

# Awareness and Perception of Health Facility Delivery Among Women of Child-Bearing Age in Jema'a LGA, Kaduna State, Northwestern Nigeria

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## ABSTRACT

**Background:** Maternal mortality remains a major public health challenge in Nigeria, with many deaths occurring during childbirth. Delivery in health facilities with skilled attendants significantly reduces maternal and neonatal complications. However, home delivery remains common in many rural communities due to sociocultural beliefs, poor access to health services, and financial constraints. Evidence on women's awareness and perceptions of health facility delivery (HFD) in Jema'a Local Government Area (LGA) of Kaduna State is limited. **Aim:** To assess the awareness and perception of health facility delivery among women of childbearing age in Jema'a LGA, Kaduna State, Nigeria. **Materials and Methods:** A community-based descriptive cross-sectional study was conducted among 250 women aged 15–49 years who had delivered at least once. A multistage sampling technique was used to select respondents from four wards and their communities. Data were collected using a structured, pretested, interviewer-administered questionnaire and analysed using descriptive statistics with SPSS version 24. **Results:** The mean age of respondents was  $23.4 \pm 7.8$  years. Most were married (88.8%), had a primary education (44.8%), and were engaged in business (42.0%). Awareness of HFD was high (78.0%), mainly through health workers (50.0%). Although 84.4% preferred HFD, home delivery remained common (50.0%). Perceived benefits included availability of medical equipment (36.0%) and skilled attendants (22.0%). Major barriers were distance (36.0%) and cost (22.0%). Spouses/partners influenced delivery decisions in 50.0% of cases. **Conclusion:** Despite high awareness and preference for HFD, sociocultural and access barriers persist. Addressing affordability, accessibility, and male involvement may improve utilization of skilled delivery services.

**Keywords:** Health Facility Delivery, Awareness, Perception, Childbearing women, Kaduna

## INTRODUCTION

Maternal mortality remains a major global public health challenge, particularly in low- and middle-income countries where access to quality maternal healthcare services is limited. Despite notable progress over the past two decades, an estimated 287,000 women still die annually from pregnancy-related causes, with sub-Saharan Africa accounting for the majority of these deaths.<sup>1</sup> Many of these deaths occur during labour and delivery and are largely preventable through timely access to skilled obstetric care. Ensuring that childbirth occurs under the supervision of trained health professionals is therefore critical for improving maternal and neonatal survival. Health facility delivery (HFD) is widely recognized as a key intervention for reducing maternal and neonatal mortality. The World Health Organization (WHO) recommends that all women give birth in health facilities where skilled birth attendants and emergency obstetric

services are available.<sup>2</sup> HFD refers to childbirth within recognized healthcare settings such as hospitals, maternity clinics, or primary healthcare centres, where trained personnel and essential equipment are available to manage normal deliveries and obstetric complications.<sup>3</sup> Facility-based deliveries enable early detection and prompt management of complications such as haemorrhage, sepsis, obstructed labour, and hypertensive disorders, which are among the leading causes of maternal mortality globally.<sup>1</sup>

Despite these benefits, the utilization of health facility delivery services remains uneven, particularly in low-resource settings.<sup>3</sup> Women's decisions regarding place of delivery are influenced by a complex interplay of socioeconomic, cultural, and health system factors, including cost of care, accessibility, transportation,

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sociocultural beliefs, and perceived quality of services.<sup>3,4</sup> In many communities, traditional childbirth practices and reliance on traditional birth attendants continue to influence delivery choices even where health facilities exist.<sup>3</sup> Nigeria contributes substantially to global maternal mortality and has one of the highest maternal mortality ratios worldwide.<sup>4</sup> Although national efforts have sought to strengthen maternal health systems, disparities in utilization persist across regions and socioeconomic groups. Northern Nigeria, in particular, continues to record poorer maternal health indicators compared with southern regions.<sup>5</sup> Factors such as lower female education, poverty, limited health infrastructure, and entrenched sociocultural norms contribute to these disparities.<sup>6</sup>

In Northwestern Nigeria, utilization of skilled birth services is especially low. Cultural practices, financial constraints, and geographic barriers often limit access to health facilities.<sup>6</sup> In addition, decision-making regarding maternal healthcare is frequently influenced by family members, particularly spouses and elders, which may affect women's autonomy in seeking facility-based delivery services. At the health system level, shortages of healthcare workers, inadequate infrastructure, and concerns about the quality of care further reduce utilization.<sup>7</sup> Evidence from national surveys highlights the magnitude of this challenge. The 2018 Nigeria Demographic and Health Survey reported that only 39% of births nationwide occur in health facilities, with substantially lower proportions in Northwestern Nigeria, where only about 17% of births take place in health facilities.<sup>4</sup> This disparity underscores the persistent barriers to skilled care. Several studies indicate that women's perceptions of the benefits and risks associated with facility-based childbirth play a critical role in shaping delivery choices.<sup>8</sup> Women who perceive health facilities as safe and well-equipped are more likely to utilize them, whereas negative perceptions about the quality of care may discourage facility-based delivery.

Perceptions of care within health facilities are increasingly recognized as important determinants of maternal health service utilization. Experiences of disrespect, lack of privacy, and poor provider attitudes during childbirth have been reported as barriers to facility-based delivery.<sup>9</sup> Such experiences may reinforce community preferences for home delivery and reduce trust in health institutions. Conversely, positive perceptions of respectful and competent care may encourage women to seek facility-

based services. Understanding women's perceptions of HFD is therefore essential for designing interventions to improve uptake of skilled delivery services.

In Kaduna State, maternal health services have been strengthened through policy initiatives and strategic health development plans.<sup>7</sup> Nevertheless, disparities in access and utilization remain evident, particularly in rural and semi-urban communities. Structural barriers such as long distances to facilities, limited transportation options, and financial constraints continue to affect women's ability to access skilled delivery services. These challenges are compounded by sociocultural beliefs and traditional childbirth practices that remain embedded within communities. Jema'a Local Government Area (LGA) in Kaduna State exemplifies these contextual realities. The LGA comprises rural and semi-urban communities, where primary healthcare facilities are the main providers of maternal health services.<sup>10</sup>

However, traditional birthing practices remain prevalent, and women's decisions regarding place of delivery are frequently influenced by household dynamics, cultural norms, and perceptions about the benefits or limitations of facility-based childbirth. Although numerous studies have examined determinants of maternal healthcare utilization in Nigeria, limited evidence exists regarding community-level awareness and perceptions of HFD in specific contexts such as Jema'a LGA.<sup>11</sup> Existing research suggests that gaps often exist between awareness of the benefits of facility delivery and actual utilization.<sup>12</sup> In many settings, women may recognize the advantages of skilled birth attendance but still prefer home delivery due to cultural familiarity, perceived convenience, or financial considerations.

These findings highlight the need for localized evidence on how awareness and perceptions influence delivery choices within specific communities. Addressing this gap is essential for informing context-appropriate maternal health interventions. Understanding women's awareness and perceptions of HFD can guide policies and programs aimed at improving utilization of skilled delivery services and reducing maternal and neonatal morbidity and mortality. Therefore, this study aimed to assess the awareness and perception of health facility delivery among women of childbearing age in Jema'a Local Government Area of Kaduna State, Northwestern Nigeria.

## **MATERIALS AND METHODS**

### **Study Design, Population, and Area**

This study employed a community-based descriptive cross-sectional design conducted between March and July 2025 in Jema'a Local Government Area (LGA), Kaduna State, Northwestern Nigeria. Jema'a LGA is characterized by heterogeneous ethnic groups and predominantly agrarian livelihoods, with farming as the primary economic activity for residents.<sup>13</sup> The study population comprised women of reproductive age (15–49 years) residing in the selected communities who had experienced at least one previous delivery. Women who were severely ill at the time of the survey or temporarily absent from their households during data collection were excluded from the study.

### **Sample Size Estimation and Sampling Technique**

The minimum sample size was estimated at 277 using the Cochran formula for a single proportion,<sup>14</sup> based on a 23.6% prevalence of awareness of health facility delivery from a previous study,<sup>15</sup> a 5% margin of error, and a 90% response rate. A multistage sampling technique was used to select participants. In the first stage, four wards (Jagindi, Takau, Maigizo, and Asso) were selected by simple random sampling from the twelve wards in Jema'a LGA. In the second stage, one community was randomly selected from each of the chosen wards. In the third stage, households were systematically selected until the required sample size for each community was reached. Within each selected household, eligible women were identified, and one respondent was chosen using simple random sampling by balloting where more than one eligible participant was present, thereby minimizing potential selection bias.

### **Data Collection**

Data were collected using a structured, interviewer-administered questionnaire developed following a review of the relevant literature on maternal health service utilization and perceptions of facility-based delivery. The questionnaire was pre-tested among 30 women in a neighbouring community with similar socio-demographic characteristics but not included in the main study. The pre-test assessed the instrument's clarity, relevance, sequencing, and average completion time, and necessary adjustments were made accordingly. Content validity of the questionnaire was ensured through expert review by two public health specialists, and the internal consistency of perception-related items was assessed using

Cronbach's alpha, yielding a reliability coefficient of 0.71, indicating acceptable reliability. The final questionnaire comprised sections on socio-demographic characteristics, awareness of health facility delivery, and perceptions toward facility-based childbirth.

### **Data Analysis**

Collected data were checked for completeness and entered into Statistical Package for the Social Sciences (SPSS) version 24.0 for analysis. Descriptive statistics were used to summarize the data. Categorical variables were presented as frequencies and percentages, while continuous variables, such as age, were summarized using means and standard deviations. Results were presented using texts and tables where appropriate to facilitate interpretation.

### **Ethical Consideration**

Ethical approval for the study was obtained from the Kaduna State Ministry of Health Research Ethics Committee prior to the commencement of data collection. Permission for community entry was also obtained from local administrative and community leaders within the study area. Participants were informed about the objectives, procedures, and voluntary nature of the study, and the confidentiality of the information provided was strictly maintained. No personal identifiers were included in the dataset, and participants were assured that the information collected would be used solely for research purposes. Written informed consent was obtained from all adult participants. For respondents under 18 years of age, assent was obtained from the participant and consent from a parent or guardian.

## **RESULTS**

### **Respondents' sociodemographic characteristics**

A total of 250 women of reproductive age participated in the study. The respondents' ages ranged from 15 to 49 years, with a mean age of  $23.4 \pm 7.8$  years. The majority of participants were 15–20 years old (150, 60.0%). Most respondents were married (222, 88.8%). Regarding educational attainment, primary education was the most common level achieved (112, 44.8%), while 105 (42.0%) of the respondents were engaged in business-related activities as their main occupation. Regarding parity, 125 respondents (50.0%) reported having five or more children [Table 1].

**Table 1: Respondents' socio-demographic characteristics**

Variables	Frequency (%) n = 250
Age group (years)	
15-20	150 (60.0)
21-30	48 (19.2)
31-40	25 (10.0)
41-49	27 (10.8)
Marital status	
Single	2 (0.8)
Married	222 (88.8)
Divorced	12 (4.8)
Widowed	14 (5.6)
Level of education	
No formal education	55 (22.0)
Primary	112 (44.8)
Secondary	75 (30.0)
Tertiary	8 (3.2)
Occupation	
Business/Trading	105 (42.0)
Farming	57 (22.8)
Civil Servant	55 (22.0)
Others (artisans, homemakers, etc.)	33 (13.2)
Number of children	
1	59 (23.6)
2	11 (4.4)
3	55 (22.0)
4	0 (0)
5	125 (50)

**Awareness of health facility delivery among respondents**

Overall, 195 respondents (78.0%) reported being aware of health facility delivery (HFD). Among those aware, health workers were the primary source of information, accounting for 50.0% of responses. Similarly, 195 respondents (78.0%) reported knowing the location of the nearest health facility, while 222 respondents (88.8%) were aware of the benefits of delivering in a health facility [Table 2].

**Respondents' perception of factors influencing delivery choices**

Most respondents (201, 80.4%) perceived health facility delivery to be safer than home delivery. The most frequently reported perceived advantages of facility-based delivery included the availability of medical equipment (90, 36.0%) and the presence of skilled birth attendants (55, 22.0%). Conversely, the most commonly perceived barriers to utilizing health facilities for childbirth were the long distance to health facilities (90, 36.0%) and the high cost of services (55, 22.0%). Despite these perceived barriers, a large proportion of respondents (211, 84.4%)

preferred delivery at a health facility. However, home delivery remained a prevalent cultural practice, with 125 respondents (50.0%) reporting it. In addition, 125 respondents (50.0%) identified spouses as the primary decision-makers regarding place of delivery, highlighting the significant role of household dynamics in shaping childbirth choices [Table 3].

**Table 2: Awareness of health facility delivery among respondents**

Variables	Frequency (%) n = 250
Heard about health facility delivery	
Yes	195 (78.0)
No	55 (22.0)
Source of information*	
Health workers	125 (50.0)
Family/Friends	55 (22.0)
Community meetings	11 (4.4)
Others (radio, church, mosque, etc.)	59 (23.6)
Knows the nearest health facility	
Yes	195 (78.0)
No	55 (22.0)
Aware of health facility delivery benefits	
Yes	222 (88.8)
No	28 (11.2)

\*Multiple responses allowed

**DISCUSSION**

This study assessed the awareness and perceptions of health facility delivery (HFD) among women of childbearing age in the Jema'a Local Government Area of Kaduna State and revealed an important pattern: although awareness and preference for facility-based childbirth were relatively high, home delivery remains a common cultural practice. This finding highlights a persistent gap between knowledge and actual utilization of skilled birth services, a phenomenon widely reported in maternal health research in low- and middle-income countries.

The relatively high level of awareness of health facility delivery (78.0%) and the even higher proportion of respondents who recognized its benefits (88.8%) suggest that maternal health information is reaching a substantial proportion of women in the study area. Similar findings have been reported in other parts of Northern Nigeria, where expanded maternal health education and antenatal counseling have improved women's knowledge of safe delivery practices.<sup>16,17</sup>

**Table 3: Respondents' perception of factors influencing delivery choices**

Variables	Frequency (%) n = 250
Believes health facility delivery is safer	
Yes	201 (80.4)
No	49 (19.6)
Perceived advantages*	
Medical equipment available	90 (36.0)
Skilled birth attendant present	55 (22.0)
Access to emergency care	35 (14.0)
Better hygiene	35 (14.0)
Others (e.g., pain relief)	35 (14.0)
Perceived disadvantages*	
Far distance to the facility	90 (36.0)
High cost of services	55 (22.0)
Negative attitude of staff	35 (14.0)
Cultural reasons/preference	35 (14.0)
Others (e.g., lack of transport)	35 (14.0)
Prefer a health facility for delivery	
Yes	211 (84.4)
No	39 (15.6)
Common cultural practices in the community*	
Home delivery	125 (50.0)
Delivery by a traditional birth attendant	55 (22.0)
Postpartum confinement at home	35 (14.0)
Others	35 (14.0)
Spousal role in decision	
Major role	125 (50.0)
Minor role	55 (22.0)
No role	70 (28.0)

\*Multiple responses allowed

Increased awareness in such settings is often attributed to sustained community health education programs and antenatal care outreach initiatives aimed at improving maternal health outcomes.<sup>16</sup> The finding that health workers constituted the primary source of information further emphasizes their critical role as trusted providers of maternal health information and agents of behavioral change. Evidence from other settings in sub-Saharan Africa indicates that effective antenatal counseling and the use of structured educational tools by health workers significantly improve maternal knowledge regarding childbirth practices and newborn care.<sup>18</sup> Strengthening the capacity of frontline health workers to deliver consistent maternal health messaging may therefore further enhance awareness and influence delivery choices in rural communities.

Despite these encouraging levels of awareness, the study identified several barriers that may limit the translation of knowledge into actual utilization of facility-based delivery services. The perception of long distance to health

facilities (36.0%) as the most common disadvantage reflects persistent geographical access challenges. This finding is consistent with a large body of literature demonstrating that physical distance and transportation difficulties significantly reduce the likelihood of facility-based childbirth in rural areas of sub-Saharan Africa.<sup>19,20</sup> When women must travel long distances to reach obstetric care, delays in accessing skilled services become more likely, particularly during labour when mobility may be limited.<sup>21</sup> Geographic barriers often interact with financial constraints, as the cost of transportation and healthcare services can further discourage facility utilization among economically vulnerable households.

Another notable barrier identified in this study was the perceived high cost of delivery services, reported by 22.0% of respondents. Financial constraints have consistently been identified as a major determinant of maternal healthcare utilization in Nigeria and other low-resource settings.<sup>17</sup> Out-of-pocket payments for healthcare, combined with indirect costs such as transportation and loss of income, can discourage women from seeking skilled birth services even when they are aware of the benefits. Policies aimed at reducing financial barriers, such as subsidized maternal services or community-based health insurance schemes, may therefore play an important role in improving uptake of facility-based delivery.

The persistence of home delivery as a cultural norm (50.0%) despite high awareness of the benefits of facility delivery underscores the influence of sociocultural factors in shaping childbirth practices. Cultural familiarity, comfort within the home environment, and longstanding community traditions often reinforce preferences for home delivery, particularly in rural settings. Similar findings have been reported in studies conducted in Ethiopia and Nigeria, where women frequently prioritize cultural expectations and personal comfort over biomedical recommendations regarding childbirth location.<sup>22,23</sup> These findings suggest that knowledge alone may be insufficient to change entrenched behavioural patterns. Effective interventions must therefore address cultural beliefs and social norms through community-based engagement strategies, including dialogue with traditional leaders, community influencers, and women's groups.

Interestingly, the finding that a substantial proportion of respondents reported not being actively advised by family members to deliver at home suggests that the persistence of home delivery may not necessarily be driven by explicit family pressure but rather by internalized cultural norms and habitual practices within the community. This observation presents an important opportunity for maternal health programs: if community members are not strongly opposed to facility delivery, targeted behavior-change communication and community education initiatives could gradually shift perceptions and normalize facility-based childbirth.

Another important finding from this study is the significant role of spouses in decision-making regarding place of delivery, with half of the respondents identifying their husbands as key decision-makers. Male involvement in maternal health has been widely recognized as an important determinant of women's utilization of maternal healthcare services in sub-Saharan Africa.<sup>24</sup> In many patriarchal societies, men control household resources and make critical decisions related to healthcare utilization. Consequently, maternal health programs that focus exclusively on women may overlook an important determinant of service uptake. Encouraging male participation in maternal health education, antenatal care visits, and community discussions on safe motherhood may therefore enhance support for facility-based delivery and improve maternal health outcomes.

Overall, the findings of this study highlight that while awareness of health facility delivery is relatively high in Jema'a LGA, structural barriers, sociocultural norms, and household decision-making dynamics continue to influence childbirth practices. Addressing these multifaceted challenges will require integrated strategies that combine improved health system accessibility, community engagement, and male involvement in maternal health interventions to promote safer childbirth practices and reduce preventable maternal and neonatal morbidity and mortality.

### **STUDY LIMITATIONS**

Several limitations should be considered when interpreting the findings of this study. The cross-sectional design limits the ability to establish causal relationships between awareness, perceptions, and the utilization of health facility delivery services. In addition, the study relied on self-reported data, which may be subject to recall

and social desirability biases, particularly given that interviews were conducted face-to-face. The study was also conducted in a single Local Government Area (Jema'a LGA) in Kaduna State, which may limit the generalizability of the findings to other regions with different sociocultural and health system contexts. Furthermore, the structured questionnaire primarily captured quantitative data, limiting deeper exploration of sociocultural factors influencing delivery choices. Qualitative approaches such as focus group discussions or in-depth interviews could provide richer insights into these dynamics. Despite these limitations, the study provides useful evidence on awareness and perceptions of health facility delivery among women of reproductive age in Jema'a LGA, which may help inform context-specific maternal health interventions to improve the utilization of skilled birth services.

### **CONCLUSION**

This study found that awareness and positive perceptions of health facility delivery (HFD) are high among women in Jema'a LGA, Kaduna State; however, home delivery remains common, indicating a gap between knowledge and practice. Key barriers include distance to health facilities, perceived service costs, cultural norms, and spouses' influence on delivery decisions. Improving HFD utilization requires integrated interventions that enhance physical and financial access to maternal healthcare, strengthen service quality, and promote community engagement and male involvement to advance maternal health and Sustainable Development Goal targets.

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Nil.

### **Conflict of interest**

None declared.

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