Factors Influencing the Use of Healthcare Services across Underserved Communities in Two Niger Delta Regions of Nigeria

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Abstract

Background: The healthcare landscape in the Niger Delta is marred by complex and persistent barriers, including poverty, geographic isolation, cultural beliefs, environmental hazards, and inadequate healthcare services. These factors collectively contribute to low healthcare availability for utilisation among women and children in the region, impeding efforts to improve maternal and child health and achieve universal healthcare access in Nigeria. **Methodology:** This study employs a descriptive research design, gathering data from 3,188 females as respondents in Delta and Edo States through household copies of the questionnaire. **Results:** The analysis, utilizing KoboToolbox and SPSS, reveals that 53.7% of respondents consulted a healthcare provider or traditional healer in the past 12 weeks, while 46.3% did not. Major barriers identified include long waiting times (28.6%), lack of trained personnel (6.1%), and high costs (4.1%). Proximity to healthcare facilities significantly influences utilisation, with those living within 15-30 minutes (trek or drive) of a health centre more likely to seek care than those living far away. **Conclusion/recommendation:** The findings underscore the need for systemic reforms to enhance healthcare access by addressing long waiting times, improving facility conditions, and increasing the availability of trained healthcare workers. Expanding healthcare infrastructure and transportation options for remote areas could improve healthcare utilisation and outcomes.

Keywords: Healthcare, Environmental hazards, Cultural beliefs, KoboToolbox

Introduction

World Health Organization (WHO) estimates that more than half a million women lose their lives in the process of reproduction worldwide yearly, with about 99 per cent often from developing countries (Jonathan & John, 2019). Sub-Saharan Africa is responsible for more than fifty per cent of maternal deaths occurring in developing countries. Nigeria, a part of Sub-Sahara Africa, accounts for more than 40,000 maternal deaths; this is roughly over 14% of the global statistics. A woman's vulnerability to death from pregnancy and childbirth in Nigeria is 1/13. The deaths of newborn babies in Nigeria represent a quarter of the total number of deaths of children under five years of age.

According to UNICEF Nigeria, Nigeria loses about 2,300 under-five and 145 women of childbearing age every single year (UNICEF, 2021); this makes the country the second largest contributor to the under-five and maternal mortality rate in the world. The majority of these occur within the first week of life, mainly due to complications during pregnancy and delivery. These outrageous deaths have been attributed to poor/lack of utilisation of maternal health care services. As such, the risk of women in a developing country dying from maternal-related problems during their lifetime is about eighty times that of a woman living in a developed country (WHO, 2021). The provision of quality

facility-based obstetric and paediatric care is the first step to preventing complications and saving the lives of mothers. There are at least 9.2 million women and girls that require these facilities every year in Nigeria. During pregnancy, any of these women can develop serious life-threatening complications. Therefore, it is important to provide enough facilities to meet the needs of all women. Significant efforts have been made to improve maternal health in Nigeria in the last 10 years (Jonathan & John, 2019). The desired outcome of every pregnancy is always a healthy mother and child. The most important goal of the public health service is to improve the well-being of all mothers, infants, and children. Maternal health services are healthcare services provided to women of childbearing age to preserve the mother's life and the baby's well-being. It can also be defined as the care given to women during pregnancy, childbirth and postpartum periods to ensure good health outcomes for the woman and baby. It is one of the components of primary health care services aimed at providing health for all. The goal of maternal health services is to prevent and detect any potential complications in pregnancy and childbirth. The elements of maternal health services include prenatal care, intrapartum care and postpartum care. Each element is helpful in maternal survival as it reduces maternal mortality and morbidity and improves the well-being of mothers and their children before, during, and after birth. The World Health Organisation (2020) estimated that 74 per cent of mortality and morbidity could be averted if all women had access to interventions that address complications of pregnancy and childbirth, especially emergency obstetric care. Access to healthcare services for women and children in underserved communities across the Niger Delta remains a pressing issue, shaped by a range of socio-economic, cultural, and systemic factors. The Niger Delta, characterised by its challenging terrain and environmental degradation due to oil exploration, presents unique barriers to healthcare access, especially for vulnerable populations such as women and children (Ibaba, 2017). Despite efforts to improve healthcare delivery, utilisation rates remain low, contributing to poor maternal and child health outcomes. Poverty is another factor influencing healthcare use in these communities. Many households across the Niger Delta live in extreme poverty, which limits their ability to afford healthcare services, transportation, and medications (Ogunlesi & Olanrewaju, 2010). Inadequate health infrastructure, including the uneven distribution of healthcare facilities and the shortage of skilled health professionals, further compounds these challenges (Edejer *et al.,* 2020). Rural women often have to travel long distances to access healthcare, and when they do, they frequently encounter poorly equipped facilities and overworked staff. Cultural beliefs also play a significant role in shaping healthcare-seeking behaviour. In many communities, traditional beliefs and practices, such as reliance on traditional birth attendants (TBAs) for childbirth, can deter women from seeking formal medical services (Omorogiuwa *et al.,* 2016). Male-dominated decision-making in the household may further restrict women's autonomy in accessing healthcare for themselves and their children. A study conducted in Southwest Nigeria, who are predominantly of Yoruba ethnicity and Christians, reported that at least two-thirds of the respondents delivered in homes, and at least 80% of them used unskilled birth attendants (Adelaja, 2018). A qualitative study in rural Nigeria revealed that perceived reasons for the underutilisation of formal maternal care included poor quality of care, physical inaccessibility, financial inaccessibility, and lack of community knowledge. Moreover, 67% and 33% of the total home deliveries were reported to be planned and unplanned, respectively.

For those who reported to have planned home deliveries, the reason cited was convenience and comfort, while those reporting unplanned home deliveries cited obstacles such as sudden labour pains, lack of transportation, no person to accompany the mother to the hospital, and cost (Adelaja, 2018); this demonstrates that religion might not be the only underlying reason for the practice of home delivery in Nigeria. Jonathan and John (2019) found that some sociocultural factors such as age, religion, traditional belief system, education, and marital status influence women's use of maternal healthcare centres in the Talensi District, Ghana. Also reported by the same authors are factors such as women's National Health Insurance Scheme status, distance to the health centre, and attitude of health care professionals. Environmental pollution due to oil extraction activities across the Niger Delta has had a profound impact on health, particularly for women and children. Studies show that oil spills and gas flaring have contributed to increased rates of respiratory diseases, malnutrition, and other health problems in the region (Nriagu *et al.,* 2016). These environmental factors, combined with limited access to clean water and sanitation, worsen the health outcomes for vulnerable populations and reduce the likelihood of seeking preventive or curative healthcare services.

In summary, the factors influencing the use of healthcare services for women and children in underserved communities of the Niger Delta are multifaceted, involving economic, cultural, environmental, and systemic challenges. Addressing these barriers is essential to improving the region's maternal and child health outcomes. The objective of the study was to assess the factors influencing the use of health care services by women and child's health in underserved communities in two Niger Delta regions. The following research questions were raised:

1. What are the common barriers to consulting healthcare providers across underserved communities, and how do these barriers impact the treatment of sickness or injury?
2. How does the proximity to healthcare facilities influence the frequency and type of healthcare services utilized in the past 12 weeks?

Materials and methods

A descriptive research design was used in the study, and 3,188 females responded to household copies of the questionnaire in the two target (Delta and Edo) States, as indicated in Table 1. Considerable success was achieved in terms of the participation of female respondents, as indicated in Table 1. Table 1 further showed that the degree of participation of females is consistent across the two states and the local government areas covered by the survey. The active participation of females in the survey in the absence of males is valuable so that the females can report on the actual position of gender inequality in the project communities and have their voices heard. The administration of the quantitative instruments resulted in 3,188 females responding to the copies of the questionnaire in the two target states. The last 12 weeks of this study were purposively considered. Data were collected using KoboToolbox (Kobocollect). After the collected quantitative data were downloaded from the server and cleaned, they were exported to Statistical Package for the Social Sciences (SPSS) for analysis.

Table 1: Percentage of respondents in the two project states

States Distribution	No	%
Delta State	1572	49.3
Edo State	1616	50.7
Total	3188	100

Table 2: Percentage of respondents' participation by LGAs

Local Government Areas	Total	
	N	%
Ethiope East (Delta state)	522	100
Ika South (Delta State	521	100
Isoko South (Delta State)	529	100
Esan Central (Edo State)	521	100
Etsako East (Edo State)	542	100
Ovia South West (Edo State)	553	100
Total	3188	100

Results

R**esearch question one:** What are the common barriers to consulting healthcare providers in underserved communities, and how do these barriers impact the treatment of sickness or injury?

Table 3 shows the consultation rate of the respondents. It showed that out of 3,188 respondents, 1,711 (53.7%) reported consulting a health provider or traditional healer within the last 12 weeks, while 1,477 (46.3%) did not seek any consultation during that period; this shows that just over half (53.7%) of the sample size sought medical care or traditional healing services. However, a significant portion, nearly half (46.3%), did not consult any healthcare provider; this indicates a substantial gap in the available healthcare utilization, possibly due to barriers that prevent people from seeking healthcare even when needed. Among those who did not consult a healthcare provider (46.3% of respondents), the reasons for non-consultation are varied (Table 4). The most commonly reported barrier to seeking healthcare was long waiting times, with 912 respondents (28.6%) citing this as a reason; this suggests that access to timely care is a critical issue in these underserved communities, potentially discouraging people from seeking treatment. Another significant barrier was the lack of trained personnel (6.1%); 195 respondents (6.1%) noted no trained healthcare workers available, highlighting a shortage of skilled professionals in these areas. High costs (4.1%) in healthcare were another barrier, with 132 respondents (4.1%) citing it as being "too expensive." Unclean facilities (3.3%), 104 respondents (3.3%) mentioned that healthcare facilities were not clean, which could deter them from seeking care. Less significant barriers, like lack of drugs (0.3%), unsuccessful treatments (1.1%), and distance to the nearest facility (0.2%), were mentioned but affected fewer people. Preference for traditional treatment (2.1%) suggests that cultural beliefs still play a role, with some respondents preferring traditional medicine over formal healthcare. A majority (1,711 respondents or 53.7%) marked "not applicable," aligning with those who had already reported seeking healthcare in Table 3, indicating they did not face barriers. The data

reveal that while a slight majority of the population did consult healthcare providers, a significant portion (46.3%) did not, primarily due to long waiting times, lack of trained personnel, and high costs. The results highlight the need to address these barriers — significantly improving efficiency, ensuring the availability of skilled healthcare workers, and reducing costs — to increase healthcare utilization across underserved communities.

Table 3: Consultation with a health provider or traditional healer in the last 12 weeks

	Frequency	Per cent
Yes	1711	53.7
No	1477	46.3
Total	3188	100.0

Table 4: Reasons for not consulting a healthcare provider

Variables	Frequency	Per cent
Facilities were not clean	104	3.3
Long waiting time	912	28.6
No trained personnel	195	6.1
Too expensive	132	4.1
No Drugs available	9	.3
Treatment unsuccessful	35	1.1
Prefer traditional treatment	68	2.1
The nearest facility is too far	6	.2
Others	16	.5
Not Applicable	1711	53.7
Total	3188	100.0

Research question two: How does the proximity to healthcare facilities influence the frequency and type of healthcare services utilized in the past 12 weeks?

Table 5 presents how long respondents can reach the nearest health centre on foot. The majority indicated that they travel 15-30 minutes to access healthcare (39.2%); this relatively short distance suggests that a significant portion of the population has moderate access to healthcare facilities. For the longer travel times for a substantial portion (31-45 minutes: 24.1%; over 45 minutes: 19.1%), a notable 24.1% (768 respondents) reported needing 31-45 minutes to reach the nearest healthcare facility, and 19.1% (607 respondents) indicated that it takes over 45 minutes. 10.6% travel 46-60 minutes, while 8.5% travel over 60 minutes; this shows that healthcare access is difficult for a substantial portion of the population, requiring extended travel time, which could act as a barrier to available healthcare utilization. For the short distance for a segment (0-14 minutes: 17.7%), a smaller group of respondents (17.7%) indicated that they live within 0-14 minutes of the nearest health facility; this group likely has better access to healthcare and, consequently, may have higher rates of healthcare utilization. Hence, proximity to healthcare facilities likely influences how individuals seek healthcare services. The data suggested that those living within 15-30 minutes of a health centre may find it easier to access services than those living far away, which could lead to increasing utilization rates.

Conversely, respondents who need over 30 minutes to reach the nearest health centre may face challenges accessing care. Longer travel times can discourage people from seeking healthcare, particularly for non-urgent conditions, leading to delayed or skipped treatments. The data indicate a need for policies to improve access to healthcare for those who

live farther from facilities (over 30 minutes); this might include building more health centres in underserved areas or providing transportation services. Proximity to healthcare facilities plays a crucial role in determining healthcare utilization. Those who live closer to health centres (within 15-30 minutes) are likely to access services, while those with longer travel times (over 45 minutes) may face significant barriers, leading to reduced healthcare utilization. Improving access for distant communities could enhance overall healthcare outcomes.

Table 5: Proximity to healthcare facilities influence the frequency and type of healthcare services utilized in the past 12 weeks

Duration	Frequency	Per cent
0-14mins	563	17.7
15-30mins	1250	39.2
31-45mins	768	24.1
46-60mins	337	10.6
Over 60mins	270	8.5
Total	3188	100.0

Discussion

The data reveals that 53.7% of respondents sought medical consultation from a health provider or traditional healer within the last 12 weeks, while 46.3% did not; this indicates that although a slight majority of individuals are utilizing healthcare services, a significant proportion faces barriers that deter them from seeking necessary care. Among those who did not seek healthcare, long waiting times emerged as the most significant barrier, affecting 28.6% of respondents; this supports existing literature, which highlights that inefficient healthcare systems, especially in low-resource settings, often lead to delays that discourage individuals from pursuing medical treatment (Okeke & Uzochukwu, 2021). The shortage of healthcare professionals also plays a crucial role in access; 6.1% of respondents cited the absence of trained personnel as a reason for not seeking care; this reflects broader concerns about the healthcare workforce in underserved areas, where the lack of skilled staff has been documented as a persistent issue (Adewuyi & Ogunlesi, 2019). Cost also proved to be a notable barrier, with 4.1% of respondents finding healthcare services "too expensive." The financial burden of healthcare is a widely recognized factor in deterring healthcare utilization, particularly in rural and underserved communities. Additionally, the condition of healthcare facilities contributed to low consultation rates, as 3.3% of respondents avoided seeking care due to unclean facilities. Poor infrastructure and hygiene in healthcare settings can significantly reduce trust in the healthcare system and discourage people from seeking care, as observed in similar studies (Akinyemi & Adebowale, 2022). Cultural preferences also influenced healthcare-seeking behaviour; 2.1% of respondents preferred traditional treatments over formal healthcare; this highlights the importance of traditional medicine in specific communities and suggests that cultural beliefs can act as both a facilitator and a barrier to formal healthcare utilization. The results emphasize the need to address systemic barriers such as long waiting times, inadequate staffing, high costs, and poor facility conditions; these factors collectively hinder the timely treatment of sickness and injury in underserved communities. To improve healthcare access and outcomes, interventions must focus on increasing efficiency, expanding the healthcare workforce, and enhancing affordability (Obinna, 2020).

Proximity to healthcare facilities significantly influences healthcare utilization. The data show that 39.2% of respondents live within 15-30 minutes of a health centre, while 17.7% live within 0-14 minutes; these respondents, who have relatively easy access to healthcare, likely represent those inclined to seek services regularly. However, a considerable portion of the population (24.1%) reported needing 31-45 minutes to reach the nearest health facility, and 19.1% of respondents required over 45 minutes to access care. For these individuals, the extended travel time serves as a barrier to healthcare, contributing to delayed treatment or complete avoidance of seeking care. Previous research (provide the reference) supports this finding, showing that individuals who live farther from healthcare services are less likely to utilize them, especially for non-urgent conditions. Improving healthcare access for those who live farther away, significantly beyond 30 minutes, is crucial for enhancing health outcomes. Policies promoting establishing healthcare facilities in underserved areas or providing transportation solutions can play a key role in addressing these access disparities. Moreover, reducing travel times can lead to better utilization of healthcare services, mainly preventive care, which is often overlooked when access is challenging (Ojo & Oladeji, 2020). Proximity to healthcare facilities directly influences the frequency and type of healthcare services utilized. Reducing the distance between individuals and healthcare centres can help bridge the gap in access, ultimately leading to improved healthcare utilization and outcomes for underserved populations. Addressing geographic barriers through infrastructure development and policy interventions remains critical for healthcare reform.

Conclusion and recommendations

This study explored the barriers to consulting healthcare providers across underserved communities and the impact of proximity to healthcare facilities on healthcare utilization. Findings indicate that systemic barriers such as long waiting times, inadequate staffing, high costs, and poor facility conditions significantly deter individuals from seeking healthcare. Additionally, proximity to healthcare facilities is a critical factor influencing the frequency and type of healthcare services utilized, with individuals living farther away being less likely to access the healthcare facilities for their services. In addition, these findings underscore the urgent need for targeted interventions to reduce barriers and improve access to healthcare across underserved communities. The study advised that the

- Government and key stakeholders should implement strategies to reduce waiting times through process efficiency and staff training. The government should develop policies to establish healthcare facilities near underserved communities.
- Stakeholders in the health sector should provide affordable or free transportation services to reduce travel times for individuals living farther away. Stakeholders in the health sector should help incorporate traditional medicine into formal healthcare systems where appropriate to align with community preferences and enhance trust.
- There is a need to expand the healthcare workforce across underserved areas by recruiting and retaining skilled personnel and introducing subsidies or financial assistance programmes to reduce the cost of healthcare services for low-income populations.
- There is a need to implement mobile clinics or telehealth services to bring healthcare closer to remote populations than this study team experienced.

Limitations to the study: This study has several limitations that should be acknowledged: the cross-sectional design does not allow for the determination of causal relationships; the study relied on self-reported data, which may be subject to recall bias; the sample may not fully represent all underserved communities, limiting the generalizability of the findings; Cultural factors were only briefly examined, and further research is needed to explore their influence comprehensively. Thus, future research should adopt longitudinal designs, include more diverse populations, and delve deeper into the interplay between cultural practices and healthcare-seeking behaviour.

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