An Assessment of Factors Influencing Healthcare Facility Choice and Non-Utilization of Modern Health Services in Rural Communities in Rivers State Nigeria

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Abstract—

Background: Utilization of modern healthcare services remains suboptimal in many rural communities in Nigeria despite the availability of primary healthcare facilities. This study assessed factors influencing healthcare facility choice and reasons for non-utilization of modern health services among rural residents in Rivers State, Nigeria.

Methods: A descriptive cross-sectional study was conducted among rural residents in selected communities across Rivers State. A multistage sampling technique was used to select respondents from ten randomly selected upland and riverine Local Government Areas. Data were collected from 400 respondents using structured questionnaires, interviews, and observations. Information on socio-demographic characteristics, healthcare facility preference, and factors influencing utilization was obtained. Data were analyzed using IBM SPSS version 27.0, with descriptive statistics and chi-square tests applied at a 5% level of significance.

Results: The mean age of respondents was 33.62 ± 4.21 years, with females constituting 53%. Alternative medicine, patent medicine vendors, and private facilities were preferred over government-owned primary health centres. Socio-demographic factors such as age, sex, marital status, educational level, occupation, and area of residence were significantly associated with healthcare facility choice. Key reasons for facility preference included quick service (82.8%), availability of drugs (78.1%), laboratory services (77.6%), and staff attitude (69.9%). Major reasons for non-utilization of modern health facilities were lack of equipment and laboratory services, poor facility environment, absence or irregular presence of doctors, and distrust in staff competence. A large proportion of respondents reported bypassing nearby facilities to seek care elsewhere. However, most expressed willingness to utilize primary health centres if improvements were made.

Conclusion: Underutilization of modern healthcare services in rural Rivers State is driven largely by modifiable systemic and service-related factors rather than cultural resistance alone. Strengthening primary healthcare infrastructure, staffing, drug availability, and service quality is essential to improve utilization and advance progress toward universal health coverage.

I. BACKGROUND

The World Health Organization emphasizes that attaining the highest possible level of health requires coordinated action not only within the health sector but also across multiple social and economic sectors that shape the social determinants of health, including education, housing, income, and the physical environment.[7][8].However, evidence indicates that PHC coverage in rural Nigeria remains inadequate. Shortages of skilled health personnel, poor infrastructure, limited essential drugs, and insufficient financing have undermined effective service delivery in many rural communities [4][12]. As a result, many rural residents continue to rely on traditional healers and informal healthcare providers as their first point of contact when illness occurs. Studies have shown that a substantial proportion of rural Nigerians lack regular access to well-equipped health facilities, making traditional medicine a more readily available and culturally acceptable option [25][22].

Furthermore, in many rural communities, particularly in low- and middle-income countries, illness is often interpreted through cultural and spiritual lenses, with health-seeking behaviour shaped by traditional beliefs, norms, and social structures [2].At the global level, efforts to improve population health were reinforced through the Millennium Development Goals (MDGs), which prioritized reductions in child and maternal mortality and control of infectious diseases. These goals were succeeded by the Sustainable Development Goals (SDGs) in 2015, with Goal 3 specifically aimed at ensuring healthy lives and promoting well-being for all at all ages [3]. Despite these commitments, Nigeria continues to face significant challenges in achieving universal health coverage, particularly for rural and marginalized populations.

Additionally, recent studies in Nigeria continue to show that patent and proprietary medicine vendors (PPMVs) remain a major source of healthcare for many households, particularly for first-line treatment of common illnesses. Evidence from rural communities indicates that households often prefer patent medicine vendors and pharmacies to primary healthcare facilities due to convenience and perceived effectiveness [21][5].Similarly, cost of treatment remains a major determinant of health-seeking behaviour, especially among low-income populations, where out-of-pocket expenditure influences the choice of healthcare provider [6]. In addition, waiting time in public health facilities has

been identified as an important factor influencing healthcare facility utilization, as long queues and delays discourage patients from using government-owned hospitals [10][11]. Considering the potential impact of low healthcare utilization on the quality of life of the population, this study examined the reasons for respondent preference of choice of Healthcare facility for care and factors for non/utilization of modern health facilities by the people of rural areas.

II. METHODS

Study area

The study was conducted in selected rural communities in Rivers State, Nigeria, located in the Niger Delta region. The state is bounded by the Atlantic Ocean to the south and by Anambra, Imo, Abia, Akwa Ibom, Bayelsa, and Delta States. Ten Local Government Areas (LGAs) were randomly selected from the twenty-three LGAs in the state, comprising five upland LGAs (Emohua, Ikwerre, Etche, Omuma, and Khana) and five riverine LGAs (Okrika, Bonny, Andoni, Opobo/Nkoro, and Degema). The selected communities are predominantly rural, with residents mainly engaged in farming, fishing, trading, and civil service. Although modern healthcare facilities are available, utilization remains low in many rural areas.

Study design and sampling

This study employed a descriptive cross-sectional design to examine healthcare facility utilization and the influence of alternative medicine practices among rural residents in Rivers State, Nigeria. Data were collected from beneficiaries of healthcare services in selected rural communities.

A multistage sampling technique was used to select respondents for the study. In the first stage, ten Local Government Areas (LGAs) were selected through simple random sampling from the upland and riverine LGAs in Rivers State, excluding Port Harcourt and Obio/Akpor LGAs due to their urban characteristics. Five LGAs were selected from the upland areas and five from the riverine areas. In the second stage, five rural communities were randomly selected from each selected LGA, resulting in a total of fifty communities. In the third stage, proportionate stratified random sampling was used to select beneficiaries of healthcare services from each community.

A total sample size of 400 respondents was obtained from the selected communities. The sampling approach ensured adequate representation of rural populations across both upland and riverine areas of the state.

Data collection

Data were collected using personal observation, face-to-face interviews, and structured questionnaires, complemented by secondary sources. Observations of households during morning and evening hours provided insights into living conditions and reliance on traditional remedies. Interviews with community members, students, traditional practitioners, and modern health workers explored health-seeking behaviors, treatment effectiveness, and facility attendance. A self-developed questionnaire, based on the study variables, assessed the relationship between health status, income, and utilization of modern health care services. Respondents rated items on a five-point Likert scale, and questionnaires were distributed proportionally across communities to ensure representativeness.

Data analysis

Statistical data analysis was performed using IBM SPSS version 27.0, a powerful and reliable statistical software. At preliminary analysis, descriptive method was used to describe the distributional characteristics of the data. These include distribution tables and charts, which were all expressed as the percentage of the distribution. Chi-square test method was conducted to test for associated risk factors to glaucoma P-value less than 0.05 was considered statistically significant.

III. RESULTS

Socio Demographic Characteristics of Respondents

Table 1 shows the demographic distribution of respondents. The age range of the respondents was between 18 and 62 yr (33.62±4.21 yr). Almost 80% of the respondents were between 18 and 50 yr. Male: female ratio was 0.89:1. The single, married and widowed were 55.7%, 38.3% and 6.0%, respectively. Only 15.0% of the respondents had no form of formal education. Most of the respondents were students (126, 34.4%), and this was followed by skilled workers (105, 28.7%), which included various forms of artisans while the civil servants while others such as professionals (bankers, lawyers, doctors, teachers), unskilled workers such as orderlies and petty traders. The results indicated that sex, marital status, educational status, occupation and residential area where the respondents dwell are all associated with the preferred choice of health facility for care. The select health facility with the highest proportion for both sexes was the alternative medicine, but whereas 33.1% of males would prefer the alternative medicine, it was 37.1% for the female gender. The study also revealed that the most common preferred facility for singles and married was the health centres, but it was the alternative medicine for the separated/widowed/divorced. Among respondents with primary or no formal education, pharmaceutical/medicine store was the preferred choice of health facility, but it was health centres for respondents with secondary and tertiary education.

Respondents with higher educational status utilize the private and teaching hospital more than their counterparts with lower academic levels. Similarly, the unemployed respondents and those with skilled jobs, such as artisans,prefer medicine stores for care than other facilities. Still, students and professionals, including respondents with unskilled jobs, will choose the private hospital. More respondents living in the inner core would rather patronize the medicine store, while those living in the outer heart would prefer the alternative medicine most.

Table 1: Socio-Demographic Characteristics of Respondents

Variable	Frequency N= 366	Percentage Response
Age		
18 – 30	112	30.6
31 – 40	84	23
41 – 50	95	26
51 – 60	57	15.5
> 60	18	4.9
Sex		
Male	172	47
Female	194	53
Marital status		
Single	204	55.7
Married	140	38.3
Widowed/separated/ divorced	22	6
Educational status		
None	55	15
Primary	106	29
Secondary	136	37.2
Tertiary	69	18.8
Occupational status		
Professional	41	11.2
Skilled	105	28.7
Unskilled	50	13.7
Students	126	34.4
Unemployed	44	12
Area of Residence		
Inner core	216	59
Outer core	150	41

Source: Survey Data, 2012

Reasons for Respondents' Preference of Choice of Health Facility for Care

Table 2 hows that in seeking reasons for their preference and what they considered in choosing a healthcare facility, quick service was the most typical reason given by 82.8% of all respondents. This was followed by the availability of drugs (78.1%). Other reasons were availability of laboratory facilities (77.6%), good attitude of the staff (69.90%) and qualified personnel (65.6%), convenience and proximity (71.6%), privacy (58.7%), respect or good attitude by workers (69.9%), cheap service constitute (29.0%) and the fact that it was the family hospital (17.8%) (Table 3). Other reasons provided were the doctor being a family member, relative or friend;the doctor is very patient, thorough and considerate. Some also felt that they had been too used to a particular health centre or that the native doctors in such facilities knew their history well. Others thought they could have some leverage regarding mode of payment of fees/charge, while some claimed they received free treatment. Some of the respondents (184, 51.4%) felt that the staff at the Basic Health Centers were not capable of treating them because they were not experts or because there were no qualified doctors.

Table 2: Reasons for Respondents' Preference of Choice of Health Facility for Care

Reason	Frequency	Percentage Response
Cheap Service	106	29.0
Convenience/Proximity	162	44.3
Qualified Personnel	240	65.6
Quick Service (alternative medicine)	303	82.8

Privacy	215	58.7
Good Attitude of Staff	256	69.9
Equipment an Lab Service	284	77.6
Drug Availability	286	78.1
Family Hospital	65	17.8
Other reasons	174	47.5
No other Choice	212	57.9

Source: Survey Data, 2012

Factors / Reasons for Non-Utilization of Modern Health Facilities by the People in Rural Areas

Table 3 shows that the major reasons for not utilizing the primary health centres were presumed lack of equipment and drugs. Others reported that the choice of facility for healthcare service should be personal, and everyone should be given a free hand. In addition, 21.4% of the respondents felt that Basic health centresare meant for local and illiterate people,and 33.9% thought it is for those who cannot afford the expenses in teaching hospitals or other reputed primary health care centres. To improve utilization of the basic and comprehensive health centres and cottage hospitals, the respondents felt the following should be put in place: good looking environment, modern facilities including laboratories, drug availability, geographical accessibility, availability of qualified medical personnel – doctors and nurses. Other qualities demanded were the improved attitude of workers and affordable services. If these things are put in place, 72.5% of those who would not have loved to use the primary health centres claimed they would use it, while 13.6% claimed they will still not use it despite the improvement, and another 13.6% could not make up their mind yet. Some respondents (314, 85.8%) reported that they usually skipped one or more health facilities close to them to attend their choice much farther away. The respondents gave reasons why they would ignore a health facility close to them and utilize one that is farther are provided in Table 2. For most of the respondents, no specific reasons were given.

Table 3: Factors / Reasons for Non-Utilization of Modern Health Facilities by the People in Rural Areas(n=314)

Reason	Frequency	Percentage Response
No 24 hr service	46	14.6
No equipment/laboratory service	158	50.3
Environment unkempt / not cozy	166	52.9
Staff poor relationship	124	39.5
No doctor in the health centre	65	20.7
The doctor does not present most times	112	35.7
No doctor on call / night duty	108	34.3
Do not trust staff competence	85	27.1
Services are expensive	73	23.2
Do not like primary health care centre	29	9.2
I wouldn't say I like government health centres	66	21
travel cost	55	17.5
No particular reason	32	10.2

Source: Survey Data, 2012

IV. DISCUSSION

The findings from this study indicate that socio-demographic factors play a significant role in determining healthcare utilization patterns among respondents in rural communities. The majority of respondents were within the economically active age group (18–50 years), with a mean age of 33.6 years. This age distribution suggests that healthcare utilization decisions are largely made by young and middle-aged adults, a trend consistent with findings from previous studies in Nigeria and other low- and middle-income countries [22][23]. The slight female predominance observed in this study aligns with earlier research indicating that women are more likely to seek healthcare services than men, often due to reproductive health needs and greater health consciousness [15][25]. However, despite this higher participation, both males and females showed a strong preference for alternative medicine, suggesting that gender alone does not guarantee utilization of modern healthcare facilities. This finding contrasts with studies conducted in urban settings where women more frequently utilize formal health services than men [5].Marital status was also associated with the preferred choice of healthcare facility. Singles and married respondents were more inclined to utilize health centres, whereas widowed, separated, or

divorced individuals preferred alternative medicine. This may be explained by social support systems, as married individuals often benefit from spousal encouragement to seek formal care, a pattern similarly reported by [18][11] Educational status emerged as a strong determinant of healthcare utilization. Respondents with secondary and tertiary education preferred health centres, private hospitals, and teaching hospitals, while those with little or no formal education relied more on medicine stores and alternative medicine. This finding supports existing literature that links higher educational attainment with improved health literacy and increased utilization of formal healthcare services (Andersen, 1995; Oladipo, 2014). Conversely, reliance on informal healthcare providers among less educated respondents mirrors findings from studies in rural Nigeria and other parts of sub-Saharan Africa [21][26].Occupational status further influenced utilization patterns. Unemployed respondents and artisans were more likely to patronize medicine stores, likely due to lower costs and flexible payment options. In contrast, students and professionals preferred private hospitals, reflecting their relatively higher socioeconomic status and perceived quality of care. Similar observations have been reported by [14], who found income and occupation to be key predictors of healthcare choice.Residential location also shaped healthcare utilization. Respondents living in inner-core areas favored medicine stores, while those in the outer core preferred alternative medicine. This finding underscores the influence of geographical access and proximity, consistent with Andersen's Behavioral Model, which identifies enabling factors such as location and accessibility as critical determinants of service use.

Additionally, quick service emerged as the most common reason for preferring a healthcare facility, reported by over 80% of respondents. This highlights the importance of waiting time in healthcare decision-making. Long waiting times in public health facilities have been repeatedly cited as a major deterrent to utilization in Nigeria [10][20] . The preference for alternative medicine in this regard may reflect perceptions of faster and more personalized care. Availability of drugs and laboratory services were also major considerations, reinforcing concerns about frequent stock-outs and inadequate diagnostic capacity in public primary health facilities. Similar findings have been documented in studies conducted across Nigeria, where drug availability strongly predicts patient satisfaction and utilization. The importance of staff attitude and perceived competence further underscores the role of quality of care in utilization decisions. Negative provider attitudes and lack of skilled personnel have been widely reported as barriers to healthcare utilization in rural settings [4][22]. Interestingly, cost was reported by fewer respondents compared to service quality indicators, suggesting that affordability alone is insufficient to drive utilization without acceptable quality.

Furthermore, the study revealed that non-utilization of modern health facilities was largely driven by structural and systemic weaknesses, particularly lack of equipment, poor facility environment, and absence of doctors. Over half of the respondents cited lack of laboratory services and unkempt environments as major deterrents. These findings are consistent with national and regional studies that report inadequate infrastructure and staffing shortages as persistent challenges in Nigeria's primary healthcare system [19][27]. Distrust in staff competence and poor staff-patient relationships further discouraged utilization. This aligns with findings by [25] who emphasized that perceived provider competence and interpersonal care significantly influence health-seeking behavior.Notably, a high proportion of respondents reported bypassing nearby facilities to seek care farther away, reflecting a lack of confidence in local health centres. Similar bypass behavior has been observed in rural Nigeria and other developing countries, where patients prioritize perceived quality over proximity [18][20].Encouragingly, the majority of respondents indicated willingness to utilize primary health centres if improvements were made in infrastructure, staffing, drug availability, and service quality. This suggests that underutilization is not due to outright rejection of modern healthcare, but rather to modifiable system-level deficiencies.

V. CONCLUSION

This study examined healthcare facility utilization patterns and the factors influencing preference for alternative and modern healthcare services among rural residents in Rivers State, Nigeria. The findings demonstrate that utilization of modern primary healthcare facilities remains suboptimal, with a significant proportion of respondents preferring alternative medicine, patent medicine vendors, and private facilities over government-owned primary health centres. Socio-demographic factors particularly age, sex, marital status, educational attainment, occupation, and place of residence were found to significantly influence healthcare-seeking behaviour and choice of health facility. Service-related factors such as quick service delivery, availability of drugs and laboratory services, perceived staff competence, and provider attitude were more influential in determining healthcare utilization than cost alone. Structural and systemic deficiencies within primary healthcare centres including inadequate equipment, poor facility environment, shortage and absenteeism of qualified medical personnel, lack of 24-hour services, and weak patient–provider relationships were major drivers of non-utilization. The widespread practice of

bypassing nearby health facilities in favour of distant ones further reflects low confidence in the quality of care offered at the primary level. Importantly, the study reveals that reluctance to utilize modern healthcare services is not rooted in cultural resistance alone, but largely in modifiable weaknesses within the health system. The expressed willingness of most respondents to use primary health centres if improvements are made underscores the potential for increased utilization through targeted investments in infrastructure, staffing, drug supply, and service quality. Strengthening primary healthcare delivery in rural areas is therefore essential for improving access, restoring public trust, and advancing Nigeria's progress toward universal health coverage and the health-related Sustainable Development Goals. Overall, this study highlights the urgent need for comprehensive health system strengthening interventions that prioritize quality, accessibility, and responsiveness of primary healthcare services in rural communities. Addressing these gaps will not only reduce reliance on unregulated alternative care but also enhance equitable health outcomes for underserved populations in Rivers State and similar rural settings across Nigeria.

VI. RECOMMENDATIONS

Based on the results of this study, the following recommendations were made:

1. Policy makers' and all stakeholders' attention ought to be drawn to improving the status and performance of the peripheral health facilities, improving the outlook image of the primary health facilities and making them environmentally friendly. Similarly, efforts to raise and keep the standards of practices in the primary health care centres through continuous medical education and regular accreditation assessment by relevant bodies is imperative in providing quality healthcare services to the populace that can lure the out of crude alternative medicine patronage.

2The role which primary health centres are expected to play in terms of health education of the people has not been possible because of their poor staffing and lack of facilities. The challenge of improving the contribution of primary health care centres to the modern health care system in Rivers State in the next decade relates to the need to train and retain more community staff to carry out the essential functions carried out by nurses, midwives and health educators. However, given the reluctance of professionally trained health personnel to work in the remote villages in local government areas and considering the reluctance of the youth to migrate to urban areas where jobs are no longer available, there is a pool of local person that can be easily trained for this purpose.

3. A programme of personnel and facility improvement in the primary health care centres in the state should be combined with a policy of deliberate dispersal of primary health centres in various parts of the state, especially in the local government areas where population density is high and yet there are limited primary health establishments.

4. Closely related to the policy of dispersal of primary health centres is the establishment of mobile clinics in localities where the population is so dispersed that it will be difficult for the threshold population, which is justifiable for a primary health centre to be provided and be attained. The primary function of such clinics is to carry out activities similar to those carried out by primary health establishments. This measure would reduce the penchant for non-utilisation of modern health care facilities by rural dwellers.

DECLARATIONS

Ethical Considerations

A letter approval was obtained from the Department of Public Health Ethical Clearance Committee at the Federal University of Technology Owerri (FUTO) before the commencement of the study. Before their inclusion in the study, each respondent was educated on the goal of the research and their verbal informed consent was obtained.

Funding

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Conflict of Interest

The Authors have declared no conflict of interest relevant to the study

Available data and materials Materials used in this study are in the reference section. In addition, any other information relating to this work will be provided on reasonable request by the corresponding author

Code Availability

Not applicable

Clinical Trial Number

Not applicable

Consent to Publish

Not applicable

Consent to participate

All participants in this study provided informed consent to participate. Ethical approval for this study was obtained from Federal University of Technology Owerri Ethics Committee, and all procedures followed ethical guidelines.

Ethics Statement

This study was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki. The research protocol was reviewed and approved by Federal University ofTechnology Owerri

Ethics Committee and all participants provided informed consent prior to their participation

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