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Research Article

Availability and Access to Primary Health Care Services Among Residents of Ndokwa West Local Government Area of Delta State, Nigeria

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ABSTRACT

INTRODUCTION: Primary healthcare utilization denotes the inclination of potential or prospective patients to make use of the services offered at primary healthcare facilities. However, availability and access to adequate healthcare has become an issue of concern especially at rural levels. This research therefore is aimed at assessing the availability and access to PHC services among residents of Ndokwa West LGA.

METHODOLOGY: A descriptive cross-sectional study approach was used in the investigation, which included 396 participants; a pretested semi-structured questionnaire was used to collect information from respondents. The data obtained were analyzed using SPSS version 25.

RESULTS: The findings showed that the respondents were primarily men, married, and Ukwani, with a majority of 86.1% being natives. Over half (55.6%) had tertiary education, while 30.3% practiced non-manual skilled occupations. Most respondents were aware of primary healthcare centres in their communities, with 89.9% stating they were available, functional and had adequate equipment for patient care. The cost of services was affordable and convenient for most respondents, with 66.7% able to afford them. Most respondents could afford these services for their spouse and children, with 86.6% agreeing that monthly income was enough to cover medical expenses.

COCLUSION: The majority of respondents' residences were convenient, with personal vehicles being the most common means of transportation. It was recommended that the populace be sensitized more on the availability of primary health care centres and further research done to explore the discrepancies in the access to primary health care.

Keywords: Primary Health Care, Primary Health Care availability, access to Primary health care services

INTRODUCTION

Primary health care (PHC) has been widely accepted as the approach to achieving this challenging goal ever since the worldwide mission of "Health for All" was founded in 1978. The globe won't become healthy until we accomplish Health for All for everyone equally and fairly across riches and poverty, education and illiteracy, old and young, men and women, youngsters and elders, established and developing countries (Yusuf, 2021). By providing preventative, therapeutic, and rehabilitation treatments, the primary health care system is a basic method created to tackle the neighbourhood's fundamental public health concerns (Olise, 2012). Primary healthcare is described as "essential care based on practical, scientifically sound and socially acceptable methods and technology, made universally accessible to individuals and families in the community through their full participation, and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-

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reliance and self-determination" (WHO 2012) in the Alma Ata declaration. Basic healthcare principles highlight the strategy's great worth. The principles of community involvement, cross-sector collaboration, essential health care, equity and use of suitable technological devices are the guiding principles underlying the success of primary health care as the objective of obtaining universal health coverage. The above demonstrates the involvement of primary health care in involving majority of the people in the development, delivery, and evaluation of health programmes with the goal of meeting their needs without regard to social, economic, or geographic constraints. It requires making appropriate use of technologies and resources from both inside and outside the healthcare industry (Olise, 2012).

The progress in both the broader societal and economic development of a locality, as well as the overall healthcare system of a nation, hinges on primary healthcare. This facet constitutes the initial point of interaction between people, their households and the community with the national healthcare structure, striving to make healthcare readily available in proximity to people's residences and workplaces. Furthermore, it serves as the foundation for a continuous healthcare provision process. Primary Health Care encompasses a spectrum of services including promotion, prevention, treatment, support, and rehabilitation, tailored to address the key health challenges encountered by the community, as defined by the World Health Organization in 2012. The progress in both the broader societal and economic development of a locality, as well as the overall healthcare system of a nation, hinges on primary healthcare. This facet constitutes the initial point of interaction between people, their households and the community with the national healthcare structure, striving to make healthcare readily available in proximity to people's residences and workplaces. Furthermore, it serves as the foundation for a continuous healthcare provision process. Primary Health Care encompasses a spectrum of services including promotion, prevention, treatment, support, and rehabilitation, tailored to address the key health challenges encountered by the community, as defined by the World Health Organization in 2012.

Primary healthcare should ideally include a wide variety of diverse medical supplies for the whole populace, including preventative, therapeutic, motivating, and restorative treatments. As established by the World Health Organization in 1978, it should act as the very first entrance stage through the healthcare sector and provide comprehensive and integrated services by creating relationships with various levels of care. Primary health care's foremost objective is to ensure that everyone has equitable access to the resources required to fulfil the healthcare needs of the majority of the population. Several factors impact the access and availability of healthcare services, including geographical as well as financial factors among others (WHO 2012). The concept of access, encompassing the "5As" (accessibility, affordability, availability, accommodation, and acceptability), reflects the harmonization of attributes and standards between healthcare providers and clients. The specific modes of delivering primary healthcare services and how well they align with the values and customary behaviors of rural communities have been given little consideration, as stated by the World Health Organization in 2012. Over nearly three decades since the Alma-Ata Declaration, the Nigerian healthcare system has, in terms of nomenclature and structure, incorporated principles of primary healthcare (WHO 2012). It has built a national infrastructure and devolved primary healthcare delivery to local governments. However, these changes have had limited impact on the health status of Nigerians, particularly those residing in rural areas. For example, the Nigeria Demographic Health Survey in 2018 indicated a five-year newborn death percentage of 67 deaths per 1,000 live births, which was higher than the estimate from the 2003 survey. Although this increase can be attributed to improved data quality in the 2018 survey, it remains evident that the implementation of primary healthcare has not significantly influenced health indicators.

Affordability relates to the cost of care in relation to a patient's ability to pay, while availability gauges a provider's capacity in terms of resources, such as staff and technology, to meet patient demands. Accessibility pertains to the geographic ease of reaching healthcare facilities. Accommodation entails adjustments made to align provider activities with patient constraints and preferences, including operating hours and patient access, irrespective of their status or the need for prior appointments. Acceptability assesses the comfort level of patients regarding the cultural, religious, and social aspects of healthcare services. As established by the World Health Organization in 1978, PHC should act as the very first entrance stage through the healthcare sector and provide comprehensive and integrated services by creating relationships with various levels of care.

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The fundamental challenges in the field of primary healthcare, as delineated during the Alma Ata conference, have garnered global recognition and consensus. However, despite this acknowledgment, there exists a lack of uniformity and clarity in how these principles are interpreted and implemented across nations worldwide. A recent study from the World Health Organization's African region underscores the issue by suggesting that the utilization of primary healthcare services hovers at a mere 5-7%, signifying an alarming 95% underutilization of these services. This situation persists despite substantial budget allocations towards primary healthcare, including the extensive construction of clinics, recruitment of staff, ongoing training efforts, and numerous collaborations spanning various sectors. Universal access to a high standard of healthcare is considered a fundamental right for citizens across the globe, including Nigeria. The goal of primary healthcare, envisioned to be achieved by the year 2000 and beyond, is to ensure that every individual is given an opportunity of accessing healthcare services. Regrettably, Nigeria is yet to reach this objective. However, to enhance accessibility and equity, basic healthcare facilities have been established in both metropolitan as well as rural regions of the country. The primary objective of primary healthcare is to offer essential health services to people and the populace at large making use of cost-effective, respectful, and environmentally friendly resources. However, the availability and access to PHC services in rural communities has become a major concern. This study seeks to assess the availability and access to Primary Health Care Services among Residents of Ndokwa West Local Government Area of Delta State, Nigeria.

Aim of the study

The aim of this study is to assess the availability and access to Primary Health Care Services among residents of Ndokwa West Local Government Area of Delta state.

1.4 Objectives of the Study

1. Access the availability of primary healthcare services in Ndokwa West Local Government Area of Delta State
2. Identify the types of healthcare services available in primary healthcare centers in Ndokwa West Local Government Area of Delta state.
3. Identify the affordability of primary healthcare services in Ndokwa West Local Government Area of Delta State
4. Identify the physical accessibility of primary healthcare centers in Ndokwa West Local Government Area of Delta State

1.5 Significance of Study

In many developing nations, particularly in Africa, a lack of awareness about their respective national health systems and programs prevails among residents. This limited awareness can lead to excessive or inefficient utilization of medical facilities. Moreover, research indicates that primary healthcare utilization rates have remained low since their establishment in Nigeria in 1992 (Jaro et al., 2012). Recognizing the factors influencing healthcare facility usage, especially at the primary level, has become imperative. This is because one of the primary objectives of primary healthcare in developing countries is aimed at boosting the health conditions of individuals as well as communities through health promotion and increased utilization of preventive, curative, and rehabilitative healthcare services.

To emphasize the importance of primary healthcare, it must be stated that it is easily accessible, contains effective and inexpensive vital medicines, and immunizations for all individuals. The Delta State region faces limited access to basic healthcare services, with less than 10% of primary healthcare facilities providing full spectrum of services. Most facilities are private clinics, with less than half having necessary items for antenatal care and infection control supplies. Medical professionals make up 9% of the workforce, with less than half receiving professional training. Assessing the availability and access to PHC services will provide information to enable policymakers take measures to improve access and availability of PHC services through the formulation of gender-responsive policies and strategies, especially in remote areas.

METHODOLOGY

Study design

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A descriptive cross sectional analytical study design was employed for this study.

Study area

This research was conducted out in Delta State's Ndokwa West Local Government Area. The headquarters of Ndokwa West are in Utagba-Ogbe (Kwale). According to the 2006 census, it has an area of 816 km2 and a population of 149,325 (Joy, 2021). Ndokwa West's prominent settlements are Utagba Uno, Onicha-Ukwani, UtagbeOgbe, Emu, Ogume, Abbi,Oliogo, and Ijeze, and its postal code is 322 (Joy, 2021). Civil officials, farmers, tiny traders, palm oil manufacturers, and local gin manufacturers are among the indigenous peoples in this local government region. Ukwani is the primary language spoken in the local government region. The religion frequently observed by the residents of Ndokwa West local government area is Christianity; others are traditional worshipers, whereas a few are Muslims.

Population of study

The study population includes people who are heads of households and residents of selected communities in Ndokwa West local government area (the study area).

Inclusion Criteria

The inclusion criteria involve heads of households who are 18 years or older and consented to participate and are residents that should have stayed in the study area for at 1 year.

Exclusion Criteria

The exclusion criteria involve heads of households who are unavailable during the study, heads of households indisposed and unable to answer and heads of households who have refused to consent to the research.

Sample size

The desired sample size was determined using Cochrane's formulae (Lepine*et al.,* 2018)

$$n = \frac{Z^2 \times pq}{d^2}$$

Where:

n = desired sample size

z = standard normal deviate corresponding to the possibility of type 1 error (a) at 95% = 1.96 confidence interval

p = utilization prevalence of proportion of individuals utilizing health service. A prevalence, p = 42.5% was used for this study which was the proportion of individuals that utilized health service in a study in Edo state (Omonana*et al.,* 2004).

q = 100 – p = 57.5% = 0.575

d = the margin of error precision set at 5% = 0.05%

$$n = \frac{1.92^2 \times 0.425 \times 0.575}{0.05^2}$$

n = 360

n = 360 + 10% (36) non-response rate = 396

Therefore, the least sample expected is 396.

Sampling technique

Multistage sampling technique was used to select the respondents for the study.

Stage 1: The study utilized a straightforward random sampling method involving balloting to determine the specific location within the Ndokwa West Local Government Area where the research would be conducted. Ultimately, four out of the available 10 wards were chosen for the study.

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Stage 2: In the selected wards, 3 communities each were selected using a simple random sampling technique.

Stage 3: In the 3 communities selected, 4 streets each were selected using a simple random sampling technique.

By dividing the total of 396 representing the population, a sample of 99 head of household was needed in each of the 4 wards selected, a sample of 33 head of household was needed in the 3 communities selected, and a sample of 11 head of household was needed in the each of 3 streets from each community in the selected ward.

Stage 4: Cluster sampling was done to identify and select the first household and take the nearest household next.

If 2 household falls on the same distance, select and sample the one on the right and leave the one on the left (Equidistance).

Method of Data Collection

Data collection was carried out through the use of semi-structured questionnaire administered by interviewers. The questionnaire was specifically designed for the study to gather information regarding the availability and accessibility of Primary Health Care (PHC) centers in the Ndokwa West Local Government Area. The questionnaire was structured with closed-ended questions and divided into five sections: Section 1 focused on socio-demographic characteristics, Section 2 covered the availability of services, Section 3 addressed the types of services offered, Section 4 examined economic accessibility, Section 5 explored physical accessibility. The administration of the questionnaire was performed by trained research assistants who were given clear instructions on the study's requirements. They were tasked with asking the questionnaire questions in a straightforward and understandable manner, using both English and the local language of the community (Ukwuani). To maintain organization, each questionnaire was assigned a unique number, and completed questionnaires were collected from the interviewers after each survey session for further compilation and analysis.

Validity and Reliability of Instrument

The study tool (questionnaire) was validated by the research supervisor. The validity of the study was also ensured by the use of a pretested structured questionnaire from the Department of Community Medicine University of Port Harcourt. The questionnaires were pretested to test the reliability of it and the outcome was evaluated and amended where necessary before actual administration.

Data analysis

Data was analysed using SPSS Version 25. Descriptive statistics (means, frequencies and percentages, as appropriate) were computed for all variables. These data were reviewed to check for outliers, missing data, and “cells” with low frequencies that might hinder stable statistical analysis.

Risk of the Research

This study may expose the current state (physical condition) and shortcomings of Primary Health Care centers in the LGA. There was also the risk of the possibility of recall bias, as the study depended on the responses given by the participants.

Ethical Approval

Ethical clearance was sought and obtained from the University of Port-Harcourt Ethical Review Committee. The objectives of the study were clearly explained to the participants and informed consent was obtained. Participants were assured of the confidentiality of their responses and that non-participants would be of no effect. The questionnaires did not have any personal identification; serial numbers were used.

Confidentiality

Participants were assured of the confidentiality of their responses. The questionnaires did not have any personal identification.

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RESULTS

A total of 400 questionnaires were administered to head of households, 396 properly completed questionnaires were used for analysis, which gave a response rate of 99%. Also, there was no missing data because only completely filled questionnaires were used for the analysis, hence giving 100% completeness of data.

Sociodemographic characteristics of respondents

According to Table 4.1 many 240(60.6%) respondents were men, 264(66.7%) respondents were married, and there were more 269(67.9%) Christians among the respondents. The majority 344 (86.1%) of research respondent are natives of the community, and 273(68.9%) of them identify as Ukwani. Based to educational attainment, more than half 220 (55.6%) of the respondents had their tertiary education. Non-manual skilled occupation e.g secretary, business was practiced by 120(30.3%) of the respondents as their occupation and many participants earned more than ₦150,000 as an income.

Table 4.1: Socio-Demographic Characteristics of Respondents

Variables	Frequency (n=396)	Percentage (%)
Sex		
Male	240	60.6
Female	156	39.4
Marital Status		
Married	264	66.7
Single	63	15.9
Divorced	24	6.1
Widow	34	8.6
Cohabiting	11	2.8
Religion		
Christianity	269	67.9
traditional worshiper	75	18.9
Islam	22	5.6
Others	30	7.6
Native of the community		
Yes	344	86.9
No	52	13.1
Ethnic group		
Ukwani	273	68.9
Igbo	77	19.4
Yoruba	6	1.5
Hausa	17	4.3
Others	23	5.8
Highest level of education		
No formal education	41	10.4
Primary	11	2.8
Secondary	47	11.9
Tertiary	220	55.6
Postgraduate	77	19.4
Monthly income		
<30,000	23	5.8
30,001-60,000	68	17.2
60,001-90,000	36	9.1
90,001-120,000	21	5.3
120,001-150,000	42	10.6

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150,000	59	14.9
>150,000	147	37.1
Occupation		
Military or other uniform services	6	1.5
Professional/higher managerial occupation e.g doctor, lawyer, engineer, accountant	64	16.2
Intermediate/lower managerial occupation e.g banker, teacher	109	27.5
Non manual skilled occupation e.g secretary, business	120	30.3
Manual skilled occupation e.g tailor, mansion/bricklayer, carpenter	22	5.6
Partly skilled occupation electrical officer, trader, hairdresser	46	11.6
Unskilled occupation e.g janitor, daylight watchman	24	6.1
Never worked/long term unemployment	5	1.3

Access the availability of primary healthcare services in Ndokwa West Local Government Area of Delta State

Table 4.2 shows that there are Primary healthcare centre in the communities as indicated by a vast number 385(97.2%) of the respondents, research participants that were aware of the type of healthcare services rendered in the primary healthcare centre in the communities were 356(89.9%) as many 174(43.9%) got the information of the existence of a primary healthcare centre in your community through health workers. Majority 356(89.9%) of the study participants indicated that primary healthcare centre functional, whereas many 221(62.1%) of the respondents stated there were enough equipment in the primary healthcare centre readily available for patient care, more than half 182(51.1%) of the participants indicates that healthcare personnel's are sometimes readily available.

Table 4.2: The Availability of Primary Health Care Centre

Variables	Frequency (n=396)	Percentage (%)
Primary healthcare center in your community		
Yes	385	97.2
No	11	2.8
Aware of the type of healthcare services rendered in the primary healthcare center in your community		
Yes	356	89.9
No	29	7.3
Don't know	11	2.8
Means through which you knew about the existence of a primary healthcare center in your community		
Television	23	5.8
Radio	17	4.3
Newspaper	6	1.5
Church	16	4.0
Health workers	174	43.9
Friends/relative	160	40.4
Primary healthcare center functional		
Yes	356	89.9
No	18	4.5
Don't know	22	5.6

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Enough equipment in the primary healthcare center readily available for patient care		
Yes	221	62.1
No	135	37.9
Healthcare personnel's readily available		
Yes always	174	48.9
Yes sometimes	182	51.1

Identify the types of healthcare services available in primary healthcare centres in Ndokwa West Local Government Area of Delta state.

Table 4.3 indicates that healthcare services available in the primary healthcare centre visited and services used at last visit to the primary healthcare centre in the community was blood pressure as stated by 261(22.2%) and 143(26.1%) of the study participants respectively. Majority 351(88.6%) and 255(64.4%) of the study respondents affirmed the availability of drug supply and equipment correspondingly. Many respondents 279(70.5%) and 351(88.6%) confirmed that the available equipment was functional and the referral service is of quality standard respectively.

Table 4.3: Types of Healthcare Services Available in the Primary Healthcare Center

Variables	Frequency (n=396)	Percentage (%)
Healthcare services available in the primary healthcare center visited		
General Out	191	16.3
In patient	204	17.4
Child health	145	12.3
Blood pressure	261	22.2
Malaria	125	10.6
Weight	116	9.9
Family	41	3.5
Accident and emergency	6	0.5
Laboratory	27	2.3
Pharmaceutical	41	3.5
Others	18	1.5
Services used at last visit to the primary healthcare center in the community		
General Out	112	20.4
In patient	82	15.0
Child health	100	18.2
Blood pressure	143	26.1
Malaria	58	10.6
Family	17	3.1
Accident	6	1.1
Laboratory	12	2.2
Pharmaceutical	18	3.3
Availability of drug supply		
Yes	351	88.6
No	24	6.1
Don't know	21	5.3
Available equipment		
Yes	255	64.4

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No	113	28.5
Don't know	28	7.1
Available equipment functional		
Yes	279	70.5
No	78	19.7
Don't know	39	9.8
Referral service of quality standard		
Yes	351	88.6
No	18	4.5
Don't know	27	6.8

Affordability of primary healthcare services in Ndokwa West Local Government Area of Delta State

In table 4.4, majority 325(82.1%) of the study respondents stated that the services were not free, among which many 164(49.7%) considered it very cheap. Cost of services were affordable and convenient for majority 362(91.4%) of the participants, as many 264(66.7%) of the respondents could always afford the services. While majority 303(76.5%) of the respondents could afford these services for your spouse, more 343(86.6%) could do same for their children, most 357(90.2%) of the participants admitted that monthly income was enough to cover these medical expenses incurred, among which 310(86.8%) respondents concurred that left income was enough to cover your remaining needs.

Table 4.4: Affordability of Primary Healthcare

Variables	Frequency (n=396)	Percentage (%)
Services free		
Yes	66	16.7
No	325	82.1
Don't know	5	1.3
Services are not free; how do you consider them (n=325)		
Very expensive	39	11.8
Expensive	24	7.3
Very cheap	164	49.7
Cheap	103	31.2
Very expensive	39	11.8
Cost of services affordable and convenient		
Yes	362	91.4
No	29	7.3
Don't know	5	1.3
Can you afford these services		
Always	264	66.7
Sometimes	121	30.6
Never	11	2.8
Afford these services for your spouse		
Yes	303	76.5
No	70	17.7
Don't know	23	5.8
Afford these for your children		
Yes	343	86.6
No	30	7.6
Don’t know	17	4.3
Sometimes	6	1.5
Monthly income enough to cover these		

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medical expenses incurred		
Yes	357	90.2
No	17	4.3
Don't know	10	2.5
Sometimes	12	3.0
Left income enough to cover your remaining needs (n=357)		
Yes	310	86.8
No	17	4.8
Sometimes	30	8.4

Physical accessibility of primary healthcare centres in Ndokwa West Local Government Area of Delta State

Table 4.5 reveals that majority 361(91.2%) of the respondents' place of residence to facility distance is convenient as the means of transportation frequently used by many 205 (51.8%) participants to get to the primary healthcare centre are personal vehicles and more 216(54.5%) of the respondents used same means on last visit to the primary healthcare centre. Many 233(58.8%) of the study participants place of residence is less than 5km away from the healthcare centre and takes less than 15mins for 182(46.0%) of the respondents.

Table 4.5: Physical Accessibility of Primary Healthcare Centre

Variables	Frequency (n=396)	Percentage (%)
Distance from place of residence to facility convenient		
Yes	361	91.2
No	30	7.6
Don't know	5	1.3
Means of transportation frequently used to get to the primary healthcare center		
Walking	46	11.6
Taxi	23	5.8
Personal vehicle	205	51.8
Bike	116	29.3
Others	6	1.5
Means of transportation last used in last visit to the primary healthcare center		
Walking	52	13.1
Taxi	5	1.3
Personal vehicle	216	54.5
Bike	117	29.5
Others	6	1.5
Distance of the primary healthcare center from place of residence		
Less than 5km	233	58.8
5-10km	112	28.3
More than 10km	23	5.8
Don't know	28	7.1
Duration to get to the primary healthcare center		
Less than 15mins	182	46.0
15-30 mins	179	45.2

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30min-1hour	11	2.8
More than 1hour	24	6.1

DISCUSSION

Socio-Demographic Characteristics

The survey comprised a predominantly male respondent group, with females forming a smaller segment. A substantial portion of the participants were married, indicating a significant presence of individuals in marital unions. Other marital statuses included single, with cohabiting being the least common. Regarding religious affiliation, the majority identified as Christians, followed by traditional worshippers, with the smallest group being Muslims. A significant proportion reported being natives of the community, while a smaller percentage were not. Among the respondents, the predominant ethnic group was Ukwani, followed by Igbo, and the smallest representation came from the Yoruba ethnic group. Educational backgrounds of the participants varied, with the highest percentage having attained tertiary education. Occupationally, respondents covered a broad spectrum, including professional/higher managerial roles, intermediate/lower managerial positions, manual skilled jobs, partly skilled occupations, unskilled employment, and individuals who had never worked or experienced long-term unemployment. Non-manual skilled occupations had the highest proportion, and monthly income distribution varied across respondents.

Availability of Primary Health Care Services

The study's findings concluded that primary healthcare centers were available and operational in the communities surveyed. A significant majority of respondents reported the existence of primary healthcare centers in their communities. This widespread availability suggests positive accessibility to healthcare facilities in these areas. In comparison to Makinde et al.'s 2018 findings, both studies revealed variations in healthcare facility ownership, distribution, and density across different regions. However, in contrast to Jigjidsuren et al.'s 2019 study in some districts of Mongolia, where a substantial proportion of health facilities lacked the capacity to provide basic healthcare services meeting minimum standards despite having infrastructure, this study indicated better access. Similarly, in a study by Al Saffer, disparities were found in the accessibility and distribution of primary healthcare centers, suggesting regional differences in primary healthcare access and services.

Types of Health Care Services Available in Primary Health Care Centers

The study has identified a broad spectrum of healthcare services offered at the primary healthcare center, indicating a holistic approach to addressing diverse health needs in the community. Respondents also shared the types of services they typically used during their visits, with blood pressure measurement being the most frequently utilized service. The majority of respondents reported that essential drugs were readily available at the primary healthcare center, highlighting the importance of access to medications for effective and efficient healthcare delivery. This high percentage suggests robust infrastructure support in this regard.

Regarding equipment availability, most respondents reported its presence, while fewer mentioned a lack of equipment. Among the majority reporting equipment availability, most indicated that the equipment was functional. However, it is crucial to ensure that equipment remains consistently available and operational to support effective healthcare service delivery. The study found that most respondents considered the referral service to meet quality standards. This suggests that patients have confidence in the primary healthcare center's ability to refer them to higher-level care when necessary, emphasizing the essential role of a well-functioning referral system within the healthcare delivery system.

When compared to studies conducted by Oyekale et al. in 2017, this study highlighted common challenges and variations in primary healthcare services and resources across different regions of Nigeria. These challenges encompass disparities in drug availability, equipment functionality, and the quality of care. The availability and functionality of equipment were found to differ across various Nigerian states, indicating potential regional disparities in primary healthcare infrastructure and resources. The positive perception of referral services aligns

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with the significance of a well-functioning referral system in primary healthcare, ensuring patients can access higher levels of care as needed, ultimately contributing to the overall effectiveness of the healthcare system.

In summary, the comprehensive range of available primary healthcare services suggests that the primary healthcare center is well-equipped to address various health needs within the community. However, ongoing efforts are necessary to maintain and ensure the functionality of equipment. These findings provide valuable insights into healthcare service availability, utilization, drug supply, equipment, and referral services within the primary healthcare center studied. Addressing equipment-related challenges and ensuring the availability of non-expired medications are essential steps toward enhancing the effectiveness of primary healthcare delivery.

Affordability of Primary Health Care Services

The findings of this study shows that the overall perception of affordability and economic accessibility to primary healthcare services in the surveyed population is positive. A minority of respondents reported that primary healthcare services were offered for free, while the majority stated that they were not free. Most respondents deemed primary healthcare costs to be reasonable and manageable, with a significant portion expressing confidence that their income was sufficient to cover both medical expenses and other financial needs. This optimistic perception suggests that the majority of individuals feel that primary healthcare costs do not impose significant financial hardships. Nevertheless, it is essential to acknowledge that some individuals still encounter challenges in affording primary healthcare services, particularly those who can only afford them occasionally or not at all.

Comparatively, a study conducted by Burnham et al. in 2011 found that a notable portion of respondents reported either free primary healthcare services or expenses covered through out-of-pocket payments in most households. However, a small yet considerable proportion of respondents had to resort to borrowing money to meet their healthcare-related costs. Both our study and the study by Burnham underscore that a significant segment of the population faces economic hurdles when accessing primary healthcare. In alignment with another study by Daniel et al. in Nigeria in 2016, financial constraints were notably prevalent among individuals seeking primary healthcare services, with user fees being a noteworthy obstacle for some.

Finally, these findings highlight that while the majority of respondents perceive primary healthcare costs as reasonable, some individuals still find these expenses burdensome. This underscores the significance of addressing economic barriers to primary healthcare access by developing policies and strategies, even in settings where services are considered accessible. These efforts should aim to ensure that primary healthcare services are both accessible and affordable to a broader and potentially all segments of the population.

Physical Accessibility of Primary Health Care Centers

The results of this study regarding the physical accessibility of primary healthcare services indicate that, overall, a majority of respondents perceive these services as conveniently located, with various transportation options available. However, it's crucial to acknowledge that there are still individuals who may experience longer travel times or prefer different types of primary healthcare providers, including traditional healers and prayer houses. When asked about their preferred place for treatment, respondents who favored general hospitals were more numerous, followed by those who preferred private hospitals. The respondents' choice of treatment location was primarily influenced by factors such as the facility's efficiency in providing services, with spousal decisions also playing a significant role. Comparing these findings with the analysis of another study conducted by Tanser et al. in 2006 in northern KwaZulu Natal, where walking was the predominant mode of transportation to primary healthcare facilities, highlights the importance of understanding local transportation dynamics in effectively assessing healthcare accessibility. Similarly, a study in Nigeria emphasized the significance of primary healthcare facilities as the most physically accessible tier of healthcare. Moreover, a study on access to primary health care (PHC) services and associated factors in Pakistan revealed that women accessed PHC services more than men due to their greater health needs. However, a large proportion of both genders did not access any PHC services. Besides general weaknesses, gender-related barriers were found in basic health unit locations, distance, transport, staff availability, income, service hours, and service organisation, confirming gender issues in access to PHC services (Panezai et al., 2017). However, comprehending the factors influencing primary healthcare choices, including the

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desire for quicker service and spousal decisions, can inform healthcare planning and interventions. These insights into the physical accessibility of primary healthcare services can guide efforts to enhance access, minimize travel times, and align healthcare services with the preferences and cultural considerations of the population. Policymakers and healthcare providers should consider the influence of demographic and socio-economic factors when designing interventions to improve access to primary health care services. Additionally, addressing cost-related barriers, especially for low-income individuals, is crucial to ensuring equitable access to these services.

CONCLUSION

In conclusion, this study emphasizes the crucial role of socio-demographic factors and accessibility considerations in shaping primary healthcare utilization patterns. These findings offer invaluable insights for healthcare policymakers and practitioners striving to enhance healthcare service utilization and accessibility within the community. Additionally, they provide a solid foundation for future research and interventions aimed at improving primary healthcare services and ensuring equitable access for all community members. The journey of primary healthcare in Nigeria, particularly in rural areas, has made significant strides, but there is still substantial work ahead to achieve the objective of universal health coverage, ensuring healthcare access for all now and in the future.

Recommendations

After recognizing the multitude of issues linked to evaluating the utilization of primary healthcare and its related determinants, and in order to effectively and efficiently implement and attain the objectives of government primary healthcare service delivery, the following recommendations are proposed as a path forward:

- Recognizing the influence of socio-demographic factors on healthcare utilization, healthcare providers and policymakers should develop targeted outreach programs. These initiatives should focus on specific groups such as women, singles, minority ethnic groups, and those with lower education levels to address potential barriers and improve access.
- Efforts should be made to improve the physical accessibility of healthcare facilities, especially in remote or underserved areas. This may involve expanding the network of primary healthcare centers or improving transportation options for those living farther from existing facilities.
- Healthcare centers should maintain the quality of their services, particularly in terms of the attitude of staff and waiting times. Ensuring a positive patient experience will not only retain current users but also encourage new ones to utilize primary healthcare services.

Declaration of competing interests

The authors declare that there are no competing interests, of any nature, financial or otherwise, that have or appeared to influence the findings in this work. Lastly, it is pertinent to note that the declared views are those of the authors, entirely.

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