



HEALTHCARE ACCESS AND FACTORS INFLUENCING IMMUNIZATION ATTITUDES BY PREGNANT WOMEN IN PRIMARY HEALTH CARE CENTER, KANO STATE, NIGERIA

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Abstract

The study examined healthcare access and factors influencing immunization attitudes among pregnant women attending Primary Health Care Center in Kano State, Nigeria. The research aimed to evaluate the influence of healthcare access on immunization attitudes, identify socio-cultural and informational factors affecting vaccine acceptance, and assess the level of immunization awareness among pregnant women. A descriptive survey research design was adopted. The target population comprised pregnant women attending antenatal clinics, and a sample size of 169 respondents was selected using the Morgan and Krejcie sample size determination method. Data were collected using a self-structured questionnaire titled Healthcare Access and Immunization Attitude Questionnaire (HAIAQ). The instrument was validated by public health experts, and a Cronbach's alpha reliability coefficient of 0.84 was obtained. Data were analyzed using descriptive statistics and chi-square tests to assess associations between healthcare access and immunization attitudes. Findings revealed that regular access to antenatal healthcare services positively influenced immunization attitudes among pregnant women. However, barriers such as long waiting times, inadequate counseling, transportation challenges, misinformation, and cultural beliefs negatively affected vaccine acceptance. The study concludes that improved healthcare access, effective provider-patient communication, and targeted health education are essential for improving immunization attitudes among pregnant women. Recommendations include strengthening primary healthcare services, enhancing counseling during antenatal visits, and expanding community-based outreach programs.

Keywords: Healthcare access, immunization attitude, pregnant women, primary healthcare,

Kano State

Introduction

Healthcare access is a critical determinant of health outcomes and health-related behaviors, particularly among vulnerable populations such as pregnant women. Access to quality healthcare services provides opportunities for disease prevention, health education, early diagnosis, and timely intervention. Immunization, as a preventive health strategy, is closely linked to healthcare access, as regular contact with healthcare facilities enhances awareness, trust, and acceptance of vaccines (WHO, 2023).

Globally, maternal immunization has been recognized as a key strategy for reducing maternal and neonatal morbidity and mortality. Vaccines administered during pregnancy, such as tetanus toxoid and influenza vaccines, protect both mothers and newborns from life-threatening diseases (WHO, 2023). However, access to healthcare services varies widely across regions, influencing immunization attitudes and uptake among pregnant women.

In Africa, disparities in healthcare access remain a significant challenge. Despite improvements in primary healthcare delivery, many women still face barriers such as long distances to health facilities, poor infrastructure, inadequate staffing, and limited health education (African Union, 2022). These challenges contribute to negative attitudes toward immunization and low vaccine uptake among pregnant women.

In Nigeria, healthcare access differs markedly between urban and rural settings, with northern states experiencing greater challenges. Although primary healthcare centers provide immunization services, factors such as transportation costs, overcrowding, poor service delivery, and limited counseling influence pregnant women's perceptions of immunization (Adegboye et al., 2021).

Studies have shown that women who attend antenatal clinics regularly and receive adequate counseling are more likely to accept recommended vaccines (Balogun et al., 2020).

Primary Health Care Center serves as a vital point of access for maternal and child health services in its community. Despite the availability of immunization services, variations in healthcare access and service quality may influence immunization attitudes among pregnant women. Understanding how healthcare access and related factors affect immunization attitudes is essential for designing effective interventions that improve vaccine acceptance and maternal health outcomes.

Statement of the Problem

Although immunization services are available in primary healthcare centers in Kano State, many pregnant women continue to exhibit negative attitudes toward vaccination. Limited access to quality healthcare services, long waiting times, inadequate counseling, and poor provider–patient communication contribute to vaccine hesitancy among pregnant women (Oluwole et al., 2021). Additionally, socio-cultural beliefs and misinformation further complicate immunization acceptance.

In Primary Health Care Center, pregnant women attend antenatal clinics, yet not all of them accept or complete recommended immunizations. The absence of comprehensive data on how healthcare access influences immunization attitudes makes it difficult to design targeted interventions. Without addressing access-related barriers, immunization programs may fail to achieve desired coverage levels, increasing the risk of vaccine-preventable diseases among mothers and newborns. This study therefore seeks to examine healthcare access and factors influencing immunization attitudes among pregnant women attending Primary Health Care Center, Kano State.

Objectives of the Study

1. Evaluate the influence of healthcare access on immunization attitudes among pregnant women in Primary Health Care Center.
2. Identify socio-cultural, informational, and health system-related factors influencing immunization attitudes among pregnant women.

Research Questions

1. How does access to healthcare influence the immunization attitudes of pregnant women in Primary Health Care Center?
2. What are factors influence the immunization attitudes of pregnant women in Primary Health Care Center?

Hypothesis

1. H₀₁: There will be no significance differences between Healthcare Access and Immunization Attitude in Primary Health Care Center.

Literature Review

Healthcare access broadly refers to the timely use of personal health services to achieve the best possible health outcomes (Penchansky & Thomas, 1981). It encompasses dimensions such as availability, accessibility, affordability, acceptability, and accommodation of services. In the context of maternal care, access denotes not only physical proximity to health facilities but also the ability of women to utilize antenatal services effectively. Adequate access enhances the likelihood of receiving immunization information, counseling, and vaccines (Shrime, 2017). Thus, understanding healthcare access is foundational to examining immunization attitudes among pregnant women.

Healthcare Access and Maternal Health Behavior

Several studies have established that access to healthcare influences maternal health behavior, including utilization of preventive services. For instance, Simkhada et al. (2008) found that women who experienced fewer barriers to care were more likely to utilize antenatal services and comply with recommended interventions such as tetanus toxoid immunization. This suggests that structural factors such as transportation, waiting times, and costs — shape attitudes and behaviors toward immunization.

Access to Information as a Component of Access

Access is not limited to physical services; it also includes access to information. Pregnant women with regular contact with healthcare providers gain critical knowledge about vaccines through counseling and educational materials. A study by Odusanya et al. (2008) in Nigeria revealed that pregnant women who received immunization information from health workers were more likely to have positive attitudes toward vaccination. This underscores the importance of provider–patient interactions as a facilitator for positive immunization attitudes.

Accessibility Barriers in Primary Health Care Settings

Physical access remains a challenge in many primary healthcare contexts, particularly in low-resource settings. Long travel distances, poor road networks, and limited transportation options discourage regular attendance at health facilities (Munga et al., 2009). These barriers not only reduce contact with immunization services but also negatively influence pregnant women’s attitudes toward preventive care, including vaccines, because of perceived effort and cost involved.

Economic and Financial Constraints

Affordability is a crucial determinant of health service use. Even in contexts where immunization services are provided free of charge, indirect costs such as transportation, waiting times, and opportunity costs can impede access. Victora et al. (2016) demonstrated that financial barriers contribute to underutilization of services, which can translate into ambivalence or negative attitudes toward immunization as women prioritize more immediate needs.

Sociocultural Influences on Access and Attitudes

Sociocultural factors such as norms, beliefs, and gender dynamics play influential roles in shaping healthcare access and attitudes toward health interventions. Cultural beliefs about pregnancy and vaccines often intersect with health service utilization. According to Okafor et al. (2017), entrenched beliefs and misconceptions about vaccines influence how pregnant women perceive risks and benefits, which can either hinder or facilitate acceptance depending on prevailing community narratives.

Health System Factors

Health system characteristics such as staffing levels, interpersonal communication, service organization, and quality of care significantly affect access and attitudes. As Dairo and Owoyokun (2013) observed, positive interactions with healthcare providers enhance trust and satisfaction, which in turn fosters positive attitudes toward recommended services like immunization. Conversely, poor provider communication or perceived mistreatment can exacerbate scepticism.

Influence of Healthcare Worker Counseling

Multiple studies emphasize that counseling by healthcare workers is a strong determinant of positive immunization attitudes. Tadesse et al. (2014) found that women who received clear and supportive immunization counseling were more likely to view vaccines as beneficial and safe, even when confronted with cultural or misinformation barriers. This highlights the role of skilled communication in shaping attitudes beyond merely providing information.

Misinformation and Social Networks

The proliferation of misinformation, especially via family and social networks, can significantly influence immunization attitudes. Betsch et al. (2015) reported that pregnant women who encountered negative vaccine narratives within their communities or through social media were more likely to express fear or distrust toward immunization. This indicates that access to credible information must be coupled with strategies to counteract misinformation.

Educational Attainment and Health Literacy

Educational level correlates strongly with both healthcare access and immunization attitudes. Higher education often equips women with better health literacy, enabling them to understand the benefits of preventive care and navigate health systems more effectively. A meta-analysis by Smith et al. (2011) confirmed that women with greater educational attainment are more likely to adopt positive health behaviors, including vaccine acceptance.

Psychological and Perceptual Factors

Psychosocial factors such as perceived susceptibility to disease, perceived severity of vaccine-preventable diseases, and perceived vaccine efficacy shape attitudes independently of structural

access. In the Health Belief Model, these perceptions influence health behavior decisions (Rosenstock, 1974). Pregnant women who believe they and their infants are at high risk of disease are more likely to develop favorable attitudes toward immunization.

Policy and Institutional Context

National and sub-national immunization policies, including communication strategies and integration of immunization into routine antenatal care, influence both access and attitudes. Policies that mandate immunization education, strengthen health worker training, and standardize service delivery can create an enabling environment that fosters positive attitudes (WHO, 2020). Conversely, weak policy implementation can perpetuate gaps in access and weaken confidence in immunization programs.

The literature highlights that healthcare access is multifaceted, involving physical, informational, economic, cultural, and systemic components that collectively influence immunization attitudes among pregnant women. While many studies emphasize structural barriers and individual determinants, there is a notable gap regarding how these factors interact specifically within primary healthcare contexts in Nigeria, particularly regarding the integrative role of antenatal services in shaping attitudes. This underscores the need for empirical studies that examine not only levels of access but also the underlying factors that mediate the relationship between access, information, and attitude toward immunization.

Methodology

The study adopted a descriptive survey research design to examine healthcare access and immunization attitudes among pregnant women attending antenatal clinics in Primary Health Care Center in Kano State. This research design was considered appropriate because it enabled the

systematic collection of data on respondents' experiences, perceptions, and attitudes toward healthcare access and immunization. The target population comprised pregnant women attending antenatal services in the health facility, from which a sample size of 169 respondents was determined using the Morgan and Krejcie sample size determination table.

Data were collected using a structured instrument titled Healthcare Access and Immunization Attitude Questionnaire (HAIAQ), which was organized into four sections covering demographic characteristics, healthcare access indicators, awareness and knowledge of immunization, and factors influencing immunization attitudes. The instrument was validated by experts in public health and nursing sciences, and its reliability was established through a pilot study conducted outside the study area, yielding a Cronbach's alpha coefficient of 0.84. Questionnaire administration was carried out over a two-week period with the assistance of trained research assistants, and ethical considerations such as informed consent and confidentiality were strictly observed. Data were analyzed using descriptive statistics, including frequencies, percentages, means, and standard deviations, while chi-square tests were employed to determine the associations between healthcare access and immunization attitudes.

Results and Discussion of Findings

Table 1: Healthcare Access Patterns

Indicator	Frequency (N)	Percentage (%)	Mean	Std. Dev
Regular ANC attendance	120	71.0	4.10	0.65
Travel <30 mins to clinic	95	56.2	3.50	0.72
Access to immunization counseling	88	52.1	3.30	0.75
Satisfaction with healthcare services	102	60.4	3.60	0.70

Most respondents regularly attended ANC clinics (71%), suggesting opportunities for promoting immunization. However, only 52.1% reported receiving counseling, indicating gaps in health education delivery. Travel times and service satisfaction influence willingness to adopt immunization recommendations.

Table 2: Factors Influencing Immunization Attitudes

Factor	Frequency (N)	Percentage (%)	Mean	Std. Dev
Fear of side effects	92	54.4	3.50	0.68
Cultural beliefs	81	47.9	3.20	0.70
Misinformation from family	78	46.2	3.10	0.72
Health worker counseling	105	62.1	3.70	0.65
Media information	88	52.1	3.30	0.70

Fear of side effects (54.4%) and cultural beliefs (47.9%) were major barriers, while counseling from health workers (62.1%) positively influenced attitudes. This highlights the importance of targeted health education and culturally sensitive messaging.

Table 3: Chi-Square Test – Healthcare Access vs. Immunization Attitude

Variable	χ^2	df	p-value	Interpretation
ANC attendance vs. attitude	18.45	1	0.000	Significant
Travel time vs. attitude	4.72	1	0.030	Significant
Counseling vs. attitude	22.13	1	0.000	Significant

Chi-square analysis shows that regular ANC attendance, travel time, and access to counseling are significantly associated with positive immunization attitudes. Women with frequent ANC visits, shorter travel times, and proper counseling were more likely to adopt positive immunization attitudes.

Discussion of Findings

The findings indicate that healthcare access is a critical determinant of immunization attitudes among pregnant women in Ja'en. Frequent ANC visits increase exposure to immunization information, build trust in healthcare providers, and reduce vaccine hesitancy. This supports Balogun et al. (2020), who emphasized healthcare engagement as a predictor of maternal immunization acceptance.

Barriers such as long travel times, inadequate counseling, and socio-cultural influences negatively impacted attitudes. These results align with Oluwole et al. (2021), demonstrating that structural and informational factors limit vaccine uptake. Despite high awareness of immunization benefits, misinformation and fear of side effects persisted, suggesting that knowledge alone is insufficient without supportive healthcare access and effective communication.

The chi-square analysis confirmed a statistically significant relationship between healthcare access variables and immunization attitudes. This reinforces the importance of structural interventions, including improved accessibility, enhanced counseling, and culturally tailored education.

Conclusion

Healthcare access significantly influences immunization attitudes among pregnant women in Primary Health Care Center. While regular ANC attendance and counseling promote positive attitudes, structural barriers and socio-cultural beliefs hinder vaccine acceptance. Addressing these

barriers through improved healthcare delivery, consistent counseling, and community engagement is essential for increasing maternal and neonatal immunization coverage.

Recommendations

1. Strengthen primary healthcare services to improve accessibility, reduce waiting times, and enhance service delivery for pregnant women.
2. Incorporate structured immunization counseling during antenatal visits to address fears, misconceptions, and misinformation.
3. Expand community-based outreach programs targeting pregnant women with limited access to healthcare facilities.
4. Engage community and religious leaders in promoting positive immunization attitudes to address socio-cultural barriers.

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