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Barriers to Primary Healthcare Utilisation among Mothers of Children Under Five Years in Isiala Mbano Local Government Area, Imo State, Nigeria

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Abstract

Primary healthcare (PHC) provides an important point of contact between communities and the formal health system, particularly for mothers and children under five years. However, utilisation may be constrained by provider-related, service-related, socioeconomic and sociocultural factors. This study examined perceived barriers to PHC utilisation among mothers of children under five years in Isiala Mbano Local Government Area (LGA), Imo State, Nigeria, with specific attention to health personnel attitudes and immunisation-related factors. A cross-sectional survey design was adopted. The study population comprised 9,713 mothers of children under five years, from whom 398 were selected using proportionate, cluster and simple random sampling techniques. Data were collected using researcher-developed Barriers to Primary Healthcare Utilisation Questionnaire (BPHUQ), which was subjected to expert validation and had a reported reliability coefficient of 0.76. Data were analysed using mean and standard deviation. Results revealed that health personnel attitudes recorded an aggregate mean of 2.31. Mothers reported unfavourable perceptions of empathy (M = 2.20), respect (M = 2.18), professionalism (M = 2.19) and care (M = 2.17), whereas effective communication was favourably rated (M = 2.79). For immunisation-related factors, fear of side effects was the only item above the criterion mean (M = 2.79). Poor knowledge of immunisation schedules (M = 2.17), accessibility (M = 2.18), cultural beliefs (M = 2.21) and religious beliefs (M = 2.22) were below the criterion mean. Unfavourable perceptions of health personnel, particularly regarding empathy, respect, professionalism and care, may represent important perceived barriers to PHC utilisation. Fear of immunisation side effects was also a notable concern. However, PHC authorities should strengthen continuing professional development on respectful, empathetic and client-centred care.

Keywords: Primary healthcare; Healthcare utilisation; Health personnel attitude; Immunisation; mothers; Under-five children; Barriers; Nigeria

Introduction

Primary healthcare (PHC) constitutes the foundation of an effective health system and provides preventive, promotive, curative and rehabilitative services close to where people live and work. The PHC approach emphasises equitable access, community participation and people-centred care and remains central to achieving universal health coverage (World Health Organization [WHO] & United Nations Children's Fund [UNICEF], 2020). The PHC is particularly important for mothers and children under five years because it provides routine immunisation, preventive care, health

education, treatment of common childhood illnesses and referral services (WHO, n.d.).

Despite the importance of PHC, the availability of facilities does not necessarily guarantee their utilisation. Healthcare access is influenced by factors involving individuals, households, communities and health systems. Levesque et al. (2013) conceptualised access to healthcare in terms of approachability, acceptability, availability and accommodation, affordability and appropriateness, together with individuals' abilities to perceive, seek, reach, pay for and engage with services. In Nigeria, evidence indicates that physical accessibility, cost, quality of care and interactions with healthcare providers influence PHC utilisation. Ntoimo et al. (2019), for example, identified poor roads, transportation difficulties, long distances, inadequate drugs, insufficient staffing, long waiting times and unfriendly or abusive provider behaviour as barriers to PHC use in rural Nigeria. Nwokoro et al. (2022) similarly reported that healthcare costs, staffing, waiting time and patient satisfaction were relevant to PHC utilisation in an under-resourced rural community in Enugu State.

The attitude of health personnel is particularly important because health workers are the most visible representatives of the health system during direct interactions with clients. Empathy, respect, effective communication, professionalism and responsiveness can enhance trust and satisfaction, whereas disrespectful treatment, poor communication and perceived lack of care may discourage subsequent utilisation. The WHO people-centred care framework emphasises that health services should respond to people's needs and preferences and should be safe, effective, timely, equitable, integrated and acceptable (WHO, 2018). Evidence from rural Nigeria further indicates that poor-quality and non-respectful care can discourage women from using PHC facilities (Ntoimo et al., 2019). A related study by Okonofua et al. (2018) found that utilisation of PHC for skilled pregnancy care in rural Nigeria was associated with multiple individual and contextual factors, highlighting the importance of considering healthcare utilisation within its broader social and health-system context.

Immunisation is another important component of PHC and provides regular opportunities for mothers and children to interact with health services. Although childhood vaccination substantially reduces vaccine-preventable diseases, its utilisation can be influenced by knowledge, accessibility, service quality, social beliefs and perceptions of vaccine safety (Galadima et al., 2021). Nigerian studies have identified fear of side effects, misinformation, inadequate knowledge, cultural and religious influences, poor access and health-worker-related factors among barriers to immunisation (Akwataghibe et al., 2019; Mohammed et al., 2024; Olaniyan et al., 2022). Oladepo et al. (2019) also reported gaps in mothers' knowledge of routine childhood immunisation and concerns relating to timely completion. WHO emphasises the importance of clear communication concerning vaccine benefits, risks and expected minor reactions to address vaccine-safety concerns (WHO, 2025).

Vaccine hesitancy is generally understood as delay in acceptance or refusal of vaccination despite the availability of vaccination services and is influenced by confidence, complacency and convenience (MacDonald & SAGE Working Group on Vaccine Hesitancy, 2015). In Nigeria, Adeyanju and Betsch (2024) found that mothers' vaccination decisions were influenced by confidence in vaccine safety, constraints, religion, family decision-making and the desire for additional information.

National evidence also demonstrates that accessibility remains relevant. Ogundele et al. (2022) found that maternal education, household wealth, place of residence and difficulty reaching health

facilities were associated with incomplete vaccination among Nigerian children aged 12–23 months. Aheto et al. (2022) similarly found associations between childhood vaccination and socioeconomic characteristics, travel time to health facilities and problems seeking healthcare.

The Andersen Behavioral Model of Health Services Use provides a useful framework for understanding these factors. The model proposes that health-service utilisation is influenced by predisposing, enabling and need-related factors (Andersen, 1995). Provider behaviour, service characteristics and mothers' perceptions of immunisation may therefore facilitate or constrain the use of PHC services. Babitsch et al. (2012) further demonstrated the continuing applicability of the model in explaining healthcare utilisation across different populations and settings.

Although previous studies have examined PHC utilisation and childhood immunisation in Nigeria, limited evidence specifically addresses mothers' perceptions of health personnel attitudes and immunisation-related barriers in Isiala Mbano Local Government Area, Imo State. Understanding these factors is important because the presence of PHC facilities alone may not ensure their effective utilisation. This study therefore examined perceived barriers to PHC utilisation among mothers of children under five years in Isiala Mbano LGA, specifically determining the extent to which health personnel attitudes and immunisation-related factors constitute perceived barriers to PHC utilisation. The study findings may provide context-specific evidence for PHC managers, health educators, healthcare providers and policymakers to strengthen provider-client relationships, improve immunisation counselling and enhance the quality, acceptability and utilisation of PHC services for mothers and children in the study area.

Methods

Study design and setting

A cross-sectional survey design was adopted. The design was considered appropriate because information concerning mothers' perceptions of PHC services and potential barriers was collected at a defined period.

The study was conducted in Isiala Mbano Local Government Area of Imo State, southeastern Nigeria. The original study records identified the following communities: Umuelemai, Amaraku, Umuozu, Umuokwu, Umuduru, Osu-Ama, Ibeme, Ugiri, Eziama and Umuozu.

Study population

The study population comprised 9,713 mothers of children under five years residing in Isiala Mbano LGA. Mothers were eligible if they: had at least one child younger than five years; were resident in Isiala Mbano LGA during the study period; and provided informed consent to participate. Mothers who were unavailable during data collection or declined participation were excluded.

Sample size and sampling technique

A sample of 398 mothers was selected using proportionate, cluster and simple random sampling techniques. The communities constituted the clusters, while respondents were selected from the eligible population within the respective clusters. Forty respondents were selected from each community except one community from which 38 respondents were selected, producing a total

sample of 398. The mothers were reportedly accessed through nursery/pre-primary schools attended by their children. School authorities assisted in organising contact with eligible mothers at predetermined dates.

Data collection procedure

Data were collected using a researcher-developed questionnaire titled the Barriers to Primary Healthcare Utilisation Questionnaire (BPHUQ). The questionnaire used a four-point Likert response format: Strongly Agree = 4 Agree = 3 Disagree = 2 Strongly Disagree = 1 The instrument contained items covering two principal domains: Health personnel attitudes: empathy, respect, communication, professionalism and care. Immunisation-related barriers: knowledge of immunisation schedules, accessibility, fear of side effects, cultural beliefs and religious beliefs

The questionnaire was subjected to expert review by three specialists comprising two specialists in Health Education and one specialist in Measurement and Evaluation. The experts examined the items for clarity, relevance, adequacy and appropriateness to the study objectives. Their recommendations were incorporated into the final instrument. A reliability index of 0.76 using Cronbach's alpha was obtained.

Data collection procedure

Following approval from relevant authorities, eligible mothers were informed about the purpose and procedures of the study. Participation was voluntary and mothers were informed of their right to decline participation or withdraw. Written informed consent was obtained before administration of the questionnaire. Participants were not required to provide names, and completed questionnaires were handled confidentially. Questionnaires were administered at agreed locations and retrieved after completion. Completed instruments were checked for completeness before analysis. Ethical approval was reportedly obtained before commencement of data collection.

Data analysis

Data were analysed using descriptive statistics, specifically mean and standard deviation. A criterion mean of 2.50 was adopted for decision-making. Mean scores of 2.50 or higher were interpreted as agreement with the statement, while mean scores below 2.50 were interpreted as disagreement.

Results

Table 1: **Mothers' Perceptions of Health Personnel Attitudes in Primary Healthcare Facilities**

S/n	Item	Mean	SD	Decision
1	Health personnel demonstrate empathy towards mothers of children under five years	2.20|	0.74|	Disagree
2	Health personnel demonstrate respect towards mothers of children under five years	2.18	0.81	Disagree
3	Health personnel communicate effectively with mothers of children under five years	2.79	1.01	Agree
4	Health personnel demonstrate professionalism towards mothers	2.19	0.78	Disagree
5	Health personnel demonstrate care towards mothers	2.17	0.77	Disagree
	Aggregate item mean	2.31		Unfavourable overall perception

Table 1 shows that four of the five assessed dimensions of health personnel attitudes recorded mean scores below the criterion mean of 2.50. These were empathy (M = 2.20), respect (M = 2.18), professionalism (M = 2.19) and care (M = 2.17). Effective communication recorded a mean score above the criterion mean (M = 2.79).

The aggregate item mean of 2.31 indicates that mothers generally did not perceive health personnel as consistently demonstrating favourable interpersonal attitudes. Thus, empathy, respect, professionalism and care emerged as areas requiring improvement, whereas communication was comparatively favourably rated.

Table 2: **Immunisation-Related Barriers to Primary Healthcare Utilisation**

S/n	Item	Mean	SD	Decision
1	There is poor knowledge of immunisation schedules among mothers of children under five years	2.17	0.77|	Disagree
2	There are accessibility problems associated with immunisation services	2.18	0.81	Disagree
3	Mothers fear side effects associated with immunization	2.79	1.01	Agree
4	Negative cultural beliefs constitute a barrier to immunization	2.21	0.77	Disagree
5	Negative religious beliefs constitute a barrier to immunization	2.22	0.79	Disagree
	Aggregate item mean	2.31		Low extent

Table 2 shows that fear of immunisation side effects was the only assessed immunisation-related factor with a mean above the criterion mean (M = 2.79). Poor knowledge of immunisation schedules (M = 2.17), accessibility problems (M = 2.18), negative cultural beliefs (M = 2.21) and negative religious beliefs (M = 2.22) were below the criterion mean.

The aggregate item mean of 2.31 suggests a relatively low overall level of endorsement of the assessed immunisation-related barriers. Nevertheless, fear of side effects emerged as a specific concern requiring attention. J

Discussion

The findings indicate that mothers did not perceive health personnel as consistently demonstrating favourable attitudes in terms of empathy, respect, professionalism and care. Effective communication was the only assessed dimension that received a mean above the criterion value.

This finding is consistent with previous evidence from Nigeria. Ntoimo et al. (2019) found that poor-quality and non-respectful care, including abusive provider behaviour, inadequate staffing and long waiting times, contributed to women's non-use of PHC facilities. The finding is also broadly consistent with Nwokoro et al. (2022), who identified patient satisfaction, waiting time and adequacy of healthcare staff among factors relevant to PHC utilisation in an under-resourced rural community in Enugu State.

The present findings are important because interpersonal quality of care can influence the acceptability of healthcare services. WHO's people-centred healthcare framework emphasises that services should respond to patients' needs, preferences and values and should be delivered in an acceptable and timely manner (WHO, 2018).

The relatively favourable rating of communication is encouraging. Effective communication can provide a foundation upon which other aspects of interpersonal care can be strengthened. Health workers who communicate clearly can use this strength to provide information, address mothers' concerns and build trust.

However, the low ratings for empathy, respect, professionalism and care suggest that communication alone may not be sufficient to create a positive healthcare experience. Respectful and compassionate interactions are particularly important in PHC because mothers may return repeatedly with their children for immunisation, treatment and preventive services.

The findings should nevertheless be interpreted cautiously. The descriptive design does not establish that poor provider attitudes caused mothers to avoid PHC services. Rather, the findings demonstrate that mothers reported relatively unfavourable perceptions of important dimensions of provider behaviour.

Fear of immunisation side effects was the only assessed immunisation-related barrier with a mean above the criterion mean. This finding is consistent with Nigerian and African evidence. Akwataghibe et al. (2019) reported that adverse events following immunisation were important demotivating experiences in some Nigerian communities. Olaniyan et al. (2022) similarly identified adverse events following immunisation and vaccination misperceptions among barriers reported by caregivers, community leaders and health workers. Mohammed et al. (2024), in a comprehensive scoping review of Nigerian routine immunisation evidence, identified fear of side effects as one of the most frequently reported caregiver-related barriers. The consistency between the present finding and the broader Nigerian literature strengthens the interpretation that concerns about vaccine side effects deserve specific attention.

The finding is also consistent with evidence from rural Nigerian mothers. Oladepo et al. (2019) reported that fear of side effects was among factors perceived to influence completion of childhood immunisation. The WHO recognises that vaccines, like other medicines, can produce side effects, but notes that common childhood vaccine reactions are generally minor and short-lived, while serious reactions are extremely rare. WHO also emphasises that an adverse event following immunisation does not necessarily establish that the vaccine caused the event (WHO, 2025).

The implication is that health workers should not dismiss mothers' concerns. Instead, immunisation encounters should include anticipatory guidance about expected reactions, appropriate responses to common reactions and when to seek additional care. WHO recommends ongoing vaccine-safety communication that addresses questions and concerns about risks and benefits.

The relatively low scores for poor knowledge, accessibility, cultural beliefs and religious beliefs suggest that these factors were not perceived as major barriers by the mothers in this particular study. However, these findings should be interpreted as context-specific rather than universal. Indeed, broader Nigerian evidence indicates that accessibility, socioeconomic conditions and knowledge can affect vaccination. Ogundele et al. (2022) found that difficulty reaching health facilities was associated with incomplete vaccination, while Aheto et al. (2022) and Yan et al. (2023) identified socioeconomic and healthcare-access factors as predictors of childhood vaccination indicators.

The discrepancy may reflect differences in local conditions, availability of PHC facilities, respondents' characteristics, community mobilisation or previous exposure to health education. It also illustrates why local assessments remain important in PHC planning.

Implications of the Findings

The findings have implications for PHC management and health education in Isiala Mbano LGA. First, interpersonal quality of care should be treated as an important component of PHC quality. Training programmes should move beyond technical competence to include empathy, respectful communication, professionalism, responsiveness and client-centred care. Second, immunisation counselling should address vaccine-safety concerns systematically. Rather than waiting for mothers to express fear after an adverse reaction, health workers should explain possible minor reactions before vaccination and provide clear instructions on what to do afterwards. Third, community-based health education should complement facility-based counselling. Community leaders and other trusted community actors can assist in reinforcing accurate information and correcting misinformation. Fourth, PHC managers should establish mechanisms through which mothers can provide feedback about their experiences. Such feedback can identify recurrent problems involving disrespectful treatment, communication and service organisation.

Strengths and Limitations

A major strength of this study is its focus on mothers of children under five years, a population that requires repeated contact with PHC services for immunisation, preventive care and management of childhood illnesses. The study also considered two distinct dimensions of potential barriers, health personnel attitudes and immunisation-related factors, thereby providing a broader perspective than studies examining only vaccination uptake.



However, the study has several limitations. First, its cross-sectional design prevents causal conclusions. Second, the study relied on self-reported perceptions, which may be affected by recall and social-desirability bias. Third, only descriptive statistics were used; therefore, the study does not establish statistically significant relationships between the identified barriers and actual PHC utilisation. Fourth, the sampling procedure involved recruiting mothers through nursery/pre-primary schools. Mothers whose children were not attending such schools may therefore have been underrepresented, potentially limiting generalisability. Finally, the study measured perceived barriers rather than directly measuring frequency or intensity of PHC utilisation. Future research should examine whether these perceived barriers are statistically associated with actual utilisation behaviour.

Conclusion

The study found that mothers of children under five years in Isiala Mbano LGA did not perceive health personnel as consistently demonstrating favourable attitudes in relation to empathy, respect, professionalism and care. Effective communication was comparatively favourably rated. Immunisation-related barriers were generally reported at a relatively low level; however, fear of immunisation side effects emerged as a specific concern. This finding is consistent with evidence from Nigeria showing that adverse events and concerns about vaccine safety can influence immunisation decisions. The findings suggest that strengthening interpersonal quality of care and improving vaccine-safety communication may contribute to greater confidence in PHC services among mothers of young children.

Recommendations

1. The PHC authorities should provide continuing professional development for health workers on empathy, respectful communication, professionalism, client-centred care and respectful treatment of mothers.

2. IThe PHC facilities should establish simple and accessible mechanisms for receiving, reviewing and responding to mothers' complaints and feedback.

3. Health workers should explain expected minor reactions, appropriate management and warning signs requiring further medical attention before mothers leave the facility.

4. Immunisation sessions should include opportunities for mothers to ask questions about vaccine safety rather than relying solely on brief vaccine administration encounters.

5. The PHC facilities should work with community leaders, women's groups, schools and community-based organisations to provide accurate and culturally appropriate information on immunisation.

6. Since effective communication was the most favourably rated provider-attitude item, health facilities should build upon this strength by incorporating structured counselling and reminder systems for immunisation appointments.

7. The PHC managers should periodically assess client satisfaction, waiting time, staff conduct and mothers' experiences to identify areas requiring quality improvement.

8. Future research should examine the statistical association between provider attitudes, immunisation concerns and actual PHC utilisation using inferential statistical techniques.

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