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The Pattern of Mental Illness and Health-seeking Behaviour of Outpatients Attending Institute of Mental Health, Chennai, India, January 2022 to March 2022

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Abstract
Introduction: Mental disorders contributed to 4·7% of DALYs in India in 2017. Institute of Mental Health, (IMH), Chennai, in Tamil Nādu state, India, offers mental health services. We conducted a study to understand patterns of illness and health-seeking behaviour among outpatients in IMH.
Methods: We did a cross-sectional study between January to March 2022. We interviewed for socio-demographic characteristics, symptoms, and health-seeking behaviour using a semi-structured

questionnaire. We computed proportions for patterns of mental illness and health-seeking behaviour.
Results: We enrolled 808 patients. The mean age for males was 34 years and 38 years for females. The majority of patients had higher secondary level education, {males 42% (n= 227) and females 36% (n= 93)}. Median income was Rs.8000. Mental illnesses present were schizophrenia {33% (n=268)}, substance abuse {25% (n=204)}, and bipolar disorder {13%(n=107)}. Reasons for seeking treatment were insomnia {88% (n=714)}, aggression {69% (n=557)}, and unmanageable behaviour at home 61% (n=495). Most patients (70%) sought treatment within 6 months after the onset of symptoms (n=564). For initial treatment, 64% went to the government sector and 36% went to the private sector. More than 90% of the patients had visited psychiatrists working either in government {61%(n=493)} or private hospitals{33%(n=270)}. Only 6 patients (0.7%) had visited traditional healers for initial treatment. Comorbidities present were among 29% (n=231). Comorbidities present were hypertension 8% (n=65), Diabetes 8% (n=62), and seizure 5% (n=39). The prevalence of stigma for mental illness was 81% (n=656). Reasons told by patients for seeking treatment in IMH were satisfactory treatment 66% (n=533) and caregivers were not necessary to stay along30% (n=245).
Conclusion: Schizophrenia, substance abuse and bipolar disorders were major illnesses among patients. Health-seeking behaviour was adequate.
Keywords: India, Chennai, Schizophrenia, bipolar, stigma, health-seeking behaviour
Key messages: Schizophrenia, substance abuse, and bipolar disorders were major illnesses Health-seeking behaviour was adequate among the patients.

Introduction:

Mental disorders were the sixth leading cause of disability-adjusted life-years (DALYs) in 2017, globally. Mental health has been included in the Sustainable Development Goals(India State-Level Disease Burden Initiative Mental Disorders Collaborators, 2020). Though mental health services and resources are available, they are not accessed due to different factors such as stigma, poverty, unawareness of the symptoms (Srivastava et al., 2016), and discrimination toward patients with mental health conditions. This discrepancy may affect access to mental health services and may worsen the mental health disorders of the patients(Muhorakeye & Biracyaza, 2021).

Major barriers to mental healthcare access are limited availability and affordability of mental healthcare services, insufficient mental healthcare strategies, lack of education about mental disorders, negative attitudes toward mentally disordered patients, and perceived quality of service(Latunji & Akinyemi, 2018) and stigma(Muhorakeye & Biracyaza, 2021) . Decentralizing mental health services will address local needs (Muhorakeye & Biracyaza, 2021). Mentally ill patients may have poor health outcomes and increased morbidity and mortality due to delayed or inappropriate health-seeking behaviour(Latunji & Akinyemi, 2018). Other reasons for patients to not seek treatment were economic problems, lack of awareness about the availability of mental health services, unsatisfied with medical services, fear of social stigma, and lack of transport to the treating institutions(Wang et al., 2019).

Caregivers of mentally ill patients had poor knowledge about mental illness and a negative attitude toward mental illness(Gabra et al., 2020). In many countries, mentally ill people sought treatment from traditional healers due to a lack of mental health facilities in their vicinity(Gabra et al., 2020). Easy accessibility to mental services, faith, and the good reputation of the treating institutions were some of the reasons for seeking treatment in tertiary or secondary care institutions(Muhorakeye & Biracyaza, 2021).

Mental disorders contributed to 4·7% of the total DALYs in India in 2017. India launched its first National Mental Health Policy (NMHP) in 2014 and a revised Mental Healthcare Act in 2017. The objective of this policy was to provide equitable, affordable, and universal access to mental health care(India State-Level Disease Burden Initiative Mental Disorders Collaborators, 2020). Despite the implementation of a national health program, the majority

of the patients remain untreated or there is a treatment gap. The high treatment gap may be due to poor awareness about symptoms of mental illness, stigma related to mental illness, and lack of knowledge on the treatment availability(Srivastava et al., 2016). The majority (75%) of all adult mental health problems have their origins in adolescence and young adulthood. Public stigma prevents people from seeking counselling and treatment(Gaiha et al., 2020).

NMHP recommends all districts should have District Mental Health Programme (DMHP) unit. The aim of DMHP is to extend mental health services to persons with mental illness in the district through the existing healthcare personnel and institutions(S. Gupta & Sagar, 2018). The Institute of mental health, in the capital of Tamil Nadu state, is offering all mental health services. This institute has outpatient (OP) and inpatient (IP) facilities, in addition to a de-addiction ward. We wanted to understand if the decentralization of services was done effectively at the district level through the study of the pattern of illness and the reasons for the patients to turn up at IMH, despite all services being available at the district level. We also wanted to study the health-seeking behaviour among the patients.

Moreover, though IMH documents all services, earlier no study had been done to describe the pattern of mental illness among the patients attending the IMH. The study on health-seeking behaviour may help to plan the necessary human resources and training for the capacity building of the service providers(Mishra et al., 2011). This may help to reallocate the human resources, logistics, and funds, needed for the institution. This may help to identify the issues in the implementation of DMHP. Based on the patient's health-seeking behaviour from the different districts of Tamil Nadu, we can give an evidence-based recommendation to the district mental health program to improve the program activities.

The objectives of the study were

1) To describe the pattern of mental illness among the patients attending IMH, Chennai.
2) To describe the health-seeking behaviour of the patients and their families.
3) To identify the reasons for seeking treatment in districts other than their residential districts.

Methods

Study setting: Our study setting was the Institute of Mental Health, Chennai.

Study population: Our study population were the outpatients attending the Institute of Mental Health.

Study Period: Our study period was from January 2022 to March 2022.

Study design: Our study design was a descriptive study.

Operational case definitions:

Health-seeking behaviour: Healthcare-seeking behaviour (HSB) has been defined as, "any action or inaction undertaken by individuals who perceive themselves to have a health problem or to be ill to find an appropriate remedy"(Latunji & Akinyemi, 2018).

Mental illness: Mental illnesses are defined as "health conditions that are characterized by alterations in thinking, mood, or behaviour (or some combination thereof) associated with distress and/or impaired functioning"(Gabra et al., 2020).

Sampling method and sample size

We included all patients attending OP, to describe the burden of mental illness. For the second and third objectives, we interviewed 808 patients, As the sample calculated was 369 for simple random sampling, we arrived at 808 for the cluster sampling method. We did two-stage cluster sampling, our clusters being day clusters. We had to select 25 patients per day to achieve the sample size. We conducted the study on all days except Sundays.

Procedure for sample size calculation: Patients seeking a psychiatrist as their first choice for treatment was 45% according to the literature(Mishra et al., 2011). {(Mishra, N., Nagpal,

S. S., Chadda, R. K., & Sood, M. (2011). Help-seeking behaviour of patients with mental health problems visiting a tertiary care centre in north India. Indian Journal of Psychiatry, 53(3), 234–238. https://doi.org/10.4103/0019-5545.86814)}. With a 95% confidence level,10% as a non-response rate, and 5% absolute precision, we arrived at this sample size. Our population was around 11,700 patients per month.

Data needed: We needed data on socio-demographic details, investigations, and psychiatric diagnoses. For health-seeking behaviour, we needed data on the time of seeking treatment after the onset of symptoms, choice of doctors/healers, willingness to continue treatment and compliance to drugs/therapy, and reasons for seeking treatment in districts other than the residential districts.

Data collection methods: We reviewed records for socio-demographic details, diagnosis, treatment, and investigations. We used a semi-structured questionnaire for health-seeking behaviour.

Data analysis: We computed proportions to describe the pattern of mental illness, to describe the health-seeking behaviour among the patients, and the reasons for seeking treatment in districts other than residential districts.

Human subject protection: We submitted the protocol to the ethics committee. We translated the semi-structured questionnaire into the local language. We took informed consent from the participants.

Results:

We enrolled 808 patients in our study. Out of which 68% (547/808) were males and 32% (261/808) were females. The mean age of the female was 38 years (Range: 9 years to 86 years) and the mean age of male was 34 years (Range: 6 years to 90 years). Among them, the majority of the males (42%, n= 227) and females (36%, n= 93) had education up to Higher Secondary level. The median income of the study population was Rs. 8000, ranging between 500 to 1 lakh Indian rupees. Around half of the males (263/547) were unemployed and more than two third of females were unemployed. (207/261). Among the males, one-fourth were doing unskilled labour (139/547) **(Table 1).**

The majority of the study population belonged to the Hindu religion, both among males {83%, (449/547)} and females {77%, (201/261)}. Among the males, 13% were Christians (72/547) and 4% were Muslims (24/547). Among the females, 16% were Christians (41/261) and 7% were Muslims (18/261). Among the patients, 70% were residents of Chennai (43%, n=354), Thiruvallur (17%, n=135), and Kanchipuram (10%, n=77). Eight out of 808 patients came from Andhra Pradesh and three patients were residents of Kerala.

Among the parents of the patients, 27% had consanguineous marriages. A history of mental illness was present among the patient's family members 57% (n=458). Among the 458, only 409 responded to the query, "Which family member had a mental illness?". In our study, the majority of the respondents said their father 24%(n=98), or their paternal side relatives 12%(n=50) had mental illness. The prevalence of mental illness in the mother was 11%(n=43) and maternal side relatives were also 11%(n=44). The presentation of mental illness was lower in brothers 10%(n=41) and sisters 5% (n=19). In our study,301 persons had one family member with a mental illness. 108 persons had more than one family member with mental illness **(Flow chart Figure 4).**

Most of the patients (70%) sought treatment within 6 months after the onset of symptoms (n=564). Among them, 15% sought treatment within one week (n=123), 25% sought treatment within one month (n=199), 30% sought treatment within two to six months (n=242), 10% sought treatment within one year, and 20% sought treatment after one year (n=164), **(Figure 2)**. Five hundred and twenty (64%) out of 808 patients, went to the

Government sector for initial treatment and 36% went to the private sector for initial treatment.

Schizophrenia {33% (n=268)} and Substance Abuse {25% (n=204)} were the major illnesses among the patients. Hundred and seven (13%) patients had bipolar disorder. Intellectual Disability (n=48) and organic disorder(n=50) were found among 6% of patients. Anxiety disorders were found among 41 patients (5%). Depressive disorders were found among 67 patients (8%) **(Figure 1).**

More than 90% of the patients had visited psychiatrists working in government {61%, (n=493)} or private hospitals, {33%, (n=270)}. Only 6 patients (0.7%) had visited traditional healers for initial treatment.

The major reasons for seeking treatment in IMH were insomnia {88% (n=714)}, aggression {69% (n=557)}, and unmanageable behaviour at home {61% (n=495)}. Other reasons for seeking treatment were talking to self {43% (n=344)}, public nuisance {39% (n=315)}, paranoia {38% (n=306)}, not going to work {31% (n=251)}, substance abuse {30% (n=242)}, poor selfcare {26% (n=208)}, hearing voices {26% (n=210)}, loss of appetite {18% (n=147)}, low mood {15% (n=122)}, suicidal ideation {14% (n=114)}, self-harm {7% (n=55)}, no one to take care at home {1% (n=11)} **(Figure 3).**

Among the patient's attending IMH OPD, 29% (n=231) had comorbid illnesses. Among these patients, 8% had Hypertension (n=65), 8% had Diabetes (n=62), Seizure was present in 5% (n=39), heart disease was present in 0.9% (n=7), 0.5% of the patients had a stroke (n=4), kidney disease was present in 0.4% (n=3), Liver disease was present in 0.3%(n=2). Thirteen percent of the patients had other comorbid illnesses (n=104).

The stigma of having a mental illness was a major issue 81% (n=656), faced by the patients and their caregivers.

Among the patients who came to IMH for treatment, 66% (n=533) came because the treatment was good in IMH, 30% (n=245) felt caregivers were not needed to be present with the patient during their stay in IMH, 3% (n=26) felt the treatment was not satisfactory in their residential districts and only 0.5% (n=4) felt there were no medical centres in their district.

Table 1: Socio-demographic characteristics, The Pattern of Mental Illness and Health-seeking Behaviour of Outpatients Attending Institute of Mental Health, Chennai, India, January 2022 to March 2022

Socio-demographic characteristics	Males(n=547) Mean age=34years (Range:6 to 90)		Females(n=261) Mean age=38 years (Range 9 to86)	
	n	%	n	%
Education				
Illiterate	26	5%	33	13%
Primary	63	12%	43	16%
High school	105	19%	41	16%
Higher Secondary	227	42%	93	36%
Degree	94	17%	40	15%
Master degree	13	2%	6	2%
Professionals	19	3%	5	2%
Occupation				
Unemployed	263	48%	207	79%
Unskilled labour	139	25%	23	9%

Skilled labour	83	15%	8	3%
Professionals	18	3%	9	3%
Laid off	44	8%	14	5%
Religion				
Hindu	449	82%	201	77%
Christian	72	13%	41	16%
Muslim	24	4%	18	7%
Others	2	0%	1	0%

Figure 1: Distribution of mental illness among the patients attending IMH OPD, Chennai, January to March 2022

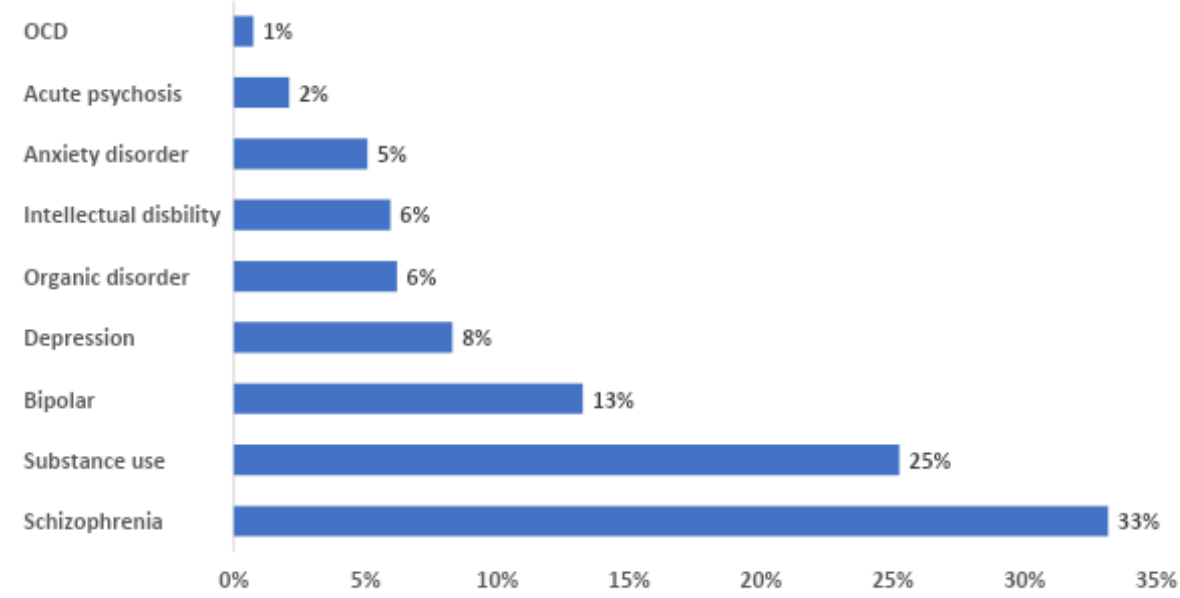
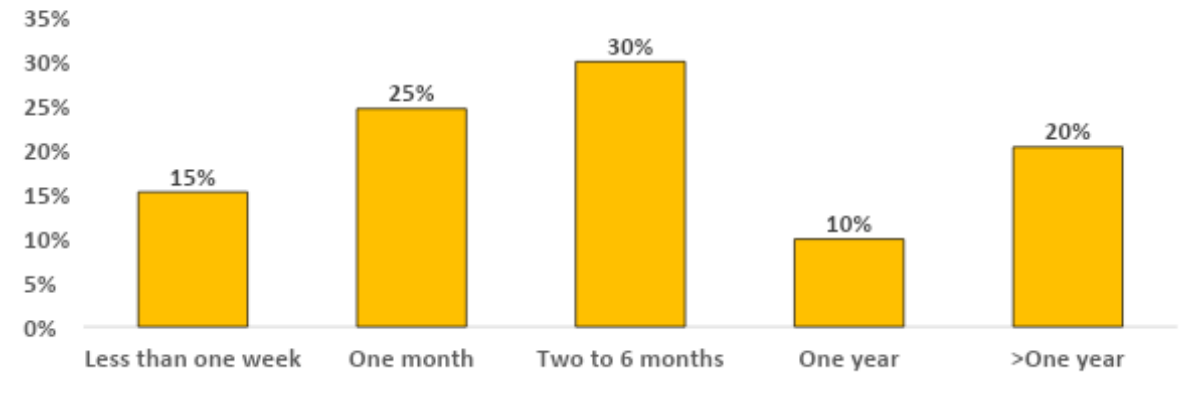


Figure 2: Symptom duration before patients sought initial treatment, among the OP patients attending IMH, Chennai, January to March 2022.



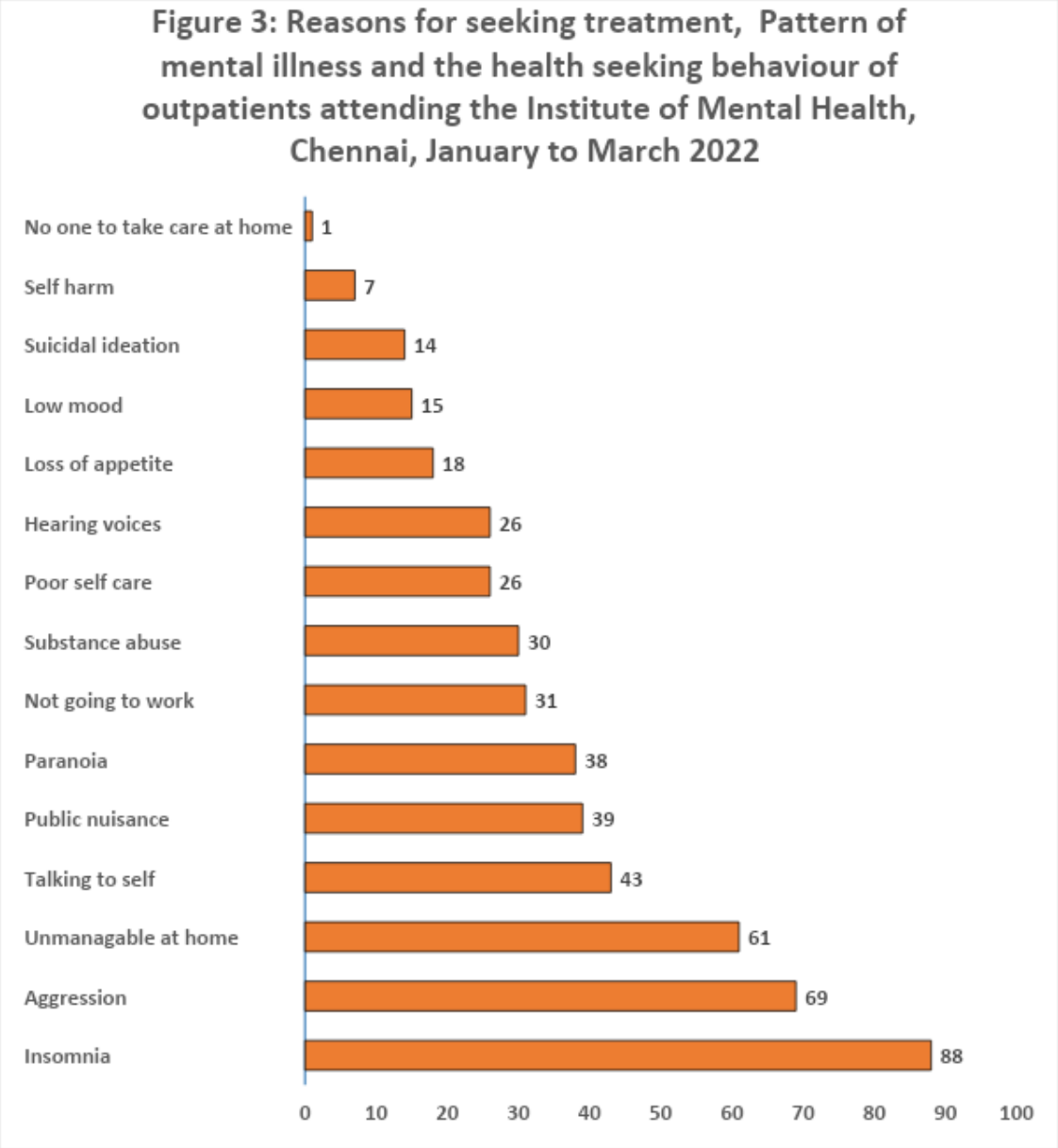
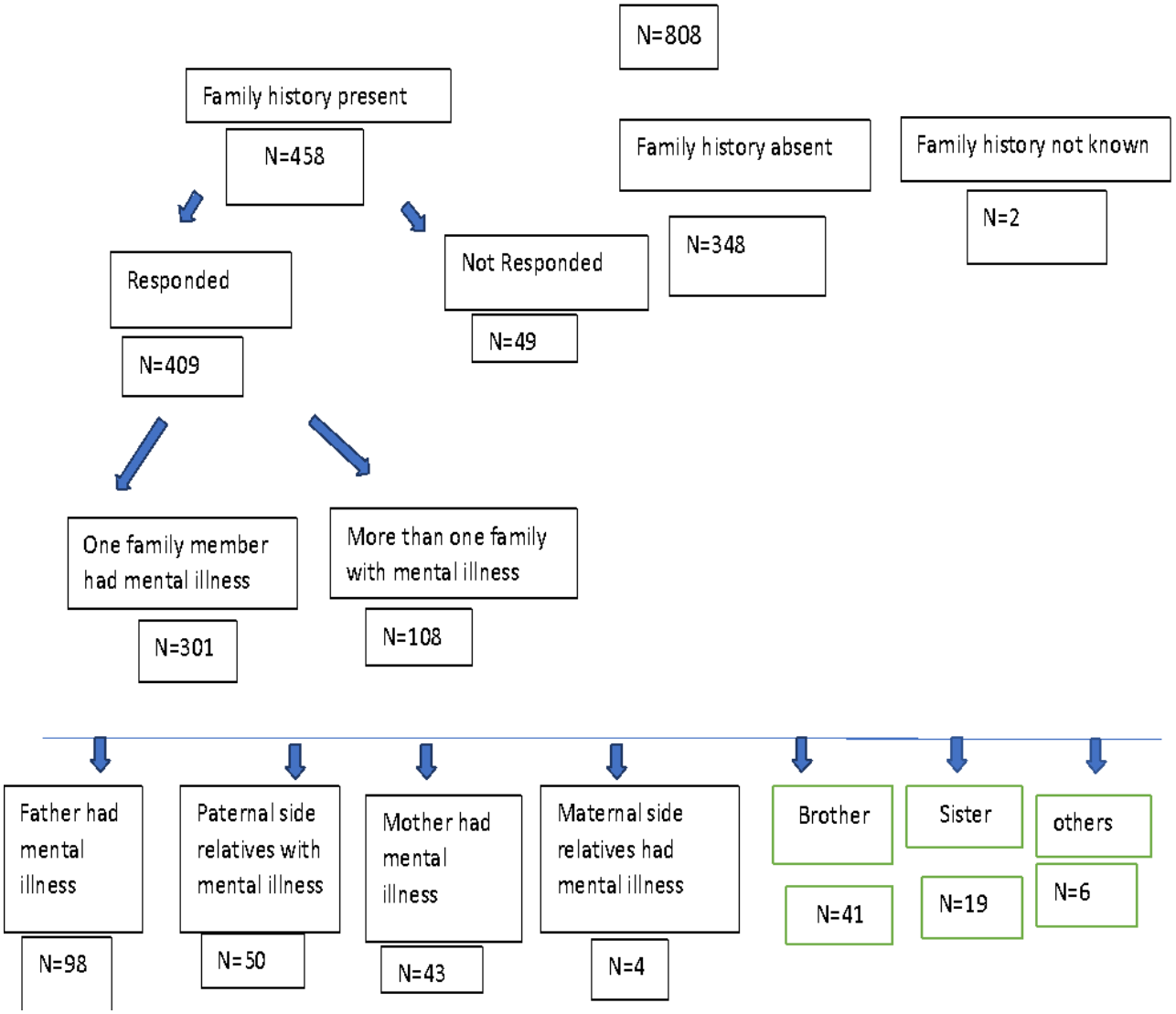


Figure 3: Reasons for seeking treatment, Pattern of mental illness and the health seeking behaviour of outpatients attending the Institute of Mental Health, Chennai, January to March 2022
No one to take care at home
1
Self harm
7
Suicidal ideation
14
Low mood
15
Loss of appetite
18
Hearing voices
26
Poor self care
26
Substance abuse
30
Not going to work
31
Paranoia
38
Public nuisance
39
Talking to self
43
Unmanagable at home
61
Aggression
69
Insomnia
88
0
10
20
30
40
50
60
70
80
90
100

The Pattern of mental illness and health-seeking behavior of outpatients attending the Institute of Mental Health, Chennai, India, January 2022 to March 2022"

Flow chart: Figure 4: History of mental illness among the family members of the patients



Discussion:

In our study, the mean age of male was 34 years and female were 38 years. A major proportion of patients had higher secondary grade education and the median income was 8000 rupees. Nearly half of the male and two-thirds of the female subjects were unemployed. One-fourth of the males were involved in unskilled labour. About a quarter of the subjects were born from consanguineous parents. Mental illness was present in the family tree among half of the study subjects. Around 70% of the study subjects sought treatment within 6 months after the onset of symptoms. Around 64% of the study subjects visited government hospitals for their first treatment. Schizophrenia and substance use were major illnesses. The majority of patients sought care in public hospitals. The major reasons for consultation were insomnia, aggression, and unmanageable behaviour at home. The other reasons were talking to self, public nuisance, paranoia, not going to work, substance abuse, poor self-care, hearing voices, loss of appetite, low mood, suicidal ideation, and self-harm behaviour. One third of

the subjects had a comorbid illness. Hypertension, diabetes, and seizure disorder were among the common comorbid illnesses. The majority of the patients and their families were affected by the stigma of mental illness. More than half of the study participants said they opted for consultation at IMH as they felt the treatment was good in IMH.

Half of the patient's parents had mental illness in our study. This was similar to the prevalence of mental illness among family members in another study done in Denmark. Among them the father's and paternal side relatives had a majority of mental illness, nearly one-third, followed by mother and maternal side relatives at 22%, last came along siblings with the prevalence of mental illness in them at 15%. Nearly one-eighth of our study population had more than one family member with mental illness.

In our study, one-fourth of the parents of our study patients had a consanguineous marriage, this was similar to another study, where there was an association found between consanguineous marriage and the incidence of mental illness among the offspring of the parents who had a consanguineous marriage(Bener et al., 2012).

A major clinical illness was schizophrenia in IMH. This was similar to a study done in Arunachal Pradesh, India. There also, schizophrenia was the commonest illness followed by bipolar disorders(KENA et al., 2022). But substance use was low in the Arunachal Pradesh study when compared to the IMH study. Substance use was the second-highest illness in the study conducted in IMH. The prevalence of schizophrenia was similar in a study done in Gwalior(Lahariya et al., 2010). Around 36% had schizophrenia in the Gwalior study, while the prevalence of schizophrenia was 33% in IMH. But bipolar prevalence was 45% at Gwalior Institute, while it was low (13%) in IMH.

Insomnia was the common reason for seeking treatment in our study. This was similar to another study done in Kochi, India(Thirugnanam & Jose, 2022). Other reasons for seeking treatment were also similar to our study. But talking to self was present among 43% in the IMH study while in the Kochi study, it was less than 8%. This difference could be due to the different populations in the Kochi study, as the study population there was mental illness among the COVID patients.

Most of the patients in our study had visited psychiatrists for the initial treatment. This is similar to another study done in Pondicherry(*How Lengthy and Tortuous Is the Pathway to Psychiatric Care among Patients Visiting a Tertiary Care Hospital in South India?*, n.d.). Most patients did not seek traditional healers, similar to other studies done in Delhi, India(Mishra et al., 2011). But another study done in Gwalior, India showed that the majority of the patients had sought faith healers as the first choice for treatment(Lahariya et al., 2010).

Stigma was found among patients regarding mental illness in our study. This was similar to another study done in Arab countries(Gabra et al., 2020). Stigma is more prevalent among Western nations(CORRIGAN & WATSON, 2002), than in Asian countries. In one study done in Gwalior, the prevalence of stigma was similar to our study. Around 70% had a stigma(Lahariya et al., 2010). Stigma may cause underreporting of mental disorders(Gaiha et al., 2020). Studies conducted in Indonesia showed that stigma delays or prevents health-seeking(Subu et al., 2021). Stigma affects not only the patients but also the family members and friends of mentally ill patients(Corbière et al., 2012). Stigma has not only delayed health-seeking behaviour, but it also impacts marital life, causing separation and divorce(Lauber & Rössler, 2007).

Common comorbid conditions in our study were diabetes, hypertension, and seizure disorders. While our study population had 8% diabetes as a comorbidity, another study done in Qatar, showed that 16% of mentally ill patients had diabetes(Zolezzi et al., 2017). In meta-analysis done in developing and emerging countries showed that the prevalence was 16% among mentally ill patients(Daré et al., 2019). But the mean age of the patients in that study was 55 years, while the mean age in our study was 38 years in females and 34 years in males.

Prevalence of hypertension was similar in our study and a study done in Qatar (8%) (Zolezzi et al., 2017). In our study, seizures were prevalent among 5% of the patients. This was similar to another study done in Norway, where the prevalence of epilepsy was 4% (Nakken et al., 2021).

In our study, only 40% of the patients sought treatment within one month after the onset of symptoms. In a study done in Delhi, more than 80% of patients had sought treatment within one month(D. Gupta et al., 2018). Another study done in Jaipur; India showed that the median duration to seek treatment was 6 months(Jain et al., 2012). A study done in Gwalior showed that the mean duration to visit a psychiatrist was 21.5 months(Lahariya et al., 2010).

Satisfactory treatment was one of the reasons quoted by the patients for seeking consultation in IMH. Reasons given for visiting tertiary care centre according to a study done in North India, were unsatisfactory treatment in previous centres, affordable treatment costs, and for second expert consultation(Mishra et al., 2011).

Bias

Information bias: As the attenders of the patients were the respondents in our study, there may be some information bias. To overcome the information bias, we cross checked with medical records.

Conclusion: Schizophrenia, substance abuse, and bipolar disorders were major illnesses among patients. Insomnia was the common reason for seeking treatment. Hypertension, diabetes, and seizure disorder were common comorbid illnesses. Health-seeking behaviour was adequate. Since the reason for getting treatment in IMH was satisfactory treatment, district-level treatment centres performance may be improved to avoid overload of cases in IMH.

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Author contributions

Dr. V. Venkatesh Mathan Kumar: Conceptual design and main author
Dr. Geetha Muthurangam: Co-author, data acquisition and drafting of the work
Dr. Sree Kalpana Mohankumar: Statistics and data analysis

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Data availability

The data was analysed by using Epi Info version 3.5

Ethics approval and consent to participate

This procedure was approved by the Institutional ethics committee of Madras Medical College EC Reg. No(CDSCO).ECR/270/Inst./TN/2013/RR-20, EC Reg. No(DHR).EC/NEW/INST/2021/1618, Telephone No.044 25305301, Fax: 011 25363970, vide Approval No.03022022 dated 16 .02 2022 and was conducted according to the principles of the Declaration of Helsinki. Written informed consent was obtained from all patients.

Competing interests

The authors declare no competing interests

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Appendix	
Abbreviations	**Definitions**
DALYs	Disability-Adjusted Life-Years
NMHP	National Mental Health Policy
DMHP	District Mental Health Project
CHC	Community Health Center
PHC	Primary Health Center
OP	Out Patient
IP	In Patient
IMH	Institute of Mental Health
IEC	Information Education Communication
HSB	Health Seeking Behaviour
OPD	Out Patient Department
COVID	Corona Virus Disease
ID	Identification
Govt	Government
MO	Medical Officer
TV	Television
NGO	Non-Government Organization
OCD	Obsessive Compulsive Disorder