 64                          | 4.5                          | 8.7                     |
| >65**                             | 8.6                          | 23.9                    |
| Diagnosis                         |                              |                         |
| Organic Brain Syndrome            | 7.6                          | 13.0                    |
| Schizophrenia/Paranoid disorder** | 21.2                         | 47.8                    |
| Other psychosis                   | 7.1                          | 10.9                    |
| Depression                        | 20.7                         | 17.4                    |
| Anxiety                           | 13.1                         | 6.5                     |
| Adjustment/Stress disorder        | 8.6                          | 0                       |
| Others                            | 8.1                          | 4.3                     |

\*\*  $P < 0.01$ 

common reason for being seen at Woodbridge Hospital was for abnormal behaviour (26%), a state in which patients might have violated social norms and which the community could easily recognise as pathological.

The finding that the medical sector was the most common source of referral is similar to that reported by Gater et al,<sup>5</sup> in a study on the pathways to psychiatric

care involving eleven centres. Within the primary health care, general practitioners were less likely to refer their cases to the public mental health services (11% 'of all referrals) as compared to their counterparts in government service (26%), suggesting that they might be more likely to treat patients with psychological problems or might have referred their patients to other psychiatrists in the general hospitals or the private sector.

The police was the second most common source of referral for the study sample. For most of the centres as reported by Gater et al,<sup>5</sup> police referrals were uncommon except for Nairobi (Kenya) which had 16% of their referrals from the police. This proportion is similar to that of this study.

Referrals from relatives/friends were similar to that of the police in that more than half of the cases suffered from severe psychotic illnesses. The illness behaviour of the psychotic patients probably is the explanation for this similarity. With the onset of psychotic processes, the patient is unlikely to seek for help. Rather, he will be more preoccupied with his intrapsychic experiences. It is only when his behaviour becomes noticeably abnormal or dangerous to the people near to him, will it trigger others to take action.<sup>6,7</sup>

Being brought for psychiatric treatment by the police is a more traumatic experience compared to being brought in by relatives and friends. This may affect patients' compliance with subsequent treatment. Public education on the symptoms of mental illness, significance of early treatment and the services available for treatment of mental illnesses will increase the likelihood of relatives seeking psychiatric treatment for their mentally sick family members early, before their behaviour becomes unmanageable.

Most of the patients continued to receive outpatient treatment after the first consultation. This finding confirms the initial belief that the profile of patients admitted to the mental health services reported by Tsoi et al<sup>1</sup> and Leong<sup>2</sup> will not provide a full picture of all patients using the mental health services. In fact, those admitted constituted only about one-third of the cases.

The diagnostic composition of those admitted was compared to earlier studies on new admissions to Woodbridge Hospital by Tsoi et al<sup>1</sup> and Leong<sup>2</sup> (Table IV). The most obvious differences between the result of this study and the two earlier ones are: an increase in the proportion of non-psychotic conditions and a decrease in the proportion of psychotic cases among those admitted in this sample. There is a slightly higher percentage of those with organic brain syndrome in the current series. The proportions of those with mental retardation or no mental illnesses are about the same for all three studies.

There seems to be a change in the diagnostic composi-

TABLEIV: COMPARING THE DIAGNOSTIC COMPOSITION (IN PERCENTAGES) OF ADMISSIONS OVER A 20-YEAR PERIOD

| Diagnostic Group                     | Tsoi <sup>1</sup> | Leong <sup>2</sup> | 1995 |
|--------------------------------------|-------------------|--------------------|------|
|                                      | 1975              | 1982/83            |      |
| Organic Brain Syndrome               | 8.4               | 8.7                | 12.0 |
| Functional Psychosis                 | 65.2              | 64.2               | 46.0 |
| Non-psychotic Condition              | 17.8              | 19.2               | 34.0 |
| Mental Retardation/No mental illness | 8.6               | 7.9                | 8.0  |

tion of those admitted over the twenty-year period. This may reflect changes in the recognition and referral processes, willingness to come for psychiatric treatment and the availability and accessibility of mental health care. However, the different methodologies and samples used by the three studies need to be taken into consideration. For example, this study examined the admissions after the first consultation, but the other two reported on new admissions over a year. Furthermore, Tsoi et al<sup>1</sup> and Leong<sup>2</sup> included all patients above the age of 10 while this study included only patients above 15 years old. Nonetheless, these changes need further study as they have an implication on delivery of care since non-psychotics and psychotics have different needs.

The result that most of the new cases did not stay in the services for long is similar to that reported by Diatkine et al,<sup>8</sup> Walsh<sup>9</sup> and Rotelli et al<sup>10</sup> for studies done in European cities, namely, Paris (France), Dublin (Ireland) and Trieste (Italy) respectively. There are many reasons why patients leave the psychiatric services. Recovery from illnesses, failure to see the necessity to continue treatment or the services not meeting the needs of the patients are a few possible explanations. Social reasons such as employment may hinder male patients and younger patients from continuing with the treatment. Psychopathology clearly has a part to play in that those with chronic psychosis tend to remain in psychiatric care.

Regier et al<sup>3</sup> in a paper on the utilisation of health services by the mentally ill in the United States, commented that "mental health services data are generally concentrated on the number of services events (for example, visits, admissions, bed days, discharges or episodes of care), rather than on the number of treated persons who account for these events." Henisz et al<sup>11</sup> found that 15% of the cohort studied used 70% of the total psychiatric services delivered over a year. Similarly, Lavik<sup>12</sup> found that 10% of the patients used 75% of the service resources.

Hospital statistics provide a basis for planning of services and the allocation of financial and manpower resources. However, they are limited in that they do not give a picture on the pattern of use by the patients. One way to overcome this deficiency is by the use of case

registers.<sup>13</sup> The usefulness of case registers for conducting epidemiological research and planning of services is obvious. The possibility of having a case register in Singapore for mental health users should be considered.

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