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PRIMARY HEALTHCARE ACCESS AND UTILISATION IN THE JERE LOCAL GOVERNMENT AREA OF BORNO STATE, NIGERIA

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ABSTRACT: Primary healthcare services are vital for determining a nation's overall health status. Improving access to and use of healthcare can lead to better health outcomes in the population. We investigated access to and utilisation of primary healthcare services in the Jere local government area of Borno State, Nigeria. Questionnaires were distributed, and interviews were conducted to collect the data. We analysed the results via descriptive statistics (frequency distribution tables). Availability sampling, a nonprobability sampling method, was used to administer 400 questionnaires to the respondents, and 292 questionnaires were returned. Most participants were young (44.50%), unmarried (87.7%), and highly literate, with 93.50% receiving tertiary education. Approximately 47.60% found healthcare inaccessible, 42.10% found it accessible, and 10.30% were undecided. A total of 51.0% used healthcare facilities, 33.2% did not, and 14.0% were undecided. A total of 38.4% visited health centers, 19.9% opted for traditional medicine, 3.4% sought treatment from religious leaders, and 34.9% used a combination of these resources. A total of 44.5% preferred modern medicine, 36.0% used herbs, 17.8% turned to prayers, and 1.7% sought blessings from elders. Therefore, the study recommends that the state and local government authorities provide a comprehensive approach encompassing infrastructural development, health education, awareness programs, staff training, and recruitment that collectively improve the primary healthcare services in the Jere local government area.

Keywords: Access, Healthcare service, Jere, Primary Healthcare, Utilisation

INTRODUCTION

Primary healthcare services are vital in determining a nation's overall health status. Improving healthcare access and use can lead to better health outcomes for the population. Therefore, individuals should make use of the available healthcare services. Primary healthcare (PHC) is the first point of contact for patients and operates at the community level (Chaudhuri et al., 2023). In Nigeria, nurses and community health workers are the primary healthcare providers instead of qualified doctors. Unfortunately, many patients in Nigeria

bypass PHC facilities and self-refer to higher levels of healthcare (Okonofua et al., 2018), resulting in an overwhelming number of patients at referral facilities such as secondary and tertiary healthcare centers (Katung, 2001; Gage et al., 2018). This practice is problematic because minor illnesses that can be treated at PHC facilities are managed at facilities designed for more severe conditions.

Access to healthcare services is vital for promoting and maintaining individual health, preventing health breakdowns, and facilitating economic development and prosperity (WHO, 2019a). Various factors can influence the use of healthcare services, including physical distance (Iyinbor et al., 2023), race, financial capability, and social factors (Omam et al., 2023). Access to care is a vital prerequisite for utilisation services (Iyinbor et al., 2023).

Using primary healthcare (PHC) services is a vital indicator of community health (Iyinbor et al., 2023). Importantly, the mere presence of health facilities does not guarantee their use, as various socioeconomic factors can influence access and utilisation (Adam & Awunor, 2014; Jia et al., 2021; Zimmerman & Shaw Jr, 2020). Sociocultural factors, such as traditional beliefs and practices, limited awareness of available healthcare services, and socioeconomic status, significantly influence individuals' utilisation of healthcare services (Aliyu et al., 2020; Iyinbor et al., 2023).

The healthcare system in Nigeria varies in terms of the availability and quality of facilities and, is influenced by local and regional factors (Federal Ministry of Health, 2016). The National Demographic Health Survey in Nigeria emphasised the underutilisation of primary healthcare (PHC) services, especially in the northern region (NDHS, 2018). Several factors are responsible for underutilisation, including long distance (Iyinbor et al., 2023), cost (Dalal & Dawad, 2009, Khan et al. 2017), healthcare workers' attitudes (Mazzilli & Davis, 2008), socioeconomic status (Dalal & Dawad, 2009; Khan et al. 2017), sociocultural practices and beliefs, and educational background (Dalal & Dawad, 2009).

Several studies have highlighted the low utilisation of healthcare services in Borno state, particularly during insurgency. This is due mainly to the devastating impact of the conflict on the region's healthcare infrastructure. Many healthcare facilities in affected areas have either been partially destroyed or destroyed. Consequently, this has had severe implications for the utilisation of healthcare services, resulting in significant challenges in accessing essential care for the community.

Understanding the utilisation patterns of healthcare services in Nigeria, particularly in Borno State, is crucial. Boko Haram insurgency has significantly worsened the already unequal distribution of healthcare services because of extensive damage to health facilities and personnel, making it essential to conduct further studies. Access to preventive and curative services is hampered by attacks on the healthcare facilities and other disturbances to health systems (Ekzayez et al., 2021). Owing to high population density, inadequate access to potable water, poor sanitation and hygiene services, and restricted access to preventative and curative health services, providing healthcare in conflict-affected environments is challenging (Omam et al., 2023). Communities in conflict-affected areas face increased health risks due to damaged infrastructure, physical and psychological trauma, and difficult living and economic circumstances (Omam et al., 2023). According to Druetz (2018), one of the critical factors limiting the effectiveness of programs in low- and middle-income countries is the absence of primary healthcare integration.

The healthcare system in Borno state, similar to that of Iraq, has suffered from years of turmoil, mismanagement of funding, and the ongoing Boko Haram insurgency. Both regions face challenges such as a shortage of healthcare workers and inadequate medical equipment (Ridwan, 2024). In Iraq, the lack of modern healthcare facilities, tools, and staff has led to an increase in death rates (Abd Ghani et al., 2016). In Borno State, treatable illnesses such as malaria have become deadly because people cannot access medical care due to the hostilities caused by Boko Haram. Health centers are overburdened and struggle to hire medical staff. According to the World Health Organisation (WHO), 40% of Adamawa, Borno, and Yobe state health facilities are destroyed. These states are home to nearly two million women of reproductive age and 1.6 million sexually active men (WHO, 2019b). As a result, the people in the northeastern zone of Nigeria, including women and children, are either not receiving enough healthcare services or are suffering from preventable and treatable health issues. The WHO also reported that Nigeria's Northeast Region has the worst maternal and child health indicators. Malaria alone is responsible for more than fifty per cent of infant mortality and morbidity rates, with severe respiratory tract infections, malnutrition, and watery diarrhoea also contributing to illness (WHO, 2019b).

It is essential to assess the level of healthcare service utilisation by residents of Jere LGA to understand healthcare provision in the region. Additional research is necessary to comprehend the utilisation of primary healthcare services in Jere LGA and Borno State and to assess progress following the Boko Haram insurgency. A literature search revealed studies conducted by Aliyu et al. (2020), who examined the distribution, capacity, and utilisation of public health facilities in Borno, northeastern Nigeria, and Bolori et al. (2016), who investigated the utilisation of healthcare services among rural women in the Jere Local Government of Borno State, Nigeria. These studies represent some of the most recent studies in this area. However, research on primary healthcare in the state is limited. This study aims to address the existing gap in knowledge by providing insights into the accessibility and utilisation of primary healthcare services in the Jere local government area.

MATERIALS AND METHODS

Study design

A cross-sectional research design incorporating a concurrent mixed-data collection approach was used. Data were obtained through a structured questionnaire and an interview schedule guide to evaluate access to and utilisation of primary healthcare services and identify the factors affecting their utilisation.

Study settings

The research was conducted in the Jere local government area (LGA) of Borno State, which is located in Nigeria's Northeast geopolitical region. Geographically, it is positioned between longitudes of 13°2'30″ "E to 13°20'0"E and latitudes of 11°45'0"N to 12°2'300″ E (Borno State Government, 2015). According to the 2006 Population and Housing Census, Jere's population was 211, 204 (NPC, 2006). However, as of 2023, the estimated projected population has grown to 369,185, with an annual growth rate of 3.4%. Jere LGA comprises ten wards: Dala, Dusuman, Galtimari, Gongulon, Khaddamari, Maimusari, Mairi, Mashamari, Ngomari, and Old Maiduguri. The area is populated by various ethnic groups, with Kanuri comprising approximately 60% of the population, followed by Shuwa, Marghi,

Babur, Chibok, Gwoza, and Mandara, which collectively make up 30% of the population. The remaining 10% includes other Nigerian tribes (Borno State Government, 2015). The Jere LGA has thirty-four (34) government health facilities, including eight (8) secondary facilities, three (3) primary facilities, and twenty-three (23) health clinics (posts).

Table 1: Healthcare facilities in Jere LGA by ownership

Type of Health Facility	Public	Private	Total
Secondary Health care	8	1	9
Primary Health Center	23	1	24
Health Clinic	3	0	3
Maternity Home	0	1	1
Total	**34**	**3**	**37**

Source: Borno State Ministry of Health & Human Services (2023)

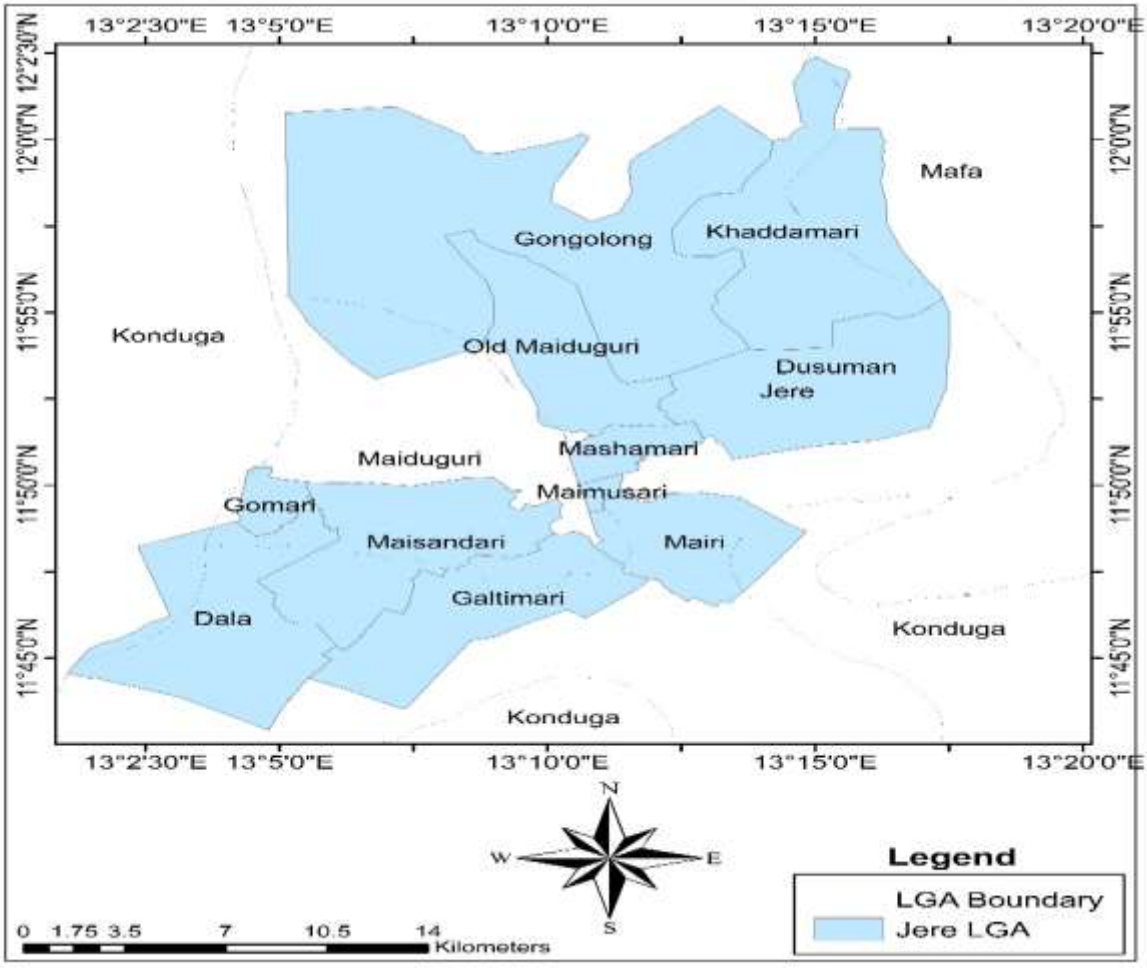

Figure 1: Study Area

Source: Department of Geography, FUT Minna (2023)

Study population

This study examined two communities: Galtimari and Mairi. According to the Borno State Ministry of Health & Human Services, 2023 (BSMHHS), the combined population of these communities is 52,946, with 27,871 in Galtimari and 25,075 in Mairi. Galtimari has 5,156 households, whereas Mairi has 4,079 (BSMHHS, 2023). The projected population of Jere's local government area in 2023 is 369,185. This research collected the quantitative data from individuals visiting primary healthcare centers in Galtimari (Fori dispensary) and Mairi (Mairi Clinic). The Fori dispensary has approximately 15 healthcare workers who admit patients. In contrast, the Mairi Clinic has various departments, including administrative/finance, laboratory, pharmacy, and a maternity complex with ten (10) healthcare workers who do not admit patients. The Mairi Clinic offers various services from Monday to Friday, including antenatal, postnatal, gynaecologic, family planning, immunisation, and general outpatient care from 8:00 am to 4:00 pm.

According to the Borno State Ministry of Health and Human Services (BSMHHS), the Jere Local Government Area (LGA) has 23 primary healthcare centers, 8 secondary health facilities, and a tertiary health center (BSMHHS, 2023). Furthermore, there are three privately owned primary health facilities. Despite the presence of these healthcare facilities, their use can be hindered by inadequate service quality, and cultural, and socioeconomic factors.

Table 2: Numbers of households and individuals in Jere LGA

Ward	No. of households	No. of individuals
Bale Galtimari	5,156	27,871
Dala Lawanti	2,545	15,521
Dusuman	16,774	92,566
Gomari	885	5,379
Gongulong	1,783	8,746
Maimusari	1,739	9,371
Mairi	4,079	25,075
Mashamari	1,435	8,112
Ngudaa/Addamari	1,441	8,233
Old Maiduguri	10,171	54,950

Source: Borno State Ministry of Health & Human Services (2023)

Sample size determination

To determine the sample size for our study, we utilised Yamane's (1967) method. The study was conducted in the Jere LGA of Borno State, with a meticulous selection of participants from the Mairi and Galtimari wards. This approach aimed to encompass both homogeneous and heterogeneous populations from the two settings, accommodating the diverse cultural and socioeconomic characteristics of the LGAs and thus ensuring a comprehensive and robust study.

The following formula was used to determine the population.

$PP = P0\ (1+r/100)\ t$……... (1)

where PP = Projected population, P0 = Initial population, r = Annual rate of growth,

t = Difference between the projection year and the previous census adopted from Adamu and Sani (2017).

The sample size was calculated via reliable Yamane (1967) sample determination. The formula is as follows:

Finite population (n2) = N …… (2)

1+ N (e)2

where n = sample size, e = level of significance (0.05 degrees of freedom), and N = population size.

(n2) = 369,184 = 369,184 = 400

1+369,184 (0.05) 2 923

The number of questionnaires in each ward in the LGA was determined by dividing the total number of questionnaires according to the population percentage of the selected wards. This ensured equal representation between the two wards.

Furthermore, key informant interviews (KIIs) were conducted with healthcare providers in the two health centers within the study area. In-depth interviews were also conducted with ward heads and residents.

Sampling technique

This survey used a five-stage sampling technique to select the respondents.

Stage 1: The local government was purposively selected on the basis of the presence of numerous primary health facilities. This decision underscores our survey's thorough planning and deliberate design, ensuring that we have access to essential healthcare resources for our data collection efforts.

Stage 2: The selection of the two wards, Galtimari and Mairi, aimed to capture both homogeneous and heterogeneous populations. This purposive approach underscores the inclusivity and diversity of our survey, enabling us to collect a broad spectrum of perspectives and experiences.

Stage 3: The Fori dispensary and Mairi Clinic were purposively selected for the survey on the basis of their accessibility, diverse patient populations, and ability to provide primary healthcare.

Stage 4: The selection process for the interviews involved careful consideration and intentionality. Two nurses from the Fori dispensary, two community health workers, and a laboratory technician from the Mairi Clinic were purposively chosen to participate as critical informants for the research.

Stage 5: For the research study, ward heads from the Galtimari and Mairi wards were selected on the basis of specific criteria to participate in in-depth interviews. In addition, two residents from each ward were purposively selected for the interviews.

Table 2: Wards in Jere LGA

Wards in Jere LGA	Wards in Jere LGA	Wards in Jere LGA
1. Dala	5. Khaddamari	9. Ngomari
2. Dusuman	6. Maimusari	10. Old Maiduguri
3. Galtimari	7. Mairi (Jere)	
4. Gongulon	8. Mashamari	

Source: National Population Commission (2008)

Data collection

We employed a convenience sampling approach to distribute questionnaires to residents attending primary healthcare facilities in the Galtimari and Mairi wards. Among the 400 questionnaires distributed, approximately 292 were returned. The availability sampling method was utilised to distribute questionnaires because of its convenience and cost-effectiveness. To address potential bias associated with this method, all individuals present at the clinic on a specific day were included in the survey. The questionnaires sought details on respondents' socioeconomic status, availability and accessibility of healthcare facilities, healthcare utilisation, healthcare sources, and health-seeking behaviours. To ensure accessibility, the questionnaires were translated into the community's local language.

Additionally, we included a diverse range of perspectives in our research. We purposively selected thirteen participants for key informant interviews (KIIs) with healthcare providers and households in the two health centers within the study area. Each interview lasted between twenty-five (25) and thirty-five (35) minutes.

Before the questionnaires were distributed, a pilot trial was carried out with a small group of participants to assess the validity of the questions and confirm their clarity and comprehensibility. Furthermore, the qualitative data were meticulously assessed for quality, rigour, and relevance to authenticate the findings and guarantee the strength of the research results.

Data analysis

The data were checked for errors, cleaned, manually coded, and inputted into the computer using IBM SPSS version 28.0. The questionnaires encompassed sociodemographic characteristics, utilisation, accessibility, availability, and affordability, each rated as poor, fair, or reasonable. Subsequently, the data was analysed using descriptive methods in a simple table to explain quantitative information as frequencies and percentages to show the number of times a data point occurs.

Ethical Consideration

Before data collection, all participants were given a comprehensive participant information document and an informed consent form. Each participant subsequently provided written informed consent, confirming their voluntary participation and understanding of the study's objectives and procedures.

RESULTS

Quantitative

Sociodemographic characteristics: The analysis in Table 3 presents the sociodemographic characteristics of the respondents. Approximately 292 participants completed the questionnaires, and 13 participated in the interviews. The study revealed that most participants were unmarried males between 18 and 33 years (90%) with a tertiary education (93.5%). The largest occupational group was students (79.1%), followed by civil servants (7.5%), farmers (5.8%), and security personnel (2.7%). These results indicate that both educational attainment and occupation play a role in influencing patterns of primary healthcare utilisation.

Table 3: Sociodemographic characteristics of the participants (n=292)

Sociodemographic variables	Frequency	Per cent	Sociodemographic variables	Frequency	Per cent
Sex					
Male	247	87.00	**Age**		
Female	45	13.00	18 – 25	130	44.50
Occupation			26 – 34	133	45.50
Civil servant	22	7.50	35 – 44	19	6.50
Security personnel	8	2.70	> 45	10	3.40
Business	14	4.80	**Marital status**		
Farming	17	5.80	Single	256	87.70
Student	231	79.1	Married	32	10.60
Civil servant	22	7.50	Divorced	5	1.70
Education					
Informal	5	1.70			
Secondary cert.	9	3.60			
Tertiary	237	93.50			
Missing	5	1.70			

Source: Field work (2023)

Availability and accessibility of PHC: The results in Table 4 illustrate the pattern of healthcare availability and accessibility. Approximately 47.60% of the respondents felt that healthcare was not readily available and accessible, 42.10% believed it was available, and 10.30% were undecided.

Utilisation of PHC: The results further revealed that 51.0% of the respondents were utilising healthcare facilities, 33.2% were not utilising healthcare facilities, and another 14.0% were not deciding, with a negligible 1.7% missing (Table 4).

Table 4: Utilisation of Primary Healthcare Facilities in Jere LGA (n=292)

Availability and accessibility of PHC	Frequency	%	Utilisation of PHC	Frequency	%
Available	123	42.1	Utilising	149	51.0
Not available	139	47.6	Not utilising	97	33.2
No idea	30	10.3	No idea	41	14.0
			Missing	5	1.7
Where healthcare is received			**Healthcare seeking behaviour**		
Healthcare centres	112	38.4	Prayers	52	17.8
Traditional healthcare	58	19.9	Seeking elderly blessings	05	1.7
Religious healthcare	10	3.4	Herbs	105	36.0
All	102	34.9	Modern medicine	130	44.5
Missing	10	3.4			

Source: Field work (2023)

Where healthcare is received: It is worth noting that there is a common trend regarding the locations where people seek healthcare services. Most respondents (38.4%) visited health centers, approximately 19.9% opted for traditional medicine, 3.4% consulted religious leaders for treatment, and 34.9% utilised a combination of these health care resources (Table 4).

Healthcare-seeking behaviour: The results revealed that the respondents had different health-seeking behaviours. Most respondents (44.5%) preferred modern medicine, whereas 36.0% used herbs. In addition, 17.8% resorted to prayers, and a negligible number (1.7%) sought blessings from elders (Table 4).

Qualitative

Sociodemographic characteristics: For the in-depth interviews, Table 5 presents the sociodemographic characteristics of the participants. The study included two nurses, two community health extension workers (CHEWs), one laboratory technician, two ward heads, and six residents of Jere LGA. The participants had a variety of occupations, including civil servants (46.15%), businesses (38.46%), and unemployed individuals (15.38%).

The study included 13 participants (76.92% married, 23.08% single) from the Galtimari and Mairi wards. Their ages ranged from 30 (45.50%) to above 60 years (3.40%), and they had diverse educational backgrounds. For example, some had Qur'anic education (23.08%), primary school certificates (7.69%), secondary school certificates (30.77%), and degrees or diplomas (38.46%). This variety of education levels provides a comprehensive understanding of the participants' perspectives.

Availability and functioning of PHC: The respondents agreed that PHC is available, but drugs are out of stock.

Accessibility and utilisation of PHC: The respondents were in complete agreement about the accessibility of health facilities, providing a reassuring picture of the current situation.

They reported that these facilities are utilised for various healthcare needs, including antenatal, delivery, and immunisation.

Affordability of PHC: Most respondents agreed that it is affordable and, sometimes, free of charge. However, some treatments require payment, and most prescribed drugs are out of stock.

Improvement in PHC: The respondents unanimously agreed that health facilities need electricity, more healthcare workers, and drugs to function effectively.

Table 5: Sociodemographic variables for in-depth interviews (n=13)

Variable	Frequency	Per cent	Variable	Frequency	Per cent
Title/rank			**Age**		
Nurse	2	15.38	30 – 40	5	38.46
CHEW	2	15.38	41 – 50	3	23.08
Lab technician	1	7.69	51 – 60	2	15.38
Ward head	2	15.38	> 60	3	23.08
Resident	6	46.15			
Education			**Location**		
Informal	3	23.08	Bale Galtimari	4	30.77
Primary cert.	1	7.69	Mairi ward	4	30.77
Secondary cert.	4	30.77	Fori Dispensary	2	15.38
Tertiary	5	38.46	Maimusari PHC	3	23.08
Marital status			**Occupation**		
Married	10	76.92	Not employed	2	15.38
Single	3	23.08	Civil servant	6	46.15
			Business	5	38.46

Source: Field work (2023)

Table 6: Themes

Themes
Availability of primary healthcare
Accessibility of primary healthcare
Affordability of primary healthcare
Utilisation of primary healthcare
How to improve the primary healthcare facility

Source: Field work (2023)

Five themes were derived from the qualitative data: availability, accessibility, affordability, utilisation, and how to improve the primary healthcare facility.

Table 7: Codes of respondents (n=13)

Variable	Code
Senior nurse Fori	1
Retired nurse Fori	2
Senior CHEW Mairi	3
Junior CHEW Mairi	4
Lab technician Mairi	5
Ward head Fori	6
Ward head Mairi	7
Resident Fori	8
Resident Fori	9
Resident Fori	10
Resident Mairi	11
Resident Mairi	12
Resident Mairi	13

Source: Field work (2023)

Do you have a PHC here in this community, and is it functioning (available)?

An in-depth interview about the availability of a PHC facility revealed the following:

"The facility is present in the area and functions well." (Respondent 1)

"There is a PHC center in this community, but the challenge we face here is that it needs to be fixed as drugs are out of stock." (Respondent 2)

Do the people utilise it?

There seems to be a consensus, as all the respondents agreed that the residents of Jere utilised the facility.

Is the PHC accessible?

Accessibility appears to be a unanimous positive aspect across all interviewees in these areas, including youths and older people. This accessibility is highlighted as a significant advantage, allowing people to utilised the services effectively, even though most respondents agreed that drugs are not available except for immunisations.

"The PHC is widely accessible within the community, catering to various healthcare needs of vulnerable people, including labour and delivery, postnatal care, immunisation, and general treatments. However, drugs are out of stock". (Code 7)

Is the PHC affordable?

Affordability is another aspect discussed by the interviewees.

"A respondent agreed that it is affordable, and another respondent opined that it is cheap, as it is, sometimes, free of charge." (Codes 8 and 9)

"Likewise, a respondent also asserts that yes, but drugs are not available." (Code 6)

This position was the same as that of a respondent at Mairi Clinic. While PHC is affordable or free, there are instances where certain drugs or treatments require payment, albeit at minimal rates. However, the reliance on free drugs and concerns about the affordability of prescribed medications outside the facility remain recurring issues, hindering full utilisation.

What do you think should be done to improve PHC in the area?

"*Regarding improvement suggestions, electricity emerges as a primary need for the smooth operation of the facility*." (Codes 5, 6, 8, and 9)

"*We aim to provide not just enough staff, but also a team of exceptionally qualified and experienced nurses and other health attendants, ensuring the highest standard of care*." (6 and 7)

"*There should be enough drugs, qualified and experienced personnel*." (Code 13)

Another area indicates the need for adequate human resources to enhance service delivery.

"*Importantly, a friendly and cordial relationship between staff and patients is not only beneficial but also essential. This fosters an environment akin to a family relationship, which in turn enhances the patient experience and encourages more people to utilise our PHC services.*" (Codes 1 and 2)

DISCUSSION

Sociodemographic characteristics

This study is particularly timely, as it investigates the primary healthcare access and utilisation level in the Jere Local Government Area (LGA). While most of the research participants were men (87.0%), the study by Aliyu et al. (2020) revealed an unexpected trend-: women were 80% more likely to use primary healthcare services. This finding and the fact that only 13% of the participants were women challenge our preconceived notions. This finding is particularly surprising given that women typically use healthcare services for prenatal and postnatal care, as well as other health issues. The majority of the participants were young, aged between 18 and 25 years (44.50%), and unmarried (87.7%). The high number of educated and unmarried participants could be attributed to the significant population of University of Maiduguri students in the study area. This contrasts with the findings of Agofure and Sarki (2017), who reported that most participants were married and between 35 and 45 years old.

Most respondents who participated in the study were highly educated, with 93.50% having some form of tertiary education. This is similar to the findings of Egbewale and Odu (2013) and Aliyu et al. (2020). The study results concerning the participants' sociodemographic details revealed that young, unmarried, and highly educated individuals used primary healthcare services more than others. However, Astuti et al. (2024) did not find any significant impact of factors such as sex, age, marital status, occupation, education, and income on the use of primary healthcare. In contrast, Niyas et al. (2018) reported that factors

such as gender, marital status, age, and place of residence determine the perceived quality of primary health services.

Educational attainment is a critical consideration in healthcare service utilisation decisions, as those with higher levels of education tend to have a greater understanding of information, enabling them to make informed decisions about the type of healthcare facilities and services to access. In contrast, educational level, income, health insurance type, health status, and referral system did not affect the estimated quality of primary healthcare services (Niyas et al. 2018). However, Agofure and Sarki (2018) reported that those with higher incomes actually patronised health services. Deciding where to receive medical care can be a complex process influenced by various factors, including socioeconomic determinants that can significantly impact access to and utilisation of healthcare services. Compared with their male counterparts, women are known to utilise primary healthcare services more often; surprisingly, only 13% were female, in contrast to the findings of Niyas et al. (2018), who reported that non-utilisation of services was greater among men than women and among those who had a poorer health status. Housewives and married women usually visit PHC centers more often than other workers (Mahmood & Saleh, 2023).

Occupation diversity is a key aspect to consider, with the student population being the highest at 79.1%. This is in contrast to the findings of Egbewale and Odu (2013), where students were the minority. Furthermore, security personnel (2.7%), business men (4.8%), farmers (5.8%), and civil servants (7.5%) are least common in terms of utilisation. Alfaqeeh et al. (2017) reported that non-utilisation of PHC services could be the result of social and economic disparities. The variety of occupations suggests that a person's work may impact how they use primary healthcare services.

Accessibility and availability

Furthermore, this study comprehensively explored healthcare utilisation perceptions and practices in the Jere LGA. The data showed that 47.6% of the respondents perceived primary healthcare facilities as unavailable and inaccessible, which aligns with Mahmood and Saleh (2023), whereas 42.1% held the opposite view, indicating perceived accessibility that supports them (Oyeyemi et al., 2023). Access requires sufficient service quality, availability, and the removal of barriers to service use (Carrasquillo, 2020). Additionally, 10.3% of the respondents expressed uncertainty. Likewise, the in-depth interviews revealed that PHC is widely accessible within the community. Examining these diverse viewpoints further is essential for fully understanding the distinction between "accessible" and "available." Having healthcare facilities available does not necessarily guarantee their utilisation. Other cultural factors may also impact access and utilisation (Sule et al., 2018). This study contradicts the findings of Egbewale and Odu (2013), who reported that 75.70% of services were accessible, in contrast to Nwokoro et al. (2022), but it aligns with the findings of Oyeyemi et al. (2023). These data are crucial for understanding the healthcare landscape in Jere and can provide valuable guidance for policy decisions.

Utilisation of PHC

The results further revealed that 51.0% of the respondents utilised healthcare facilities, which aligns with the findings of Oluwadare et al. (2023), who reported that 79% of the respondents were aware of a PHC facility in their community. However, 33.2% were not utilised, which

aligns with Astuti et al. (2024). The respondents confirmed that inadequate drugs sometimes prevent them from using healthcare services that align with them (Okoronkwo et al., 2014; Ahmad et al., 2019; Sheshe & Adamu, 2019; Aliyu et al., 2020; Iyinbor et al., 2023). Additionally, some mentioned that the high cost of services (Aliyu et al., 2020) and the inadequacy of medical staff also hindered their use of healthcare services. People's beliefs, customs, and traditions influence their perceptions of health and illness, affecting their use of healthcare services.

Sources of healthcare services

Additionally, 38.4% of the participants regarded doctors and health centers as their primary healthcare options. This finding is consistent with the findings of Khajeh et al. (2019) and Aliyu et al. (2020), who reported a preference for public hospitals over other healthcare facilities. Despite offering lower-quality services, most individuals favour government health facilities for lower treatment costs (Aliyu et al., 2020). However, Nwankwo et al. (2017) reported that, rather than primary health facilities, most households use patent medicine vendors or pharmacies as their first line of therapy. Moreover, 19.9% of the respondents preferred traditional practitioners, a trend supported by other studies (Thapa, 2007; Taffa, Yamasaki-Nakagawa, 2011; Owumi et al., 2013; 2015; Raji, 2018). Moreover, the study highlights the implications of diverse influences on healthcare decision-making. A total of 3.4% of the respondents considered religious leaders to be healthcare sources. This research highlights how complex and diverse healthcare decision-making is in the community. This suggests that more research is needed to better understand these influences.

Health-seeking behaviours

Furthermore, the data illuminate the varied healthcare-seeking practices embraced by Jere residents. While Orthodox medicine was favoured by 44.5% of the respondents, the use of Orthodox and traditional healthcare was related to socioeconomic status. Ahmed et al. (2005) reported that a substantial portion (36.0%) incorporates traditional methods, such as the use of herbs. Women in Uganda seeking treatment for malaria were more likely to use herbs as the first course of treatment, followed by purchasing tablets from shops and, finally, Orthodox if none of the previous interventions had worked (Kengeya-Kayondo et al., 2014). Furthermore, 17.8% engage in prayers as part of their healthcare approach. These findings support the findings of Dein (2020), who revealed that individuals use Islamic texts to address different types of spiritual beings. The incorporation of these traditional practices alongside standard medical services highlights the coexistence and integration of diverse healthcare beliefs and practices within the community. Furthermore, the data show significant variation in residents' perceptions of healthcare accessibility and utilisation. This highlights the importance of creating policies to remove barriers to healthcare access and developing strategies to improve the use of healthcare services.

In addition, the in-depth interviews revealed that health facilities are accessible and affordable, and that the utilisation rate is commendable however not all can afford to pay for prescriptions. These findings support Agofure and Sarki's (2017) assertion that respondents are satisfied with the services provided at the primary healthcare centers studied. However, the community faces challenges such as an inadequate workforce, electricity, and drugs. The study's main findings show that the residents of Jere LGA know the importance of utilising primary healthcare (PHC). However, challenges such as a shortage of healthcare personnel,

high treatment costs, limited availability of drugs and equipment, and unreliable electricity supply hinder access to these services. Similarly, Paul and Okolie (2022) emphasised that numerous primary healthcare centers in Nigeria, such as those located in Dutse-Makaranta, Ajuwon, Ogungbade, and Okinnin-Egbedore, face challenges related to unreliable power supply, inadequate lighting, and poor maintenance.

Conclusion

This study investigated how primary healthcare services are accessed and utilised in the Jere local government area. The study revealed that most participants were unmarried males of younger ages with a tertiary education. Most respondents felt that healthcare was not readily available or accessible as most drugs were out of stock. However, more than half of the respondents were utilising healthcare facilities and visiting health centers as their first place of contact for healthcare. A substantial proportion of the community integrates traditional and cultural healthcare practices alongside conventional medical services. In addition, a negligible number resorted to prayers and sought blessings from elders. Most respondents who do not utilise facilities said that a lack of drugs and funds is the reason. One significant finding highlighted the accessibility and crucial role of Fori's primary healthcare and Mairi Clinic in providing essential services to the community, a reassuring presence in the healthcare landscape. The study revealed several barriers to accessing healthcare, such as limited facility access, insufficient drugs and staff, low health literacy, and a lack of awareness. The recommendations aimed to improve healthcare utilisation by understanding barriers, identifying specific hindrances, and implementing comprehensive strategies aligned with community preferences.

Strengths and Limitations

This study was the first to examine the assessment and utilisation of primary health care in Jere LGA. The study's cross-sectional nature and the use of mixed methods allowed the researchers to reach the target population within a short period and with minimal resources. The study revealed that providing services and commodities such as water, drugs, electricity, and equipment significantly contributes to Jere residents' access to and utilisation of primary health care. However, the study has some limitations. It was conducted in homogeneous and heterogeneous populations, so the findings cannot be generalised to the entire LGA. Additionally, only descriptive statistics were used, so including inferential statistics would strengthen the findings.

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