



A CROSS-SECTIONAL STUDY ON PATHWAYS TO HEALTH CARE AMONG PATIENTS WITH MENTAL ILLNESS IN A TERTIARY CARE CENTRE, CHEGALPATTU DISTRICT

Mohamed Mohideen Sha A S

Postgraduate

Sumithra Devi S

Professor

Siva Ilango T

Professor and HOD

Usaid S*

Associate Professor *Corresponding Author

Uma Gayathri B P

Assistant Professor

Sanjay Pandian

Senior Resident

ABSTRACT

Background: In low- and middle-income countries, the pathways to psychiatric care are often long and complex due to cultural beliefs and reliance on pluralistic healthcare systems. Understanding these pathways is crucial for addressing the vast treatment gap. **Aim:** To systematically map the pathways to psychiatric care, identify primary initiators, and determine the sociodemographic predictors of delayed treatment among patients in a Tier-3 city in South India. **Method:** A cross-sectional, hospital-based study was conducted involving 110 psychiatric patients. Data regarding sociodemographic factors, clinical diagnoses, and pathways to care (using the WHO encounter form framework) were recorded. Variables including the Duration of Untreated Illness (DUI), Number of Encounters (NOE), and total financial expenditure were analyzed. **Results:** Only 20.0% of patients accessed a mental health professional as their first point of contact, while 36.4% initially sought help from traditional or religious healers. The median DUI was 18.0 months, and the mean NOE was 2.9. Relatives and friends initiated care in 80.0% of cases. Multiple linear regression indicated that higher educational attainment ($p=0.029$) and female gender ($p=0.021$) independently predicted a significantly shorter DUI. Rural residence ($p=0.038$) and higher caregiver education ($p=0.022$) were significantly associated with an increased NOE. **Conclusion:** The pathway to specialized psychiatric care remains highly pluralistic, tortuous, and community-driven. Educational interventions and integrating traditional healers into formal referral networks are essential strategies to reduce the duration of untreated illness.

KEYWORDS : Pathway to Care, Duration of Untreated Illness, Traditional Healers, Treatment Gap.

INTRODUCTION

Mental and substance use disorders account for a profound proportion of the global disease burden. Despite the availability of effective treatments, a massive "treatment gap" persists, particularly in low- and middle-income countries (LMICs). In India, the National Mental Health Survey (2015–16) highlighted that nearly 80% of individuals suffering from mental morbidity do not receive evidence-based care [1]. To address this gap, it is imperative to move beyond simple epidemiology and examine the actual behavioral trajectory patients take from the onset of symptoms to their first effective psychiatric intervention.

This trajectory is defined as the "pathway to psychiatric care." The framework was globally standardized by the World Health Organization (WHO) through a landmark cross-cultural study by Gater et al. (1991), which established that care-seeking pathways are heavily dictated by local cultural beliefs, the accessibility of mental health professionals (MHPs), and pervasive social stigma [2].

In the Indian context, the healthcare ecosystem is distinctly pluralistic. Patients in Tier-3 cities and semi-urban regions frequently navigate a complex matrix of modern allopathic medicine, traditional Ayurvedic systems, and deeply entrenched magico-religious practices [3, 4]. Because psychiatric symptoms are often culturally attributed to supernatural forces, black magic, or somatic weakness, the pathway to specialized care becomes notoriously long and tortuous [5]. This results in a prolonged Duration of Untreated Illness (DUI) and an increased Number of Encounters (NOE) with non-psychiatric providers. A prolonged DUI is clinically detrimental, as it is robustly associated with poorer treatment responses, chronicity, and increased caregiver burden, particularly in psychotic spectrum disorders [6, 7].

Given that pathways are highly localized and vary significantly across different Indian states, extrapolating data from metropolitan centers to smaller districts is clinically inadequate. Recent studies in South India and North Karnataka have emphasized the need for region-specific data to understand these cultural nuances [8, 9]. Therefore, the present study was undertaken to systematically map the pathways to psychiatric care, identify the primary initiators, and determine the sociodemographic predictors of delayed treatment among patients presenting to a tertiary mental health facility in a Tier-3 city in South India.

Objectives:

1. To determine the pathways to health care among patients with mental illness in a tertiary care centre, Chengalpattu district.
2. To determine association between sociodemographic and clinical factors in seeking health care among patients with mental illness.

Study Design & Setting

A six-month cross-sectional study will be conducted at the Psychiatry Outpatient Department, Karpaga Vinayaga Institute of Medical Sciences & Research Centre, to assess recent trends in mental healthcare-seeking behavior.

Participants & Sampling

Using consecutive convenient sampling, 110 new outpatients (aged >18) accompanied by family caregivers will be recruited. Follow-up cases, internal ward referrals, and unaccompanied patients are excluded. This sample size accounts for a 50% expected prevalence of delayed care (calculated for 10% precision and 95% confidence), plus a 10% buffer for non-participation.

Data Collection & Analysis

Following consent, patient demographics will be gathered via a semi-structured questionnaire, and caregivers will complete the WHO "Pathways to Care" form. A senior faculty member will diagnose patients using ICD-11 criteria. Finally, data will be analyzed in IBM SPSS (v22) using descriptive statistics and Chi-square tests at a 5% significance level.

RESULTS

Table 1: Sociodemographic Factors

Sociodemographic Factor	Frequency (n)	Percentage (%)
Gender		
Male	60	54.5
Female	50	45.5
Age Group		
18 to 30 Years	38	34.5
31 to 50 Years	50	45.5
Above 50 Years	22	20.0
Religion		
Hindu	85	77.3
Muslim	13	11.8
Christian	12	10.9
Place of Residence		
Rural	49	44.5
Semi-urban	40	36.4
Urban	21	19.1
Socioeconomic Status (SES)		
Lower	50	45.5
Middle	46	41.8
Upper	14	12.7
Education Level		
Primary School	30	27.3
Secondary School	28	25.5
High School	24	21.8
College Graduate	18	16.4
Illiterate	10	9.0
Occupation		
Unemployed	55	50.0
Labour / Unskilled	20	18.2
Student	12	10.9
Self-employed	10	9.1
Professional / Skilled	8	7.3
Clerical / Semi-skilled	5	4.5

S. no.	Diagnosis	No. of patients	Percentage (%)
1	Schizophrenia and related psychosis	25	22.7
2	Substance use disorders	25	22.7
3	Mood disorders	20	18.2
4	Anxiety disorders / Obsessive compulsive disorder	10	9.1
5	Dissociative / Somatoform disorders	10	9.1
6	Intellectual disability	6	5.5
7	Organic brain syndromes	5	4.5
8	Adjustment disorder	5	4.5
9	Conduct disorder	4	3.6
Total		110	100.0

Details of the Pathway and Expenditure

The median duration of untreated illness (DUI) for the study population was 18.0 months (IQR 4.0 – 48.0). The mean number of encounters (NOE) before reaching the tertiary psychiatric care center was 2.9 (SD $\pm$ 1.5), indicating a highly tortuous pathway to specialized care. Figure 1 illustrates the specific pathways to psychiatric care taken by the participants. Notably, only 20% of patients (n=22) accessed psychiatric services as their first point of contact, while the remaining 80% initially navigated through traditional healers, general practitioners, or general hospitals.

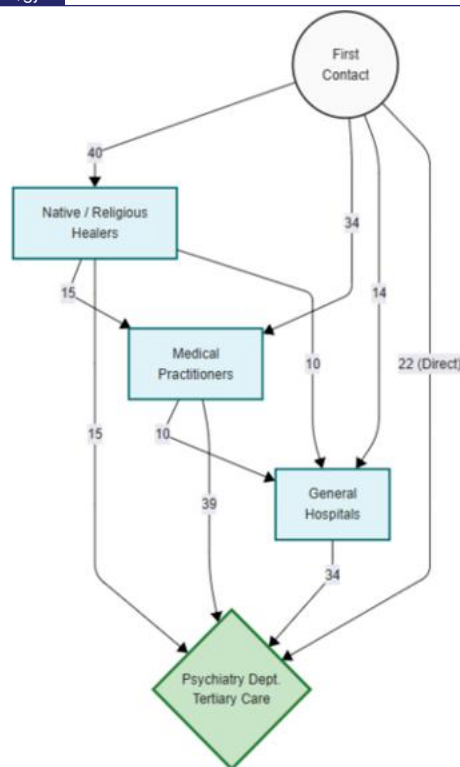


Figure 1: Navigational Pathways to Psychiatric Care

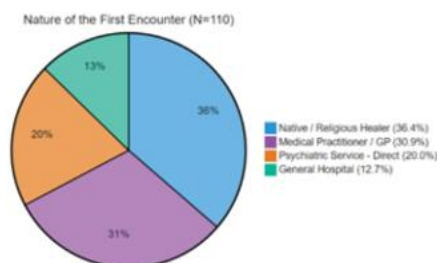


Figure 2: Distribution of First Clinical Contact Points

Data regarding the financial expenditure incurred prior to reaching the psychiatric facility was collected from all 110 patients and their caregivers. The out-of-pocket expenditure varied widely depending on the length of the pathway and the types of traditional or allopathic treatments sought. The range of expenditure was ₹500–₹50,000. The median amount spent was ₹9,500 (IQR 3,200–18,500).

Table 3: Duration of Untreated Illness (DUI) and Number of Encounters (NOE) in Different Diagnostic Categories (N = 110)

S. no.	Diagnosis	DUI (months) (Median)	NOE (Mean $\pm$ SD)
1	Organic brain syndromes	10.0	2.6 ($\pm$ 0.5)
2	Substance use disorder	60.0	3.6 ($\pm$ 1.1)
3	Schizophrenia and related psychosis	24.0	3.4 ($\pm$ 1.0)
4	Mood disorders	6.0	2.1 ($\pm$ 0.8)
5	Anxiety disorders / Obsessive compulsive disorder	3.5	1.4 ($\pm$ 0.5)
6	Adjustment disorder	1.0	1.0 ($\pm$ 0.0)
7	Dissociative / Somatoform disorders	24.0	4.0 ($\pm$ 0.0)
8	Intellectual disability	147.0	5.8 ($\pm$ 0.4)
9	Conduct disorder	4.0	1.2 ($\pm$ 0.4)

Table 3 represents the Duration of Untreated Illness (DUI) and Number of Encounters (NOE) participants had before meeting

a mental health professional (MHP), distributed across different diagnostic categories. Consistent with broader trends, intellectual disability followed by substance use disorder and schizophrenia had the longest DUI. With the exception of adjustment disorder, conduct disorder, and anxiety disorders, patients across all other major psychiatric diagnostic categories experienced a median DUI of 6 months or more before receiving specialized care.

Diagnosis of Patients Meeting Traditional Healers First (n=40)

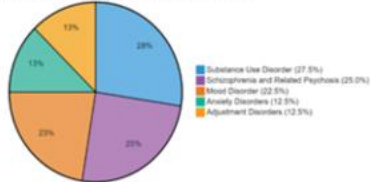


Figure 3: Diagnostic Profile of Patients First Accessing Traditional Healers

Table 4: Association of Sociodemographic Variables with DUI and NOE

Socio-demographic Variable	n (%)	DUI (Median, Months)	p-value	NOE (Median)	p-value
Gender			0.041*		0.582
Male	60 (54.5%)	24		3	
Female	50 (45.5%)	12		2	
Place of Residence			0.215		0.038*
Rural	49 (44.5%)	24		4	
Semi-urban	40 (36.4%)	18		3	
Urban	21 (19.1%)	12		2	
Socioeconomic Status (SES)			0.312		0.154
Lower	50 (45.5%)	24		3	
Middle	46 (41.8%)	18		2	
Upper	14 (12.7%)	12		2	
Education Level			0.562		0.092

Table 5: Linear Regression Models Predicting DUI and NOE & Multivariate Analysis

	DUI			95.0% CI for B (DUI)		NOE			95.0% CI for B (NOE)	
Predicting variable	B	t	Sig.	Lower bound	Upper bound	B	t	Sig.	Lower bound	Upper bound
(Constant)	21.452	0.584	0.561	-52.104	95.011	3.120	3.104	0.002*	1.150	5.090
Age	0.724	2.051	0.042*	0.031	1.417	0.005	0.684	0.495	-0.010	0.020
Sex	-24.821	-2.330	0.021*	-45.812	-3.830	-0.012	-0.031	0.972	-0.751	0.727
SES	12.415	1.152	0.252	-8.932	33.762	-0.210	-0.712	0.479	-0.795	0.375
Area of residence	2.441	0.191	0.849	-23.105	27.987	-0.115	-0.342	0.735	-0.802	0.572
Education	-7.953	-2.194	0.029*	-15.102	-0.804	0.068	0.651	0.518	-0.141	0.277
Occupation	3.552	1.101	0.274	-2.845	9.949	-0.142	-1.553	0.124	-0.324	0.040
Religion	11.205	1.321	0.190	-5.612	28.022	-0.175	-0.704	0.485	-0.672	0.322
Family history of MI	-0.481	-0.061	0.952	-16.214	15.252	0.365	1.682	0.095	-0.062	0.792
Education (CG)	6.124	1.583	0.116	-1.542	13.790	-0.144	-1.352	0.180	-0.352	0.064
Occupation (CG)	-3.852	-1.304	0.195	-9.814	2.110	-0.080	-0.951	0.345	-0.251	0.091

Linear regression was carried out to identify the predictors of the DUI and NOE. Variables that had a potential association in the preliminary analysis were taken for multiple linear regression. The results of both regression models have been combined in Table 5.

After adjusting for sociodemographic characteristics, multiple linear regression analysis revealed that DUI was significantly associated with older age ($B = 0.724$; $p = 0.042$) and higher educational status ($B = -7.953$; $p = 0.029$) of the participants. Specifically, attaining higher education was an independent predictor of a significantly shorter DUI. Compared to males,

Illiterate / Primary	40 (36.4%)	30		4	
Secondary / High School	52 (47.3%)	18		3	
Graduate / Above	18 (16.4%)	12		2	
Religion			0.428		0.710
Hindu	85 (77.3%)	18		3	
Muslim	13 (11.8%)	36		3	
Christian	12 (10.9%)	18		2	

*Significant at < 0.05 ; SES: Socioeconomic Status; DUI: Duration of Untreated Illness; NOE: Number of Encounters.

Initiators of Help-Seeking (N=110)

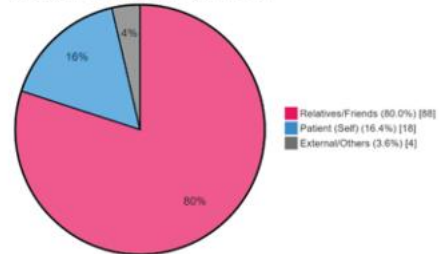


Figure 4: Initiators of Psychiatric Help-Seeking

Diagnosis of Patients Meeting an MHP First (n=22)

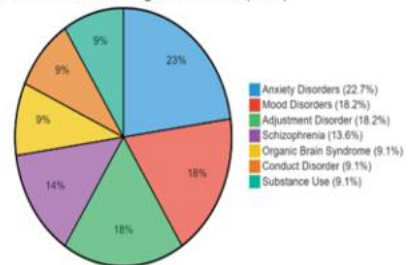


Figure 5: Diagnostic Profile of Patients Directly Accessing Mental Health Professionals

females had a significantly shorter DUI ($B = -24.821$; $p = 0.021$). None of the sociodemographic or caregiver variables significantly predicted the NOE.

Key Analytical Findings

Gender and Delay in Care: Males had a significantly longer DUI than females ($p = 0.041$). Males waited a median of 24 months before reaching specialized care, compared to 12 months for females.

Residence and the "Tortuous" Pathway: While residence did not significantly affect the total delay (DUI), it had a significant association with the Number of Encounters (NOE)

($p = 0.038$). Patients from rural areas had a median of 4 encounters with different providers before reaching specialized care, whereas urban patients had 2.

Correlation Analysis: DUI vs. NOE: There was no significant correlation between the length of time a patient was ill and the number of encounters ($p = 0.684$, $r = 0.041$). **Caregiver Education:** The education level of the caregivers showed a significant positive correlation with the number of encounters ($p = 0.022$, $r = 0.695$). This suggests that more educated caregivers might be more proactive in seeking multiple opinions or alternative providers.

DISCUSSION

The current study delineated the navigational pathways to psychiatric care within a highly pluralistic healthcare setting in South India. Our findings indicate that a significant proportion of patients (36.4%) made their first clinical contact with native, faith, or traditional healers. This robust reliance on magico-religious interventions as a primary resource mirrors help-seeking behaviors documented in central India and rural Gujarat, where community beliefs often attribute psychiatric morbidity to supernatural etiologies (Lahariya et al., 2010; Schoonover et al., 2014). Furthermore, our data closely aligns with a recent exploratory study from North Karnataka, reinforcing the persistent dominance of non-allopathic routes in the southern and western regions of the country (Khan, n.d.).

When contextualized globally, the pathways observed in our cohort resonate with those in other developing LMICs. Studies from Malawi and Ghana report a similar phenomenon, where the scarcity of mental health resources and prevailing cultural paradigms drive the vast majority of patients toward traditional healers long before they reach tertiary psychiatric facilities (Ibrahim et al., 2016; Kauye, Udedi, & Mafuta, 2015). Conversely, 20.0% of the participants in our study accessed a mental health professional (MHP) directly for their first encounter. While this direct-contact rate remains lower than in high-income nations or developed Asian settings like Singapore (Jeyagurunathan et al., 2018), it reflects a gradual improvement in localized mental health literacy compared to older Indian cohorts (Mishra et al., 2011). Analysis of the duration of untreated illness (DUI) revealed critical sociodemographic determinants. Multivariate regression demonstrated that higher educational attainment independently predicted a significantly shorter DUI. This corroborates the established premise that formal education dismantles stigma, improves health literacy, and accelerates appropriate clinical help-seeking (Faizan et al., 2012). Additionally, female patients in our sample presented with a significantly shorter DUI than males. This gender dynamic likely reflects the high proportion of disruptive substance use disorders among male participants, which are frequently normalized by society as behavioral habits rather than illnesses, thereby delaying formal medical intervention (Khemani et al., 2020). The collective, interdependent nature of the Indian social fabric was starkly evident in the initiation of care. Relatives and friends triggered the help-seeking process in 80.0% of cases, whereas autonomous self-referral was exceedingly rare (16.4%). This overwhelming reliance on the family support system underscores that psychiatric care pathways are predominantly community-driven rather than individualistic, a finding consistently highlighted in previous literature (Gater et al., 1991;). Paradoxically, while higher patient education reduced the time delay (DUI), elevated caregiver education was positively correlated with an increased number of encounters (NOE). This suggests that well-resourced, educated caregivers may engage in extensive "doctor-shopping" across multiple allopathic and alternative providers before accepting a definitive psychiatric diagnosis (Naik et al., 2012). This study is subject to certain limitations, notably its cross-sectional, hospital-based design and the inherent recall bias associated with retrospectively

calculating the DUI and treatment histories. Nevertheless, the findings emphatically highlight the need to move beyond traditional biomedical frameworks. Integrating traditional healers into community mental health referral networks and targeting psychoeducational campaigns toward family units, rather than solely individuals, are essential steps to shorten the tortuous pathway to care in Tier-3 Indian cities.

REFERENCES

1. Gururaj G, Varghese M, Benegal V, et al. National mental health survey of India, 2015–16: summary. Bengaluru: Natl Inst Ment Health Neurosci; 2016.
2. Gater R, Sousa DBAE, Barrientos G, et al. The pathways to psychiatric care: a cross-cultural study. *Psychol Med*. 1991;21(3):761–774.
3. Biswal R, Subudhi C, Acharya SK. Healers and healing practices of mental illness in India: the role of proposed eclectic healing model. *J Health Res Rev*. 2017;4(3):89.
4. Schoonover J, Lipkin S, Javid M, et al. Perceptions of traditional healing for mental illness in rural Gujarat. *Ann Glob Health*. 2014;80(2):96–102.
5. Jain N, Gautam S, Jain S, et al. Pathway to psychiatric care in a tertiary mental health facility in Jaipur, India. *Asian J Psychiatry*. 2012;5(4):303–308.
6. Farooq S, Large M, Nielsen O, et al. The relationship between the duration of untreated psychosis and outcome in low-and-middle income countries: a systematic review and meta analysis. *Schizophr Res*. 2009;109(1–3):15–23.
7. Thirthalli J, Channaveerachari NK, Subbakrishna DK, et al. Prospective study of duration of untreated psychosis and outcome of never-treated patients with schizophrenia in India. *Indian J Psychiatry*. 2011;53(4):319.
8. Faizan S, Raveesh B, Ravindra L, et al. Pathways to psychiatric care in South India and their sociodemographic and attitudinal correlates. *BMC Proc*. 2012;6(Suppl 4):P13.
9. Khan A. Health-care seeking pathways of psychiatry patients in North Karnataka of India – a 0hospital-based: exploratory cross-sectional study. 10.5195/ijms.2022.1770.
10. Lahariya C, Singhal S, Gupta S, et al. Pathway of care among psychiatric patients attending a mental health institution in central India. *Indian J Psychiatry*. 2010;52(4):333.
11. Kauye F, Udedi M, Mafuta C. Pathway to care for psychiatric patients in a developing country: Malawi. *Int J Soc Psychiatry*. 2015;61(2):121–128.
12. Ibrahim A, Hor S, Bahar OS, et al. Pathways to psychiatric care for mental disorders: a retrospective study of patients seeking mental health services at a public psychiatric facility in Ghana. *Int J Ment Health Syst*. 2016;10:63.
13. Jeyagurunathan A, Abidin E, Shafie S, et al. Pathways to care among psychiatric outpatients in a tertiary mental health institution in Singapore. *Int J Soc Psychiatry*. 2018;64(6):554–562.
14. Mishra N, Nagpal SS, Chadda RK, et al. Help-seeking behavior of patients with mental health problems visiting a tertiary care center in north India. *Indian J Psychiatry*. 2011;53(3):234.
15. Naik SK, Pattanayak S, Gupta CS, et al. Help-seeking behaviors among caregivers of schizophrenia and other psychotic patients: a hospital-based study in two geographically and culturally distinct Indian cities. *Indian J Psychol Med*. 2012;34(4):338.
16. Khemani MC, Premarajan KC, Menon V, et al. Pathways to care among patients with severe mental disorders attending a tertiary health-care facility in Puducherry, South India. *Indian J Psychiatry*. 2020;62(6):664.
17. Simiyon M, Joju S, Thilakan P et al. How Lengthy and Tortuous is the Pathway to Psychiatric Care among Patients Visiting a Tertiary Care Hospital in South India? A Cross-sectional Study. *Ind J Priv Psychiatry*. 2022;16(1):3–9.