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Research Article

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Evaluating Mental Health Practices among Community Health Extension Workers in Northern Nigeria: An Outcome Measure of Integrating Mental Health into Primary Healthcare Services

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Abstract

Background: *According to the 1991 mental health policy, the vast majority of Nigeria's population should be able to have access to mental health services through primary healthcare within a short distance of their homes. However, for a variety of reasons, the primary healthcare clinics do not provide these services.*

Objective: *The aim of this study was to assess the current mental health practices of community health extension workers in northern Nigeria.*

Methods: *This study evaluated the mental health practices and characteristics of 130 community health extension workers in northern Nigeria. A cross-sectional study design was employed, with data collected using a consecutive sampling procedure and a self-administered questionnaire adapted from a previous study in Nigeria.*

Results: *The results showed that over 67% of respondents reported inadequate mental health practices. Correlation analysis revealed weak positive associations between knowledge and practice, particularly in domains such as mental health diagnosis ($r = 0.179$, $p = 0.042$) and referral to mental health facilities ($r = 0.248$, $p = 0.005$).*

Conclusion: *Despite over three decades of efforts to integrate mental health into primary healthcare settings in Nigeria, community health workers' mental health practice has remained significantly poor, implying that there are virtually no mental health services available in northern Nigeria's primary healthcare settings. This highlights the critical need to reconsider and actively advance the integration of mental health services within primary care systems.*

Keywords: Mental Health, Community Health Extension Workers, Practices, Northern Nigeria, Primary Healthcare

1. Introduction

Mental health disorders are exceedingly common throughout the world, but many countries continue to neglect them [1]. As of 2021, approximately 13.9% of the global population suffers from mental health issues, with rates much higher in Low- and Middle-income Countries (LMICs) including Nigeria, where 25% to 30% have been reported, and depression, anxiety, and posttraumatic stress disorder are significantly more common, particularly in conflict-

affected areas [2-4]. To add to this, mental health disorders are the leading cause of years lived with disability globally, accounting for 15.6% of years lived with disability (YLDs) [5]. Depressive and anxiety disorders have constantly ranked among the top ten causes of all YLDs since the year 2000 [6]. These disorders have been associated with both direct treatment costs and a variety of indirect expenses, including decreased economic output, greater unemployment rates, and other economic consequences [6]. Despite these consequences, global mental health systems continue to suffer considerable gaps and discrepancies in policy, resources, and care delivery. Several countries spend less than 2% of their healthcare budgets on mental health, half of the world's population lives in countries with just one psychiatrist per 200,000 people, and mental health services in primary care are still scarce, particularly in low-income countries [7]. For example, in 2024, the Association of Psychiatrists in Nigeria reported that the country had fewer than 250 psychiatrists serving a population of more than 216 million, with services mainly concentrated in urban areas, making access difficult for those in rural communities, as there are currently no mental health services provided in primary healthcare settings in Nigeria [8,9].

The Alma Ata Declaration, issued in 1978, identified primary health care as a viable alternative for providing health care to everybody by the year 2000. One of the key topics discussed in the proceedings was mental health promotion [10]. Accordingly, Nigeria recognized the need to include mental health in primary healthcare in 1991 [11]. This is a well-thought-out health policy that would enable more individuals to obtain mental health treatment, as primary health care is frequently the first point of contact with the healthcare system for the majority of people in Nigeria and other Sub-Saharan African nations [12,13]. Primary healthcare institutions are often staffed by community health workers who have received specialized training to address rural health issues [12]. Moreover, they have a unique and vital role in the mental health care ecosystem, especially in underserved or remote areas [14,15]. However, their ability to do so effectively is contingent on the quality and depth of mental health training they receive, as well as the availability of mental health services within the PHC framework [16-19]. Such challenges frequently influence existing primary health care personnel's willingness to embrace the concept of delivering mental health services in their various units [18]. This throws into doubt the extent of mental health services in primary care, notwithstanding their recommendation in 1991.

While there has been some research on mental health within primary healthcare settings in Nigeria, studies remain scarce in Northern Nigeria, a region deeply affected by armed banditry, terrorism, and other forms of violence [20-22]. Survivors of these violent conflicts often face a range of neuropsychological consequences, yet they do so in a country where mental health care remains severely underfunded and underserved [8,9]. The aim of our study was to evaluate mental health practices and the factors associated with them among community health extension workers in northern Nigeria. We believe that these data can also be used to assess the reach of PHC's mental health component in this region, as well as to provide evidence to healthcare planners about the importance of improving mental health in primary care as a strategy for minimizing the mental health treatment gap.

2. Methods

2.1 Study Design

It was a cross-sectional study design. This is part of a larger study that took place between September and October 2022, 2023, and 2024 to indirectly assess the reach of primary healthcare's mental health component since its integration in 1991. The study utilized a cross-sectional technique to evaluate the current mental health practices of community health extension workers in northern Nigeria.

2.2 Study Area

The study was conducted at the College of Community Health, Jos University Teaching Hospital in Jos, northern Nigeria. This region, which includes the North Central, Northeast, and Northwest areas, covers 79.4% of Nigeria's surface area and is home to 126 million of the country's 235 million people as of 2025 [23]. The Primary health care accounts for around 88 percent of all health facilities in Nigeria, with more than 30,000 PHCs nationwide staffed by community health workers [24]. The study focused on the mental health practices of community health extension workers who were new students, yet to attended community mental health lectures.

2.3 Study Population and Sampling Technique

All first-year CHO students who were present during the data collection period were considered for inclusion in the study. Students who declined to participate or had conditions that made participation impossible were excluded. A consecutive sampling method was used to recruit eligible participants who met the inclusion criteria.

2.4 Instruments

A self-administered structured questionnaire that has been modified from previous research carried out in Ethiopia and Nigeria was utilized to collect data [16,21]. For the purpose of this research, the questionnaire was divided into three parts. The first part asked about the demographics of the students, including their age, sex, ethnicity, and so on. The second part was a 33-item questionnaire designed to assess respondents' mental health knowledge, which included their understanding of mental health disorders, including their causes and risk factors, symptoms (manifestation), and treatment. The questions required dichotomous yes or no responses, which were scored as 1 for yes and 0 for no responses. Those who scored higher than or equal to the overall mean score of the 33-item knowledge questionnaire were considered to have good knowledge, while those who scored lower than the total mean score was considered to have poor knowledge. The last part consists of a six-item questionnaire that was used to assess practice, which in this study refers to activities based on participants' knowledge in

providing mental illness services to the community (diagnostic, referral, and counseling).

These questions required binary yes or no responses, with 1 for yes and 0 for no responses. Those who scored higher than the total mean score of the 6-item practice questionnaire were said to have good practice, while those who scored lower than the total mean score was said to have poor practice. To ensure the applicability of the questionnaires and the quality of the data collected, the researchers practiced using them under the supervision of an experienced co-researcher. After that, the questionnaires were pretested on ten community health practitioners who met the inclusion criteria and agreed to be interviewed but did not form part of the sample size. They were drawn from primary healthcare facilities in Jos and the surrounding areas. The results of the pre-testing were then used to reconstruct the questionnaire and address any flaws that may interfere with the smooth conduct of the main study.

2.5 Procedure

Ethical approval for this study was obtained from the Health Ethics Committee of the Jos University Teaching Hospital, as well as permission from the Coordinator of the College of Community Health. Four researchers approached potential respondents during a break period in their lecture hall. After explaining the purpose and objectives of the study, informed consent was sought from all respondents. They were assured that any information provided would be kept confidential and that participation in the study was entirely voluntary. Students were informed that their decision to participate or not would have no impact on their academic standing. This was clearly communicated in writing. Respondents who agreed to take part in the study signed the consent form before being invited to any available offices for a face-to-face interview. This process was repeated weekly until all eligible respondents had completed the interview within three consecutive visits.

2.6 Data-Analysis

The data were analyzed using the Statistical Package for Social Sciences version 25 (SPSS-25). Descriptive statistics were used to summarize the results. A chi-square test was applied to examine associations between categorical variables. The direction and strength of the relationship between knowledge and practice of mental health were determined using correlation analysis. Statistical significance was set at a p-value of less than 0.05.

3. Results

All 130 respondents completed the questionnaire fully and accurately.

3.1 Sociodemographic Characteristics

The average age of the respondents was 39.81 ± 7 years, with ages ranging from 25 to 53 years. Over half of the respondents (52.3%) were female, and 78.5% identified as Christian. In terms of geographic distribution, 64 (49.2%) respondents were from Nigeria's north-central region, 40 (30.8%) were from the northwest, and 26 (20.0%) were from the northeast. All respondents held at least a diploma in community health, with at least 57% of them practicing for over ten years, 44.6% were primary healthcare officers in charge and 50.8% had overall good knowledge of mental health. See Table 1 for details.

Variable	Frequency	Percentage
Age group		
25-34	32	24.6
35-44	58	44.6
45-54	40	30.8
Sex		
Male	62	47.7
Female	68	52.3
Religion		
Christianity	102	78.5
Islam	28	21.5
State of practice		
North central	64	49.2
North west	40	30.8
North east	26	20.0
Office Position		
Officer in-charge	58	44.6
Others	72	55.4

Years of experience		
1-10	55	42.3
11-20	60	46.2
21-34	15	11.5
Knowledge of mental health		
Inadequate	64	49.2
Adequate	66	50.8

Table 1: Demographic Characteristics of the Respondents

3.2 Practice of Mental Health

Only 16 respondents (12.3%) reported ever diagnosing a mental illness. At least 87% of the respondents refer patients with symptoms to mental health treatment facilities and, at times, advise patients to seek prayers or visit traditional healers. Additionally, 90 respondents (69.2%) provided counseling to patients, and 124 respondents (95.4%) offered awareness about mental health, and only 7.7% of the respondents had ever prescribed psychotropic medications to patients with mental illness. Participants who had an overall mean score of 3.7 or above were classified as having good mental health practices. Based on this criterion, 32.7% of the respondents demonstrated good overall mental health practice. For more details, see Table 2.

Variable	**Response**	
	Yes	**No**
Ever diagnosed mental illness	16(12.3)	114(87.7)
Refer them to mental health treatment facility	128(98.5)	2(1.5)
Advise some to go for prayers or visit traditional healers	114(87.7)	16(12.3)
Ever prescribed psychotropic medications to patients with mental illness	10(7.7)	120(92.3)
Provision of counseling to patients with mental illness	90(69.2)	40(30.8)
Provision of awareness creation	124(95.4)	6(4.6)
Overall practice score		
Good	42(32.3%)	
Poor	88(67.7%)	
Mean score	3.7 ± 0.84	

Table 2: Respondents Practice of Mental Illness

3.3 Correlation between Knowledge and Practice of Mental Health

A weak, positive, significant correlation was found between overall knowledge of mental health and several key practices: diagnosing a patient with a mental health disorder ($r = 0.179$, $p = 0.042$), referring patients to mental health treatment facilities ($r = 0.248$, $p = 0.005$), and overall mental health practice ($r = 0.189$, $p = 0.031$). Additionally, a weak, positive, significant relationship was found between knowledge of mental health awareness and the provision of awareness creation ($r = 0.119$, $p = 0.024$). In contrast, a moderate, positive, and significant correlation was observed between knowledge of mental illness manifestations and the following practices: diagnosing a patient with a mental illness ($r = 0.409$, $p < 0.001$), referring patients to mental health treatment facilities ($r = 0.383$, $p < 0.001$), and overall mental health practice ($r = 0.383$, $p < 0.001$). Furthermore, a weak, positive, significant relationship was found between knowledge of mental health management and referring patients to mental health treatment facilities ($r = 0.233$, $p = 0.008$). However, a moderate, negative, significant relationship was noted between knowledge of mental health management and the provision of awareness creation ($r = -0.316$, $p < 0.001$). see table 3 for the detailed results.

Practice								
Knowledge	Statistics	P1	P2	P3	P4	P5	P6	P_{total}
K_{Total}	R	0.179*	0.248**	0.072	0.006	0.040	-0.031	0.189*
	P	**0.042**	**0.005**	0.416	0.942	0.651	0.728	**0.031**
	N	130	130	130	130	130	130	130
K_1	R	0.087	-0.022	-0.016	0.063	-0.027	0.199*	0.074
	P	0.323	0.806	0.860	0.478	0.763	**0.024**	0.400
	N	130	130	130	130	130	130	130
K_2	R	0.034	0.018	0.059	0.040	0.016	-0.043	0.038
	P	0.705	0.835	0.505	0.649	0.856	0.630	0.664
	N	130	130	130	130	130	130	130
K_3	R	0.409**	0.383**	0.138	0.000	0.148	0.064	0.385**
	P	**<0.001**	**<0.001**	0.117	0.995	0.092	0.473	**<0.001**
	N	130	130	130	130	130	130	130
K_4	R	0.013	0.233	-0.099	-0.116	0.038	-0.316**	0-.025
	P	0.886	**0.008**	0.263	0.190	0.667	**<0.001**	0.775
	N	130	130	130	130	130	130	130

Table 3: Correlation Analysis between Knowledge and Practice of Mental Health

Key:
K total=Overall knowledge
K1= Knowledge of mental health and mental health problems
K2= Knowledge of cause of mental health problems
K3= The manifestation of mental illness
K4= Knowledge of management of mental health problems

P total=Overall practice
P1=Ever diagnosed mental illness
P2= Refer them to mental health treatment facility
P3= Advise some to go for prayers or visit traditional healers
P4= Ever prescribed psychotropic medications to patients with mental illness
P5= Provision of counseling to patients with mental illness
P6= Provision of awareness creation

3.4 Association between Overall Mental Health Practice and Sociodemographic Factors

The chi-square test results indicated that there was no statistically significant association between the respondents' overall mental health practices and their sociodemographic characteristics. For more details, refer to Table 1.

Variable	**Response**			**Statistic**		
Age group (years)	**Poor**	**Good**	**Total**	**X^2**	**Df**	**P-value**
25-34	10(23.8)	22(25.0)	32(24.6)	0.239	2	0.887
35-44	20(47.6)	58(44.6)	58(44.6)			
45-54	12(28.8)	40(30.8)	40(30.8)			
Sex						
Male	18(29.0)	44(71.0)	62(100)	0.581	1	0.446
Female	24(35.3)	44(64.7)	68(100)			

Religion						
Christianity	30(29.4)	72(70.6)	102(100)	1.816	1	0.178
Islam	12(42.9)	16(57.1)	28(100)			
Office Position						
Officer In-charge	18(31.0)	40(69.0)	58(100)	0.077	2	0.781
Others	24(33.3)	48(69.7)	72(100)			
State of practice						
North central	16(38.1)	48(54.5)	64(49.2)	3.975	2	0.137
North west	14(33.3)	26(29.5)	40(30.8)			
North east	12(28.6)	14(15.9)	26(20.0)			
Years of practice						
1-10	20(47.6)	35(39.8)	55(42.3)	2.912	2	0.233
11-20	20(47.6)	40(45.5)	60(46.2)			
21-34	2(4.8)	13(14.8)	15(11.5)			

Table 4: Factor Associated with Over all Practice of the Community Health Workers Towards Mental Illness in Northern Nigeria

4. Discussion

The demographic characteristics of the respondents in this study, such as age, marital status, gender, and educational level, were consistent with a previous study on primary healthcare providers in northern Nigeria, reflecting the typical profile of Nigeria's community health professionals. These workers are generally of similar ages, predominantly female, and married [25]. Additionally, all respondents held at least a diploma in community health, and the majority had over ten years of work experience prior to the study. In addition, more than half of the respondents demonstrated good knowledge of mental health, which aligns with findings from other studies in Nigeria and other low- and middle-income countries (28-56%) [16, 21, 26-29]. Our finding however, contrast with other previous findings in Nigeria, which showed relatively limited mental health awareness among primary healthcare practitioners, implying an improvement in mental health knowledge among our respondents [30,31].

Although more than half of our respondents had adequate knowledge of mental health, over two-thirds demonstrated poor mental health practices. This issue is not unique to our study group; it reflects a long-standing challenge in Nigeria and other low- and middle-income countries [27,31,32,34]. Poor mental health policy and inadequate implementation have been specifically identified as major barriers to effective community mental health services among primary healthcare providers in these regions [35]. This underscores the assertion that even after completing their education, community health workers often have little to no exposure to mental health practices due to the lack of mental health services in primary care settings [9]. Research indicates that simply providing information may not be enough to change behavior, particularly if the knowledge is theoretical rather than practical [36].

The poor mental health practices observed in our study were reflected across various domains we assessed. For instance, only one in ten respondents had ever diagnosed a patient with a mental illness, a finding consistent with previous research in Ethiopia [16]. However, this should not be interpreted to mean that individuals with mental health concerns are less likely to seek care at primary healthcare (PHC) facilities. In fact, many individuals could have been identified at PHC centers, were mental health resources and services in these settings are available [9]. Other contributing factors may include negative attitudes toward mental illness, stemming from limited understanding of its causes and treatments. Many individuals attribute these conditions to supernatural forces while also acknowledging biological causes [37,38]. This blending of biological and cultural perspectives on mental illness creates challenges for both patients and healthcare providers when making decisions. This is reflected in the practice of encouraging patients to seek both traditional healing and mental health care, a trend observed in nine out of ten respondents in our study.

Furthermore, our data revealed that about 2 out of every 10 respondents had ever prescribed psychotropic drugs to patients with mental illness. A 1991 study by Abiodun OA reported that many primary healthcare providers in Nigeria were unfamiliar with psychotropic medications like antidepressants, and a more recent study exploring barriers to providing community-based mental health care at the primary healthcare level in northern Nigeria found that no medications for mental health treatment were available in PHC facilities [31,39]. Despite the inclusion of psychiatric medications on Nigeria's essential drug list to enhance primary healthcare practice, these medications are often omitted [40]. This highlights that, despite long-standing recommendations, effectively integrating mental health into primary care remains a challenge in Nigeria.

Our findings also revealed that more than two-thirds of respondents

actively promoted mental health counseling and awareness. While it is well known that Community Health Workers (CHWs) commonly participate in World Mental Health Day activities in Nigerian communities to raise awareness and combat stigma, psychological disorders are rarely addressed in their routine health presentations at their various units. This is due in part to a lack of training and resources that would allow them to successfully integrate mental health subjects into their regular health conversations [20-22]. As a result, counseling and awareness campaigns in these instances may be influenced more by personal opinions than scientifically validated processes.

The correlation analysis between knowledge and practice of mental health revealed a significant positive, but weak, relationship between overall knowledge, perception, and understanding of mental illness and mental health practices such as diagnosing mental illnesses and referring patients to treatment. This suggests that increasing mental health awareness among healthcare workers can improve their ability to recognize symptoms, provide support, and connect patients to appropriate care, as reported in previous research [41]. However, the weak correlation indicates that knowledge is not the sole predictor of mental health practices. Other factors influencing Community Health Workers' (CHWs) participation in mental health activities that were not examined by the study could have played a role.

We also found a moderate, negative, and significant relationship between knowledge of mental health management and awareness-raising initiatives. This inverse correlation suggests that as respondents become more familiar with alternative management options such as psychopharmacotherapy, they are more likely to practice them rather than focusing solely on awareness-raising activities. Moreover, it has been documented in an earlier study that many primary healthcare providers in Nigeria were unfamiliar with psychotropic medications [31]. In contrast, chi-square test results showed no statistically significant association between respondents' general mental health practices and sociodemographic variables. This indicates that the sociodemographic characteristics of the participants did not have a measurable impact on their mental health practices, rather knowledge and other factors which the study did not evaluate may have influenced the mental health practices of the respondents more than sociodemographic factors.

5. Limitations

To the best of our knowledge, there is currently no research specifically assessing practices related to mental health among community health workers in northern Nigeria. Our findings provide valuable insights and could serve as a foundation for future studies in this area. However, there are some limitations to our research. First, while we evaluated the practice of mental health in general, our study did not explore practice towards specific mental illnesses, which may result in differing outcomes. Additionally, the study primarily focused on community health extension workers, and therefore, our findings may not fully reflect the viewpoints of other primary healthcare professionals, such as nurses or other healthcare staff, who may have different experiences and insights on mental health.

6. Conclusion

Our research revealed that more than two-thirds of respondents indicated inadequate mental health practices, particularly in diagnosing mental illness and providing psychotropic medicines. However, we found a clear positive association between knowledge and practice, with greater knowledge of mental health associated with better practices, such as more accurate diagnoses and appropriate referrals to mental health treatment institutions. While some progress has been made in raising awareness through training and education, many primary healthcare workers still lack the necessary skills and knowledge to effectively recognize and address mental health issues. This lack of considerable progress emphasizes the need to reconsider and actively pursue the integration of mental health services into primary care systems. Achieving this goal will likely require a comprehensive approach involving education, policy changes, and resource allocation that is necessary to ensure that these efforts translate into meaningful improvements in practice.

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Potential Conflicts of Interest

The authors declare no conflicts of interest regarding this study.

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