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RESEARCH ARTICLE

Non-psychiatric help-seeking and associated factors among patients attending mental health services at Dilla University Referral Hospital, Gedeo Zone, South Ethiopia Region, Ethiopia, 2023

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Abstract

Background: Mental health disorders are a significant public health concern globally, particularly affecting low- and middle-income countries. Ethiopia, like many developing nations, faces challenges in providing adequate mental healthcare services. Previous studies have highlighted the underutilization of psychiatric care and a preference for non-psychiatric treatment options among individuals with mental health issues in the country. Understanding the factors associated with non-psychiatric help-seeking is crucial for developing effective interventions to improve mental health outcomes.

Objective: This study aimed to assess the prevalence of non-psychiatric help-seeking and its associated factors among patients attending mental health services at Dilla University Referral Hospital, Gedeo Zone, South Ethiopia Region, in 2023.

Method: The study was conducted at Dilla University Referral Hospital from July to October 2023, using an institutional-based cross-sectional design. A systematic random sampling technique was employed to recruit a sample of 423 participants. Data were collected using various tools, including questionnaires and interviews, to assess non-psychiatric treatment-seeking behaviors, social support, mental health literacy, and perceived stigma. Quantitative data were gathered using the Epi-Collect smartphone application and analyzed using SPSS version 26. Bivariate and multivariate logistic regression analyses were conducted to identify factors associated with routes to psychiatric care. Statistical significance was set at $p < 0.05$.

Result: A substantial majority (92.7%) of participants initially sought non-psychiatric care for mental health issues. Factors associated with non-psychiatric treatment-seeking included younger age (AOR=4.28, 95% CI=2.178-10.635), female sex (AOR=2.30, 95% CI=1.767-3.742), lower education (AOR=3.20, 95% CI=1.423-9.164), specific diagnoses (such as schizophrenia and bipolar disorder), poor social support (AOR=4.90, 95% CI=1.562-18.024), low mental health literacy (AOR=3.53, 95% CI=2.723-5.677), low income (AOR=3.01, 95% CI=1.602-6.934), limited awareness of psychiatric services (AOR=2.00, 95% CI=1.239-3.618), high perceived stigma (AOR=3.00, 95% CI=2.223-4.443), and residing more than 5 km from a health facility (AOR=2.16, 95% CI=1.562-3.621).

Conclusion: This study highlights the substantial reliance on non-psychiatric care for mental health issues among individuals seeking treatment. Factors such as age, gender, education, diagnosis, social support, mental health literacy, income, awareness of psychiatric services, perceived stigma, and geographical accessibility significantly influenced help-seeking behaviors. Understanding these determinants is crucial for developing targeted interventions to improve access to and utilization of appropriate mental healthcare services.

Keywords: Non-psychiatric help-seeking, Mental health services, Ethiopia, Associated factors, Gedeo Zone

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1 Introduction

Mental health is a critical component of overall well-being, yet it remains a neglected aspect of healthcare in many parts of the world, particularly in low- and middle-income countries (LMICs) [1]. The burden of mental disorders is substantial, significantly contributing to disability and mortality [2]. Despite this, access to specialized mental health services remains limited due to a scarcity of resources, including human capital, infrastructure, and financial investments [3]. The World Health Organization (WHO) estimates that one in four people globally will experience a mental health condition. In Africa, over 80% seek healthcare from traditional healers, with 40-60% specifically for mental health problems [4, 5].

Studies across Asia illustrate that seeking mental health care often involves indirect routes, especially in rural areas. In China, a staggering 80% of individuals relied on indirect pathways compared to just 20% who approached a mental health professional directly [6]. Similar trends emerge in India, where only 8% to 57% of patients, depending on the hospital setting (general vs. psychiatric), had a psychiatrist as their primary contact [7]. Recent studies focusing on rural populations in India reinforce this point, with only 9% to 15% initiating care with a psychiatrist [8]. In Bali, Indonesia, 87% of new patients at a mental health hospital had consulted a traditional healer before seeking formal help, often visiting multiple healers [8].

In developing nations, particularly in sub-Saharan Africa, many individuals with mental health conditions seek guidance from traditional healers either as their primary source of care or as their exclusive provider for mental health services [9]. Multiple factors influence the paths patients take when seeking mental health care, resulting in treatment delays or complete avoidance of formal care, which perpetuates the mental health treatment gap [10]. In regions like Ethiopia, individuals with mental health conditions often explore treatment options from a diverse range of formal and informal sources if they choose to pursue mental health care at all [9].

For instance, nearly 80% of individuals with mental illnesses in some parts of Nigeria first sought treatment from unofficial providers such as priests, spiritualists, or herbalists [11]. In Lagos, Nigeria, approximately 70% of individuals diagnosed with schizophrenia initially sought therapy from spiritualists or traditional healers [12]. The Zulu people of South Africa believe that traditional healers are the only ones who can truly understand mental disorders, perceiving Western medicine as effective for physical illnesses but potentially ineffective for mental illness [13]. This cultural perspective influences their pathways to psychiatric treatment.

Ethiopia faces a significant burden of mental health disorders, with limited access to care being a critical issue [14]. Studies indicate a high prevalence of mental illness, ranging from 11.6% to 40.4% (15, 16). Stigma surrounding mental illness poses a major barrier, with traditional beliefs often attributing mental health problems to supernatural causes or bad luck [17]. This stigma discourages individuals from seeking professional help. Additionally, the lack of qualified mental health professionals is a significant challenge, as Ethiopia has a low psychiatrist-to-population ratio, making access to specialized care difficult [18]. Mental health services are primarily concentrated in urban areas, leaving rural populations with limited options [19].

Understanding the pathways people take to seek mental healthcare is key to addressing delays in accessing professional help in Ethiopia—a situation common across Africa. These delays in reaching qualified professionals or proper facilities can have serious consequences, leading to worse outcomes for patients in the long run [20-22].

While understanding why people choose non-psychiatric treatment for mental health concerns is crucial for predicting and preventing underutilization of services, there is a dearth of studies on this topic in Ethiopia [23, 24]. To address this gap, this study aims to investigate the prevalence of non-psychiatric help-seeking behaviors among patients attending mental health services at Dilla University Referral Hospital and to iden-

tify the associated factors influencing this behavior. By understanding these factors, this study seeks to contribute to the development of more effective mental health service delivery models in the region.

2 Methods

2.1 Study area and study period

The study was conducted between July 2023 and November 2023 at Dilla University Referral Hospital, located in the Gedeo Zone of southern Ethiopia, approximately 365 kilometers from the capital city, Addis Ababa. This teaching hospital provides medical education for various healthcare professionals and offers services across six major departments: internal medicine, surgery, obstetrics, pediatrics, dentistry, and ophthalmology. Additionally, the hospital provides essential services such as radiology, psychiatry, pharmacy, clinical laboratory, nursing, and midwifery care.

2.2 Study Design

An institutional-based cross-sectional design was employed.

2.3 Population

This study focused on a source population comprising all patients receiving ongoing mental health care at Dilla University Referral Hospital. This included both inpatients (admitted to the hospital) and outpatients (receiving follow-up care). The study population consisted of all patients in follow-up and inpatient units during the data collection period. To ensure accurate diagnoses, only patients with confirmed mental disorders based on the DSM-5 classification system were included. Confirmation was provided by a senior mental health professional with a Master of Science degree in Psychiatry working at the hospital, ensuring the expertise of the personnel involved in diagnosing participants.

2.4 Eligibility Criteria

Participants were recruited based on strict criteria. To be included, individuals had to be 18 years old or older, aligning with Ethiopia's legal age of consent. A confirmed diagnosis of a mental health disorder using the DSM-5 was mandatory. Additionally, participation was limited to patients currently receiving treatment at the mental health service of Dilla University Referral Hospital. The willingness to provide informed consent was also crucial.

To ensure data quality, specific groups were excluded from the study. Patients with severe cognitive impairment that could limit their understanding or ability to consent were not included. Similarly, those experiencing an acute mental health crisis or active psychosis were excluded, as this could affect the accuracy of their responses. To prevent the repeated inclusion of patients with monthly visits and ensure that each patient was included only once, we utilized a log comprising medical record numbers and visit dates during the study period. For patients with multiple visits, only data from their first qualifying encounter was used.

2.5 Sample Size Determination

We used a standard statistical formula to determine the minimum number of participants needed for the study involving psychiatric patients. This formula considers the desired level of precision (a 5% margin of error) and a high level of confidence (95%). Initially, we explored using an estimate of the expected proportion (prevalence) based on a previous study; however, this resulted in a lower minimum sample size than we deemed necessary. Due to a lack of specific knowledge about the prevalence of different routes to care in the target population, we opted for a more conservative approach. We used a neutral value of p= 0.5, q=0.5 (assuming an equal likelihood of using any route) in the formula, which yielded a minimum sample size of 384 participants. To account for potential dropouts, we added a 10% buffer, bringing the final target sample size to 423.

2.6 Sampling technique and procedure

This study employed systematic random sampling to select participants. Since hospital records indicated an average of 400 psychiatric patients visiting Dilla University Referral Hos-

pital each month, the total estimated population size (N) was 2000 (400 patients/month * 5 months). To ensure a representative sample, we used systematic random sampling. This method involves selecting participants at regular intervals throughout the population list. The interval size (k) was calculated by dividing the total population (N) by the desired sample size (n): k = N/n = 2000 patients/ 423 participants ≈ 5. Since a perfect interval of 4.7 wasn't feasible, we opted for every 5th patient on the list (k ≈ 5). Finally, to avoid bias in choosing the starting point, a random number between 1 and 5 was chosen using a lottery method. This random number determined the first participant on the list to be included in the sample, and then every 5th patient thereafter was selected until the target sample size was reached.

2.7 Study variable

The dependent variable in this study was non-psychiatric treatment seeking. The independent variables included various sociodemographic factors such as age, sex, marital status, religion, educational status, economic status, place of residence, and distance to a health facility. Additionally, clinical and psychosocial factors were considered as independent variables, including social support, perceived stigma, awareness of the availability of mental health services, perceived severity of illness, and diagnosis based on the DSM-5.

2.8 Operational Definitions/Measurements

Non-Psychiatric Treatment Seeking: A semi-structured, interviewer-administered questionnaire was developed for this study based on the pathway encounter form designed for the WHO collaborative study [25]. This tool collected data on the number of patients with mental disorders who sought services from various psychiatric providers in both the formal and informal sectors in Ethiopia. It allowed for an estimated comparison of individuals with mental disorders who consulted traditional healers, religious leaders (faith-based prayer), and medical care providers (general practitioners) before attending the outpatient unit at Dilla University Referral Hospital for mental health services. Non-psychiatric treatment seeking is defined as individuals who initially sought help from sources such as religious leaders, general practitioners, or traditional healers before reaching a mental health professional. Previous studies have employed a similar approach [23, 26].

Traditional Healer/Religious Leader: This term refers to herbalists and faith healers (Imams/Sheiks, Orthodox Church clergy, and Protestant pastors) found in the Gedeo Zone. Similar definitions have been used in prior studies [27, 28].

General Practitioner: A general practitioner is defined as a medical doctor who provides primary healthcare services, including the diagnosis and management of common medical conditions, and may also offer basic counseling or referrals for mental health concerns.

Social Support: The Oslo Social Support Scale (OSSS-3) was employed to measure social support [29]. The OSSS-3 assigns a total score ranging from 3 to 14, with scores of 3 to 8 indicating poor social support, 9 to 11 indicating moderate support, and 12 to 14 indicating strong social support. Prior research has demonstrated acceptable internal consistency for the OSSS-3 ($\alpha = 0.640$). This tool has also been successfully utilized in previous studies conducted in Ethiopian settings [30-33.

Time to Treatment: A semi-structured questionnaire was used to interview patients and their caregivers to assess time to treatment. Similar to a prior study conducted in Ethiopia, treatment was considered delayed if the reported duration of untreated illness exceeded the median/mean total duration reported in the sample [23, 33].

Awareness of Psychiatric Treatment Availability: Awareness was assessed using a single item with a "yes" or "no" option. Previous studies in Ethiopia have employed a similar assessment approach [33].

Mental Health Literacy: The 36-item Mental Health Literacy Tool (MHLT-36) assesses indi-

viduals' understanding of mental health. This standardized tool evaluates knowledge, attitudes, and beliefs about mental illness (34). MHLT-36 includes items that test the ability to recognize symptoms of common mental disorassessch as depression, anxiety, and schizophrenia, and assesses knowledge about causes, treatments, and prognosis. While it does not directly measure help-seeking behavior, it can indirectly gauge attitudes toward seeking professional help. Scoring is based on a four-point Likert scale, with higher scores indicating greater mental health literacy. The MHLT-36 has established reliability and validity across diverse populations (35-37) and has been used in previous studies in Ethiopia [27, 38-40].

Perceived Stigma Scale (PSS-4): This scale was used to assess individuals' perceptions of negative attitudes and beliefs toward people with mental illness (41). The PSS-4 consists of four core items that participants rate on a Likert scale to indicate their level of agreement. Some statements are reverse scored, meaning that strong disagreement results in a higher score. After reverse scoring, a total score is calculated by summing the scores across all four statements. Higher total scores indicate a stronger perception of stigma associated with mental illness. The PSS-4 has been established as a reliable and valid tool in various research settings and has been utilized in previous studies in Ethiopia.

2.9 Data collection procedure

Data was collected through face-to-face interviews using semi-structured questionnaires, which covered socio-demographic, clinical, and psychosocial factors, supplemented by document reviews. The data collection was carried out by three trained Bachelor of Science (BSc) degree holders in psychiatric nursing, who gathered information directly from the patients. To ensure the quality and consistency of the data collected, a two-day intensive training program was provided to these data collectors. This training included detailed explanations of the study objectives, ethical considerations (such as maintaining confidentiality and securing informed consent), and a thorough review of each questionnaire item to ensure consistent administration and accurate recording of responses. The entire data collection process was supervised by a Master of Science holder in mental health at the study site.

The questionnaire included scales and items detailed in the "Operational Definitions/Measurements" section, such as the Oslo Social Support Scale, MHLT-36, PSS-4, and specific items designed to assess non-psychiatric help-seeking, time to treatment, and awareness of the availability of psychiatric treatment. The English version of the questionnaire was carefully translated into Amharic, then into Gedeuffa (the local language) by a professional translator, and subsequently back translated into English by an independent translator to verify consistency and accuracy. Patients were approached for data collection during their visits to the psychiatry unit, with interviews conducted in a separate outpatient unit to ensure participant comfort and confidentiality. Before each interview, data collectors clearly explained the purpose of the study, ensured participants understood their right to withdraw at any time, and obtained informed consent.

2.10 Data Quality Control

The questionnaire was initially prepared in English and then translated into Amharic and Gedeuffa, the local language of the Gedeo Zone. To ensure consistency and clarity, the translated versions were back translated into English by two experts. Pre-testing was conducted on 5% of the sample size at Hawassa Comprehensive Specialized Hospital, and the feedback obtained from this pre-test was used to refine the final version of the questionnaire.

Data collectors and supervisors received training from the principal investigator on the questionnaire, data collection methods, quality control measures, and ethical considerations. The reliability of the questionnaire and participants' understanding were assessed. During data collection, site supervisors provided oversight. Once the data collection process was complete, the questionnaires were checked for completeness and consistency.

2.11 Data processing and analysis

The collected data were gathered using the Epi-Collect smartphone application and subsequently exported to SPSS version 26 for analysis. Crude and adjusted odds ratios were calculated to measure the association between independent variables and pathways to psychiatric care. Chi-square tests were employed for categorical independent variables to assess assumptions. Results were presented using frequency tables and charts, and the normality of the data was checked.

Descriptive statistics were reported using means and standard deviations for normally distributed numerical data. Both multivariable and bivariate logistic regression models were utilized to assess the association of independent variables with the dependent variable. Variables with a p-value of ≤ 0.025 in the bivariate logistic regression analysis were selected for inclusion in the multivariable logistic regression analysis. Variables with a p-value of <0.05 in the multivariable logistic regression analysis were considered statistically significant for non-psychiatric treatment seeking.

3 Result

3.1 Sociodemographic characteristics of study participants

The most common age group among participants was 31-40 years, accounting for 54.4% of the total. In terms of sex, there were slightly more males (50.6%) than females (49.4%). Just over half (53.2%) of the participants were married, while 28.6% were single. The majority identified as Protestant (61.2%), followed by Orthodox (22.5%) and Muslim (15.1%).

Regarding education, the largest group (44%) had completed elementary school, followed by those with a high school education (27.9%) and those holding a degree or higher (24.6%). The most common occupation was daily laborer (22.5%), followed by farmer (20.6%) and housewife (21.5%). Most participants (52%) reported a monthly income between 1001-3000 birr (see Table 1).

Table 1 Sociodemographic characteristics of study participants at Dilla University Referral Hospital, Gedeo Zone, South Ethiopia Region, 2023

Variable	Category	Frequency	Percent
Age (in year)	18-30	78	18.4
	31-40	230	54.4
	41-50	85	20.1
	≥51	30	7.1
Sex	Male	214	50.6
	Female	209	49.4
Marital status	Married	225	53.2
	Single	121	28.6
	Divorced	59	13.9
	Widowed	18	4.3
Religion	Orthodox	95	22.5
	Muslim	64	15.1
	Protestant	259	61.2
	Other	5	1.2
Educational Status	Unable to read and write	15	3.5
	Elementary school	186	44
	High school	118	27.9
	Degree and above	104	24.6
Occupational status	Jobless	31	7.3
	Daily laborer	95	22.5
	Farmer	87	20.6
	Private business	58	13.7
	Student	35	8.3
	Housewife	91	21.5
	Civil servant	26	6.1
Monthly income	0-1000birr	175	41.4
	1001-3000birr	220	52.0
	>3001	28	6.6

3.2 Distribution of participants' Demographics, Referral Sources, Treatment History, and Diagnoses

The study examined various factors related to mental health service utilization. Regarding the source of healthcare provider recommendations, the majority of patients (51.1%) were referred by family members, followed by former patients (15.6%), while 10.2% sought care independently. A significant proportion of patients (87.7%) did not have a referral letter, indicating a potential gap in access to formal healthcare.

Past mental health service utilization was reported by 39.2% of participants, suggesting a history of treatment. The most prevalent DSM-5 diagnoses included epilepsy (44.4%), schizophrenia (31.7%), and other psychotic disorders (9.5%). In terms of care settings, traditional healers were the most frequently accessed (42.3%), followed by religious leaders (40.2%), highlighting the importance of traditional and spiritual practices in mental healthcare seeking (see Table 2).

Table 2 Distribution of participant demographics, referral sources, treatment history, and diagnoses at Dilla University Referral Hospital, Gedeo Zone, South Ethiopia Region, 2023

Variables	Category	Frequency	Percent
Who recommended a healthcare provider	Patient himself	43	10.2
	Former patient	66	15.6
	Family	216	51.1
	Others	98	23.2
Does the patient have a referral letter	Yes	52	12.3
	No	371	87.7
Has the patient received mental health	Yes	166	39.2
services in the past	No	257	60.8
Diagnosis based on DSM-5	Schizophrenia spectrum disorder	174	41.2
	Major depressive disorder	25	5.9
	Bipolar Disorder	23	5.4
	Epilepsy	188	44.4
	Anxiety	13	3.1
Where did you receive care	Traditional healer	179	42.3
	Psychiatric service	31	7.3
	Religious leader	170	40.2
	General practitioner	43	10.2

3.3 Help-Seeking Behaviors, Perceived Causes of Mental Illness, and Treatment Utilization

The study examined factors influencing help-seeking behaviors and perceptions of mental illness among participants. Family members and relatives were identified as the primary referral sources, accounting for 52.2%, followed by neighbors (13.2%) and friends (13%). A small percentage sought help independently (4.3%) or based on recommendations from former patients or health professionals (4.3% each).

The most common reasons for seeking care were functional impairment and worsening illness, each representing 39.2% of cases. Other significant factors included suicidal behavior (13%) and aggressive behavior (8.5%). The main barriers to earlier help-seeking were financial difficulties (36.9%) and a lack of awareness about available mental health services (41.6%). Additional obstacles included the distance to services (11.6%) and financial constraints (36.9%).

Perceptions of mental illness varied widely. Commonly attributed causes included the evil eye (37.6%) and sinful acts (24.3%), with spiritual possession cited by 24.1%. A smaller percentage associated mental illness with stress (1.2%), family history (8.5%), or were unsure (4.3%).

In terms of care-seeking behaviors, traditional healers were the most frequently utilized service providers (42.3%), followed by religious leaders (40.2%). Access to psychiatric services and general practitioners was less common, at 7.3% and 10.2%, respectively.

Table 3 Help-seeking behaviors, perceived causes of mental illness, and treatment utilization among patients attending mental health services at Dilla University Referral Hospital, Gedeo Zone, South Ethiopia Region, 2023

Variables	Category	Frequency	Percent
Who recommended that you seek care?	Neighbor	56	13.2
	Family/relative	22	1 52.2
	Friends	55	13.0
	Patient himself	18	4.3
	Former patient	55	13.0
	Health professional	18	4.3
What was the main problem	Suicidal behavior	55	13.0
	Aggressive behavior	36	8.5
	Functional impairment	166	39.2
	Worsening illness	166	39.2
Reasons for not seeking care sooner	Financial difficulties	156	36.9
	Didn't know where to seek help	176	41.6
	Lack of mental health service	42	9.9
	Distance	49	11.6
Perceived causes of mental illnesses	Evil eye	159	37.6
	Sinful act	103	24.3
	Stress	5	1.2
	Spiritual possession	102	24.1
	Family history	36	8.5
	I don't know	18	4.3
Where did you receive care	Traditional healer	179	42.3
	Psychiatric service	74	7.3
	Religious leader	170	40.2
	General practitioner	43	10.2

3.4 Distribution of Beliefs about Cures, Treatments, Causes, and Severity of Mental Illness

The study examined participants' perceptions of mental illness. A majority of respondents (61.9%) believed that mental illnesses are not curable, while 33.8% were uncertain. In terms of treatment options, religious practices—such as prayer, exorcism, and holy water—were predominantly viewed as effective, accounting for 51.1% of responses. Traditional healing methods, including herbalism and witchcraft, were also widely recognized (41.6%), while a smaller proportion identified mental health professionals as viable treatment options (7.3%).

Participants had varied perceptions of who is susceptible to mental illness. A significant portion associated mental illness with substance use (36.4%), while others identified individuals experiencing crises (30.7%) and those exhibiting anger or stress (13.5%) as at risk. Additionally, 17% of respondents viewed overthinking as a potential risk factor.

The perceived severity of mental illnesses was predominantly high, with 66.7% rating them as highly severe and an additional 17% as very severe. Stigma associated with mental illness was pronounced, with a combined 96.5% of respondents acknowledging some level of shame related to the condition. Only a small minority (3.6%) did not perceive mental illness as shameful.

Table 4 Distribution of beliefs about cures, treatments, causes, and severity of mental illness among study participants at Dilla University Referral Hospital, Gedeo Zone, South Ethiopia Region, 2023

Variables	Category	Frequency	Percent
Are mental illnesses curable?	Yes	18	4.3
	I am not sure	143	33.8
	No	262	61.9
Which treatment can be used to treat mental illness?	Mental health professional	31	7.3
	Church for prayer/Exorcise	156	36.9
	Holy water	60	14.2
	Traditional healer/herbalist	85	20.1
	Traditional healer/witchcraft	91	21.5
Which kinds of people are affected by mental illnesses?	People with crisis	130	30.7
	Angry and stressed	57	13.5
	People who use drugs	154	36.4
	Those who think a lot	72	17.0
	Others	10	2.4
Perceived severity of mental illnesses	Less severe	13	3.1
	Severe	56	13.2
	Highly severe	282	66.7
	Very highly severe	72	17.0
Perception of mental illness	Very highly shameful	68	16.1
	Highly shameful	180	42.6
	Shameful	160	37.8
	Not as such shameful	10	2.4
	Not at all shameful	5	1.2

3.5 Distribution of treatment type, Social Support, Mental Health Literacy, and Perceived Stigma

Most participants (92.7%) sought non-psychiatric treatment as their initial point of contact for mental health concerns, while a smaller proportion (7.3%) directly accessed psychiatric services. In terms of treatment timeliness, a significant number of participants (68.3%) sought help early, whereas 31.7% experienced delays in initiating treatment.

Social support varied among participants, with a large proportion reporting poor social support (69.3%). A smaller percentage indicated intermediate (28.8%) or strong social support (1.9%). Mental health literacy levels were relatively balanced, with 50.4% of participants scoring low in mental health literacy and 49.6% scoring high. Awareness of available mental health services was notably low, with 88.2% of participants unaware of such resources.

Perceived stigma towards mental illness was prevalent, as 43.5% of participants reported high levels of stigma. Additionally, a significant majority (75.9%) lived more than 5 kilometers away from a health facility, which could potentially affect access to care.

3.6 The magnitude of Non-psychiatric and Psychiatric treatment-seeking

A substantial majority of individuals experiencing mental disorders in this study sought treatment from non-psychiatric sources as their initial point of care. Specifically, 92.7% of participants (95% Confidence Interval: 89.9% - 95%) reported consulting traditional healers, religious leaders, or general practitioners as their first point of contact for addressing mental health concerns. This finding highlights the significant role these providers play in mental health service utilization within the study population.

Table 5 Distribution of treatment type, time to treatment, social support, mental health literacy, and perceived stigma among participants attending mental health services at Dilla University Referral Hospital, Gedeo Zone, South Ethiopia Region, 2023

Variable	Category	Frequency	Percent
Treatment sought as first point contact	Non-psychiatric treatment	392	92.7
	Psychiatric Treatment	31	7.3
Time to treatment	Early comer to treatment	289	68.3
	Delayed to treatment	134	31.7
Social Support	Poor social support	293	69.3
	Intermediate social support	122	28.8
	Strong social support	8	1.9
Level of mental health literacy	Low MHL score	213	50.4
	High MHL score	210	49.6
Awareness about the availability of mental health service	Yes	50	11.8
	No	373	88.2
Perceived stigma	High	184	43.5
	Low	239	56.5
Distance from health facility	≤5Km	102	24.1
	>5Km	321	75.9

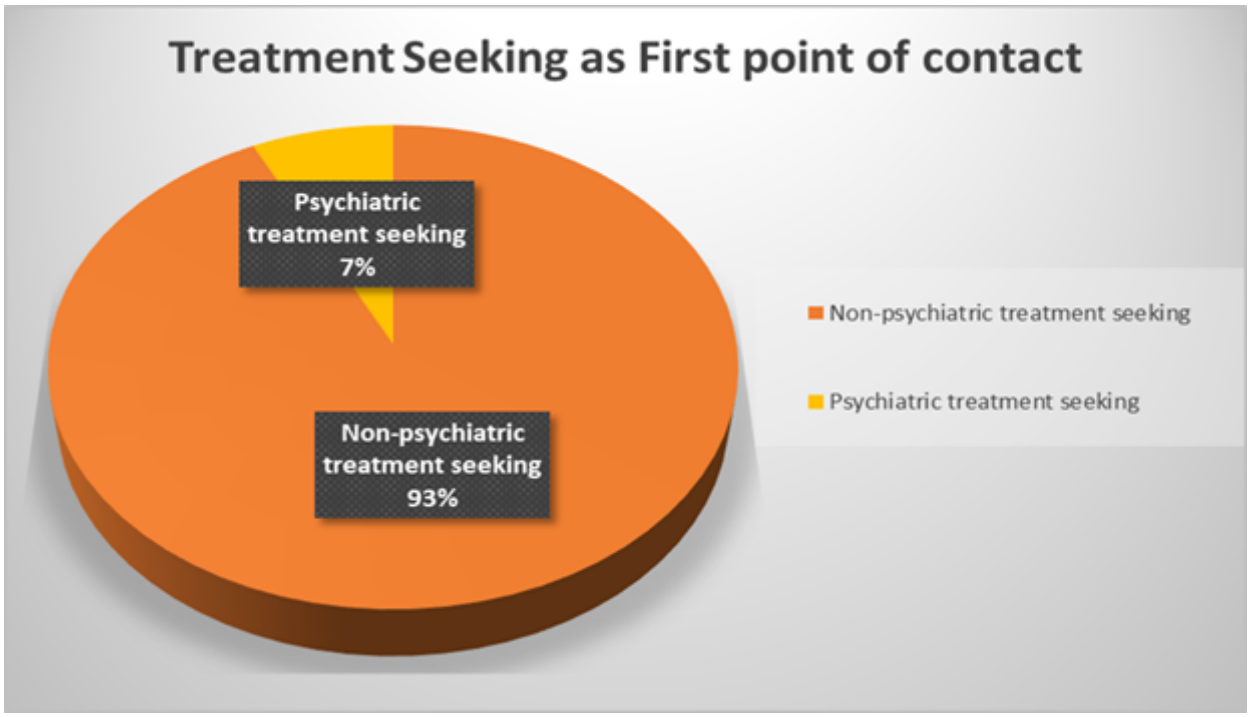

Figure 1 Showing the magnitude of Non-psychiatric treatment seeking among study participants at Dilla University Referral Hospital, Gedeo Zone, South Ethiopia Region, Ethiopia, 2023

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Table 6 Description of bivariable and multivariable binary logistic regression analysis showing the association between non-psychiatric care seeking and associated factors among study participants at Dilla University, Gedeo Zone, South Ethiopia Region

Variables	Category	Treatment sought as first contact		Crude Odd Ratio (95% CI)	Adjusted Odd Ratio (95% CI)	P-Value
		Non-psychiatric treatment	psychiatric treatment			
Age (in year)	18-30	66	12	4.81(1.871 , 12.380)	4.28(2.178, 10.635)*	0.01
	31-40	5	226	0.019(0.006 , 0.061)	0.012(0.007, 0.050)*	0
	41-50	5	79	0.055(0.017 , 0.176)	0.031(0.021, 0.146)*	0
	≥51	16	14	1		
Sex	Male	39	165	1	1	
	Female	79	130	2.57(1.644 , 4.021)	2.30(1.767, 3.742)	0.000
Educational Status	Unable to read and write	8	7	3.6 (1.191, 10.954)	3.2(1.423, 9.164)*	0.01
	Elementary school	61	125	1.54(0.895 , 2.657)	1.34(0.977, 2.434)	0.06
	High school	28	90	0.98(0.530, 1.824)	0.89(0.585, 1.652)	0.47
	Degree and above	25	79	1	1	
Diagnosis based on DSM-5	Schizophrenia spectrum disorder	120	54	3.55(1.112 , 11.371)	3.12(1.340, 9.433)*	0.01
	Major Depressive disorder	10	15	1.06(0.270 , 4.216)	0.89(0.337, 3.380)	0.46
	Bipolar Disorder	16	7	3.65(0.878 , 15.242)	3.17(1.104, 12.116)*	0.03
	Epilepsy	7	181	0.06(0.016 , 0.238)	0.04(0.020, 0.192)	0.000
	Anxiety Disorder	5	8	1	1	
Social Support	Poor social support	223	70	5.30(1.238 , 22.779)	4.90(1.562, 18.024)*	0.01
	Intermediate Social support	22	100	0.36(0.081 , 1.650)	0.32(0.104, 1.295)	0.09
	Strong social support	5	3	1	1	
Mental health literacy level	Low	173	40	3.9(2.538 , 6.091)	3.53(2.723, 5.677)*	0
	High	110	100	1	1	
Monthly Income	0-1000ETB	100	75	3.33(1.393 , 7.979)	3.01(1.602, 6.934)*	0.000
	1001-3000ETB	50	160	0.78 (0.324 , 1.882)	0.67(0.374, 1.634)	0.2
	≥3001ETB	8	20	1	1	
Awareness about the availability	Yes	33	17	1	1	
of psychiatric treatment	No	300	73	2.11(1.118 , 4.009)	2.00(1.239, 3.618)*	0.01
Perceived Stigma	High	134	50	3.14(2.080 , 4.748)	3.00(2.223, 4.443)*	0
	Low	110	129	1	1	
Distance from health facility	≥5km	72	30	2.37(1.441 , 3.925)	2.16(1.562, 3.621)*	0.000
	<5km	111	110	1	1	

NB: Hosmer and Lemeshow test result was p-value=0.65, * indicating factors with significant association.

3.7 Factors associated with non-psychiatric treatment-seeking

This study revealed significant disparities in help-seeking behaviors among patients with mental health conditions. Individuals aged 18-30 were significantly more likely (AOR = 4.28, 95% CI = 2.178-10.635, p <0.01) to seek non-psychiatric treatment compared to those aged 41-50. Similarly, women were twice as likely (AOR = 2.30, 95% CI = 1.767-3.742, p = 0.000) as men to opt for non-psychiatric care.

Educational status also influenced help-seeking patterns. Those unable to read and write were three times more likely (AOR = 3.2, 95% CI = 1.423-9.164, p = 0.01) to seek non-psychiatric treatment compared to individuals with a degree or higher. Regarding diagnosis, individuals with schizophrenia spectrum disorder (AOR = 3.12, 95% CI = 1.340-9.433, p = 0.01) and bipolar disorder (AOR = 3.17, 95% CI = 1.104-12.116, p = 0.03) were significantly more likely to seek non-psychiatric treatment than those with anxiety disorder.

Patients with poor social support (AOR=4.90, 95% CI = 1.562-18.024, p=0.01) and low mental health literacy (AOR = 3.53, 95% CI = 2.723-5.677, p = 0.00) were also more inclined to choose non-psychiatric treatment. Furthermore, individuals with lower monthly income (AOR = 3.01, 95% CI = 1.602-6.934, p = 0.000) and limited awareness of psychiatric services (AOR = 2.00, 95% CI = 1.239-3.618, p = 0.01) were more likely to seek non-psychiatric care. Lastly, those with high perceived stigma (AOR = 3.00, 95% CI = 2.223-4.443, p = 0.00) and those residing more than 5 kilometers from a health facility (AOR = 2.16, 95% CI = 1.562-3.621, p = 0.000) were also more likely to opt for non-psychiatric treatment.

4 Discussion

A significant majority of individuals in this study sought non-psychiatric treatment as their initial point of care for mental health concerns. Despite the prevalence of mental disorders, an impressive 92.7% (95% Confidence Interval: 89.9% - 95%) of participants initially turned to traditional healers, religious figures, or general practitioners rather than specialized psychiatric services. This finding underscores the critical role these providers play in mental healthcare within the study population and highlights the need for a comprehensive understanding of the factors influencing this trend.

The study further explores characteristics associated with seeking non-psychiatric treatment, examining variables such as age, gender, education, diagnosis, social support, mental health literacy, income, awareness of psychiatric services, perceived stigma, and geographic location. The aim is to identify key determinants of this healthcare-seeking behavior.

The current study reveals a substantial reliance on non-psychiatric treatment for mental health issues, with 92.7% of participants initially seeking care from traditional or religious healers or general practitioners. This figure is notably higher than previous research in Ethiopia. For instance, a study at Mekele Comprehensive Specialized Hospital reported that 77.5% of participants utilized religious healers or traditional medicine, while another study at Amanuel Mental Specialized Hospital found a lower rate of 59% seeking non-psychiatric care.

This disparity may be due to several factors, particularly the geographic location of the hospitals. Amanuel Mental Specialized Hospital, located in Addis Ababa, the capital city, likely attracts a higher proportion of individuals with severe mental health conditions who are aware of specialized psychiatric services, resulting in lower reliance on non-psychiatric care.

Furthermore, the high prevalence of non-psychiatric treatment-seeking in this study (92.7%) is considerably greater than that reported in a study conducted in Ghana, where 47.7% of participants sought non-psychiatric care. Several factors may account for this discrepancy. The disparity in healthcare infrastructure between Ethiopia and Ghana could significantly influence treatment-seeking behaviors, as Ethiopia may have more limited access to specialized mental health services, particularly

in rural areas, driving individuals toward traditional and religious healers for care. In contrast, Ghana might have a more developed mental health system, offering greater accessibility to psychiatric care.

Cultural and socio-economic factors also play a pivotal role. The strong influence of traditional and religious beliefs in Ethiopian society may foster a preference for non-psychiatric treatment options, while Ghana might have a more balanced integration of Western medicine and traditional practices, reducing reliance on non-psychiatric care.

Additionally, this study reveals a notably high rate of non-psychiatric treatment-seeking (92.7%) among participants, contrasting with findings from Bangladesh (84%) and Central India (69%), suggesting significant regional disparities in help-seeking behaviors for mental health issues. Factors contributing to these differences warrant further exploration, including variations in cultural attitudes toward mental illness, accessibility of psychiatric care, and socio-economic conditions.

The finding that 92.7% of participants in this Ethiopian study sought non-psychiatric treatment aligns closely with research conducted in Bali, Indonesia, which reported a similarly high rate of 87% for initial help-seeking from non-psychiatric services. These comparable findings suggest that reliance on non-psychiatric care for mental health issues may be a common phenomenon across various cultural and socio-economic contexts.

Our findings indicate that individuals aged 18-30 were significantly more likely to seek non-psychiatric treatment compared to those aged 41-50. This observation aligns with previous research highlighting adolescents' avoidance of professional mental health services. To address this, interventions targeting young adults should prioritize early identification of mental health concerns, reduce stigma associated with seeking professional help, and enhance the accessibility and acceptability of mental health services for this age group.

The study found that women were twice as likely as men to seek non-psychiatric treatment for mental health issues. This aligns with a study conducted in Singapore, which reported a higher likelihood of women seeking help from non-psychiatric providers, such as traditional healers, for mental health concerns. This gender disparity underscores the need for gender-sensitive interventions. Tailored mental health services, including community-based programs that address cultural and gender-specific beliefs, may be crucial in increasing help-seeking among women and improving access to appropriate care for both genders.

Our findings reveal a significant disparity in non-psychiatric treatment-seeking behavior based on educational attainment. Individuals with no formal education were three times more likely to utilize non-psychiatric treatment options compared to those with a degree or higher. This observation aligns with a study in South Africa that identified a correlation between lower educational levels and a preference for non-psychiatric providers. These results underscore the need for targeted interventions to improve access to mental healthcare among less educated populations.

The study indicates that individuals with schizophrenia or bipolar disorder were significantly more likely to seek non-psychiatric treatment than those with anxiety disorder. This aligns with previous research highlighting the disproportionate use of traditional healers by individuals with severe mental illness (SMI). The complex symptoms and treatment challenges associated with schizophrenia and bipolar disorder may contribute to greater reliance on alternative care providers, potentially resulting in delays in accessing evidence-based psychiatric care.

Our findings underscore the role of mental health literacy and awareness of psychiatric services in shaping help-seeking behaviors. Individuals with low mental health literacy were 3.5 times more likely to opt for non-psychiatric treatment compared to their more informed counterparts. Similarly, those with limited knowledge about available psychiatric treatment were twice as likely to seek alternative care. These results

highlight the impact of community misconceptions about mental disorders and the reliance on traditional healing as barriers to appropriate care. Comprehensive interventions are imperative, prioritizing mental health literacy through community-based education programs that emphasize the nature of mental illnesses, available treatment options, and the importance of seeking professional help. Additionally, increasing the accessibility and visibility of psychiatric services is essential, which can be achieved by expanding mental health infrastructure and integrating services into primary care settings.

Our findings also indicate a strong association between perceived stigma and help-seeking behaviors. Individuals with high perceived stigma were three times more likely to seek non-psychiatric treatment compared to those with lower stigma. These results support previous research suggesting that perceived stigma drives individuals with mental health issues to avoid specialized psychiatric care. To effectively address this, it is crucial to implement strategies that destigmatize mental illness, such as public education campaigns that challenge negative stereotypes and promote understanding. Increasing accessibility to mental health services and reducing barriers to care are essential steps to ensure individuals receive the appropriate support they need.

Finally, we found a strong association between geographical accessibility to healthcare facilities and treatment-seeking behavior for mental health conditions. Individuals living more than 5 kilometers from a health facility were twice as likely to opt for non-psychiatric care compared to those living closer. This corroborates previous studies suggesting that proximity to mental healthcare services influences treatment preferences, with patients often favoring more accessible options like non-psychiatric treatment. To enhance access to mental healthcare, strategies should focus on improving geographical accessibility by expanding the network of mental health facilities in underserved areas. Additionally, implementing mobile mental health services and exploring telehealth interventions can bridge the gap for individuals in remote regions.

In summary, this study found a significantly high prevalence of non-psychiatric treatment seeking for mental health issues, particularly among young individuals, women, those with lower education, and people with severe mental illnesses. Factors such as limited access to psychiatric care and perceived stigma contributed to this trend.

Study strengths and limitations

The current study contributes to the growing body of literature on non-psychiatric help-seeking behaviors among individuals with mental health issues in Ethiopia by providing valuable insights into the prevalence and associated factors among patients attending Dilla University Referral Hospital. The study's large sample size enhances the generalizability of the findings. Additionally, the inclusion of various sociodemographic and clinical variables allowed for a comprehensive exploration of factors influencing non-psychiatric help-seeking.

However, the study has certain limitations. Being a cross-sectional design, it cannot establish causality between the identified factors and non-psychiatric help-seeking behaviors. Moreover, the study was confined to patients attending a single hospital, which may limit the generalizability of the findings to other settings. Additionally, the reliance on self-reported data may be subject to recall bias. Future longitudinal studies with a larger sample size and incorporating qualitative methods are recommended to further explore the complex interplay of factors influencing non-psychiatric help-seeking behaviors.

5 Conclusion

This study revealed a high prevalence of non-psychiatric help-seeking among patients with mental disorders. Several factors were significantly associated with non-psychiatric help-seeking, including young age, female gender, lower educational status, diagnosis (schizophrenia spectrum and bipolar disorder), poor social support, low mental health literacy, low-income status, lack of awareness about available psychiatric services, perceived stigma, and residing more than 5 kilometers from a health facility.

Understanding these factors is crucial for developing targeted interventions to improve access to and utilization of appropriate mental healthcare services.

Recommendation

The high prevalence of non-psychiatric help-seeking among patients with mental health conditions at Dilla University Referral Hospital underscores the need for targeted mental health interventions. To address the identified factors, we recommend the following:

Firstly, to improve low mental health literacy and limited awareness of available mental health services, it is important to conduct regular panel discussions with community members. Additionally, capacity building through targeted training for health extension workers on mental health packages is crucial. While this package has recently been integrated into health extension services, specific training for these workers has not yet been provided. This intervention will enhance early detection and referral of patients at the grassroots level.

Secondly, to address issues of poor social support and low-income status that contribute to affordability challenges, advocacy and awareness campaigns promoting the utilization of health insurance are essential. These efforts can help mitigate the financial barriers that drive patients towards non-psychiatric care.

Lastly, to overcome geographical accessibility challenges, it is vital to draw governmental attention to facilitate the establishment of mental health services within primary healthcare settings, specifically in primary hospitals and health centers.

These concrete actions will collectively strengthen the mental health service delivery system, improve access to appropriate care, and ultimately reduce non-psychiatric help-seeking behaviors.

Abbreviations

AOR	Adjusted Odds Ratio
BSc	Bachelor of Science
CHMS	College of Health and Medical Sciences
CI	Confidence Interval
COR	Crude Odds Ratio
DU	Dilla University
DURH	Dilla University Referral Hospital
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition
OSSS-3	Oslo Social Support Scale
MHLT	Mental Health Literacy Tool
PSS	Perceived Stigma Scale
SPSS	Statistical Package for Social Sciences

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Authors' contributions

All authors significantly contributed to the published work, including the generation of ideas, study design, execution, data collection, analysis, and interpretation. MN prepared the manuscript for publication and participated in writing, revising, and critically evaluating the article. MN also gave final approval for the version to be published, agreed to the journal for submission, and accepted responsibility for all aspects of the work. Therefore, all authors have contributed to the article and approved the submitted version.

Availability of data and materials

The data sets used and/or analyzed during the current study are available from the corresponding authors upon reasonable request.

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Declarations

Ethics approval and consent to participate

Ethical approval was obtained from the Institutional Review Board (IRB) of Dilla University College of Medicine and Health Sciences prior to conducting the study. Participants provided informed consent after being informed about the study's purpose. Personal identification was kept confidential throughout the study, and participants were assured that they could withdraw from the study at any time if they wished.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

References

1. Sarikhani Y, Bastani P, Rafiee M, Kavosi Z, Ravangard R. Key barriers to the provision and utilization of mental health services in low-and middle-income countries: a scope study. Community mental health journal. 2021;57:836-52.
2. Organization WH. Mental health investment case: a guidance note. 2021.
3. Kazdin AE, Rabbitt SM. Novel models for delivering mental health services and reducing the burdens of mental illness. Clinical Psychological Science. 2013;1(2):170-91.
4. Vigo D, Thornicroft G, Atun R. Estimating the true global burden of mental illness. The Lancet Psychiatry. 2016;3(2):171-8.
5. Baheretibeb Y, Wondimagegn D, Law S. Holy water and biomedicine: a descriptive study of active collaboration between religious traditional healers and biomedical psychiatry in Ethiopia. BJPsych open. 2021;7(3):e92.
6. Li X, Zhang W, Lin Y, Zhang X, Qu Z, Wang X, *et al.* Pathways to psychiatric care of patients from rural regions: a general-hospital-based study. International Journal of Social Psychiatry. 2014;60(3):280-9.
7. Gupta DK, Sidana R, Behari M, Verma KK, Bhadoriya MS. Help-seeking behavior and pathways to care among patients seeking treatment at a private psychiatric hospital in North India. Journal of Mental Health and Human Behaviour. 2018;23(1):63-6.
8. Kurihara T, Kato M, Reverger R, Tirta IGR. Pathway to psychiatric care in Bali. Psychiatry and Clinical Neurosciences. 2006;60(2):204-10.
9. Uwakwe R, Otakpor A. Public Mental Health-Using the Mental Health Gap Action Program to Put all Hands to the Pumps. Front Public Heal. 2014; 2 (33). 2014.
10. Nsereko JR, Kizza D, Kigozi F, Ssebunnya J, Ndyanabangi S, Flisher AJ, *et al.* Stakeholder's perceptions of help-seeking behaviour among people with mental health problems in Uganda. International journal of mental health systems. 2011;5:1-9.
11. Lasebikan VO, Owoaje ET, Asuzu MC. Social network as a determinant of pathway to mental health service utilization among psychotic patients in a Nigerian hospital. Annals of African medicine. 2012;11(1).
12. 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. Schizophrenia research and treatment. 2013;2013(1):769161.
13. Crawford TA, Lipsedge M. Seeking help for psychological distress: The interface of Zulu traditional healing and Western biomedicine. Mental Health, Religion & Culture. 2004;7(2):131-48.
14. Hailemariam M, Fekadu A, Prince M, Hanlon C. Engaging and staying engaged: a phenomenological study of barriers to equitable access to mental healthcare for people with severe mental disorders in a rural African setting. International journal for equity in health. 2017;16:1-12.
15. Hanlon C, Medhin G, Selamu M, Birhane R, Dewey M, Tirfessa K, *et al.* Impact of integrated district level mental health care on clinical and social outcomes of people with severe mental illness in rural Ethiopia: an intervention cohort study. Epidemiology and psychiatric sciences. 2020;29:e45.
16. Wubshet TY, Geberemichael SG, Adilo TM, Arusi TT, Gutulo MG, Assefa DZ, *et al.* Prevalence and Associated Factors of Poststroke Depression among Outpatient Stroke Patients Who Have a Follow-Up at the Outpatient Neurology Clinic of Zewditu Memorial Hospital in Addis Ababa, Ethiopia. Depression Research and Treatment. 2022;2022(1):9750035.
17. Krwece A. Exploring traditional African beliefs with regard to mental health, health-seeking behaviour, and treatment adherence: A systematic review. 2021.
18. Ndetei DM, Gatonga P. The challenges of human resources in low-and middle-income countries. Essentials of global mental health. 2014:117-25.
19. Hooda A, Asad A, Singh SK, Kakkar A. Economic Barriers to Mental Health: Policy Development and Implementation. 2022.
20. Girma E, Tesfaye M. Patterns of treatment seeking behavior for mental illnesses in Southwest Ethiopia: a hospital based study. BMC psychiatry. 2011;11:1-7.
21. Norman RM, Lewis SW, Marshall M. Duration of untreated psychosis and its relationship to clinical outcome. The British journal of psychiatry. 2005;187(S48):s19-s23.
22. 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. American journal of psychiatry. 2005;162(10):1785-804.
23. Teshager S, Kerebih H, Hailesilassie H, Abera M. Pathways to psychiatric care and factors associated with delayed help-seeking among patients with mental illness in Northern Ethiopia: a cross-sectional study. BMJ open. 2020;10(7):e033928.
24. Bekele YY, Flisher A, Alem A, Baheretebeb Y. Pathways to psychiatric care in Ethiopia. Psychological medicine. 2009;39(3):475-83.

25. Gater R, Jordanova V, Maric N, Alikaj V, Bajs M, Cavic T, *et al.* Pathways to psychiatric care in Eastern Europe. The British Journal of Psychiatry. 2005;186(6):529-35.
26. 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. International Journal of Mental Health Systems. 2008;2:1-9.
27. Anbesaw T, Asmamaw A, Adamu K, Tsegaw M. Mental health literacy and its associated factors among traditional healers toward mental illness in Northeast, Ethiopia: A mixed approach study. Plos one. 2024;19(2):e0298406.
28. Kpobi LN, Swartz L, Omenyo CN. Traditional herbalists' methods of treating mental disorders in Ghana. Transcultural psychiatry. 2019;56(1):250-66.
29. Franz L, Carter T, Leiner AS, Bergner E, Thompson NJ, Compton MT. Stigma and treatment delay in first-episode psychosis: a grounded theory study. Early intervention in psychiatry. 2010;4(1):47-56.
30. Azale T, Fekadu A, Hanlon C. Treatment gap and help-seeking for postpartum depression in a rural African setting. BMC psychiatry. 2016;16:1-10.
31. Menberu M, Mekonen T, Azale T, Ayano G, Yimer S, Getnet A, *et al.* Health care seeking behavior for depression in Northeast Ethiopia: depression is not considered as illness by more than half of the participants. Annals of general psychiatry. 2018;17:1-7.
32. Zewdu S, Hanlon C, Fekadu A, Medhin G, Teferra S. Treatment gap, help-seeking, stigma and magnitude of alcohol use disorder in rural Ethiopia. Substance abuse treatment, prevention, and policy. 2019;14:1-10.
33. Negash M, Temesgen B, Kassaw C, Abebe L, Moges S, Sime Y, *et al.* Delayed treatment seeking and its associated factors among people with schizophrenia spectrum disorders who are on follow-up at Dilla University Referral Hospital in the southern region of Ethiopia, 2022: a cross-sectional study. Frontiers in Psychiatry. 2023;14:1230448.
34. Dias P, Campos L, Almeida H, Palha F. Mental health literacy in young adults: adaptation and psychometric properties of the mental health literacy questionnaire. International journal of environmental research and public health. 2018;15(7):1318.
35. Krohne N, Gomboc V, Lavrič M, Podlogar T, Poštuvan V, Šedivy NZ, *et al.* Slovenian validation of the mental health literacy scale (S-MHLS) on the general population: a four-factor model. INQUIRY: The Journal of Health Care Organization, Provision, and Financing. 2022; 59:00469580211047193.
36. Castellvi P, Casañas R, Arfuch V-M, Gil Moreno JJ, Torres Torres M, García-Forero C, *et al.* Development and validation of the Espaijove. net Mental Health Literacy (EMHL) test for Spanish adolescents. International journal of environmental research and public health. 2020;17(1):72.
37. Kågström A, Pešout O, Kučera M, Juríková L, Winkler P. Development and validation of a universal mental health literacy scale for adolescents (UMHL-A). Psychiatry Research. 2023;320:115031.
38. Hassen HM. Mental Health Literacy of Adolescents and the Effect of Socio-demographic Characteristics: A Cross-sectional Study in Urban Ethiopia. Online Journal of Health and Allied Sciences. 2022;20(4).
39. Mideksa G, Tesfaye E, Yitayih Y, Sime Y, Aliye K, Gizaw AT. Mental health literacy and associated factors among traditional healers of Jimma town, southwest, Ethiopia 2020: a community based, cross-sectional study. Frontiers in Psychiatry. 2024;15:1304454.
40. Seboka BT, Hailegebreal S, Negash M, Mamo TT, Ewune HA, Gilano G, *et al.* Predictors of mental health literacy and information seeking behavior toward mental health among university students in resource-limited settings. International journal of general medicine. 2022;15:8159.
41. Warttig SL, Forshaw MJ, South J, White AK. New, normative, English-sample data for the short form perceived stress scale (PSS-4). Journal of health psychology. 2013;18(12):1617-28.
42. Ibrahim A, Hor S, Bahar OS, Dwomoh D, McKay MM, Esena RK, *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. International journal of mental health systems. 2016;10:1-11.
43. Giasuddin NA, Chowdhury NF, Hashimoto N, Fujisawa D, Waheed S. Pathways to psychiatric care in Bangladesh. Social psychiatry and psychiatric epidemiology. 2012;47:129-36.
44. Lahariya C, Singhal S, Gupta S, Mishra A. Pathway of care among psychiatric patients attending a mental health institution in central India. Indian journal of psychiatry. 2010;52(4):333-8.
45. Martínez-Hernáez A, DiGiacomo SM, Carceller-Maicas N, Correa-Urquiza M, Martorell-Poveda MA. Non-professional-help-seeking among young people with depression: a qualitative study. BMC Psychiatry. 2014;14(1):124.
46. Shahwan SBM, Abdin E, Vaingankar J, Shafie SB, Ann CS, Subramaniam M. Help-seeking from traditional healers among Singaporean older adults. Asean Journal of Psychiatry. 2016:160-70.
47. Zingela Z, van Wyk S, Pietersen J. Use of traditional and alternative healers by psychiatric patients: A descriptive study in urban South Africa. Transcultural Psychiatry. 2019;56(1):146-66.

48. Maura J, Weisman de Mamani A. Mental health disparities, treatment engagement, and attrition among racial/ethnic minorities with severe mental illness: A review. Journal of clinical psychology in medical settings. 2017;24:187-210.
49. Nortje G, Oladeji B, Gureje O, Seedat S. Effectiveness of traditional healers in treating mental disorders: a systematic review. The Lancet Psychiatry. 2016;3(2):154-70.
50. Yongsi HBN. Knowledge and attitudes towards mental health and mental illness among general public in Yaounde. SAS J Med. 2015;1(1):26-32.
51. Ibrahim A, Hor S, Bahar OS, Dwomoh D, McKay MM, Esena RK, *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. International Journal of Mental Health Systems. 2016;10(1):63.
52. Khemani MC, Premarajan KC, Menon V, Olickal JJ, Vijayageetha M, Chinnakali P. Pathways to care among patients with severe mental disorders attending a tertiary health-care facility in Puducherry, South India. Indian Journal of Psychiatry. 2020;62(6):664-9.