African Journal of Social Issues 8 (1): 2025
Available online at https://ajosdemar.com;
https://www.ajol.info/index.php/ajosi

DOI: https://dx.doi.org/10.4314/ajosi.v8i1.20

p-ISSN 2672 – 5142; e-ISSN 2734 – 3324
Original Research

KNOWLEDGE, ATTITUDE AND PRACTICES TOWARDS MENTAL HEALTH SERVICES AMONG ADULTS IN KATSINA METROPOLIS, NIGERIA

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ABSTRACT
Mental health is a crucial aspect of the health system that receives little attention compared to physical health in Nigeria. However, mental health disorders are increasingly prevalent in every of the diverse societies in the country. Many adults suffering from mental health conditions do not get the required care, leading to long-term impairment of functioning and problems in maintaining relationships. This study aims to determine adults' knowledge, attitudes and health-seeking behaviour towards mental health services in Katsina metropolis of Northern Nigeria. A cross-sectional study design was carried out using a multi-stage sampling technique to select eligible adults in the Katsina metropolis. An interviewer-administered closed-ended questionnaire was utilized as a data collection tool, and the collected data was analyzed using SPSS version 22. The result of this study showed that most of the study participants (59%) have adequate knowledge of where to access mental health services. Federal Medical Center Katsina and Katsina Psychiatric Hospital are the main healthcare facilities where adults seek mental health services, and there is a strong belief that the existing mental health services are adequate and reliable. Among the socio-demographic variables of the study participants, only marital status influences their health-seeking behaviour. In conclusion, there is a need to integrate religious and traditional mental health practitioners into the existing health system structure to achieve better service delivery. Additionally, there is a need to develop mental health services at the level of primary health care.

Keywords
Mental health in Nigeria, Mental health system, depression, access to mental health, cost of mental health, cross sectional study, mental health research.

INTRODUCTION

Background

In a study conducted in Western Nigeria, households in 21 out of the 36 states were sampled, and 6752 adults aged 18 and above were selected for the study which showed the lifetime, and 12-month prevalence estimates of major depressive disorder to be 3.1% and 1.1%, respectively (Gureje, Uwakwe, Oladeji, Makanjuola & Esan, 2010). In another study conducted in Oyo State, Nigeria, among 1105 participants, results showed that the overall prevalence of depression was 5.2% and it is more prevalent among women than men, at 5.7% and 4.8%, respectively (Amoran, Lawoyin & Lasebikan, 2007). Poor mental health causes impairment in functional well-being, a decrease in quality of life (Lim, Jin & Ng, 2012; Johansson, Carlbring, Heedman, Paxling & Andersson, 2013) as well as overall health status (Moussavi, Chatterji, Verdes, Tandon, Patel & Ustun, 2007; Strine, Kroenke, Dhingra, Balluz, Gonzalez, Berry & Mokdad, 2009). It can also cause impairment in a person's role at home, decreased productivity at work, and impairment in relationships and social network (Chong, Abdin, Nan, Vaingankar & Subramaniam, 2012). These can result in limitations of daily activities (Strine, Kroenke, Dhingra, Balluz, Gonzalez, Berry & Mokdad, 2009), job insecurities (Lee, Park, Min, Lee & Kim, 2013), and increased risk of early mortality due to physical disorders and suicide (Kessler & Bromet, 2013). Early detection is necessary to reduce the suffering that these problems cause.

Globally, poor mental health contributes to the disease burden allocated to suicide and ischemic heart disease, emphasizing the importance of considering depressive disorders as a public health priority (Ferrari, Charlson, Norman, Patten, Freedman, Murray et al., 2013). In places like China, poor mental health significantly affects the maternal status of young women, as for instance, maternal anxiety increases the risk of pregnancy and delivery complications (Yuan & Makama, 2024). In England, one in three adults aged 16–74 (37%) has conditions such as anxiety or depression as they accessed mental health treatment in 2014. This figure increased from one in four (24%) in an earlier survey carried out in 2007 (McManus, Bebbington, Jenkins & Brugha, 2016). In the United States, mental health disorders, such as depression, topped the list of the costliest medical conditions costing about $201 billion, in the year 2013 (Roehrig, 2016). This was an area Singapore strategically addressed in its "MediSave-MediShied-MediFund" health plan that also addresses equity in the health sector which includes Mental Health (De Jesus & Makama, 2024). In Nigeria, mental health services are grossly inadequate, making it difficult for individuals to access care (Mustapha, Makama & Ologun, 2024). This is especially true in Katsina Metropolis, where poverty, inadequate mental health services, and public awareness of mental health issues lead to very low mental health care-seeking behaviours among its adult population (Abubakar & Abdulrahman, 2018). Another area affecting health grossly, not only in Katsina state, but in Nigeria is policy making. Nigerian political landscape is not proactive in making swift policies that would solve health problems accordingly (Abubakar, Dalglish, Angell, Sanuade, Abimbola, Adamu et al., 2022; Ajisegiri, Abimbola, Tesema, Odunsanya, Ojji, Peiris et al., 2021). This is particularly true for mental health, one of the reasons it seems to be a neglected area of the country's health sector (Mustapha, Makama & Ologun, 2024), just like, for instance, motorcycle accident despite its

high prevalence rate, which is even one of the worst in the world (Makama, Boyle, Umukoro, Mustapha & Bawa, 2024).

Mental health is paramount to personal well-being, family relationships, and successful societal contributions. It is pivotal to the development of communities and countries (World Health Organization, 2008a). Beliefs about causation and experience influence patients' beliefs about effective treatment and determine the type of treatment sought after. In Africa, mentally ill patients are often blamed for having their illness; while some others may see mentally ill people as victims of unfortunate fate, religious and moral transgression, or even witchcraft (Jorm, 2000). This may lead to denial by both sufferers and their families, with subsequent delays in seeking professional treatment (Rickwood & Thomas, 2012). Myths and beliefs about mental health and illness are ubiquitous in every community which influence people's attitudes (Saint Arnault, 2009). Most of the African society's attitudes towards mental illness are far from the scientific view which may negatively affect treatment-seeking and treatment adherence (Benti, Ebrahim, Awoke, Yohannis & Bedaso, 2016). And of all the health problems, the public poorly understands mental illnesses because societal prejudice and bias towards mental illness threaten the provision of high-quality holistic patient care including rehabilitation (Yuan, Picco, Chang, Abdin, Chua, Ong et al., 2017). Moreover, the negative attitudes prevalent in the community deter mentally ill people from treatment-seeking and treatment adherence (Ganesh, 2011). People often seek medical help after they have tried all options, most often than not, after symptoms have become worse and this in turn negatively affects the prognoses of treatment (Post, Leverich, Kupka, Keck, McElroy, Altshuler et al., 2010). Hence, assessing the community's attitude and help-seeking behaviour is essential to having an appropriate health promotion strategy to also scale up the public utilization of mental health services, particularly in developing countries with multi-ethnic and multicultural societies like Nigeria (Benti, Ebrahim, Awoke, Yohannis & Bedaso, 2016). Mental illness is of global burden (Vigo, Jones, Atun & Thornicroft, 2022), unfortunately, mental health issues have been little investigated in low- and middle-income countries and limited information, especially in African settings, is available about the perception and the attitude of the public regarding mental health problems in emerging nations (Gebrekidan, Tibebe & Azadi, 2018; Mustapha, Makama & Ologun, 2024; Williams & Makama, 2024).

PROBLEM STATEMENT

The prevalence of mental health problems or diseases has steadily increased in recent years (Ewhrudjakpor, 2009). Studies on mental health problems in adults have indicated that one-third exhibit substantial symptoms of a mental health condition such as depression, generalized anxiety disorder, or suicidality (Ganesh, 2011). Women are more likely than men to admit to having a depressive condition (Longkumer & Borooah, 2013). Major depression is the world's second-largest cause of Mental illnesses (Vos, Barber, Bell, Bertozzi-Villa, Biyukov, Bolliger et al., 2015), and mental illness is anticipated to overtake physical illness as the primary cause of death by 2029 (Gurung, 2014). Furthermore, one million individuals commit suicide, with another 10 to 20 million attempting it on a yearly basis (Elbur, Albarraq, Yousif, Abdallah & Aldeeb, 2014). The global cost of mental illness was approximately $2.5 trillion in 2010, with a projected increase to more than $6 trillion by 2030 (Adewuya & Makanjuola, 2009). Nearly

half of the world's population suffers from mental illness, which affects their self-esteem, relationships, and ability to function in daily life (Mukoro, 2011). One of the reasons for the high prevalence of mental health illnesses in most settings is the inadequate mental health-related information readily available to the population (Ridley, Rao, Schilbach & Patel, 2020). According to a survey conducted in the United States, less than 27% of study respondents with mental health disorders requiring consultation sought treatment from formal sources (Habel, 2004). Similarly, in a study in Finland, about one-fifth of respondents with depression sought professional care (Habel, 2004). In subsequent research, less than half of the respondents said they had received treatment for their mental illness (Schein, Gagnon, Chan, Morin & Grondines, 2005). Furthermore, individuals suffering from major depression, suicidal ideation, and a history of self-harm are more likely to seek help than those with less significant symptoms (Magaard, Seeralan, Schulz & Brütt, 2017; Ting, Woo, To & Woo, 2009).

In Africa, the situation is even worse as evidenced by a study of adults in Nigeria in which only about 1.5% considered obtaining professional help as a suggested course of action for depression (Cankurtaran, Halil, Ulger, Dagli, Yavuz, Karaca et al., 2006). Although health professionals are vital sources of this information but due to their scarcity and generally low accessibility, other sources are crucial in teaching the public about mental health issues such as the internet, self-help books, pamphlets, telephone hotlines, newspapers, television, and radio; therefore, most adults with mental disorders choose not to get help from health professionals (Celik & Celik, 2002). Furthermore, it has been documented that despite the ill effects of mental diseases such as depression, anxiety, bipolar disorder, schizophrenia, eating disorders, mood disorders, and psychosis, most adults do not seek treatment or prefer informal sources of aid to professional sources of help (Formosa & Kutsal, 2019). This could lead to accessing misleading information and further worsening mental health problems (Corrigan, Druss & Perlick, 2014; Woodward, 2011). According to another study, the lifetime prevalence of mental disorders in Nigeria ranges from 12.1% to 26.2% (World Health Organization, 2008b), and only 20% of people with serious common mental disorders in Nigeria received treatment in the previous 12 months, with therapy being largely inadequate (Odejide, Morakinyo, Oshiname, Omigbodum, Ajuwon & Kola, 2002). Ultimately, the underutilization of mental health services can cause certain consequences, such as committing crimes and other vices (World Mental Health Day, 2011). In general, the use of health services depends on factors such as age, sex, education, enabling employment and social support factors (Gureje, 2015; Omigbodun, 2001; WHO-ALMS Report, 2006). The likelihood that a person would use healthcare services is dependent on predisposing factors while enabling factors are resources that may make it easier to access healthcare (Makama, Ologun & Umoh, 2024). Therefore, positive health-seeking behaviours in patients can lead to better utilization of health services, including patients with mental health problems (World Health Organization, 2008b). Certain barriers contribute to poor utilization of mental health services, such as fear of stigma and embarrassment; negative attitude towards the treatment, or mental health services; lack of perceived need for seeking help; long waiting hours at the health centres; cost of treatment; lack of information about available services; preference for self-management over seeking help; and low health professional-to-patient ratio (Jack-Ide & Uys, 2013). The under-utilization

of mental health services among adults is a public health concern in Nigeria (Anyebe, Olisah, Ejidokun & Nuhu, 2017).

Some states in the country such as Katsina have psychiatric units in some health facilities with the primary function of providing direct counselling interventions to people whose personal problems interfere with their ability to function successfully (Creswell & Clark, 2017). However, despite the benefits of these services, many people in those states still underutilize mental health services even when these services are available (Jegede, 2010). The purpose of this study, therefore, is to investigate the knowledge, attitudes and health care-seeking behaviour towards mental health services among adults in Katsina Metropolis. This study aims to determine the level of awareness of mental health services among adults in the study area, the attitude of adults towards seeking mental health services and the factors that may influence their decision to seek help. The results of this study will provide insight into the barriers and facilitators to mental health services utilization in Katsina Metropolis and may inform the development of interventions to improve access to mental health services.

Justification for the study

Katsina Metropolis is a densely populated area within Katsina State in northern Nigeria. Despite the high population density and the availability of health care services for mental health disorders, there is limited knowledge on how adults in this area make decisions about mental health care seeking behavior. This study seeks to understand the barriers to health care seeking behavior among adults in the region, as well as the relationships between attitudes towards mental health care seeking behavior and knowledge about mental health. This study will provide valuable information to inform healthcare policies and services in this region. The findings from this study will shed light on how adults in Katsina Metropolis make decisions around mental health care and can be used as a basis to increase the accessibility, availability and utilization of mental health services.

Research Questions: (1) what is the level of knowledge of adults in the Katsina metropolis on the availability of mental health services? (2) Where do adults in the Katsina metropolis seek mental health services? (3) What are the perceptions of adults in the Katsina metropolis towards mental health services? (4) What are the factors influencing mental health care-seeking behaviour?

AIM: to determine the knowledge, attitudes and health care-seeking behaviour towards mental health services among Adults in Katsina Metropolis.

Objectives: (1) to determine the level of knowledge of adults in the Katsina metropolis on the availability of mental health services; (2) to identify where adults in the Katsina metropolis seek mental health services; (3) to determine the perception of adults in the Katsina metropolis towards mental health services; and (4) to identify factors influencing mental health care-seeking behaviour.

MATERIALS AND METHODS

Study Area: Katsina is in the Northwestern region of Nigeria. It is bordered to the north by Niger republic, to the East by Zamfara, to the south by Kaduna and to the east by Kano. According to the national population census of 2006, the population of Katsina state stands at

7 million people (All News Katsina, 2020). According to the Katsina state statistical yearbook for 2022, Katsina state has a total of 18,044 health facilities comprising 1 tertiary, 143 secondary and 17899 primary health facilities across the 34 local government areas of the state. The people of Katsina state are mostly farmers and civil servants (City Population, n.d).

Study design: The study was descriptive cross-sectional study aimed at assessing the knowledge, attitudes and health care-seeking behaviour towards mental health services among Adults in Katsina Metropolis.

Study population: Adults' resident in Katsina metropolis. Adult as defined by the legal age of 18 years.

Inclusion Criteria: Male and female adults of age 18 and above who are residents of the Katsina metropolis for at least, a year and have consented to this study.

Exclusion Criteria: (1) Residents less than 18 years of age; (2) Adults who have not live in the metropolis for up to a year; (3) Adults with a mental disorder that may impair their ability to participate in the study; and (4) Adults who did not consent to the study.

Sample size determination: Sample size was determined using Cochran's formula for the computation of sample size (Nanjundeswaraswamy & Divakar, 2021).

$$N= (z^2pq)/d^2$$

z = Standard normal deviation set at 1.96 normal interval

p = prevalence of the level of knowledge on the availability of mental health services

q = proportions that does not have the characteristics being investigated (q = 1-p)

d = Level of significance set at 0.05 (precision set at 5%)

n = 384 respondents; 10% of the calculated sample size will be added to accommodate for non-response by participants making a total of 422 respondents.

Sampling technique: A multistage sampling technique was used to select adults who were willing to participate in this study. And Table 1 below summarizes these stages.

Table 1: The different stages of the Multistage Sampling Technique

Stage	Activity
1	One ward was selected from the 13 wards in the Katsina metropolis using random sampling by balloting.
2	Random sampling using computer-generated random numbers was used to select a community where study participants would be recruited.
3	Systematic random sampling was used to select the households where the study respondent will be recruited.
4	Adult and willing members in each selected household were recruited for the study.

Study Instruments: A questionnaire was used for this study (see Appendix 1). The questionnaire was a semi-structured interviewer-administered questionnaire designed after a

thorough literature search. The variables were aligned so that they corresponded to the research objectives, providing answers to the research questions. The variables contained pertinent items that were strategically organized for easy and accurate computation.

Data Collection Methods: Four research assistants with bachelor's degrees and experience in data collection were recruited and trained for data collection. The training included an overview of the research objectives, obtaining informed consent, data collection procedure, how to review the questionnaire to ensure completeness and accuracy. Issues relating to privacy and good interpersonal relationships were also discussed. The criteria for selection of research assistants included good communication skills, good interpersonal relationships, availability, interest in the research, respect for persons, good knowledge, understanding and ability to speak and read English and Hausa language.

Data management, analysis, and presentation: Data obtained was sorted, cleaned for errors, coded, and entered. Data collected was analyzed using Statistical Package for Social Sciences (SPSS) version 22 software after being serially numbered for easy identification, control, analysis and recall purposes in case of any problem. Descriptive statistics such as percentage and mean were used to summarize variables such as demographics and factors influencing knowledge.

Ethical considerations: The study followed the basic ethical principles guiding research involving human respondents. Ethical approval was obtained from the Katsina State Research Ethics Review Committee to ensure the proposed study has met all the principles and National guidelines in research involving human respondents. The Ethics approval assigned number is MOH/ADM/SUB/1152/834, for this research to take place for a duration of 2 years from December 11, 2023, to December 12 2024.

Confidentiality: To guarantee respondents of confidentiality of the information that was given, names, phone numbers or addresses of respondents were not requested, only identification numbers were assigned to the questionnaires for proper recording.

Beneficence: The outcome of the research shall be of benefit not only to the researcher but also to the respondents, members and the government of Katsina state. Also, this research should trigger scholars and academics from other northern states to do more research on mental health on their communities.

Voluntariness: The respondents were given full details concerning the research before they took part in it and they were informed of their full rights to withdraw at any stage of the study.

Informed Consent: The purpose of the research was adequately communicated to the respondents.

Feedback: The outcome of this study and recommendations was communicated to all stakeholders at the conclusion of the study.

Inducements: No fees were paid to any of the respondents.

RESULTS

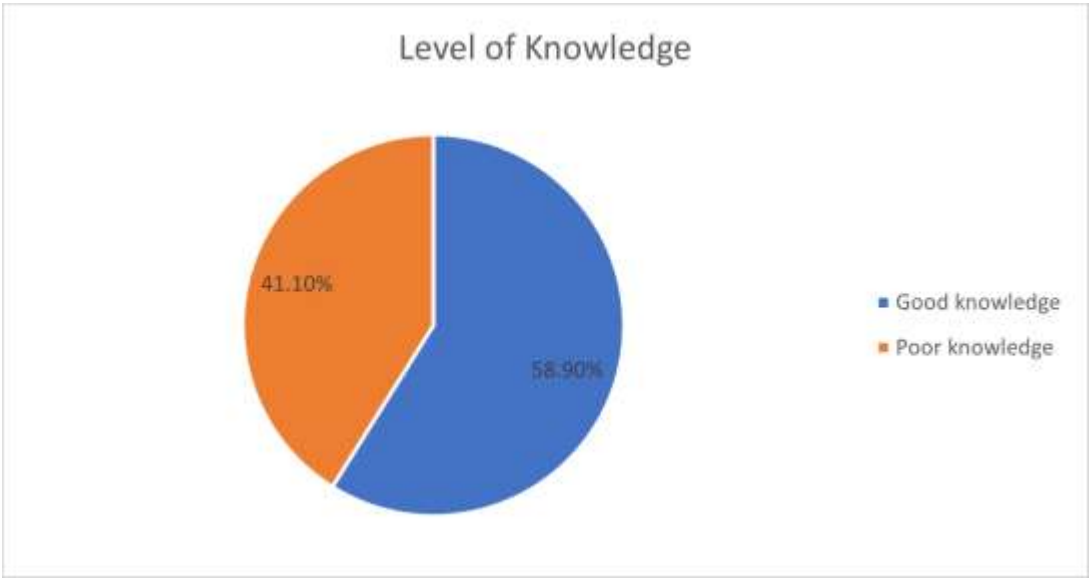
Sociodemographic variables: 422 adults were contacted and 401 fit into our inclusion criteria to form the sample size for this study. As shown in the Table 2 below, majority of the respondents were males (68.30%) with most (38.72%) of respondents falling within the age range of 26-33.

Table 2: The sociodemographic characteristics of respondents

Gender	
Female	31.70%
Male	68.30%
Age range	
18-25	24.89%
26-33	38.72%
34-41	29.15%
>42	7.23%
Religion	
Christianity	21.70%
Islam	73.83%
Others	4.47%
Marital status	
Divorced	13.19%
Married	38.72%
Single	48.09%
Level of education	
No formal education	16.81%
Primary	28.30%
Secondary	32.77%
Tertiary	22.13%

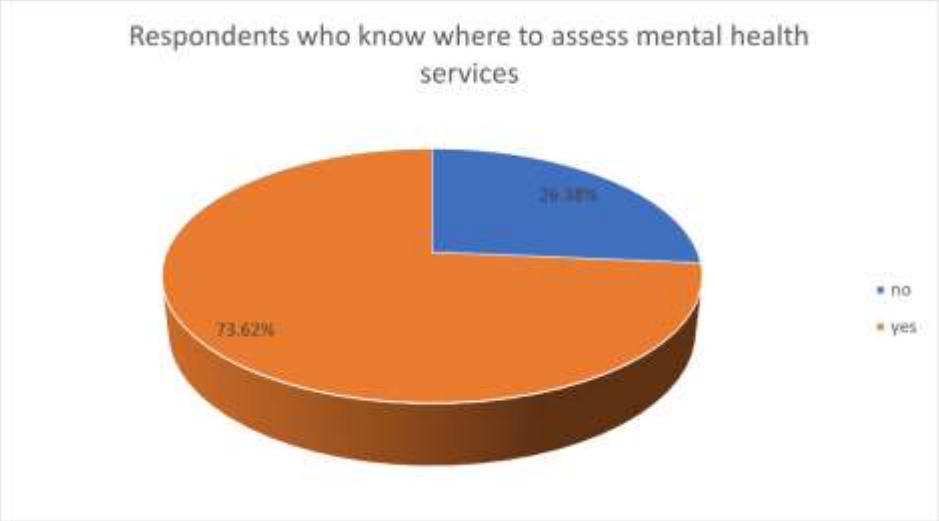
Level of Knowledge on Availability of Mental Health Services: As shown in Figure 1 below, majority (58.90%) of the respondents have a good knowledge on the availability of mental health services in Katsina State.

Figure 1: Level of Knowledge on Availability of Mental Health Services



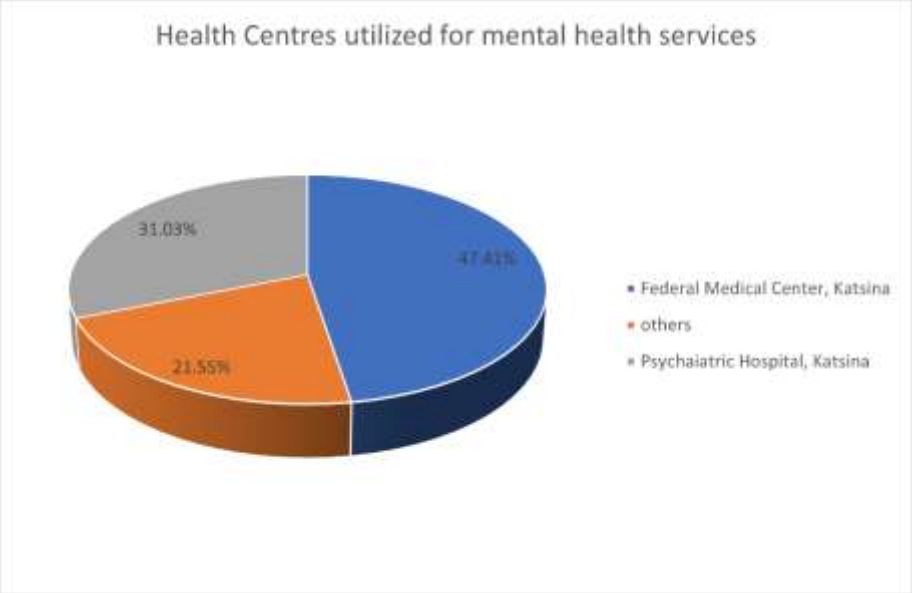
Respondents who know where to assess mental health services: As shown in Fig 2 below, majority of the respondents know where to assess mental health services within Katsina metropolis.

Fig 2: Respondents who know where to assess mental health services



Health Centres Utilized for Mental Health Services: As shown in Fig 3 below, among the respondents who knew where to assess mental health services within Katsina state, those who went to Federal Medical Centre, Katsina, Psychiatric Hospital, Katsina and other health facilities accounted for 47.41%, 31.03% and 21.55%, respectively.

Fig 3: Health Centres Utilized for Mental Health Services



Perception of adults in Katsina metropolis towards mental health services: As shown in Table 3 below, about 53% of respondents agreed that they are likely to use mental health services with 57% of respondents agreeing that people know where to access mental health services within Katsina metropolis. About 78% of the respondents attributed stigmatization as a barrier to seeking mental health services in Katsina metropolis. Other barriers include cost at 62%, distance at 49% and religion at 22%. 87% of the respondents do not use alternative mental

health services which means that 13 out of every 100 of our respondents use alternative mental health services from either spiritual or traditional healers and this is significant.

Table 3: Perception of adults in Katsina metropolis towards mental health services

Perception question (n = 401)	Options	Outcome in %
How likely would you be to seek mental health services?	Likely	53.11
	Unlikely	46.89
Do you believe that mental health services are reliable?	Yes	70.32
	No	29.68
Do you think enough mental health professionals are available?	Yes	54.61
	No	45.39
What other barriers hinder you from accessing Mental Health Services in Kaduna metropolis? A. My family does not want me to go to any mental health facility B. It is against my culture C. It is against my religion D. It is embarrassing if people find out E. The nearest centre is too far from me F. I do not believe I need Mental Health Services G. Cost H. Other reasons		12.71 4.24 22.44 78.05 48.88 19.20 61.85
To what extent do you think people know where to access services	To a great extent	57.1
	To a less extent	42.9
Do you use alternative mental health services	Yes	12.97
	No	87.03
What alternative mental health services do you use? A. Traditional healers B. Spiritual healers C. Others		2.74 10.22
Multiple non-conflicting options for a question can be selected by a respondent if they apply		

Factors influencing mental health care-seeking behaviour: Table 4 shows that the relationship between education and knowledge on where to assess mental health services was not significant ($p>0.005$), however the relationship between marital status and knowledge on where to access mental health services is significant ($p<0.005$).

Table 4: Factors influencing mental health care-seeking behavior

Sociodemographic variable	Responses		Inferential statistics	
	no	yes	Chi-square	P
No formal education	20	59	2.3554	0.502
	25.32%	74.68%		
	16.00%	17.10%		
Primary	35	98		
	26.32%	73.68%		
	28.00%	28.41%		
Secondary	47	107		
	30.52%	69.48%		
	37.60%	31.01%		
Tertiary	23	81		
	22.12%	77.88%		
	18.40%	23.48%		
Marital Status	**no**	**yes**	2.9165	0.2326
Divorced	21	41		
	33.87%	66.13%		
	16.80%	11.88%		
Married	42	140		
	23.08%	76.92%		
	33.60%	40.58%		
Single	62	164		
	27.43%	72.57%		
	49.60%	47.54%		

DISCUSSION

The findings of our study are in line with those of another study carried out among adults in Sothern Nigeria where majority of the study participants knew where to access mental health services (World Health Organization, 2008a). Our findings are also in congruence with that of another study carried out in Southern India, which showed that 42% of respondents knew about the treatment of mental disorders (Jorm, 2000). Agreeing to the reliability of the mental health services of the state conforms with another study conducted in north-east India which showed that psychiatrists were the most preferred treatment option for marital mental disorders (Rickwood & Thomas, 2012). This study as well agrees with a similar study in Nepal which reported similar results, with 86% of respondents choosing psychiatrists as the most preferred treatment option for mental disorders; 7% choosing general practitioners and 1% choosing local faith healers (Saint Arnault, 2009). Also, our findings agree with those of a study carried out in Southwest Nigeria which showed that almost all of the respondents in the study (97.0%)

knew that mental disorders could be treated and the majority of respondents chose psychiatrists (75.3%) as the most appropriate form of initial treatment. However, our findings are in contrast with a study performed in Delta State, Nigeria, in 2009, which showed that 87.2% of respondents thought that mental disorders could not be treated (World Health Organization, 2008a).

A study in Southern Nigeria found that the first factor that affects the choice of place of health care was geographic accessibility. This is in line with our study which found that 49% of respondents see distance as a barrier in accessing mental health care services. Our study also showed that 13% of respondents utilized other sources of mental health care which includes traditional and faith-based healers. This is in line with a study carried out in Southwestern Nigeria which showed that elderly people in rural areas often rely on traditional healers and faith-based healthcare providers due to their lack of access to professional healthcare services (Prince, 1964; Makanjuola, 2015). Other factors that influenced choice of mental healthcare services in our study was the cost at 61.85%. This determinant correlates with the results of studies carried out in Southern Nigeria (Makanjuola, 1987; Ozmen, Ogel, Aker, Sagduyu, Tamar & Boratav, 2004), the USA (Gaitanidis, Gallastegi, Van Erp, Gebran, Velmahos & Kaafarani, 2023) and other parts of the world (Alegra, NeMoyer, Falgas, Wang & Alvarez, 2018; Fleury, Grenier, Bamvita & Caron, 2011; Verhoog, Eijgermans, Fang, Bramer, Raat & Jansen, 2004).

Findings from our study found that about 70% of respondents believe that mental healthcare services in Katsina metropolis were reliable. This is a good health-seeking behaviour which is in line with another study done in Lagos which showed that a larger proportion of the participants showed good health-seeking behaviour as well (Egwuonwu, Kanma-Okafor, Ogunyemi, Yusuf & Adeyemi, 2019).

CONCLUSION

It can be concluded from the study that most of the study participants have adequate knowledge about the available mental health services and facilities and where they can access their mental healthcare. This is from the two major facilities (Federal Medical Centre, Katsina and Psychiatric Hospital, Katsina). Additionally, the study participants also demonstrated willingness to access mental health care should they experience a mental health problem. They also believe that the available mental health services are adequate and reliable. However, most of the study participants expressed concern about possible barriers that prevent them from accessing the available metal health services which are- stigmatization, cost, distance and religious beliefs. 13 out of every hundred of our respondents use alternative services for their mental health needs which are mostly traditional and religious healers. Among the sociodemographic characteristics of the study participants, only marital status was shown to influence their health-seeking behavior.

RECOMMENDATIONS

(1) There is a need for rigorous health promotion and awareness campaigns both through community-based strategies and through the classroom in order to give the people of Katsina state proper orientation on mental health to reduce stigmatization. (2) The government should

devise strategies to incorporate the other sources of mental healthcare such as traditional and faith-based healers into the existing healthcare system. (3) The government should work towards developing primary health care system to include mental healthcare; and (4) the government should develop strategies to further strengthen the existing mental healthcare system because it's adequately utilized by the population. It is encouraging that mental health topics are beginning to attract attention from the academic environment of the northern part of Nigeria (Makama, Mustapha & Umoh, 2025), nevertheless, a lot needs to be done to bridge the gap in mental health in the region.

Conflicting Interest

The authors declare that they have no competing interests.

Authors' Contributions

Attahiru Dan-Ali Mustapha: Formal analysis, conceptualisation, writing of draft, editing of the draft, supervision, methodology, ethical approval, resources and materials, research supervision and the final approval of the version to be published.

Funom Theophilus Makama: Formal analysis, conceptualisation, writing of draft, editing of the draft, supervision, methodology, ethical approval and the final approval of the version to be published.

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APPENDIX

Appendix 1: Questionnaire

Section A: Sociodemographic Characteristics

1. Sex: A. Male ( ) B. Female ( )
2. What is your age? A.18-25; B. 26-33; C.34-41; D. 42-49; E. 50-57; F. Above 58
3. Religion: A. Islam; B. Christianity; C. Others
4. Marital status: A. Married; B. Single; C. Divorced; D. Widowed
5. Educational status: A. No formal education; B. Primary; C. Secondary; D. Tertiary

Section B: Level of knowledge of adults in the Katsina metropolis on the availability of mental health services

6. Do you know the locations of mental health service providers in the Katsina metropolis?
A. Yes; B. No
7. Do you know the types of mental health services available in the Katsina metropolis?
A. Yes; B. No
8. Do you know the cost of mental health services in the Katsina metropolis?

A. Yes; B. No
9. Are the mental health service providers in the Katsina metropolis qualified to provide such services?
A. Yes; B. No
10. Have you ever received mental health services in the Katsina metropolis?
A. Yes; B. No
11. How can you rate the level of expertise on mental services in Katsina metropolis Consultancy services ( ) General services ( ) ordinary services ( ) quack services ( )
12. How often do you seek mental health services in the Katsina metropolis?
A. Often; B. Not often

Section C: Identify where adults in the Katsina metropolis seek mental health services

13. Do you know health facility(ies) that provide mental health services? Yes ( ) No ( )
14. If yes in (13), Mention them: …….
15. Do you have reason(s) to use a particular mental health facility? Yes ( ) No ( ).
16. Why did you choose that facility?
A. Cost; B. Distance; C. Service; D. Familiarity; E. Others……..
17. Do you access mental health services other than from these mental health facilities?
A. Yes; B. No.
18. If yes to (17) what are these alternative services?
A. traditional healers; B. Spiritual healers; C. Others
19. Can you further explain the "others" in (18)?

_____

20. If no to (17), how satisfied are you with the mental health services available in Kaduna metropolis? A. Very satisfied B. Somewhat satisfied; C. Average; D. Abysmal
21. Do you feel the mental health services available in Katsina metropolis are sufficient?
A. Sufficient; B. Not sufficient; C. I don't know; D. I don't care
22. How satisfied are you with the alternative mental health services you have chosen in (18)?
A. Very satisfied; B. Satisfied; C. I cannot tell; D. Not satisfied
23. How do you rate the quality of mental health services available in the Katsina metropolis?
A. Good; B. Poor; C. I don't know; D. I don't care
24. How would you rate the affordability of mental health services in the Katsina metropolis?
A. Affordable; B. Unaffordable; C. I don't know; D. I don't care
25. Is the cost a barrier for you to access mental health care in Kaduna metropolis?
A. Yes; B. No; C. I don't care
26. What other barriers hinder you from accessing Mental Health Services in Katsina metropolis?
A. My family does not want me to go to any mental health facility
B. It is against my culture
C. It is against my religion
D. It is embarrassing if people find out
E. The nearest centre is too far from me
F. I do not believe I need Mental Health Services

G. Other reasons

Section D: Perception of adults in Katsina Metropolis towards mental health services

27. How likely would you be to seek mental health services in Katsina Metropolis?
A. Likely; B. Unlikely
28. Do you believe that mental health services in Katsina Metropolis are reliable?
A. Yes; B. No
29. Do you think there are enough mental health professionals available in Katsina metropolis?
A. Yes; B. No
30. Are there any barriers that you feel prevent you from accessing mental health services in Katsina metropolis?
A. Yes; B. No
31. If yes, can you please list them? ……..
32. To what extent do you think community members in Katsina metropolis are aware of the available mental health services?
A, To a great extent; B, To a less extent.