Texila International Journal of Public Health
ISSN: 2520-3134
DOI: 10.21522/TIJPH.2013.13.01.Art022

Utilization of Public Healthcare Facilities in Delta State, Nigeria

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Abstract

Nigeria's healthcare system is a complex blend of public and private providers, each offering varying levels of service and accessibility. In Delta State, healthcare utilisation patterns are influenced by factors such as affordability, accessibility, and perceived quality of care. The study examines the utilisation of public healthcare facilities in Delta State, Nigeria, exploring residents' preferences and comparing public and private healthcare services. A cross-sectional quantitative survey was conducted among 1,191 residents across six Local Government Areas in Delta State, using face-to-face and virtual questionnaires administered from March 1, 2024, to June 6, 2024. Descriptive statistics were used to analyse the data. The survey revealed that 92.53% have used public healthcare facilities at least within the space of five years, while 67.17% were more frequent users. A total of 39.00% of respondents prefer to use public hospitals; 24.90% prefer private facilities; and 36.10% equally prefer both. In terms of specific features, the public facilities were rated better for their affordability (89.99%) and accessibility (59.53%). However, private facilities were perceived to provide more effective care (58.5%) and operate with better equipment and infrastructure (50.5%), while public facilities performed better in terms of staff quality (53.65%) and value for money (53.15%). The study highlights the strong demand for public health services in Delta State but also identifies areas for improvement in care quality, equipment, and infrastructure in public facilities, which can be achieved through targeted investments and quality improvement initiatives to enhance public confidence and achieve universal health coverage.

Keywords: *Delta State Public Health Facilities, Healthcare Preference, Healthcare Quality, Healthcare Utilization, Private Versus Public Health Facilities, Universal Health Coverage.*

Introduction

The process of healthcare system development aimed at improving patients' satisfaction and universal health coverage extends beyond the mere budgeting, providing infrastructure, and sharing of supplies. The pattern of utilization of healthcare facilities is an equally important aspect of public health delivery because it is a typical reflection of the accessibility and perceived quality of healthcare services within any given region [1]. In Nigeria, and other low- and middle-income countries (LMICs), healthcare is characterised by a mix of public and private providers, each with its strengths and weaknesses [2–5]. The public healthcare facilities often fall short of expectations in service delivery as exemplified in Gemignani et al. [5] which highlights the significant gap in the public healthcare services in Burkina Faso. Such gaps often require various interventions from various institutions such as faith-based facilities and other nongovernment organizations (NGOs) to bridge them to ensure better quality, affordable,

Received: 28.01.2025 ***Accepted: 07.02.2025*** ***Published on: 28.03.2025***
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and accessible care to the poor and marginalized populations and promote utilization.

Health service utilization is in no doubt affected by the quality and many other factors often categorized into accessibility, affordability, quality of service, cost-effectiveness, quality of staff, and infrastructure condition [6–11]. These can be further grouped into structure, process, and outcomes [12]. Various studies have examined the impacts of the components of these factors. Mannan [4] examined the utilization of public health facilities in Bangladesh, revealing that cost and accessibility issues remain the major barriers. Similarly, a study by Verma et al [3] on public dental facilities shows that lower socioeconomic groups struggle to access essential dental services. Fullman et al [7] in an extensive analysis of healthcare access and quality across 195 countries found significant disparities in the performance and availability of essential services and in addition to funding and poor infrastructure, it pointed out workforce shortages, geographical barriers, and socioeconomic disparities as factors contributing to the poor performances.

Poor performance of a healthcare system will ultimately repel the users as it is strongly linked to patient satisfaction and interest in using the system. Ali et al [11] conducted a literature review on health service quality and found a strong link between patient satisfaction and the quality of care, emphasizing the importance of inclusivity and professionalism of the staff as a critical component. Similarly, Al-Jabril et al. [8] in a study conducted in Oman highlighted that the behaviour of staff such as humaneness, empathy, and emotional support is essential for ensuring patient satisfaction. In addition, Bellio and Buccoliero [10] in a study in Italy underscored the importance of the facility and environment where the care is delivered. The Nigerian public health system is not immune from these phenomena seen in other LMICs. This is evident in studies such as Balogun [9] who explored the barriers to high-quality healthcare in Nigeria and identified systematic issues such as inadequate funding, poor infrastructure, and workforce shortages as significant obstacles that hinder the delivery and reception of efficient healthcare services. The assessment of healthcare quality therefore considers healthcare access and utilization as fundamental components as reflected in many studies in public health globally [7]. The same should be considered when evaluating quality at the state levels in Nigerian States.

In Delta State Nigeria, the public health system is open to all, but the care may not be appealing to everyone. Patients are often faced with the dilemma of choosing between the public and private facilities which has their respective drawbacks. Health facilities usually differ between public and private systems, and between the urban and rural areas. Leonard and Masatu [2] examined these urban-rural quality disparities and recommended that they be addressed through policies beyond the funding levels. Such solutions can be enhanced by first understanding what makes the patients more satisfied with the care they receive. While the State government has made significant strides towards closing the gaps in the health system such as the creation of the Delta State Contributory Health Commission, the utilization of the system and the designated facilities remains an area of concern to the public health stakeholders.

Low utilization of health services is exacerbated by the high cost of care relative to the economic capacity of healthcare users as many Nigerians and Delta State residents depend on out-of-pocket (OOP) payments for care received [13–15]. This often results in a substantial portion of the population refraining from seeking care due to financial constraints, while those who do seek care may experience substandard services [16] due to already identified factors such as poor staffing and

infrastructural limitations [6–12]. In 2016, a study by Ged [6] attempted to assess the availability of essential medical devices in primary healthcare centres in Delta State and found significant gaps in the availability of these devices that are significantly hindering service delivery and patient outcomes. This is undesirable as emphasized by the World Health Organization (WHO) that health is a fundamental human right and universal health coverage (UHC) should be the goal to ensure public access to essential health services without financial hardship [16]. Yet, many LMICs struggle with resource constraints, insufficient public health spending and poor infrastructure, which makes the achievement of UHC difficult [17–19].

Delta State is not exempt from these challenges. Even though it has made efforts to improve healthcare access and quality, many residents continue to face significant barriers to utilizing the healthcare facilities [20]. However, the existing studies are from decades ago and there is no recent evidence on the frequency of public facility use, the preference for facilities, and whether residents still face the same level of challenges after nearly ten years of the existence of the Delta State Contributory Health Commission (DSCHC). This study aims to deepen the understanding of healthcare facility utilisation, preference, and comparison in Delta State. The findings will inform policy and practice, contributing to the goal of equitable access to quality healthcare for all.

Research Objectives

The following are the research questions for this study

1. To examine how residents utilize public health facilities in Delta State, Nigeria
2. To assess the preference for healthcare facilities in Delta State, Nigeria
3. To understand how residents compare public and private healthcare facilities in Delta State, Nigeria

Research Questions

The following are the research questions for this study

1. How frequently do residents utilize public health facilities in Delta State, Nigeria?
2. What is the preference of residents regarding healthcare facilities in Delta State, Nigeria?
3. How do residents compare public and private healthcare facilities in Delta State Nigeria?

Methods

Research Design

This study is a cross-sectional quantitative survey, forming part of a larger mixed-methods PhD research project. The research involved a convergent mixed-method approach [21] involving the simultaneous application of qualitative and quantitative methods. The study utilized a questionnaire-based primary survey of Delta State residents' perceptions regarding the quality of healthcare systems and services in the state in the past 5-7 years and a secondary data analysis on the budgetary functions of the government in Delta State towards healthcare services, yielding multiple articles. This article focuses on a fraction of the large pool of quantitative data.

Research Setting

Delta State is one of the 36 states in Nigeria and is in the south-south (Figure 1) with an area of 16,986 km^2 an estimated total population of 5,748,822 for the year 2023 and an annual population growth of 2%. It is bounded by Edo State to the north, Bayelsa State and Rivers State to the southeast, Ondo to the northwest, and Anambra State to the east [22].

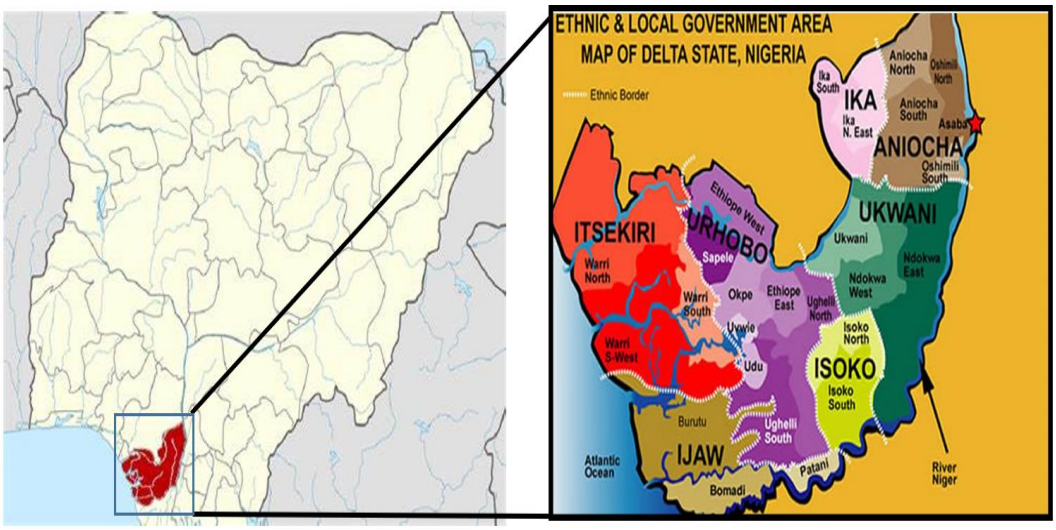

Figure 1. Map of Nigeria and Delta State showing the Local Government Areas [23,24]

Target Population

At the time of the study, Delta State's adult population was estimated at 5,748,822 using the of 5,636,100 for the year 2022 and an annual population growth of 2% [22] spread across 25 Local Government Areas (LGAs) which are divided into 3 senatorial districts; Delta North with 9 LGAs, Delta Central with 8 LGAs, and Delta South with 8 LGAs [25, 26]. To facilitate representativeness, two LGAs were drawn randomly to represent each senatorial district using the Spinwheel app [27] to obtain 6 LGAs (Table 1). To use the app, the names of all LGAs were entered into the names space and the "spin" button was clicked to spin the digital wheel. It was then allowed to a complete stop and any LGA resting at the pointer was selected and removed from the pool. The process was repeated until the 6 LGAs were reached.

Sampling Size Determination

The sample size for the study was calculated from the estimated population of 5,748,822 using Cochran's sample size formula due to the large size of the population [22, 28, 29].

$$Sample\ Size\ (n) = \frac{\frac{Z^2 * p\,(1-p)}{e^2}}{1 + \frac{Z^2 * p\,(1-p)}{e^2 N}}$$

Using p = estimated proportion of 0.5 for maximum variability, N = population size of 5,748,822, e = margin of error of 3%, and z = z-score of 1.96, the calculated sample size was 1,067 participants. To account for a potential 10% non-response rate, the final sample size was increased to 1,174 participants, rounded up to 1,200.

Table 1. LGA, Target Population, and Sample Size Selected for each Region of Delta State

Senatorial District	Selected LGA	LGA^{+} 2023 Population ^{e} (X)	Sample size (X/∑X)*1,200)
Delta North	Ika South	233,580	175
	Ndokwa West	209,712	157
Delta Central	Ethiope East	280,908	210
	Sapele	243,576	182
Delta South	Warri South	436,152	326
	Isoko North	200,634	150
Total		**1,604,562**	**1,200**

e = estimated Population. +Source: [22].

The number of respondents for each of the six LGA was calculated using the ratio of the target LGA's population to the total study population for all

$$[Required\ LGA\ Sample = (LGA\ population)/ (\sum 6\ LGA\ Population) \times 1200)]$$

regions to yield the values as outlined in Table 1.

Inclusion and Exclusion Criteria

Adults aged 25 years and above who had resided in Delta State for at least five years were eligible to participate. Preference for participants 25 years and older was due to the retrospective nature of the study, which sought to collect accurate data on healthcare experiences over the past 5–7 years.

Instrument for Data Collection

Data collection primarily involved face-to-face interviews, supplemented by virtual methods. The survey questionnaire was developed based on conceptual frameworks, including Levesque's framework for access to healthcare [30], the Donabedian healthcare quality assessment model [31], the SERVIQUAL framework [32], and Mosadeghrad's conceptual framework for quality of care [33]. Additionally, the Patient Satisfaction Questionnaire (PSQ-18) was incorporated to measure patient satisfaction [34]. The questionnaire comprises five sessions covering sociodemographic data, healthcare utilization which is reported in this article and other aspects of the cost of care, quality of care, satisfaction with care, and perceived problems and solutions to common problems in the healthcare systems.

Sampling and Procedure for Data Collection

The survey questionnaire was administered mostly physically and partly virtually. A probability sampling technique was used for sample collection using a printed copy of the questionnaire which was distributed to capture responses from respondents in the various regions to ensure more representative data. Data was collected from 3/1/2024 to 6/6/2024 by a team of 12 data collectors who were trained, assessed, and directly supervised throughout the process. Data collectors were lodged in local communities during data collection to enhance rapport and receptiveness.

Communities, health facilities, and other public places were approached with the Delta State Ministry of Health Ethics Committee approval letter and protocol for data collection. In the communities, every 5th house was randomly selected, and one adult was interviewed, while in the health facilities, every 3rd patient was interviewed after obtaining consent. In public spaces, such as churches and parks, after a general introduction, participants were randomized by a lucky dip from a box that had 5 "yes" and 5 "no" cards which were mixed and given to each willing individual to draw one card and those who selected yes were allowed to participate with further consent. A printed questionnaire was given to them to complete with the guidance of the trained data-collecting team members. Data were inspected, collated, and uploaded into a Google spreadsheet using an e-version of the questionnaire.

For the online component, the SpinWheel App was used to draw names from the participant lists on various platforms and closed social media groups after ensuring that the listed participants were from the study and sample population and met other inclusion criteria for the research.

Data Analysis

A total of 1,191 complete responses from the selected regions and LGAs were analyzed. This response was sufficient to meet the calculated sample size requirement of 1,067 respondents. The data were analyzed using Microsoft Excel, and IBM SPSS version 29. Descriptive

statistics, including variance, mean, and standard deviation, were applied and results were presented in tables and chats.

Ethical Considerations

This research proposal went through an ethical review by the Texila American University's Research Guide for approval. Thereafter, it was sent to the Delta State Health Research Ethics Committee for review and ethical clearance to conduct data collection in the State from which it received approval on the 28th of February 2024 with approval ID: HM/596/T^2/173 under the title "healthcare financing and users' quality perceptions in delta state, Nigeria".

Following full ethical approval, implementation began with the administration of the questionnaire which carries a summary of informed consent for each participant was utilized to collect data after the main informed consent document was read, acknowledged, and accepted by the respondents using an agreement question which placed at the beginning of the form that automatically terminates the interview if the participants answer a "no" to it. All respondents and participants were fully aware of and reserved the right to withdraw their consent at any point during the study.

No personally identifiable information was collected during the study and all information gathered was safely stored in the researchers' password-protected personal device. All paper responses were destroyed as soon as the data were entered into the computer spreadsheet.

Result

This session represents the results of the quantitative research study. It presents the quantitative insights and quantitative data gathered through surveys of 1,191 respondents in Delta State, Nigeria, which answers the research questions.

Sociodemographic Data

The data shows that in terms of education, 44.33% hold either an HND or a bachelor's degree, indicating a well-educated base. A total of 25.44% possess OND or other equivalent diplomas, while 19.65% have qualifications from secondary school or below. Postgraduate degrees were less common, with 9.24% master's degrees and 1.34% PhD/Fellowships.

Table 2 shows that in terms of education, 44.33% hold either an HND or a bachelor's degree, indicating a well-educated base. A total of 25.44% possess OND or other equivalent diplomas, while 19.65% have qualifications from secondary school or below. Postgraduate degrees were less common with 9.24% master's degrees and 1.34% PhD/Fellowships.

Table 2. Sociodemographic Attributes of Respondents

Sociodemographic Attributes		**Frequency (N = 1,191)**	**Percentage**
Education	Secondary/High school or below	234	19.65%
	OND/Diploma	303	25.44%
	HND/Bachelor's degrees	528	44.33%
	Masters/Postgraduate	110	9.24%
	PhD/Fellowships	16	1.34%
Age	25 - 34 years	454	38.12%
	35 - 44 years	420	35.26%
	45 - 54 years	242	20.32%
	55 - 64 years	57	4.79%
	65 years and above	18	1.51%

Local Government Area (LGA)	Warri South	265	22.25%
	Ndokwa West	214	17.97%
	Ethiope East	211	17.72%
	Sapele	188	15.79%
	Ika South	161	13.52%
	Isoko North	152	12.76%
Employment	Employed Full-time	687	57.68%
	Employed Part-time	348	29.22%
	Unemployed	156	13.10%
Marital Status	Single	459	38.54%
	Married	600	50.38%
	Divorced/Separated	96	8.06%
	Widowed	36	3.02%
Family Size	1-3	308	25.86%
	4-6	695	58.35%
	7 and above	188	15.79%
Monthly Income (naira)	Less than 30,000	183	15.37%
	30,000 to 100,000	440	36.94%
	100,000 to 250,000	394	33.08%
	250,000 to 500,000	129	10.83%
	More than 500,000	45	3.78%
Gender	Male	656	55.08%
	Female	535	44.92%
Employment Status	Non-Healthcare Sector	687	57.68%
	Healthcare Sector	309	25.94%
	Unemployed	127	10.66%
	Both Healthcare and Non-Healthcare	68	5.71%

(Source: Quantitative Survey)

The age distribution leans towards younger demographics with 38.12% being between 25-34 years old, followed closely by the 35 - 44 (35.26%) as the representation steadily declines in older age brackets. Geographically, Warri South has the most prominent representation (22.25%) in resonance with the population size. Other locations also show notable representations; Ndokwa West (17.97%), Ethiope East (17.72%), Sapele (15.79%), and Ika South (13.52%).

Full-time workers constituted 57.68%, followed by part-time employment (29.22%) and the least being the unemployed (13.10%). When examining marital status, 50.38% were married compared to 38.54% who were single. A smaller portion of 8.06% is divorced/separated and 3.02% is widowed. Family size shows that the most common size is 4-6 people (58.35%), followed by 1-3 people (25.86%), while those with 7 or more members are 15.79%.

Rate of Government Health Facilities Utilization in Delta State

The survey assessed how often residents utilize public health facilities in Delta State and the chart below shows a summary of the results.

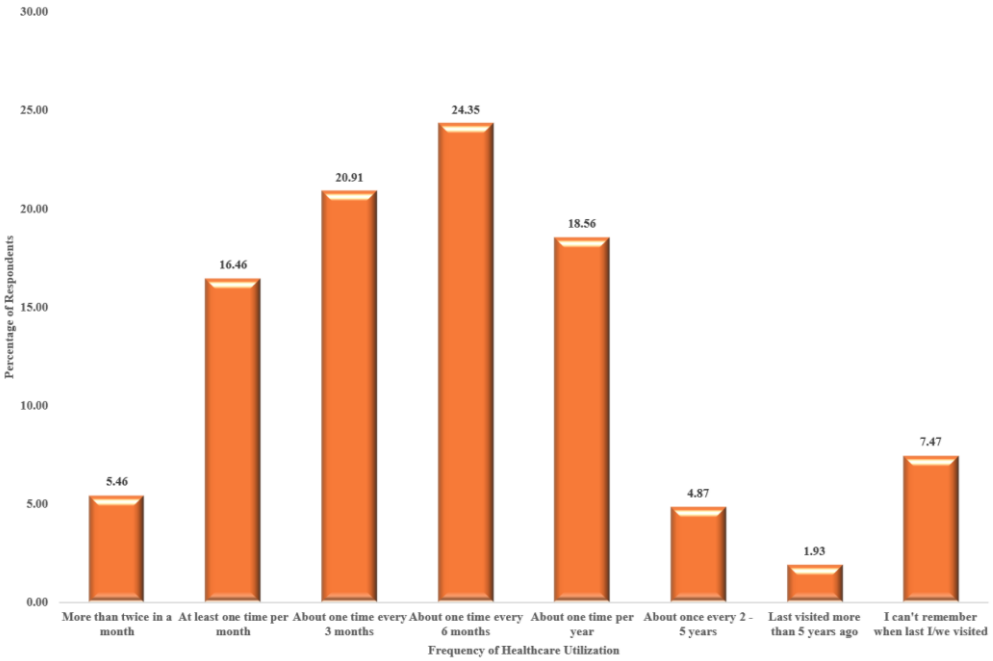

Figure 2. The Frequency of Use of Government Healthcare (n=1191)

(Source: Quantitative Survey Data)

Figure 2 shows that 24.35% of respondents use public healthcare facilities at least every six months, while a total of 42.82% use them more frequently, giving a 67.17% frequent utilization rate. While 7.47% cannot remember when last they used public health facilities, 18.56%, 4.87%, and 1.93% reported that they utilized the facilities about once yearly, every 2-5 years, or more than 5 years ago, respectively.

Preference for Healthcare Facilities in Delta State

The survey assessed the preference for healthcare facilities in Delta State Nigeria. The findings are shown in Figure 3 below.

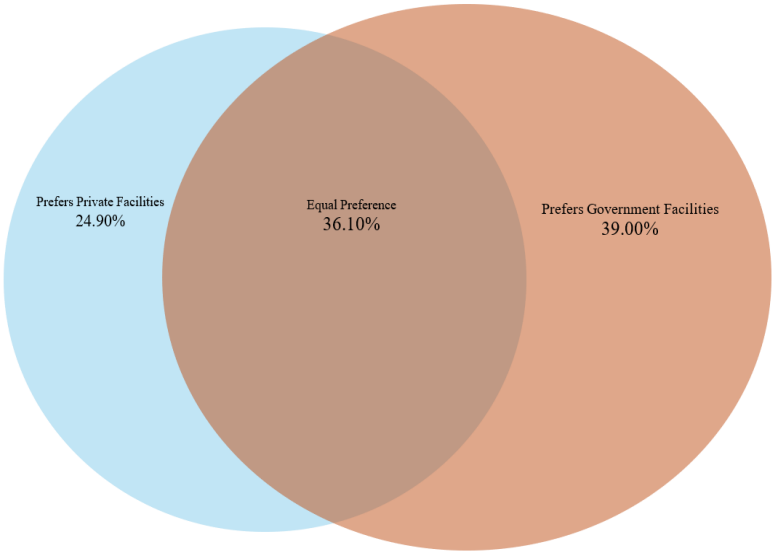

Figure 3. Preference of Healthcare Facilities among Delta State Residents (n=1191)

(Source: Quantitative Survey Data)

According to Figure 3, more than a third (39.00%) of the respondents prefer public hospitals, 24.90% prefer private health facilities, and 36.10% equally prefer both.

Comparison of Use of Public and Private Healthcare Facilities

The survey also evaluated how the Delta State residents compare public and private healthcare facilities as summarized in Table 3 below.

Table 3. Participants' Perception of the Quality of Public vs Private Hospitals (n=1191)

	Strongly agree n (%)	Agree n (%)	Disagree n (%)	Strongly disagree n (%)	Variance	Skewness	
						Statistic	Std. Error
Government hospitals are more affordable than private healthcare facilities	399 (35.5%)	637 (53.5%)	80 (6.7%)	75 (6.7%)	0.634	1.009	0.071
Government hospitals are more accessible than private healthcare facilities	187 (15.7%)	522 (43.8%)	305 (25.6%)	177 (14.9%)	0.851	0.274	
Government hospitals provide more effective care than private healthcare facilities	91 (7.6%)	403 (33.8%)	440 (36.9%)	257 (21.6%)	0.785	-0.094	
Service value for money is better in public hospitals than in private healthcare facilities	154 (12.9%)	479 (40.2%)	382 (32.1%)	176 (14.8%)	0.805	0.116	
Government hospitals have better quality of staff than private hospitals	177 (14.9%)	462 (38.8%)	346 (29.1%)	206 (17.3%)	0.894	0.122	
Government hospitals have better equipment and infrastructure than private hospitals	167 (14.0%)	423 (35.5%)	378 (31.7%)	223 (18.7%)	0.903	0.016	

(Source: Quantitative Survey Data).

Table 3 provides the Likert scale rating of the quality of public facilities compared to private. With the two ends being strongly agreed (+4 points) and strongly disagreed (+1 point) and a cutoff point of 2.5, the data was analyzed shows that the participants report that public care way more affordable than private health providers with a skewness of 1.009 and variance of 0.634 suggesting a more positive trend at high consensus. Accessibility also showed a similar pattern with a moderate positive skewness of 0.274 and a moderate variance of 0.851. Service value for money (skewness 0.116; Variance 0.805), and staff quality (skewness 0.122;

Variance 0.894) also showed a favourable perception of public facilities although with more varied opinions and less positive skewness.

However, the effectiveness of care and quality of equipment & infrastructure received a reversed and varied opinion with a variance of 0.785 and negative skewness of 0.094, equipment & infrastructure (skewness 0.016; Variance 0.903), indicating that although residents believe that the public healthcare systems are more open to them and less costly, their assessment of the facilities and effectiveness of care received are contrary.

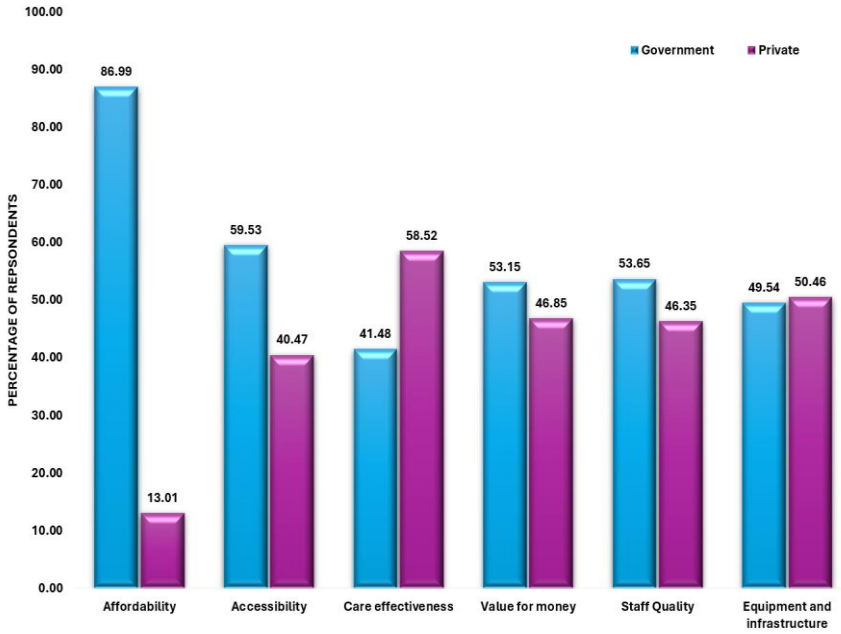

Figure 4. Summary of Participants' Perception of the Quality of Public vs Private Hospitals (n=1191)

(Source: Quantitative Survey Data)

Figure 4 is a further simplified graphical illustration of the comparative data grouped as agreed (i.e. agree + strongly agree) and disagree (disagree + strongly disagree). It shows that most respondents (89.99%) report that public health facilities are more affordable than private facilities. Accessibility, value for money, and staff quality perceived in public facilities slightly outperformed the private by occupying 59.53%. 53.15%, and 53.65% out of 100%, respectively, while the private facilities take the lead at 58.52% in care effectiveness, and slightly (50.46%) for quality of equipment & infrastructure.

Discussion

This session provides a comprehensive understanding of the utilization of public healthcare facilities in Delta State, Nigeria using responses from 1,191 residents.

Utilization of Healthcare among Delta State Residents

The study reveals that a substantial portion of Delta State residents utilize public healthcare facilities with regularity. Specifically, 67.17% of respondents indicated frequently utilizing these facilities at least every six months, highlighting a strong reliance on public health services as often seen in developing countries such as Nigeria. This finding is slightly higher than that of Nwokoro et al [35], who found 46.2% utilization among adult residents in Obupka, Enugu State. It is also significantly higher than Muhammed et al [36] which found 7.6% in Katsina State, and Nwakwo et al [37] which found 18.9% in Anambra State.

However, these numbers are lower than those reported by Adam and Awunor [38], who reported 76.8% in Edo State, and Otovwe and Elizabeth [39], whose study showed 89.4% utilization of primary healthcare facilities in Kaduna State. It is worth noting that these studies report general healthcare utilization, whereas this study focuses on frequent utilization (at least every 6 months). If all patronage is included, the rate of utilization increases to 92.53%, which aligns more closely with the later studies [38,39]. Although public healthcare may not be patronized by the entire population, there is still a need for further efforts to improve healthcare accessibility and utilization as a notable 25.36% of respondents reported less frequent visits to public health facilities and the 7.47% who could not recall visiting any public facilities due to possible disconnection from the healthcare system likely due to factors identified in other studies [38] that can strongly contribute to poor health outcomes and suboptimal healthcare systems as reported by Omuta [20].

Healthcare Preference among Delta State Residents

The study finds that there is no single preference for healthcare facilities among the residents of the state. While 39.00% of respondents prefer public hospitals, a substantial 24.90% prefer private facilities and 36.10% would rather use both public and private facilities. This suggests that a moderate proportion of the population sees value in both public and private healthcare facilities especially when costs a considered [3, 4]. The moderately low preference for public healthcare facilities in Delta State is not a unique situation but rather a symptom of the broader challenges faced by other regions in the nation and other LMICs. These countries often grapple with resource constraints, reliance on donor funding, and insufficient public health spending which makes it difficult to provide universal access to healthcare, isolating the poor from healthcare [17–19,40,41]. There is a need to expand government efforts to include the 40.1% of people in the state who fall below the poverty line [42] in addition to various private facilities, especially those owned by NGOs, who also supplement affordable care [2, 5]. This means that the government in the pursuit of sustainability should consider quality assurance and improvement and not just policies that favour profits over public good [43].

Comparison of Public and Private Health Facilities

These findings highlight the complexities and trade-offs that residents consider when choosing which health facilities to visit. Private facilities are often viewed as having better quality of care, more modern infrastructure, and shorter waiting times than public hospitals [44]. However, the result of this study reveals a slight difference in this regard because participants reported that public facilities performed better than private facilities when it comes to quality of staff, accessibility, and value for money, while private facilities were reported to have higher care effectiveness and slightly higher perception of quality of equipment and infrastructure compared to public ones as has been reported in several external studies [45–48].

A vast majority (89.99%) of respondents agreed that public hospitals are more *affordable* than private ones. This is expected as public facilities often have subsidies that may make OOP expenses in private facilities significantly higher than in public facilities [43]. *Accessibility* received a slightly favourable (59.5%) vote for the public health facilities in Delta State. This may be due to factors such as distance, cost, staffing, staff professionalism, and infrastructure [36, 38, 39]. These factors have eroded the trust in the public healthcare systems according to the WHO [49, 50]. It is

recommended that equity be considered when distributing public health facilities as many studies have found that public facilities are often unevenly distributed, concentrating more in urban areas than rural [51–54].

Regarding the *effectiveness of care*, private facilities were favoured by 58.5% of the respondents, and just about half (50.5%) of them felt private facilities had better *equipment and infrastructure*. These results are consistent with existing literature which suggests that private facilities tend to be perceived as having better care effectiveness and infrastructure while public facilities often struggle with underfunding and poor infrastructure as Eze and Jones [55] report that patients perceive better care quality from doctors in their private facilities compared to the public system and this was same even when infrastructure is better in the public sector. This lack of direct translation of better infrastructure to higher quality care is an interesting finding.

Also, this study shows that respondents reported that public facilities have offered more *value for money* and *better staff quality*, even though they were reported to be lower on equipment and infrastructure. These findings agree with Leslie et al. [56] and Vora and Mavalankar [57] who reported that infrastructure is poorly correlated with the quality of care in healthcare facilities in LMICs. While public facilities may be more accessible and affordable, there is a need for improvements in care quality to enhance service utilization and public confidence since studies from similar contexts support the findings that health services are generally considered to be better in private healthcare settings than in the public sector [45, 46, 58].

Delta State government's investments in healthcare should meet a reciprocal public interest in the utilization of the system. As observed in other low- and middle-income countries (LMICs), such as those discussed by [26, 59, 60], challenges like resource constraints, reliance on donor funding, and insufficient public health spending hinder the provision of universal healthcare access, often isolating the poor from essential services.

Recommendation

Based on the study findings, it is evident that public health facilities are perceived as more affordable, accessible, and offering better value for money and staff quality compared to private facilities. However, private facilities outperform in care effectiveness and the quality of equipment and infrastructure. To address these discrepancies, the following recommendations are proposed:

1. Governments and policymakers should prioritize investment in upgrading the infrastructure and equipment of public health facilities. This will help improve the perceived quality and effectiveness of care, aligning it more closely with private facilities.
2. Public hospitals should enhance the training programs for healthcare staff in public facilities to improve the quality of care. Continuous professional development and specialized training can ensure that staff are equipped with the latest knowledge and skills.
3. There should be active efforts towards fostering collaborations between public and private health sectors. This can facilitate the sharing of resources, knowledge, and best practices, ultimately improving the overall healthcare system.
4. Public health administration should engage with the community to understand their needs and perspectives. Feedback mechanisms should be established to gather patient opinions and experiences, which can then be used to inform service improvements.
5. The government should implement robust digital and analogue monitoring and evaluation frameworks to regularly assess

the performance of public health facilities, especially in rural communities. Data-driven approaches can identify areas for improvement and track the progress of implemented changes.

Addressing these key areas in Delta State will make it possible to enhance the overall quality and effectiveness of public health facilities, ensuring that they can provide equitable and high-quality care to all residents. Especially through the Delta State Contributory Health Commission.

Conclusion

This study reveals the pattern of healthcare utilization in Delta State, Nigeria, highlighting a strong demand for public health services. Although public facilities are preferred for their affordability and accessibility, private facilities are perceived to deliver better quality of care and be better equipped. The findings emphasize the need for the government to improve the quality of care in public facilities through equipment upgrades, infrastructural facelifts, and staff development. To achieve this, improving the quality of care through equipment upgrades, infrastructural improvements, and staff development in public facilities will foster better public-private parity and partnerships, ultimately advancing the goal of universal health coverage.

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