

## ASSESSMENT OF KNOWLEDGE, ATTITUDES, AND PRACTICES OF PREGNANT WOMEN ON MATERNAL HEALTH AND NEONATAL SURVIVAL IN ORPHAN AND LESS PRIVILEGE CLINIC, TALATA MAFARA LOCAL GOVERNMENT, ZAMFARA STATE

**Dauda Salisu<sup>1,8</sup>, Bello Almu<sup>2, 3</sup>, Manir Yahaya<sup>4, 8</sup>, Habibu Muhammad<sup>5, 8</sup>, Ibrahim Aliyu<sup>6, 8</sup>, Bahar Lawali Malan<sup>7, 8</sup>**

- 1. National Health Fellow, Talata Mafara Local Government, Zamfara State,**
  - 2. Zamfara State University Talata Mafara (ZAMSUT)**
  - 3. Usman Danfodio University Teaching Hospital Sokoto (UDUTHS), Sokoto State**
  - 2. Zamfara State University Talata Mafara (ZAMSUT)**
  - 3. National Health Fellow, Maradun Local Government, Zamfara State**
  - 4. National Health Fellow, Anka Local Government, Zamfara State**
  - 5. National Health Fellow, Bukkuyum Local Government, Zamfara State**
  - 6. National Health Fellow, Bakura Local Government, Zamfara State**
- Corresponding Author Email/Phone: daudalimanchi@gmail.com; +238038309497**

### Abstract

Maternal mortality remains a significant global health concern, affecting developing countries. In 2020, approximately 287,000 women died due to complications related to pregnancy and childbirth. Almost 95% of these deaths occurred in low and middle-income countries. This study was conducted to assess the knowledge, attitudes, and practices (KAP) of pregnant women regarding maternal and neonatal health, identify barriers to accessing antenatal care (ANC) and neonatal services. Data was collected using a structured questionnaire validated in prior Knowledge, Attitudes, and Practices. 275 copies of questionnaire were distributed to the pregnant women attending antenatal care in orphan and less privilege clinic Talata Mafara LGA. The result indicated that most of them are within the age group of 15-25 (61.1%) though they are married (90.1%). About 72.3% attained secondary education level. The respondents were unemployed (36.7%), earning above N30, 000 monthly (36.4%). About 97.5% having prim parous pregnancy (97.5%). Unlike most previous studies, this study covered the three dimensions knowledge, attitude and practices related to maternal health and neonatal survival. This study shows that the level of utilization of maternal health care services is satisfactory, but there is need to improve on educating pregnant women on maternal health and neonatal survival to enhance the maternal health and minimize the risk factors in antenatal, natal and postnatal periods. The government should motivate pregnant women by providing free maternal care services and incentives to energize them to attend all ANC's, natal and postnatal services.

**Keywords:** Attitudes, Knowledge, Practices

### Introduction

Maternal mortality remains a significant global health concern, disproportionately affecting developing countries. In 2020, approximately 287,000 women died due to complications related to pregnancy and childbirth. Almost 95% of these deaths occurred in low and middle-income countries (World Health Organization, 2025). The chances of dying from pregnancy related complications are significantly higher in developing countries compared to developed countries (Ogbonnaya et al., 2025). A woman's lifetime risk of maternal death is the probability that a 15-year-old woman will eventually die from a maternal cause. These deaths are largely preventable through access to quality maternal healthcare services, including skilled birth attendance and timely management of complications. To help ensure such access to care, Birth Preparedness and Complication Readiness (BPCR) is a comprehensive strategy that empowers pregnant women and their families to plan for normal birth and anticipate potential complications, thereby facilitating prompt access to appropriate care (WHO, 2025; Ogbonnaya et al., 2025).

Across the countries and territories globally, 1 in 4 pregnant women receives no antenatal care, and more than 40% give birth without the assistance of a skilled attendant. Therefore, to reduce child mortality, improving the health of pregnant women and new mothers is critical. More than half a million women die each year globally due to pregnancy-related causes and many more suffer debilitating long-term effects that could be easily avoided through adequate maternal care. Furthermore, improving maternal health is vitally important for a child's prospects of survival (Ogunba et al., 2017). According to the World Health Organization (WHO), encyclopedically, several pregnant girls do not get enough micronutrients in their diets during their gestation and reproductive-age period, which influences unborn generation. Lack of knowledge, station, and unhappy practices of nutrition, similar to consuming nutrient-deficient food and a lack of proper eating patterns, are understood to be the cause of colorful health problems and nutritional scarcity scarcities in nutrition throughout the life cycle has a major effect on health. Pregnant women need the most nutritional variety in their lives (Yalewdeg & Mahlet, 2020).

In Ethiopia, nutritional KAP conditions are among the main causes of morbidity and mortality in pregnant women. The major problems are protein-energy malnutrition and micronutrient deficiencies analogous to vitamin A, iron, and iodine (Yalewdeg & Mahlet, 2020; WHO 2023). Nigeria exemplifies this crisis, reporting one of the world's highest maternal mortality ratios (MMR) at 512 deaths per 100,000 live births and neonatal mortality rates exceeding 34.5 per 1,000 births (Nigeria Demographic and Health Survey (NPC 2019; UNICEF, 2022)

Sub-Saharan Africa bears the heaviest burden of maternal mortality globally. Three of the five countries with the highest maternal mortality ratio (MMR) in 2020 are in Sub-Saharan Africa, with Nigeria the third country on the list having a MMR of 1047 per 100, 000 live births (United Nations International Children's Emergency Fund, 2025). The pooled maternal mortality ratio for Nigeria derived from a 2023 meta-analysis with reported data for 96 health facilities was 1470 per 100,000 live births which still remains alarmingly high (Haruna et al., 2023; Ogbonnaya et al., 2025). It makes biggest contribution to the death of all mothers around the world (Mustsfa, 2020).

This study assessed pregnant women's knowledge, attitudes, and practices (KAP) concerning antenatal, natal, and post-natal healthcare. A cross-sectional survey was conducted, generating qualitative data on pregnancy complications, education, beliefs, and individual, institutional, social, and cultural factors to analyse their relationship to these behavioural domains (Mustafa, 2020).

Despite efforts to expand healthcare access, socioeconomic barriers, cultural norms, and knowledge gaps persistently hinder service utilization in Northern Nigeria (Afolabi et al., 2023; Iliyasu et al., 2021). In developing nations, with haemorrhage, hypertension, and sepsis as leading preventable causes of neonatal and maternal death (WHO, 2023). Neonatal survival hinges on early breastfeeding and infection prevention services often inaccessible in rural Nigeria (UNICEF, 2022). Alarmingly, only 26.6% of women in Zamfara State complete  $\geq 4$  ANC visits (NDHS, 2018), lagging behind the global average of 62% (WHO, 2023) and urban Eritrea (80%; National Statistics Office Eritrea, 2013).

Significant barriers to maternal healthcare access in Zamfara State are multifaceted. Geographic accessibility poses a fundamental challenge, with limited clinics and inadequate transportation infrastructure restricting women's ability to reach facilities (Iliyasu et al., 2021). Compounding this are financial constraints, as out-of-pocket costs for services create prohibitive economic burdens for many families (Afolabi et al., 2023). Cultural factors further impede utilization, as evidenced by a persistent preference for traditional birth attendants over facility-based care (Olawuyi & Olofin, 2020). Additionally, critical knowledge gaps exist among the population; for instance, only 24% of women in similar low-resource settings can identify iron-deficiency risks during pregnancy, reflecting broader deficiencies in maternal health awareness (Patel et al., 2016).

Talata Mafara, a rural Local Government Area (LGA) in Zamfara State, faces acute healthcare disparities. The Orphans and Less Privileged Clinic serve vulnerable populations, including widows and low-income pregnant women. Late Antenatal Care (ANC) initiation and reliance on traditional birth attendants increase

maternal/neonatal risks (Odetola, 2021). This study addresses a critical evidence gap by assessing Knowledge, Attitudes, and Practices (KAP) among pregnant women in this setting to inform targeted interventions.

Studies in Eritrea and Northwestern Nigeria confirm KAP deficits correlate with poor outcomes (Gebremariam et al., 2023; Nahom et al., 2019). However, Talata Mafara's vulnerable populations remain understudied, necessitating this research.

### **Objective of the study**

This study aims to assess the knowledge, attitudes, and practices (KAP) of pregnant women regarding maternal and neonatal health, identify barriers to accessing antenatal care (ANC) and neonatal services, and generate evidence-based recommendations for reducing mortality in underserved communities.

To address these threefold objectives, two primary hypotheses will be tested:  $H_1$  posits no significant association exists between maternal health knowledge and health service utilization, while  $H_2$  asserts that attitudes do not significantly influence maternal health practices.

The scope of this investigation is deliberately focused, with the target population exclusively limited to pregnant women attending antenatal services at the Orphans and Less Privileged Clinic in Talata Mafara during the study period.

### **Methodology**

A descriptive cross-sectional survey was conducted from August to October 2025 at the Orphans and Less Privileged Clinic in Talata Mafara, geographically situated at coordinates 12°34'00"N 6°04'00"E (Aliyu & Ismail, 2017). The study recruited 275 pregnant women, with the sample size determined using Rasoft® sample size calculation software. Participants were systematically selected through systematic random sampling from the population of women attending antenatal care (ANC) services at the clinic during the specified study period.

### **Data collection**

Data were collected using a structured questionnaire validated in prior Knowledge, Attitudes, and Practices (KAP) studies (Rosliza & Muhamad, 2011). This instrument assesses three critical domains: (1) Knowledge of maternal danger signs and antenatal care (ANC) importance; (2) Attitudes toward facility-based delivery; and (3) Practices related to ANC attendance and breastfeeding. Trained research staff administered the tool through face-to-face interviews to ensure accurate data capture and participant comprehension.

### **Ethical clearance**

Ethical clearance was secured from the Zamfara State Ministry of Health prior to study initiation. All participants provided written informed consent, emphasizing voluntary participation and the right to withdraw. Confidentiality was maintained through anonymized datasets, with personally identifiable information encrypted and stored separately. As a measure of beneficence, the findings of this study was disseminated to clinic Healthcare Providers, community and all the relevant stakeholders to directly reform service improvements. Collected data were analyzed using descriptive statistics, including frequencies and percentages, to summarize participant characteristics and KAP patterns. Data Collation was performed in SPSS Statistics software (Version 28).

## Results

The total of 275 copies of questionnaire were distributed to the pregnant women attending antenatal care in orphan and less privilege clinic Talata Mafara LGA.

**Table 1: Demographic Information**

| Characteristic         | Frequency (n=275) | Percentage (%) |
|------------------------|-------------------|----------------|
| Age of the respondents |                   |                |
| 15 – 25                | 168               | 61.1           |
| 26 – 35                | 85                | 30.9           |
| 36 – 45                | 22                | 8              |
| 46 – 55                | 0                 | -              |
| Marital status         |                   |                |
| Married                | 248               | 90.2           |
| Widowed                | 27                | 9.8            |
| Single                 | 0                 | -              |
| Education level        |                   |                |
| Non formal             | 30                | 10.9           |
| Primary                | 28                | 10.2           |
| Secondary              | 199               | 72.4           |
| Tertiary               | 18                | 6.5            |
| Occupation             |                   |                |
| Unemployed             | 101               | 36.7           |
| Trader                 | 89                | 32.4           |
| Farmer                 | 60                | 21.8           |
| Artisan                | 5                 | 1.8            |
| Other                  | 20                | 7.3            |
| Number of pregnancies  |                   |                |
| Primiparios            | 268               | 97.5           |
| Multiparous            | 7                 | 2.5            |
| Monthly Income         |                   |                |
| 10,000                 | 50                | 10.9           |
| 20,000                 | 89                | 32.3           |
| 30,000                 | 100               | 36.4           |

Field survey data (August–October 2025).

Demographic Information of the Pregnant Women result on Table 1 shows that respondents were within the age group of 15-25 with 61.1% and married (90.1%). About 72.3% having secondary education level, most of them were unemployed (36.7%), earning above 30,000 monthly (36.4%). About 97.5% having prim parous pregnancy.

Table 2: Knowledge

| S/N | Knowledge assessment                               | Yes        | No         | I don't know |
|-----|--|------------|------------|--------------|
| 1   | Severe bleeding indicates an emergency             | 220 (80)   | 43 (15.6)  | 12 (4.4)     |
| 2   | Swollen hands/face means high blood pressure       | 231 (84)   | 39 (14.18) | 5 (1.82)     |
| 3   | Severe headaches could be life-threatening.        | 243 (88.4) | 28 (10.18) | 4 (1.42)     |
| 4   | Breastfeeding should start within 1 hour of birth  | 201 (73)   | 65 (23.6)  | 9 (3.4)      |
| 5   | A baby weighing <2.5kg needs urgent medical care.  | 198 (72)   | 69 (25)    | 8 (3)        |
| 6   | Cord infections can cause neonatal death.          | 169 (61.4) | 83 (30.19) | 23 (8.36)    |
| 7   | Iron tablets prevent anemia in pregnancy.          | 178 (64.7) | 69 (25)    | 28 (10.25)   |
| 8   | Sleeping under mosquito nets reduces malaria risk. | 250 (90.9) | 25 (9.1)   | -            |

**Field survey data (August–October 2025).**

The study results indicate the level of knowledge among pregnant women in the study area on maternal health and neonatal survival. Most knew that severe bleeding indicates an emergency (80%), swollen hands/face signal high blood pressure (84%), and severe headaches could be life-threatening (88.4%). High percentages also correctly identified that breastfeeding should start within one hour of birth (73%), a baby weighing <2.5kg needs urgent care (72%), cord infections can cause neonatal death (61.4%), iron tablets prevent anemia in pregnancy (64.7%), sleeping under mosquito nets reduces malaria risk (90.9%), and vaccinations (e.g., tetanus) protect mothers and babies (90.2%). Therefore, the study shows that the majority of pregnant women have knowledge of maternal health.

Table 3: Attitudes

| S/N | Attitude assessment  | Strongly disagree | Disagree  | Neutral   | Agree     | Strongly agree |
|-----|--|-------------------|-----------|-----------|-----------|----------------|
| 1   | Facility-based delivery is safer than home birth               | 3 (1.14)          | 2 (0.72)  | 7 (2.54)  | 22 (8)    | 241(87.6)      |
| 2   | I trust doctors/nurses more than traditional birth attendants. | -                 | 1 (0.4)   | 10 (3.6)  | 44 (16)   | 22 (80)        |
| 3   | Regular ANC visits are unnecessary if healthy.                 | 41 (15)           | 30 (10.9) | 41 (14.9) | 43 (15.6) | 120(43.6)      |
| 4   | Family's opinions influence where I give birth.                | 56 (20.4)         | 61 (22.2) | 90 (32.7) | 30 (10.9) | 36 (13.8)      |

**Field survey data (August–October 2025).**

The results show positive attitude toward modern healthcare, with 87.6% strongly agreeing that facility-based delivery is safer and 80.0% strongly trusting health professionals over traditional attendants. However, a notable proportion (43.6%) strongly agreed that regular ANC is unnecessary when feeling healthy, indicating a potential gap in risk perception. Attitudes toward family influence are mixed, with 42.6% (Disagree/Strongly Disagree) indicating independence in birth location decisions

Table 4: Practices

| S/no | Practice assessment                    | Yes        | No        |
|------|--|------------|-----------|
| 1    | Received iron supplements?             | 268 (97.5) | 7 (2.5)   |
| 2    | Preferred birth location               | 218 (79.3) | 57 (20.7) |
| 3    | Plan to breastfeed within 1 hour?      | 241 (87.6) | 34 (12.4) |
| 4    | Will use clean blade for cord cutting? | 261 (94.9) | 14 (5.1)  |
| 5    | Have a mosquito net for baby?          | 247 (89.8) | 28 (10.2) |

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Field survey data (August–October 2025).

The study reveals exceptionally high adherence to key recommended practices among participants. Nearly all women (97.5%) reported receiving iron supplements, and the vast majority reported intentions to use sterile cord-cutting tools (94.9%), initiate timely breastfeeding (87.6%), and use mosquito nets for their babies (89.8%). A strong preference for facility-based delivery (79.3%) was also reported, aligning with positive attitudes shown in Table 3.

### Discussion

Most participants were within the age group of 15-25 (61.1%) and were married (90.1%). About 72.3% had attained a secondary education level, and 36.7% were unemployed, with 36.4% earning above ₦30,000 monthly. Additionally, 97.5% were experiencing a prim parous pregnancy. Unlike most previous studies, this study comprehensively covered the three dimensions of knowledge, attitude, and practices related to maternal health and neonatal survival. All participants in this study were pregnant women (n=275) who were interested in vaccination and expressed confidence in vaccine safety. All participants knew that immunization is not exclusively for the wealthy and that it is accessible to everyone at healthcare centers. No complications were detected during their pregnancies, and Community Health Extension Workers (CHEWs) and Nurses attended to the patients during antenatal care (ANC) visits and deliveries. Therefore, this study shows that the majority of pregnant women have knowledge of maternal health and neonatal survival. This is because most respondents strongly agreed that facility-based delivery is safer than home birth (87.6%) and trusted doctors/nurses more than traditional birth attendants (87.6%). They also strongly disagreed that regular antenatal visits are unnecessary if they feel healthy (43.6%). However, they expressed a need for free ANC services and maternal delivery kits due to their low income and the distance to the clinic.

Contextualized within the broader landscape of maternal health KAP research in Nigeria, this study's findings present a distinct profile. The knowledge levels observed are encouraging and somewhat higher than the baseline suggested by national data (NPC, 2019), while the positive attitudes towards facility-based care align with findings from other Nigerian studies (Ogunba et al., 2017). Crucially, the reported practices, such as the high uptake of iron supplements and preference for skilled birth attendance, appear more favourable than utilization rates often documented for rural and underserved settings in Northern Nigeria (Olawuyi & Olofin, 2020; Afolabi et al., 2023). This suggests that the targeted services of the Orphans and Less Privileged Clinic may effectively bridge the common knowledge-practice gap, creating a positive enclave for its attendees. However, this progress exists against the persistent structural barriers of cost and distance consistently highlighted in the region (Iliyasu et al., 2021). Furthermore, the finding that 43.6% of women considered ANC unnecessary if feeling healthy reveals a persistent gap in risk perception. This underscores that even in supportive settings, continuous and targeted health education remains essential to counter misconceptions and improve comprehensive care-seeking behaviour.

## Conclusion

This study concludes that the level of utilization of maternal health care services is satisfactory. There is a need to improve educating pregnant women on maternal health and neonatal survival to enhance the maternal health and minimize the risk factors in antenatal, natal and postnatal period. Knowledge of maternal health was found to be moderate. However, practices of maternal health were found to be satisfactory. Knowledge of ANC was found to be associated with higher educational level of the respondents.

## Recommendation

To translate the positive knowledge and attitudes documented in this study into sustained, equitable practice, a two-pronged strategy is recommended. Primarily, there is a need to enhance targeted health education. Community-level Information, Education, and Communication (IEC) campaigns should be scaled up to specifically promote the WHO-recommended minimum of four antenatal care visits and correct the misconception that care is only needed when symptomatic. Concurrently, structural barriers must be addressed. The government and health partners should provide fully subsidized maternal care services, complemented by practical incentives such as transportation support and birth kits, to directly alleviate the financial and geographic constraints reported by women in this underserved community.

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