ISSN:2584-2706 DOI: https://doi.org/10.67317/IJMSRT26AUG081

Mothers' Perception, Utilisation, and Satisfaction with Primary Healthcare Services for Children in Ishielu LGA, Ebonyi State, Nigeria

*Okeke, Kingsley Udechukwu ; Okoye, Solomon Azuka
Ace-Putor Nursing Division, University of Port Harcourt

Clement Felix Chimereuche
School of midwifery, Abiriba

Eze, Clementina Nkiru
Department of Nursing Science, Evangel University

*Corresponding author

Abstract
Primary Health Care (PHC) is vital in enhancing children's health status, particularly in rural areas that lack better-equipped healthcare facilities. However, the utilization, perception, and satisfaction associated with PHC services for child healthcare vary across settings. This study assessed the perception, utilisation, and satisfaction with Primary Health Care services for child healthcare among mothers in Ishielu Local Government Area, Ebonyi State, Nigeria. A community-based descriptive cross-sectional design was used. A total sample size of 397 women of reproductive age was selected through cluster sampling technique. Data were collected using structured questionnaires which were analysed descriptively in SPSS version 26. The findings showed that most respondents had a positive perception of PHC services, particularly in terms of accessibility (72.8%), short waiting time (89.7%), and effectiveness of treatment (94.5%), although affordability was a concern. Almost all respondents (98.2%) had previously used PHC services, but regular utilization was moderate, with only 13.9% always visiting. PHC centres were the most preferred locations for immunization (72.0%) and treatment of childhood illnesses (76.1%). Satisfaction with services was generally high across most areas, except for distance, where only 27.2% expressed satisfaction. In summary, PHC services for child healthcare have been well received and utilized by many people in the research location, but cost and distance remain constraints on usage. Accessibility should be increased, costs reduced, and community perception improved to increase patronage of services and improve child health outcomes.

Keywords:
Child Health, Primary healthcare (PHC), Utilisation, Perception, Satisfaction, Women, Ebonyi State, Nigeria.

1.0 Introduction

Child health serves as a key measure of a society's overall well-being and future potential. In recent times, the notion has evolved from being only about the freedom from sickness to include the ability of a child to develop and interact with his or her environment (Stein, 2024). Ensuring that the health of children is protected is important, and it needs a good number of services that include preventive, curative, and promotive measures. In fact, Primary Health Care (PHC) serves as the cornerstone of ensuring the good health of a child. It is considered an efficient and effective approach to enhancing the health condition of a child (Carai & Weber, 2021; WHO, 2023). The UN Convention on the Rights

of the Child (UNCRC) stipulates that each child has a fundamental right to enjoy the highest level of health (WHO, 2023).

Despite its significance, there are many challenges facing PHC in Nigeria. The under-5 mortality rate is rather high because, despite representing less than 3% of the world's total population, in 2021, Nigeria contributed to 27% of under-5 deaths globally (Somorija et al., 2025). While the under-5 mortality rate has reduced from 191 deaths per 1,000 live births in 1990 to 102 in 2021, progress towards achieving international targets remains inadequate as well as achieving SDG 3.2, which aims at reducing the rate to 25 per 1,000 live births by 2030. Neonatal mortality rates have remained relatively high due to shortcomings in the provision of post-natal services, with worse statistics evident in the Northwest as compared to the Southeast (Somorija et al., 2025; Olawade et al., 2025).

From various research findings in Nigeria, awareness of PHC services does not necessarily translate into their utilization. For example, Oluwadare et al. (2023) found a high level of awareness of child health and immunization services but noted a low utilization rate. This trend is seen in other regions where despite having a high level of awareness of the service, issues like poor quality of the services, availability of medicines, and negative attitudes by healthcare personnel play significant roles in discouraging caregivers from using these services (Iyinbor et al., 2024; Mobote, 2022).

Perception regarding the quality is highly influential in determining health-seeking behaviours. The main criteria used by caregivers to assess the quality of healthcare services include the presence of drugs, the attitude of the health workers, cleanliness, and waiting time (Arije et al., 2018; Oyebade et al., 2022). Negative perceptions may cause caregivers to avoid using healthcare facilities that are closer to their homes, even when it means having to travel greater distances (Escamilla et al., 2018). On the other hand, respect and clear communication tend to lead to satisfaction with PHC services (Unumeri et al., 2020; Mohamed et al., 2015).

The extent to which PHC is used for child health services also differs from place to place. While some research indicates a very high uptake rate in some cases (Omage et al., 2024; Otovwe & Elizabeth, 2017), other research reports a low patronage rate, with caregivers preferring self-medication or other means of health provision (Aboaba et al., 2023; Oluwole et al., 2023). Factors such as economic status, education, proximity to PHC centers, and belief systems tend to influence the level of use (Agunwa et al., 2017; Ogunwande & Odefadehan, 2024). At times, family dynamics, like that of spousal roles and decision-making dynamics, can positively or negatively affect the use of health facilities (Uzuegbu et al., 2024).

Patient satisfaction with PHC services influences their sustained utilization. Although some researchers have noted medium to high levels of satisfaction, other studies indicate that patients are dissatisfied or indifferent (Odugbemi et al., 2025; Uwaibi & Omozuwa, 2021). Frequently reported barriers include long wait times, poor communication skills, insufficient facilities, and lack of medical supplies (Jibril et al., 2024; Al Deen & Fadhil, 2020). Notably, despite high reported satisfaction, there are significant disparities in service availability and health status (Hailemariam et al., 2023).

The geographical location of patients also impacts their access and satisfaction with the care received. Urban areas usually provide better experiences owing to better facilities, staffing, and service availability (Adeniyi et al., 2026; Onunze et al., 2023), whereas those in rural locations experience barriers such as distance, poor condition of facilities, and inadequate resources, preventing them from utilizing PHC services (Ayadu & Okon, 2024; Odefadehan et al., 2021).

Overall, these findings imply that addressing child health in Nigeria will not only involve the delivery of PHC services, but it will require a keen consideration of the way these services are viewed by people, their usage, and the level of satisfaction they receive from them. Examining these dimensions from the perspective of mothers, who frequently serve as primary caregivers, is essential in this regard.

Unfortunately, little is known about the perception, utilization, and satisfaction of Nigerian women with PHC child healthcare services specifically in Ishielu Local Government Area, Ebonyi State. Given the continued poor performance in child health indicators as well as the critical role played by PHC, this issue merits special attention. Therefore, this research is designed to assess women's perception, utilization, and satisfaction with PHC child healthcare services in Ishielu LGA, Ebonyi State, Nigeria.

2.0 Materials and Methods

2.1 Study Area

ISSN:2584-2706 DOI: https://doi.org/10.67317/IJMSRT26AUG081

This study was conducted in Ishielu Local Government Area (LGA), Ebonyi State, Nigeria. Ishielu LGA, founded in 1989, has its administrative capital at Ezillo and a total population of about 227,300 distributed over an area of 725.3 km² (National Bureau of Statistics, 2023). Located in the northwestern region of Ebonyi State, Ishielu has common boundaries with Onioha, Ezza North, and Ohaukwu LGAs. The area is predominantly agrarian, with most people engaged in the cultivation of various farm produce such as yam, cassava, rice, and palm produce. There are some who engage in trade and industrial activities. The study area comprises several communities, including Nkalagu, Ezillo, Ntezi, Okpoto, and Amazu. The major languages spoken in the area are English, Nigerian pidgin, and Igbo.

2.2 Study Design

A descriptive, community-based cross-sectional study design was employed in this research. The design was considered appropriate because it enabled systematic assessment of mothers' perceptions, utilization patterns and satisfaction with PHC services at a single point in time.

2.3 Study Population

The study population comprised mothers aged 15–49 years who had at least one child and resided in Ishielu LGA. The estimated population of women in this category is about 53,149 (National Bureau of Statistics, 2023).

2.4 Sample Size Determination

The sample size was calculated using Taro Yamane's formula:
Where and .
Substituting the values:
Thus, 397 respondents were required for the study.

2.5 Sampling Technique

A cluster sampling method was used. Five communities (Nkalagu, Ezillo, Ntezi, Okpoto, and Amazu) were selected using a simple random sampling procedure from the LGA. The sample was equally allocated across the randomly selected communities, and participants were randomly selected within each cluster to obtain participants from multiple geographical clusters within the study area. This method was used because of unavailability of data on reproductive aged women per community of the local government.

2.6 Data Collection Instrument

Primary data were collected using a structured, self-administered questionnaire developed by the researcher. The questionnaire covered socio-demographic characteristics, perception of primary healthcare services, utilization patterns, and satisfaction. Five-point Likert-type response scales were used to assess respondents' perceptions and satisfaction, while structured questions were used to assess utilization and preferred sources of child healthcare. Questionnaires were distributed in markets, churches, and homes over ten days. Respondents who needed assistance were guided after a clear explanation of the study purpose.

2.7 Validity and Reliability of the Instrument

Face and content validity of the questionnaire were assessed by two experts in Maternal and Child Health Nursing, two research experts, a statistician and the project supervisors. Any required changes were incorporated into the instrument. A pilot study was carried out among 10% of the respondents (n = 40). It was performed in Ezza North Local Government Area which was similar to the study area although not included in the actual study. Reliability was checked by using Split-half reliability and the Spearman-Brown prophecy formula, which yielded a reliability coefficient of 0.98.

2.8 Data Analysis

Data were analysed using SPSS Statistics version 26. Frequencies and percentages were used to summarize categorical variables and describe respondents' perceptions, utilization patterns, preferred sources of care and satisfaction with PHC services.

2.9 Ethical Considerations

Ethical approval was obtained from the University of Port Harcourt Ethical Committee (Approval No. UPH/CEREMAD/REC/MM117/054). Permission was also granted by the Ishielu Local Government Health Department. Informed consent was obtained from all participants, and confidentiality was maintained throughout the study. The research was non-invasive and posed minimal risk to participants.

3.0 Results

Table 3.1 Socio-demographic characteristics of women in Ishielu LGA, Ebonyi State

Variables	Frequency (N=397)	Percent (%)
Age distribution		
15-25 years	37	9.3
26-35 years	173	43.6
36-45 years	177	44.6
Above 45 years	10	2.5
Marital Status		
Married	361	90.9
Single	30	7.6
Widowed	4	1.0
Divorced	2	0.5
Occupation		
Farming	281	70.8
Trading/Business	90	22.7
Civil Servant	19	4.8
Other	7	1.8
Highest Level of education		
No formal Education	13	3.3
Primary School	25	6.3
Secondary School	340	85.6
Tertiary Education	19	4.8
Number of Children		
1-2 children	25	6.3
3-4 children	157	39.5
5-6 children	165	41.6
More than 6 children	50	12.6
Age of Youngest Child		
Less than 1 year	42	10.6
1-2 years	146	36.8
3-5 years	151	38.0
More than 5 years	58	14.6
Religion		
Christianity	391	98.5
Traditional Religion	6	1.5

Table 3.1 shows the socio-demographic characteristics of women in Ishielu LGA, Ebonyi State. Many of the women were aged 26–45 years (88.2%) and married (90.9%). Most respondents were farmers (70.8%) and had attained secondary school education (85.6%). A large proportion had three to six

ISSN:2584-2706 DOI: https://doi.org/10.67317/IJMSRT26AUG081

children (81.1%), and the youngest child of most respondents was between 1 and 5 years (74.8%). Almost all respondents were Christians (98.5%).

Table 3.2 Perception of Primary Health care Centre for Child healthcare Services among women in Ishielu LGA, Ebonyi State

Variable	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	f	%	f	%	f	%	f	%	f	%
The PHC Facility is easily accessible from my home	31	7.8%	69	17.4%	8	2.0%	98	24.7 %	191	48.1 %
The waiting time to see a healthcare worker is usually short	2	0.5%	5	1.3%	34	8.6%	274	69.0 %	82	20.7 %
The healthcare workers are kind and respectful	80	20.2%	61	15.4%	25	6.3%	173	43.6 %	58	14.6 %
The healthcare workers take time to explain my child's condition and treatment	4	1.0%	49	12.3%	2	0.5%	129	32.5 %	213	53.7 %
Essential drugs for children are usually available when needed	11	2.8%	12	3.0%	45	11.3 %	297	74.8 %	32	8.1%
The medical equipment is in good working condition	6	1.5%	10	2.5%	5	1.3%	221	55.7 %	155	39.0 %
The treatments my child receives at the PHC are effective	4	1.0%	8	2.0%	10	2.5%	65	16.4 %	310	78.1 %

Table 3.2 presents respondents' perception of Primary Healthcare Centres for child healthcare services. Most respondents expressed a positive perception regarding accessibility, with (72.8%) either agreeing or strongly agreeing that the PHC facility was easily accessible from their homes. A large majority reported that waiting time is short (89.7%). More than half of the respondents agreed that healthcare workers are kind and respectful (58.2%). Most respondents also agreed that healthcare workers take time to explain their child's condition (86.2%). In addition, 82.9% agreed that essential drugs are available, while 94.7% agreed that medical equipment is in good working condition. Nearly all respondents perceived that treatments received at PHC centres are effective (94.5%).

Table 3.3 Previous Use of Primary Healthcare Centres for Child Health Services

Variable		Frequency	Percent		
Ever visited a Primary Health care Centre for their child's health needs	No	7	1.8		
	Yes	390	98.2		
	Total	**397**	**100.0**		

Table 3.3 shows respondents' previous use of Primary Healthcare Centres for child health services. Almost all respondents (98.2%) reported having ever used PHC services for their children's health needs, while only 1.8% had never used PHC services.

ISSN:2584-2706 DOI: https://doi.org/10.67317/IJMSRT26AUG081

Table 3.4 Frequency and Pattern of Utilization of Primary Healthcare Centres for Child Health Services

Utilization Indicator	Category	Frequency (N=397)	Percent (%)
How often do you visit Primary Healthcare Centre for any of your children?	Always	55	13.9
	Sometimes	188	47.4
	Rarely	143	36.0
	Never	11	2.8
How often do you visit a Primary Healthcare centre for child health as your first choice?	Always	48	12.1
	Sometimes	209	52.6
	Rarely	133	33.5
	Never	7	1.8

Table 3.4 shows the frequency and pattern of utilization of Primary Healthcare Centres for child health services. Nearly half of the respondents (47.4%) reported visiting PHC centres sometimes, while 36.0% visited rarely. Only 13.9% reported always visiting, and a small proportion (2.8%) never visited. Regarding PHC use as the first point of care, 52.6% reported sometimes using PHC as their first choice, while 33.5% rarely did so. A smaller proportion (12.1%) always used PHC as their first choice, and 1.8% never considered PHC as their first option.

Table 3.5 Healthcare services used in Primary Health care Centre in the last 12 months

Variables	Frequency (N=397)	Percent (%)
Immunization/Vaccination	90	22.7
Treatment of Malaria	169	42.6
Growth monitoring and promotion	25	6.3
Routine Child Welfare	88	22.2
Nutrition services	19	4.8
None of the above	6	1.5

Table 3.5 shows the healthcare services respondents used at Primary Healthcare Centers in the last 12 months. The most used service was treatment of malaria (42.6%). Other services accessed included immunization/vaccination (22.7%) and routine child welfare services (22.2%). Fewer respondents reported using growth monitoring (6.3%) and nutrition services (4.8%), while only 1.5% did not use any of the listed services.

Table 3.6 Preferred Location for Child Healthcare Services (Routine Immunization and Treatment of Childhood Illnesses)

Variable	Location	Frequency (N=397)	Percent (%)
Routine Immunization	Primary Healthcare	286	72.0
	Private Hospital/Clinic	58	14.6
	Mobile Health Team/Outreach	29	7.3
	I do not get routine immunization for my child	19	4.8
	Others	5	1.3
Preferred location for treating illnesses	Primary Health Care	302	76.1
	Patent Medicine Vendor	45	11.3
	Traditional Healer	14	3.5
	General/Private Hospital	27	6.8
	Self-treatment at home	5	1.3
	Other	4	1.0

Table 3.6 shows where respondents prefer to seek care for routine immunization and treatment of childhood illnesses. For routine immunization, most respondents preferred Primary Healthcare

ISSN:2584-2706 DOI: https://doi.org/10.67317/IJMSRT26AUG081

Centres (72.0%), followed by private hospitals/clinics (14.6%) and mobile health teams/outreach services (7.3%), while a small proportion reported not accessing immunization (4.8%) or using other options (1.3%). For treatment of childhood illnesses, Primary Healthcare Centres were the most preferred source of care (76.1%). Other options included patent medicine vendors (11.3%), general or private hospitals (6.8%), traditional healers (3.5%), self-treatment at home (1.3%), and other sources (1.0%).

Table 3.7 Level of Satisfaction with Primary Healthcare Services for Child Health

Variable	Very Dissatisfied		Dissatisfied		Neutral		Satisfied		Very Satisfied	
	f	%	f	%	f	%	f	%	f	%
Availability of the health workers when you visit	3	0.8%	6	1.5%	48	12.1 %	126	31.7 %	214	53.9 %
Waiting time before your child receives care	4	1.0%	8	2.0%	30	7.6%	158	39.8 %	197	49.6 %
Cost of services	13	3.3%	17	4.3%	60	15.1 %	203	51.1 %	104	26.2 %
Availability of essential drugs for children	9	2.3%	21	5.3%	57	14.4 %	218	54.9 %	92	23.2 %
Cleanliness of the facility	2	0.5%	6	1.5%	15	3.8%	149	37.5 %	225	56.7 %
Availability of the medical equipment	6	1.5%	14	3.5%	43	10.8 %	191	48.1 %	143	36.0 %
Effectiveness of the treatment your child received	8	2.0%	15	3.8%	41	10.3 %	207	52.1 %	126	31.7 %
Distance of the PHC	78	19.6 %	189	47.6 %	22	5.5%	60	15.1 %	48	12.1 %
Respect and politeness shown by the health workers	8	2.0%	13	3.3%	25	6.3%	187	47.1 %	164	41.3 %

Table 3.7 shows the level of satisfaction with Primary Healthcare Centres in Ishielu LGA, Ebonyi State. The findings indicate high satisfaction in most service areas. Specifically, the majority of respondents were satisfied or very satisfied with the availability of health workers (85.6%), waiting time before care (89.4%), cost of services (77.3%), availability of essential drugs (78.1%), cleanliness of the facility (94.2%), availability of medical equipment (84.1%), effectiveness of treatment received (83.9%), and respect and politeness shown by healthcare workers (88.4%). In contrast, only 27.2% of respondents were satisfied or very satisfied with the distance to the Primary Healthcare Centre, indicating accessibility challenges.

4.0 Discussion

Socio-demographic characteristics of the respondents reveal that many of the women respondents are at their most reproductive age. More than four-fifths of the respondents were aged 26–45 years. Moreover, 90.9% of them are married. Most of the women (70.8%) engaged in farming as their main economic activity and attained secondary education (85.6%). Additionally, more than eight in ten women respondents reported having between three and six children. In essence, these characteristics may have implications for health-seeking behaviour, although such relationships were not directly tested in the present study. This interpretation is supported by Ogunwande and Odefadehan (2024), who reported that married women of moderate educational attainment and large households are highly involved in PHC utilization. Similarly, Agunwa et al. (2017) found that age, education, and number of children play a crucial role in child health services utilization. Nonetheless, the predominance of farming suggest that respondents were largely engaged in an agrarian livelihood; the present study did not directly assess household income or poverty, which in turn impacts the ability to utilize health services consistently.

ISSN:2584-2706 DOI: https://doi.org/10.67317/IJMSRT26AUG081

The perception of PHC services was generally positive, especially in terms of accessibility (72.8%), short waiting time (89.7%), availability of drugs (82.9%), functional equipment (94.7%), and treatment effectiveness (94.5%). The results correspond with findings by Arije et al. (2018) who stated that the availability of drugs, staff attitude, and the condition of facilities are crucial elements for positive perceptions. Conversely, the findings by Iyinbor et al. (2024) indicated negative perceptions because of long waiting time and drug unavailability, contrary to the current research findings. The disparity may imply effective service delivery in the study location or differences in health care system performance at the local level.

The study found a very high level of previous utilization of PHC services, with 98.2% of respondents reporting that they had visited a PHC centre for their child's health needs. However, regular use was lower, as only 13.9% always visited, while 47.4% visited sometimes and 36.0% rarely did so. Similarly, only 12.1% always used PHC as their first choice. It is evident from the results that although previous use and preference for PHC services were high, regular utilization was less consistent. This trend is like what was found by Oluwadare et al. (2023). It agrees with the results of Odugbemi et al. (2025), which indicate that even though PHCs were most favoured, not everyone used them regularly. Thus, other variables such as cost, convenience, and alternative solutions could play an important role in how and when PHC facilities will be used by women.

Treatment of malaria was the most frequently reported child-health service accessed at PHC centres (42.6%), followed by immunizations/vaccination (22.7%) and routine child welfare services (22.2%). Growth monitoring (6.3%) and nutrition services (4.8%) had relatively lower rates. This indicates that PHC clinics are primarily utilized to access curative and preventive services that are either urgent or well-known to the patients. Thus, preventive care services such as growth monitoring are utilized less frequently. The findings align with those of Omage et al. (2024), who found that malaria treatment and immunization were the primary reasons for accessing PHC facilities. At the same time, the results are in line with the study by Onunze et al. (2023), who reported lower growth monitoring and nutrition services utilization rates. This suggests the need to enhance the awareness and delivery of comprehensive children's health services in addition to immunization and treatment.

Primary health care centres emerged as the preferred sources for routine immunizations (72.0%) and treatment of childhood illnesses (76.1%). Some respondents resorted to seeking healthcare services from alternative sources, including patent medicine vendors (11.3%) and private hospitals (6.8%). While the findings show that PHCs are the key providers of healthcare services, it can be noted that PHCs are not the only choice available to parents/caregivers when accessing these services. This conclusion is consistent with the study carried out by Odefadehan et al. (2021). These scholars observed that although patronage of PHCs was on the rise, others still played a critical role. The findings also support Escamilla et al. (2018), who observed that individuals could opt to seek services outside the reach of their PHC because of higher quality of service. On the other hand, Oluwole et al. (2023) reported a high tendency to visit private hospitals, a finding contrary to the current research. Such variation could be attributed to differences in health access perception and facilities' distribution in rural versus urban areas.

The level of satisfaction with PHC services was generally high across most areas. Satisfaction with the availability of health workers was high for many respondents (85.6%), as was satisfaction with waiting times (89.4%), affordability (77.3%), drug availability (78.1%), cleanliness (94.2%), equipment availability (84.1%), treatment effectiveness (83.9%), and staff behaviour (88.4%). In contrast, low satisfaction was recorded for distance, with only 27.2% of respondents were satisfied or very satisfied with the distance to the PHC centre. The high level of satisfaction reported across several service dimensions suggest favourable user experiences, although they should not be interpreted as an objective assessment of service quality. These findings are in line with findings of Unumeri et al. (2020) who noted high satisfaction with staff and service delivery. They agree with those of Mohamed et al. (2015) who highlighted the importance of cleanliness and staff competency to satisfaction. The results, however, contradict those of Jibril et al. (2024) and Iyinbor et al. (2024) who noted low satisfaction among respondents. These inconsistencies may arise from differences in infrastructure, geographical accessibility and service-delivery condition across settings. The low satisfaction with distance also supports Ayadu and Okon (2024), who found that accessibility strongly affects utilization.

5.0 Conclusion

The findings suggest that women in Ishielu Local Government Area have favourable perception of primary health care services for child healthcare. The study revealed very high satisfaction with most assessed dimensions of PHC services, alongside inconsistent regular utilization. The majority of women utilize the services of PHC at least once for child healthcare, especially immunization and treatment of various diseases. However, regular patronage of the services is limited. To enhance patronage, the problem of accessibility must be addressed to ensure better child health outcomes at the Primary Health Care level.

6.0 Recommendations

1.The government should improve geographic accessibility to PHC services for women by establishing clinics within their reach and reducing financial barriers to accessing essential child-health services.
2.The services provided should include all essential drugs, functioning equipment, and adequately trained and appropriately deployed healthcare personnel.
3.Community-based health education should be strengthened to improve awareness of available child-health services and encourage appropriate and timely use of PHC facilities.

Limitation of the study

1. Information on perception, utilization and satisfaction was self-reported and maybe influenced by recall bias or social desirability bias.
2. The absence of reliable community-level data on women of reproductive age per community of the local government necessitated approximately equal allocation of participants across the selected clusters which may not have reflected the differences in population sizes of the communities.
3. The study used only five communities of the local government because of time and financial constraints which may limit the generalizability of the findings to other populations with different socioeconomic characteristics.

Acknowledgments

NA

Funding

This study was not funded by any source.

Competing Interest

No conflict of interest.

Authors Contributions:

K.U Okeke and F.C Clement: Conceptualization, original draft, methodology and investigation.
C.N Eze: Supervision, data curation, review and validation.
S.A Okoye: Formal analysis, editing, manuscript preparation and visualization.
All authors approved the final manuscript.

References

- Aboaba, K. O., Akamo, A. A., Obalola, T. O., Bankole, O. A., Oladele, A. O., & Yussuf, O. G. (2023). Factors influencing choice of healthcare facilities utilisation by rural households in Ogun State, Nigeria. *Agricultura Tropica et Subtropica,* 56(1), 143–152.
- Adeniyi, M. A., Adewoye, K. R., Durowade, K. A., Isa, A., Adebisi, O. O., & Azees, A. S. (2026). Comparative study of patient's satisfaction with quality of maternal and child healthcare services in primary healthcare centres in urban and rural communities in Ekiti State, Nigeria. *International Journal of Community Medicine and Public Health, 13(2),* 552–564. https://doi.org/10.18203/2394-6040.ijcmph20260279
- Agunwa CC, Obi IE, Ndu AC, Omotowo IB, Idoko CA, Umeobieri AK, Aniwada EC. Determinants of patterns of maternal and child health service utilization in a rural community in south eastern Nigeria. BMC Health Serv Res. 2017 Nov 13;17(1):715. doi: 10.1186/s12913-017-2653-x. PMID: 29132329; PMCID: PMC5683234.

- Al Deen, L. D., & Fadhil, A. A. (2020). Caregivers' Satisfaction toward Under-Five Health Care Services Provided at Primary Health Care Centers in Al Karkh, Baghdad, 2020. *Journal of the Faculty of Medicine Baghdad, 63(4)*, 138–144.
- Arije, O. O., Alabi, T., & Olowookere, O. S. (2018). Users' Perception about the Quality of Child Health Services in the Primary Health Care Facilities in South West Nigeria: A Qualitative Assessment. *Journal of Family Medicine and Community Health, 5(1)*, 1143.
- Ayadu. K, & Joseph.O. (2024). Healthcare Facilities and Patronage patterns of Rural dwellers in Nsit Local Government Area. *Journal of Health, Metabolism and Nutrition Studies, 5(3).* https://berkeleypublications.com/bjhmns/article/view/233
- Carai, S., & Weber, M. W. (2021). Primary health care for children - evidence for prevention. *BMC pediatrics*, *21*(Suppl 1), 328. https://doi.org/10.1186/s12887-021-02787-w
- Escamilla, V., Calhoun, L., Winston, J., & Speizer, I. S. (2018). The Role of Distance and Quality on Facility Selection for Maternal and Child Health Services in Urban Kenya. *Journal of Urban Health, 95(1),* 1–12.
- Hailemariam Z, Eyob M, Deribe E (2023) Caregivers' Satisfaction Status with Services for Under-five Children and Associated Factors at Primary Health Care Units in Rural Ethiopia: Measuring Primary Health Care Responsiveness. *Health Sci J.* Vol. 17 No. 12: 1089.
- Iyinbor, V. T., Olu, O. O. M., Nwaogwugwu, J. C., & Adam, V. Y. (2024). Perceptions and Factors affecting Utilization of Primary Health Care Services in a predominantly Urban Community in South-South Nigeria. Journal of Medicine and Biomedical Research, 22(2), 38–46.
- Jibril, M. B., Sambo, M. N., Sulaiman, H., Musa, H. S., Musa, A., Shuaibu, Z. B., Aminu, L., Wada, Y. H., & Ahmed, A. (2024). Optimizing primary healthcare experience: assessing client satisfaction in Kaduna State, Northwest Nigeria. *BMC Primary Care, 25(231),* 1–13. https://doi.org/10.1186/s12875-024-02481-7
- Mobote, M. (2022). Client satisfaction with maternal and child health services in primary health centers in Ajeromi Ifelodun local government area of Lagos. *Journal of Pregnancy and Child Health, 9(5)*, 533. https://doi.org/10.4172/2376-127X.1000533
- Mohamed, E. Y., Sami, W., Alotaibi, A., Alfarag, A., Almutairi, A., & Alanzi, F. (2015). Patients' satisfaction with primary health care centers' services, Majmaah, Kingdom of Saudi Arabia. *International Journal of Health Sciences, 9(2),* 163–170. https://doi.org/10.12816/0024113
- National Bureau of Statistics. (2023). *Demographic statistics bulletin 2022*. Federal Government of Nigeria. https://www.nigerianstat.gov.ng/pdfuploads/DEMOGRAPHIC_BULLETIN_2022_FINAL.pdf
- Odefadehan, Olalekan and Adereti, Oladoyin (2021). Determinants of the Patronage of Available Primary Health services by Rural Women in Osun State, Nigeria. *Journal of International Women Studies, 22(5)*,175-194. Available at: https://vc.bridgew.edu/jiws/vol22/iss5/12
- Odugbemi, B. A., Oduntan, O. O., Popoola, B. F., Fagbemi, T. O., Oniyire, O., Oyenuga, O., Mustafa, I., & Wright, O. (2025). Utilization and self-reported satisfaction with primary health care services in Lagos State, Nigeria. *Research Square*. https://doi.org/10.21203/rs.3.rs-7238380/v1
- Ogunwande, I. O., & Odefadehan, O. O. (2024). Factors influencing patronage of primary healthcare among rural farming households in Osun State, Nigeria. Journal of Science and Technology Research (JOST), Centre for Research and Development (CERAD), Federal University of Technology, Akure. *Journal of Sustainable Technology,* Vol. 13, No. 1 (April, 2024), ISSN: 2251-0680
- Olawade, D. B., Wada, O. Z., Aderinto, N., Odetayo, A. P., Adebisi, Y. A., Esan, D. T., & Ling, J. (2025). Factors contributing to under-5 child mortality in Nigeria: A narrative review. *Medicine, 104*(1), e41142. https://doi.org/10.1097/MD.0000000000041142
- Oluwadare, T., Adegbilero-Iwari, O., Fasoro, A., & Faeji, C. (2023). Utilization of Primary Healthcare Centers by Residents of Ido-Ekiti, Nigeria. *Ethiopian Journal of Health Sciences*, *33(2),* 227–236.
- Oluwole, E. O., Awoga, O. F., Roberts, A. A., & Bakare, Q. O. (2023). Choice of Healthcare Facilities for Antenatal Care, Delivery Services and Satisfaction Received by Mothers of Infants in Lagos, Nigeria. *African Journal of Health Sciences, 36(4)*, 348-361.
- Omage, U. D., Anyaku, D. O., Nwachukwu, N. A., & Offiah, C. M. (2024). Utilization of Primary Health Care for Maternal and Child Health Care Services in Suleja Local Government Area of Niger State, Nigeria. *Journal of Clinical and Metabolism Studies, 5(3),* 31–61.

- Onunze, R. A., Samuel, E., & Kabiru, M. (2023). Utilization of Child Health Services in Primary Health Care Centres in Nsukka Health District. *International Journal of Human Kinetics, Health and Education, 2 (2)*. Available at: https://journals.aphriapub.com/index.php/IJoHKHE/article/view/2211 (Accessed: 26 February 2026)
- Otovwe A, Elizabeth S. Utilization of Primary Health Care Services in Jaba Local Government Area of Kaduna State Nigeria. *Ethiop J Health Sci. 2017 Jul;27(4):*339-350. doi: 10.4314/ejhs.v27i4.5. PMID: 29217936; PMCID: PMC5615023.
- Oyebade, A., Adeyemo, C., Oshineye, A., Olanrewaju, S., Njoku, L., Oladapo, J., & Atolagbe, J. (2022). Perception of quality of primary health care services in South-West Nigeria: a cross sectional study. *International Journal of Community Medicine and Public Health, 9(9)*, 3426–3432.
- Somorija, F. C., Dukku, A. M., & Ibrahim, A. I. (2025). Child mortality in Nigeria: Trends, determinants, and disparities from 1990 to 2021 – A demographic synthesis using NDHS and MICS data. *Journal of Humanities and Social Science, 7*(6). https://doi.org/10.70382/bjhss.v7i6.004
- Stein, R. E. K. (2024). *Defining child health in the 21st century*. Pediatric Research, 96(6). https://doi.org/10.1038/s41390-024-03423-w
- Unumeri, G. O., Okereke, E., & Ahonsi, B. A. (2020). Levels and dimensions of client satisfaction with the treatment of recent maternal, newborn and child health related illnesses by frontline health workers in rural Nigeria. *African Journal of Reproductive Health, 24(4)*, 41–50. DOI: 10.29063/ajrh2020/v24i4.5
- Uwaibi, N. E., & Omozuwa, S. E. (2021). Maternal satisfaction with childhood immunization services in primary health care centres in Edo State, Nigeria. *African Journal of Reproductive Health, 25(2)*, 86–93. https://doi.org/10.29063/ajrh2021/v25i2.8
- Uzuegbu, C. N., Nnama-Okechukwu, C. U., & Udeze, O. N. (2024). Access to maternal and child health care services in primary health care centers in Nigeria: Perspectives from primary health care nurses. *Journal of Human Rights and Social Work, 9(4),* 606–614. https://doi.org/10.1007/s41134-024-00320-4
- World Health Organization. (2023). *Improving primary health care for children and adolescents*. World Health Organization. https://www.who.int/europe/activities/improving-primary-health-care-for-children-and-adolescents