

## Research Report

# PATHWAYS TO CARE AND DURATION OF UNTREATED ILLNESS IN PATIENTS ATTENDING A STATE PSYCHIATRIC HOSPITAL

Sukesh G<sup>1\*</sup>, Indu V Nair

<sup>1</sup>Department of Health Services, Kerala

<sup>2</sup>Mental Health Centre, Thiruvananthapuram

\*Corresponding address: District Mental Health Programme, District Hospital Kozhencherry, Pathanamthitta. Email: sukeshgopi@gmail.com

### ABSTRACT

**Background:** In India, due to various factors, mentally ill often turn to a variety of carers for treatment. It results in a longer duration of untreated illness (DUI) with poor long term prognosis. Studies on pathways to care, seek to find out predictors of mentally ill person's help-seeking behaviour. There is a dearth of literature in this subject in Kerala setting. **Methods:** Cross-sectional study was conducted on 250 consecutive first-time outpatients. The diagnosis was made according to DSM 5. A pilot-tested, semi-structured proforma was used for socio-demographic details and Encounter form by WHO for pathways to care. The analysis was done using Epi Info software. **Results and discussion:** Four gateways to care identified: Psychiatrist- 71.2%, faith healers – 14.8%, non-psychiatrist modern medicine doctors- 9.2%, alternate systems of medicine- 4.8%. Median DUI was seven months. Faith healers as first carers were more in BPL compared to APL families ( $p=0.004$ ). Substance use disorders had longer median DUI than psychotic and anxiety disorders and mental retardation. Major neurocognitive disorder had more delays than the schizophrenia spectrum and other psychotic disorders and mental retardation ( $p=0.000$ ). Among first carers, longer DUI was with faith healers and alternate systems of medicine when compared to psychiatrists. ( $p=0.000$ ). Those from higher socioeconomic status and a diagnosis of substance use disorder more often have a psychiatrist as the first carer. Being male was associated with lengthier pathways. **Conclusion:** Faith healers & alternate systems of medicine practitioners form the first portal of psychiatric care for a small yet significant proportion of the patients. Reduction in DUI in case of psychiatric disorders needs attention to this aspect also.

**Keywords:** pathways to care, duration of untreated illness, help-seeking, mental illness

**Key message:** DUI in case of psychiatric disorders depend on the first carer and subsequent pathway to psychiatric care. Future pathways to care studies need to explore other significant first carers of psychiatric help-seeking.

### INTRODUCTION

Psychiatric disorders are associated with a higher disability and burden of disease, than many physical illnesses. Psychiatric conditions account for almost 11 per cent of disease burden globally, which is projected to reach 15% by 2020. Of the ten leading causes of

disability worldwide, measured in years lived with a disability, five were psychiatric conditions: unipolar depression, alcohol use, bipolar affective disorder (manic depression) schizophrenia and obsessive-compulsive disorder.<sup>1</sup>

Access the article online:

<https://kjonline.com/index.php/kjp/article/view/218>

DOI: <https://doi.org/10.30834/KJP.33.2.2020.218>

Received: 6/10/2020. Web publication: 30/11/2020

QR Code



How to cite the article: Sukesh G, Indu VN. Pathways to care and duration of untreated illness in patients attending a state psychiatric hospital. Kerala Journal of Psychiatry 2020, 33(2):

In India, at any point in time, nearly 6.5% of the population suffers from a serious mental or behavioural disorder, and another 10% of the population has a minor mental illness.<sup>2,3</sup> A large proportion of psychiatric patients do not attend any health facility due to the lack of awareness about treatment services, the distance, and the stigma associated with treatment. The psychiatric patients first seek the help of various sources prior to attending a psychiatric health facility.<sup>4</sup>

Pathways to care can be defined as “the sequence of contacts with individuals and organizations prompted by the distressed person’s efforts and those of his or her significant others, to seek help as well as the help that is supplied in response to these efforts.” Understanding the routes that people take to obtain care may facilitate the development of mental health care services that decrease the time from first symptoms to effective treatment.<sup>5</sup> First caregivers constitute the most important part of the psychiatric pathways and provide an overall direction to the pathways of care. The delay in seeking treatment is mostly attributed to the choice of the first caregivers.<sup>6</sup>

Duration of untreated illness (DUI) is the duration between onset of symptoms and presentation to a mental health professional.<sup>7</sup> Systematic reviews and meta-analytic studies have shown that a longer duration of untreated illness, especially in case of psychotic disorders, is associated with more severe symptom profile, worse psychosocial functioning, poorer quality of life, and poorer treatment outcomes.<sup>8</sup>

In 2014, psychiatrists/100000 population in India was <0.05, & psychiatric beds were 2.1/100000 population.<sup>9</sup> In Kerala, however, for every 100000 population, there would be 1.2 psychiatrists.<sup>10</sup> Nearly 80% of persons suffering from mental disorders, had not received any treatment despite the presence of illness for more than 12 months. Notwithstanding the efforts at enhancing mental health care delivery across the country, a huge treatment gap still exists for all types of mental health problems: ranging from 28% to 83% for mental disorders and 86% for alcohol use disorders. Persons with mental illness are unable to receive quality care due to limited awareness, availability, accessibility and affordability; the costs of care are also becoming increasingly prohibitive.<sup>3</sup>

Worldwide, several studies have been conducted to

recognize the help-seeking behaviour and routes the patients with mental illness take to reach psychiatric care services. Indian studies also exist on the same subject.

However, in the changed context of the Mental Health Care Act 2017, the right to access mental healthcare and treatment includes mental health services of affordable cost, of good quality, available in sufficient quantity, accessible geographically, and without discrimination based on gender, sex, sexual orientation, religion, culture, caste, social or political beliefs. For the fulfilment of this right, the appropriate Government is bound to provide a range of services required by persons with mental illness.<sup>11</sup> Thus, it becomes important to understand the preferences people make for the treatment of mental disorders to ensure proper distribution and utilization of such services more than ever.

Kerala being the leading state in India in literacy rate and composite Health Index scores,<sup>12, 13</sup> might have a pattern on its own in health-seeking behaviour. Hence, awareness and utilization of health services, particularly mental health services in the state, need to be explored. Furthermore, such a study on pathways to care has not been conducted independently in Kerala setting so far.

The present study was planned to evaluate the pathways to care of psychiatric patients attending a state psychiatric hospital in Kerala and to study the various correlates, including the socio-demographic variables.

### Materials and methods

This cross-sectional study was conducted at a tertiary state psychiatric care centre in Thiruvananthapuram with in-patient strength of over 500. Outpatient (OP) services are rendered every day, with an average turnout of about 150-200 patients per day. Under the assumption that psychiatric patients who sought the help of the relevant first carer to be 28.5%,<sup>7</sup> and applying the formula:  $Z\alpha pq/d^2$ , where p is the percentage of the sample contacting the relevant first carer in the study-28.5%, q = 100-p, d= allowable error in p (20%).

Thus, the sample comprised of 250 consecutive psychiatric patients attending the outpatient department and casualty services of the hospital for the first time during the study period. Sample collection was completed by four months. Patients including child and adolescent cases with a reliable informant having the

Table 1. Socio-demographic and clinical profile of study participants

Variable	Category	Frequency (%)
Age	0-10 years	1 (0.4%)
	11-20 years	6 (2%)
	21-30 years	80 (32%)
	31-40 years	62 (24.8%)
	41-50 years	19 (7.6%)
	51-60 years	60 (24%)
	61-70 years	12 (4.8%)
	71-80 years	8 (3.2%)
	Above 80 years	2 (0.8%)
Sex	Male	146 (58.4%)
	Female	104 (41.6%)
Religion	Hindu	160 (64%)
	Muslim	34 (13.6%)
	Christian	56 (22.4%)
Marital status	Married	142 (56.8%)
	Single/ widowed	108 (43.2%)
Education	Below Secondary level	155 (62%)
	Secondary level & above	95 (38%)
Employment status	Unemployed	129 (51.6%)
	Employed	121 (48.4%)
Socio-economic status	APL	114 (45.6%)
	BPL	136 (54.4%)
Current living situation	With family	236 (94.4%)
	Alone	14 (5.6%)
Diagnosis	Schizophrenia spectrum & other psychotic disorders	99 (39.6%)
	Mood disorders	96 (38.4%)
	Anxiety disorders	17 (6.8%)
	Substance use disorders	21 (8.4%)
	Intellectual disability disorder	4 (1.6%)
	Neurocognitive disorders	13 (5.2%)

knowledge of the course of illness and giving written informed consent for participating in the study were included. For each participant, a semi-structured pilot-tested proforma was used for collecting socio-demographic data including age, sex, religion, marital

status, education, employment status, family type, current living situation, place of residence, age at onset of illness etc. and clinical variables including diagnosis, substance use and family history of mental illness. Pathways to care were assessed using the modified version of the WHO Encounter form. The Encounter form gathers systematic information about the sources of care used by patients before seeing a mental health professional. Details of the chosen pathways and reasons for the same were collected from the family member. It takes about 5 minutes to be completed for every patient.<sup>14</sup> It is a standard tool which has been translated into many languages and has been used worldwide in many studies. The encounter form also serves to record the main problems presented by the patients, the decision-maker for care-seeking, type of care they received before they saw the mental health professional etc., which were not collected in the present study. The Encounter form was modified to that extend for the use in this study.

Psychiatric diagnoses according to DSM-5, based on the history and mental status examination done under the supervision of a senior consultant in the department and the total duration of illness were to be filled in by the investigator. For the study, DUI was taken as the time duration between onset of symptoms and presentation to a psychiatrist.

Percentages & means with their respective confidence intervals were used to summarise data. When comparing DUI, median values were used because the distribution was heavily skewed. Chi-square test was used for categorical data, and the Kruskal–Wallis non-parametric test was used for continuous data. When a significance was found while using the Kruskal–Wallis test, a posthoc analysis of pairwise comparisons were done to find out which of the two variables differed significantly. A “Pathways to Care Map” was created incorporating the routes taken by individual patients to reach psychiatric care. The number of patients taking each step on the care pathway was mapped onto the diagram. Association of the first caregiver in the pathway with socio-demographic factors like sex, religion, marital status, education level, employment status, socioeconomic status, area of residence etc. and psychiatric diagnosis (Schizophrenia spectrum & other psychotic disorders, mood disorders including bipolar and related disorders and depressive disorders, anxiety

disorders, substance use disorders, intellectual disability disorder, and neurocognitive disorders) and DUI were evaluated. All data analysis was performed using Epi Info software. (version 7)

Necessary permission and clearance for the study were obtained from the Scientific and Ethical committee constituted at the centre of study. Written informed consent was obtained from each study participant. In cases of minor patients, assent was obtained from the child and consent from the accompanying relative.

## RESULTS

Socio-demographic and diagnostic profile of the study population is as depicted in Table 1.

### PATHWAYS TO CARE DIAGRAM

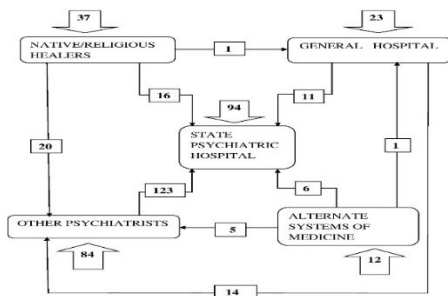


Image 1 is a pictorial representation of pathways to care of patients reaching the centre for the first time.

It is seen that there are four major gateways to care of the mentally ill in the region. The detailed distribution of the number of patients and their first portal of entry are as follows: Traditional/ Faith healers-37 (14.8%), Non-psychiatrist modern medicine doctor - 23 (9.2%), Alternative systems of medicine practitioners (AYUSH) - 12 (4.8%) Psychiatrist-178 (71.2%).

Other possible cares including psychologists & lay counsellors were included in data collection form but elicited no response from the study participants.

The median total duration of illness (TDI) of the study sample was 24 months (SD 34.92). The median duration of untreated illness (DUI) was found to be seven months (SD 43.63), range 0-360 months. Subjects had already visited, on an average, 0.856 carers (SD 0.78),

before visiting this centre and 0.36 carers (SD 0.58) before approaching a psychiatrist

Psychiatrists were the first choice for most of the psychiatric patients in the study sample. Table 2 explains the factors affecting the choice of first carers, including socio-demographic and diagnostic variables. As seen in the table, being from an APL family, having a diagnosis of substance use disorders, mood disorders, neurocognitive disorders or schizophrenia spectrum disorders were all significantly associated with having psychiatrists as the first caregiver.

The median duration of untreated illness in the sample was seven months. However, there was a wide range of DUI from 0 to 360 months. The higher extremes of these values were found in substance use disorders. Table 3 depicts the various correlates of DUI.

In the study, no significant association had been seen with socio-demographic factors except for the gender. Chi-Square test showed that sex was a factor affecting the delays in seeking care ( $\chi^2= 7.828$ ,  $df = 1$ ,  $p=0.005$ ). To see the association of both sexes with DUI, a posthoc analysis was done employing Independent samples Kruskal Wallis test, which revealed that protracted DUI was seen with male patients when compared to their female counterparts.

To find the association of DUI and first carers, Kruskal- Wallis test was done for independent samples. When significance was noted ( $\chi^2=39.432$ ,  $df =3$ ,  $p=0.000$ ), a post-hoc analysis of the data was done and pairwise comparison of the mean ranks were conducted. Longest DUI was found to be for those who had faith healer as a first caregiver. Significantly higher DUI was seen for patients who had gone to faith healers and alternate systems of medicine when compared with those who had MHP as their first carer.

In case of diagnosis and DUI, since results showed significance ( $\chi^2=40.242$ ,  $df= 5$ ,  $p=0.000$ , a posthoc analysis was done to find out the pairwise associations. Pairwise comparison of diagnoses showed that alcohol use disorder had longer median DUI when compared to psychotic disorders, anxiety disorders and mental retardation. Major Neurocognitive disorders had more delays in help-seeking when compared to schizophrenia spectrum disorders and mental retardation.

1Table 2. Factors affecting the choice of first carers

	Faith healer (%)	Non-psychiatric modern medicine doctor (%)	Alternate systems of medicine practitioner (%)	Psychiatrist (%)	Total	p-value***
Male	24(16.4%)	13(8.9%)	6(4.1%)	103(70.5%)	146	0.792
Hindu	20(12.5%)	17(10.6%)	8(5%)	115(71.9%)	160	0.451
Secondary & above education	14(14.8%)	9(9.2%)	6(6.5%)	66(69.5%)	95	0.124
Married	20(14.1%)	10(7.1%)	8(5.6%)	104(73.2%)	142	0.699
Unemployed	21(16.3%)	15(11.6%)	5(3.9%)	88(68.2%)	129	0.406
APL status	7(6.1%)	13(11.4%)	5(4.4%)	89(78.1%)	114	0.004*
Rural residence	17(16.2%)	9(8.6%)	4(3.8%)	75(71.4%)	105	0.877
<b>Diagnosis</b>						
Schizophrenia & other psychotic spectrum disorders	24(24.3%)	5(5%)	4(4%)	66(66.7%)	99	0.001*
Mood disorders	10(10.4%)	6(6.3%)	4(4.1%)	76(79.2%)	96	0.061
Anxiety disorders	1(5.9%)	6(35.3%)	0(0.0%)	10(58.8%)	17	0.023*
Substance use disorders	0(0.0%)	1(4.8%)	3(14.3%)	17(81%)	21	0.037*
Intellectual disability	0(0.0%)	3(75%)	0(0.0%)	1(25%)	4	<0.001**8
Neurocognitive disorders	2(15.4%)	2(15.4%)	1(7.7%)	8(61.5%)	13	0.001*
Total	37(14.8%)	23(9.2%)	12(4.8%)	178(71.2%)	250	

\*p<05; \*\* p<0.001; \*\*\*Chiquare test

## DISCUSSION

Studies on pathways to care of mental illnesses are prompt, inexpensive and effective methods of obtaining information on the peoples' help-seeking behaviour. This information can be useful in the planning of mental health services, including assessment of treatment gap and specific interventions for improving the access of appropriate care by people with mental illness. Region-specific findings were obtained from studies on help-seeking in mental disorders across the country even though certain commonalities in those findings were observed.

The subjects of the study were predominantly young adults, male, married, belonging to the Hindu religion, with an educated background and unemployed. Majority of the subjects were from a family with BPL (Below Poverty Line) status, now living with the family. The socio-demographic and diagnostic distribution of patients is similar in studies conducted inside and outside of the country.<sup>4, 15-20</sup>

In line with the high literacy rate of Kerala, 93.2% of the patients were educated, and 62% had secondary and higher education. However, the proportion of the

unemployed is higher (51.6%) in the sample. This might be due to, the higher disability imposed by psychiatric

illnesses and, the societal perception that mentally ill are inherently incapable and hence unemployable. Further, most of the study sample were having schizophrenia and other psychotic disorders which can heavily incapacitate the patients' socio-occupational functioning and can impact their employability.

The religious distribution of the sample is roughly matching the population distribution of the area with Hindus forming the bulk followed by Christians and Muslims. A larger proportion of the study group was married and living with the family (94.4%). This points to the better family support system in the context of the traditional society. In the study, 1.6% of the population were migrants working as labourers in the state. These people even though didn't have a family system to support here, were brought to treatment and taken care of by their co-workers. This population can further increase in future with the influx of migrant labourers from other states, when culture-specific interventions may be needed even at the community level.

Table 3. Duration of Untreated Psychosis (DUP) and its correlates

Category	N	Mean Rank	P-Value	Pairwise comparison of ranks*
Gender	146	136.26		
A. Male			p=0.005	A > B
B. Female	104	110.39		
First carer				
A. Faith healer	37	181.07	p=0.000	A > B, C, D
B. Non-psychiatrist modern medicine doctor	23	142.96		
C. Alternate systems of medicine	12	180.90		
D. Psychiatrist	178	108.38		
Diagnosis				
A. Schizophrenia spectrum & other psychotic disorders	99	14.87	p=0.000	D > A, C, E
B. Mood disorders	96	117.90		
C. Anxiety disorders	17	110.56		
D. Substance use disorders	21	204.45		
E. Intellectual disability disorders	4	50.88		
F. Neurocognitive disorders	13	177.54		

\*Kruskal- Wallis test; pairwise comparison of the mean ranks

Majority of the patients in this study were having schizophrenia spectrum and mood disorders; this could be because, our hospital being a tertiary level centre, chronic & severely ill patients form the largest subset of our patient population. Hence, other diagnoses, including obsessive-compulsive & related disorders, trauma & stressor-related disorders and somatic symptom disorders and neurodevelopmental disorders, including autism, didn't form the sample population. Mental health centres are generally viewed as treatment centres for severe mental illnesses, and this might be one reason why other disorders are less represented in the sample population. Studies done elsewhere also reported similar diagnostic distribution.<sup>4,7</sup>

### Pathways to care

In 1983, Goldberg and Huxley made the preliminary attempt to understand the pathways to psychiatric care.<sup>21</sup> According to them, the pathway progressed through a series of levels, each separated by variably permeable filters. The first level is the prevalence of psychiatric disorders in the community, and the first filter is the decision to seek help. The next level is the proportion of those with a mental disorder who seek help, and the second filter is the recognition of a psychiatric disorder by the primary care provider. Further levels consider referral to specialized care and admission to hospital. This model of levels and filters in

psychiatric care fits well where the only access to specialized care is by referral from a primary care physician.<sup>22</sup> The Indian system of psychiatric care is more complex than the Western system, where there are multiple and often unregulated options available for the patients.

Worldwide, pathway studies have demonstrated three predominant patterns of psychiatric care. The first pattern is dominated by primary care physicians or family physicians, who refers them to mental health professionals. The major portals in this pathway to care are General practitioner (GP), hospital emergency services, criminal justice systems and psychiatrists.<sup>[23, 24, 25]</sup> This pattern is seen mostly in west European countries. The second pattern is found in countries like Turkey, Japan etc.<sup>26, 27</sup> where patients can see any medical specialist of their choice and are thus likely to have direct access to mental health professionals. The third pattern, where faith healers and indigenous/alternate systems of medicine carers play an important role in the pathway, is reported in Pakistan, India, Ethiopia, and Indonesia.<sup>15, 19, 28, 29</sup> In these countries, for mental illnesses, people are free to access any type of treatment they want. These regions have a shortage of trained mental health manpower and still follow traditional methods of healing. Longer delays in help-seeking mark the pathway to psychiatric care in these

countries. This study's result doesn't conform to any of these individual patterns but is a mixture of the last two patterns.

The first caregiver in the pathway to psychiatric care is determined by a complex interaction of socio-demographic, economic and cultural factors and factors associated with the health care system, including accessibility and availability of the services. The first caregiver determines the overall direction of the care pathway and has a significant influence on subsequent progression to psychiatric services.

A psychiatrist was approached as the first caregiver by 71.2% of patients in this study. This figure is relatively high when compared to the range of figures reported from India and certain developed countries. The psychiatrist as the first caregiver ranged from 12% in a general hospital study in Chattisgarh in 2012<sup>30</sup> to 57.7% reported by Chadda et al. from a Psychiatric hospital in 2001.<sup>19</sup> As high as 74% of patients from a Kerala centre in a multicentric study by Pradhan et al. had psychiatrist as the first caregiver.<sup>20</sup> In developed countries, the figures for a psychiatrist as the first caregiver ranged from 22% to 40%.<sup>31</sup> The larger proportion of patients in the current study seeking help from the psychiatrist at the first instance may be due to several factors. The higher literacy rate in the state, increased awareness about mental diseases and professional help available, availability of psychiatrists, and accessibility of psychiatric services due to improved health care system, in general, can be some of the factors.

Traditional healers are known by different names as faith healers, religious healers, and native healers in different parts of the world. The non-psychiatric modern medicine doctors include General practitioners (GP), physician, paediatrician, neurologist and neurosurgeons in this study. Alternate systems of medicine include the Ayurveda, yoga, Unani, Siddha, homoeopathy, and acupuncture as practised in different parts of the country.

Family physicians occupy a pivotal role in the help-seeking pathway, with 53% of patients consulting a general practitioner in Australia.<sup>32</sup> In Nigeria,<sup>33</sup> the majority (69%) of the patients consulted spiritual or traditional healers as the first contact while 13.8% consulted a non-psychiatric physician or General Practitioner. Lahariya et al.<sup>4</sup> in India has found faith

healers forming the first contact of help in 68% of the total sample. In a Study in Jaipur<sup>7</sup> faith healers followed by psychiatrists, Non-psychiatrist allopath care provider and Alternative medicine care provider form the first portal of care.

This shows that traditional healers form the first carer for a sizeable proportion of psychiatric patients in developing countries. The rationale for their popularity may be their easy accessibility, the belief models in the causation of mental illnesses prevalent in the society, holistic approach, cultural friendliness and cost-effectiveness. The practice of seeking help from alternative systems of medicine in psychiatric disorders seems to be unique to the Indian setting. It emerges from the study that faith healers and alternate systems of medicine practitioners are significant players in the mental health scenario in the region and cannot be ignored.

### **Delay in seeking treatment**

The median duration of illness of patients presenting for the first time to the mental health centre is two years akin to a study by Gupta in India.<sup>34</sup> It took approximately seven months for patients with mental illness to contact a psychiatrist in the present study. An average delay of 26.12 weeks was seen from the onset of illness to presentation at a clinic in Bangalore.<sup>35</sup> This finding is similar to other studies done in India and outside.<sup>7,20,29</sup> Median interval between onset of the problem, and first seeking care was eight weeks in Italy.<sup>24</sup> Thus the delay in presentation to a psychiatrist is relatively high in the study group as compared to the developed countries and almost similar to that of other developing countries and may be attributed to the difference in beliefs of illness causation, public opinion and stigma, and the role of the family.

### **Factors influencing pathways to care**

Subjects coming from higher socioeconomic status families (78.1%) were more likely to choose a psychiatrist as the first carer than those from low SE status families (65%). Contact with faith healers at the beginning of psychiatric care-seeking was more with lower (22%) than higher (6%) SE status families. Both these results were statistically significant. (p-value 0.004). Thus, lower family income and economic deprivation were factors associated with negative care pathway in the present study. Kiliç et al. found that

those coming from a below-average social position were less likely to contact the psychiatric services directly.<sup>26</sup> No significant association was seen between other socio-demographic factors and first caregiver. Similar findings were reported from studies by Anderson et al. in a systematic review,<sup>[36]</sup> Chadda et al. in India.<sup>19</sup> In the case of severe mental illnesses, psychiatric service utilization by females is found to be low compared to that of males.<sup>28</sup> In psychotic disorders, being single and living alone are factors adversely influencing care pathways.<sup>37</sup>

It was seen that a diagnosis of alcohol use disorder had a higher chance of contact with psychiatric services as the first carer when compared to anxiety disorders and intellectual disability. Schizophrenia spectrum disorders had the highest first contact with faith healers. With major neurocognitive disorders and intellectual disability disorders, the help-seeking primarily occurs with the non-psychiatrist modern medicine doctors. Similar to finding in the present study, Balhara et al.<sup>38</sup> had found that for 56.9% of the alcohol-dependent patients, the first point of contact was with a tertiary care addiction psychiatrist. Other studies also found that anxiety disorders had a less perceived need for psychiatric treatment than mood disorders,<sup>39</sup> as seen in this study. In Nigeria, the majority (69%) of the patients with schizophrenia consulted spiritual or traditional healers as the first contact.<sup>33</sup> Thus, these findings broadly agree with the studies done in India and abroad.

#### **Duration of untreated illness and its correlates**

In the study, male gender was significantly associated with longer delays in initiating appropriate treatment (p 0.005). Findings from Turkey by Kiliç et al.,<sup>26</sup> and from Spain by Vasquez et al.,<sup>40</sup> support this finding. Increased help-seeking was seen in women than in men in Canada.<sup>22</sup> Barring gender, no other socio-demographic variable had a significant association with the DUI in the sample. However, younger age, lower educational level, unemployment, and living alone, were associated with protracted DUI in a study by Ehmann et al.<sup>41</sup>

Having faith healers as the first carers are associated with a significant delay in seeking treatment when compared to having psychiatrists as the primary carer (p 0.000). This finding is similar to those in studies on psychoses in South Africa,<sup>42</sup> and schizophrenia in India.<sup>43</sup> Seeking early help from alternate systems of

medicine practitioners was also having a longer median delay (p 0.003). Patients spend a substantial proportion of their DUI in seeking help from magico-religious healing centres and alternate medicine doctors. This finding suggests that there is a need to improve collaboration between mental health care facilities and these care providers. Efforts should be made to educate faith healers and practitioners of alternate medicines about the symptoms of mental illnesses and early initiation of appropriate psychiatric treatment, so that these patients can be referred to treatment agencies at the earliest to reduce the duration of untreated illness.

Increasing the awareness about the nature of psychiatric illnesses and the availability of psychiatric care must be the aim of public health education, to make the pathway to care more direct. The primary care physicians, as also those practising alternative systems of medicine, must be made aware of the need to identify patients with psychiatric illnesses to establish an effective and efficient referral system

A diagnosis of alcohol use disorder had longer median DUI when compared to schizophrenia spectrum disorders (p-value 0.000), mood disorders (p-value 0.000), anxiety disorders (p 0.001) and mental retardation (p 0.001) in the study. Alcohol dependent patients in the study had the longest DUI at 360 months in some cases. Substance use disorder is not usually seen by the family as a psychiatric disorder instead as a wrong choice in life made by the person. Criticisms and neglect from the part of the family and society follow while the precious time for initiation of treatment is lost. Individual factors, specifically the perceived necessity of the individual patient, also plays a part in it. Sometimes, the family tries over-the-counter medications and alternate systems of medicine which further delays pathway to psychiatric care. This adds up to the total duration of illness and subsequently DUI in these cases. Further, a higher prevalence of substance use disorders among males in the study population may be another reason for the male predominance in the delay in the treatment-seeking group.

Major Neurocognitive disorders had more delays in help-seeking when compared to schizophrenia spectrum disorders (p 0.048) and mental retardation (p 0.032). However, most people with neurocognitive disorders report to a neurologist and involvement of psychiatry is often when there is associated behavioural abnormality.



In a Turkish study, it was apparent that the patients with alcohol dependence had longer median delays than those with depression, anxiety disorders and somatization disorders.<sup>26</sup> In a study at an Indian mental hospital, there was no significant association between DUI and diagnosis.<sup>19</sup> Duration of untreated psychosis is longer for subjects with a diagnosis of schizophrenia or schizoaffective disorder, compared to mood disorders with psychotic features.<sup>8, 23</sup> In Australia, Psychiatric diagnosis was not independently associated with pathway duration.<sup>[44]</sup>

### Limitations

Information gathered in this study was based on the willingness of informants to acknowledge their previous source of care. Since the information was gathered retrospectively, recall bias may have influenced the results to some extent. The study was conducted in a tertiary mental health facility where patients with severe mental disorders outnumber those with common mental disorders; perhaps it reflects the non-representativeness of the study sample when extrapolated to the community level. The cross-sectional nature of the study could have restricted the unfolding of actual longer pathway as help-seeking might not have ended at the study point.

### Conclusion

Faith healers & alternate systems of medicine practitioners form the first portal of psychiatric care for a small yet significant proportion of the patients. Reduction in DUI in case of psychiatric disorders needs attention to this aspect also.

### Financial support and sponsorship:

None.

### Conflict of interest:

None declared.

### REFERENCES

- Lopez AD, Murray CC. The global burden of disease, 1990-2020. *Nature medicine*. 1998;4(11):1241-3.
- National Mental Health Program. New Delhi: NIHF; 2005. National Institute of Health and Family Welfare. Accessible from: <http://www.nihfw.org/ndcnihfw/html/Programmes/NationalMentalHealth.htm>
- Gururaj G, Girish N, Issac MK. Mental, neurological and substance abuse disorders: Strategies towards a systems approach. In: *Burden of disease in India*. National Commission on Macroeconomics and Health. New Delhi: Government of India; 2005.226-36.
- Lahariya C, Singhal S, Gupta S, Mishra A. Pathway of care among psychiatric patients attending a mental health institution in central India. *Indian J psychiatry*. 2010;52(4):333-8.
- Rogler LH, Cortes DE. Help-seeking pathways: a unifying concept in mental health care. *Am J Psychiatry*. 1993;150(4):554-61.
- Shin YM, Jung HY, Kim SW, Lee SH, Shin SE, Park JI, et al. A descriptive study of pathways to care of high risk for psychosis adolescents in Korea. *Early Interv Psychiatry* 2010;4(2):119-23.
- Jain N, Gautam S, Jain S, Gupta ID, Batra L, Sharma R, et al. pathway to psychiatric care in a tertiary mental health facility in Jaipur, India. *Asian J Psychiatr* 2012;5(4):303-8.
- Perkins DO, Gu H, Boteva K, Lieberman JA. Relationship between duration of untreated psychosis and outcome in first-episode schizophrenia: a critical review and meta-analysis. *Am J Psychiatry*. 2005;162(10):1785-804.
- World Health Organization. World health statistics, 2015. World Health Organization. 2015;112-16.
- Shibukumar, Thavody J, National Mental Health Survey of India, 2015-16: Kerala State Report, IMHANS, Kozhikode, 2017:3
- Ministry of Law and Justice. The Mental Healthcare Act. 2017. [Last accessed on 2019 Oct 10]. Available from: [https://indiacode.nic.in/show-data?actid=AC\\_CEN\\_12\\_13\\_00024\\_201710\\_1517807327874&sectionId=6224&sectionno=18&orderno=18](https://indiacode.nic.in/show-data?actid=AC_CEN_12_13_00024_201710_1517807327874&sectionId=6224&sectionno=18&orderno=18)
- NITI Aayog. Healthy States, Progressive India: Report on the ranks of states and union territories. [Last accessed on 2019 Aug 24] Available from: <http://social.niti.gov.in/>
- Ministry of Home Affairs, Government of India. Literacy Rate- Census of India. [Last accessed on 2019 Jun 12]. Available from: [censusindia.gov.in › data\\_files › india › Final\\_PPT\\_2011\\_chapter6](http://censusindia.gov.in/data_files/india/Final_PPT_2011_chapter6)
- World Health Organization. Division of Mental Health. Pathways of patients with mental disorders: a multi-centre collaborative project. MNH/NAT/87.1. Unpublished. Geneva: World Health Organization; 1987.
- Naqvi HA, Hussain S, Zaman M, Islam M. Pathways to Care: Duration of untreated psychosis from Karachi, Pakistan. *PLoS ONE* 2009;4(10):1-6.
- Pattanayak S, Gupta CS. Assessment of Pathways to Care in Psychotic Patients Presenting At a Psychiatric Clinic in an Indian City. *Asian J Psychiatr*. 2011;4: S85
- Behari M, Gupta DK, Singh V, Verma KK, Sengupta SN, Sidana R, et al. help seeking behaviour and

- pathways to care among patients seeking care at a community mental health clinic and psychiatry outpatient department of a medical college: A study from North Rajasthan. *J Mental Health Hum Behav.* 2016;29:18-33.
18. Prabhu A, Vardhan GV, Pandit LV. Pathways to tertiary care adopted by individuals with psychiatric illness. *Asian J Psychiatr.* 2015;16:32-5
  19. Chadda RK, Agarwal V, Singh MC, Raheja D. Help seeking behaviour of psychiatric patients before seeking care at a mental hospital. *Int J Soc Psychiatry.* 2001;47(4):71-8.
  20. Pradhan SC, Singh MM, Singh RA, Das J, Ram D, Patil B, et al. First care gives of mentally ill patients: A multicenter study. *Indian J Med Sci.* 2001;55:203-8.
  21. Goldberg D, Huxley P. *Mental illness in the community: The pathway to psychiatric care.* London, Tavistock, 1980.
  22. Bland RC, Newman SC, Orn H. Help-seeking for psychiatric disorders. *Can J Psychiatry.* 1997;42(9):935-42.
  23. Bhui K, Ullrich S, Coid JW. Which pathways to psychiatric care lead to earlier treatment and a shorter duration of first-episode psychosis? *BMC psychiatry.* 2014;14(1):72.
  24. Balestrieri M, Bon MG, Rodriguez-Sacristan A, Tansella M. Pathways to psychiatric care in South-Verona, Italy. *Psychol med.* 1994;24(3):641-9.
  25. Gater R, Sousa DBAE, Barrientos G, Caraveo J, Chandrashekar CR, Dhadhphale M, et al. The pathways to psychiatric care: a cross-cultural study. *Psychol med.* 1991;21(3):761-74.
  26. Kiliç C, Rezaki M, Üstün TB, Gater RA. Pathways to psychiatric care in Ankara. *Soc Psychiatry Psychiatr Epidemiol.* 1994;29(3):131-6.
  27. Fujisawa D, Hashimoto N, Masamune-Koizumi Y, Otsuka K, Tateno M, Okugawa G, et al. pathway to psychiatric care in Japan: A multicenter observational study. *Int J Ment Health Syst.* 2008;2(1):14.
  28. Bekele YY, Flisher AJ, Alem A, Baheretebib Y. Pathways to psychiatric care in Ethiopia. *Psychol Med.* 2009;39(03):475-83.
  29. Kurihara T, Kato M, Reverger R, Tirta IGR. Pathway to psychiatric care in Bali. *Psychiatry Clin Neurosci.* 2006;60(2):204-10.
  30. Naik SK, Pattanayak S, Gupta CS, Pattanayak RD. 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):338-45.
  31. Alegria M, Bijl RV, Lin E, Waltfers EE, Kessler RC Income differences in persons seeking outpatient treatment for mental disorders: a comparison of the United States with Ontario and The Netherlands. *Arch Gen Psychiatry.* 2000;57(4):383-91.
  32. Steel Z, McDonald R, Silove D, Bauman A, Sandford P, Herron J, et al. Pathways to the first contact with specialist mental health care. *Aust N Z J Psychiatry.* 2006;40(4):347-54.
  33. Adeosun II, Adegbohun AA, Adewumi TA, Jeje OO. The pathways to the first contact with mental health services among patients with schizophrenia in Lagos, Nigeria. *Schizophr Res Treat.* 2013;15(1):12-8.
  34. Gupta SK. Web model of pathways to psychiatric care for Indian setting. *Int J Health Allied Sci.* 2012;1(4):293.
  35. Faizan S, Raveesh BN, Ravindra LS, Sharath K. Pathways to psychiatric care in South India and their socio-demographic and attitudinal correlates. *BMC Proceedings* 2012;6(S4).
  36. Anderson KK, Fuhrer R, Malla AK. The pathways to mental health care of first episode psychosis patients: a systematic review. *Psychol Med.* 2010;40(10):1585-97.
  37. Singh SP, Grange T. Measuring pathways to care in first-episode psychosis: A systematic review. *Schizophr Res.* 2006 Jan 1;81(1):75-82.
  38. Balhara YPS, Prakash S, Gupta R. Pathways to Care of Alcohol-Dependent Patients: An Exploratory Study From a Tertiary Care Substance Use Disorder Treatment Center. *Int J High Risk Behav Addict.* 2016;5(3).
  39. Meadows G, Burgess P, Bobevski I, Fossey E, Harvey C, Liaw ST. Perceived need for mental health care: influences of diagnosis, demography and disability. *Psychol med.* 2002;32(2):299-309.
  40. Vázquez-Barquero JL, Castanedo SH, Artal JA, Nuñez JC, Gaité L, Goldberg D, et al. Pathways to psychiatric care in Cantabria. *Acta Psychiatr Scand.* 1993;88(4):229-34.
  41. Ehmann TS, Tee KA, MacEwan GW, Dalzell KL, Hanson LA, Smith GN, et al. Treatment delay and pathways to care in early psychosis. *Early interve psychiatry.* 2013;8(3):240-6.
  42. Burns JK, Tomita A. Traditional and religious healers in the pathway to care for people with mental disorders in Africa: a systematic review and meta-analysis. *Soc Psychiatry Psychiatr Epidemiol.* 2014;50(6):867-77.
  43. Thirthalli J, Varghese RS, Ross D, Jagannathan A, Venkatasubramanian G, Gangadhar BN. Pathways to psychiatric care in schizophrenia in India. *Schizophr Res.* 2008;102(1-3):160-1.
  44. Harrison J, Kisely SR, Jones JA, Blake I, Creed FH. Access to psychiatric care; the results of the Pathways to care study in Preston. *J Public Health Med.* 1997;19(1):69-75.