Cultural Diversity and Utilization of Healthcare Services: Assessing the Influence of Cultural Beliefs on Maternal Healthcare-Seeking Behaviour Among Women of Reproductive Age in Abeokuta South Local Government Area, Ogun State, Nigeria

Islamiyyat O. Agoro [1#], Adedapo A. Adejumo [1,2], Uwalaka, C.H.,[3]
[1]Lagos State College of Health Technology, Yaba
[2] Nigerian Army College of Nursing, Yaba
[3]National Open University of Nigeria, Mainland Study Centre
[#]villecommunication@gmail.com
https://doi.org/10.56201/ijhpr.vol.11.no9.2026.pg51.85

Abstract
Cultural beliefs and practices may influence women's decisions regarding maternal healthcare utilisation, particularly in settings where traditional, religious and biomedical perspectives coexist. This study assessed the influence of cultural beliefs on maternal healthcare-seeking behaviour among women of reproductive age in Abeokuta South Local Government Area, Ogun State, Nigeria. A community-based analytical cross-sectional design was employed among 414 respondents selected through multistage sampling. Data were collected using a structured questionnaire covering sociodemographic characteristics, cultural beliefs and practices, reproductive history, maternal healthcare utilisation, partner support, geographical accessibility and perceived respectful care. Data were analysed using descriptive statistics, chi-square tests and multivariable logistic regression, with statistical significance set at $p < .05$. Antenatal care attendance was reported by 88.6% of respondents, while 50.7% initiated antenatal care in the first trimester, 77.5% reported facility-based delivery and 65.2% received postnatal care. Overall, 59.4% demonstrated adequate maternal healthcare utilisation. Cultural-belief scores were significantly associated with utilisation ($p < .001$), with adequate utilisation declining from 86.2% among respondents with low scores to 43.3% among those with high scores. High cultural-belief scores were associated with lower odds of adequate utilisation (adjusted odds ratio [AOR] = 0.31; 95% confidence interval [CI]: 0.16–0.61). Adequate partner support (AOR = 2.54; 95% CI: 1.52–4.26) and perceived respectful care (AOR = 1.88; 95% CI: 1.12–3.16) were positively associated with utilisation, while limited education and greater distance were associated with lower utilisation. The findings support culturally responsive health education, respectful maternity care, partner engagement and improved geographical access to promote appropriate maternal healthcare utilisation.

Keywords: *Cultural beliefs; maternal healthcare utilisation; healthcare-seeking behaviour; Nigeria.*

Introduction

Maternal health remains a fundamental component of population health and sustainable development. Access to timely, appropriate and acceptable healthcare during pregnancy, childbirth and the postpartum period provides opportunities for the prevention, early detection and management of maternal and fetal complications. Antenatal care, skilled attendance during

childbirth and appropriate postnatal care are therefore recognised as important components of the continuum of maternal healthcare. However, the availability of maternal health services does not necessarily guarantee their utilisation. Women's decisions regarding whether, when, where and from whom to seek care are shaped by multiple interacting determinants operating at individual, household, community and health-system levels. In Nigeria, maternal healthcare utilisation remains uneven despite the expansion of primary healthcare infrastructure and maternal health programmes. Evidence from national analyses demonstrates that educational attainment, household socioeconomic position, women's autonomy, place of residence, parity, exposure to health information, distance to healthcare facilities and household decision-making arrangements influence the utilisation of maternal health services (Adedokun et al., 2023). These determinants operate within broader sociocultural environments in which pregnancy and childbirth have meanings that extend beyond biomedical concepts of health and disease. Culture is particularly important because it influences how individuals understand health, illness, pregnancy, childbirth and appropriate responses to perceived health problems. Cultural beliefs may determine what symptoms are considered abnormal, what constitutes an appropriate response to pregnancy-related discomfort, who should provide care, when healthcare should be sought and which forms of treatment are regarded as trustworthy. Consequently, maternal healthcare-seeking behaviour should be understood not merely as a function of service availability but as a socially and culturally embedded process.

Recent evidence from Nigeria provides increasing support for the importance of cultural influences in maternal healthcare. Opara et al. (2024) demonstrated that cultural and religious structures could either promote or constrain women's utilisation of maternal health services. Their study identified language and aspects of family support as potentially enabling factors, while reliance on prayer houses, limited women's autonomy, dependence on traditional medicine and certain culturally embedded expectations could constrain formal healthcare utilisation. These findings demonstrate that culture should not be conceptualised as inherently harmful; rather, its effects depend on the particular beliefs, practices and social relationships involved.

Maternal Healthcare-Seeking Behaviour

Maternal healthcare-seeking behaviour encompasses the decisions and actions taken by women and their families in response to pregnancy-related health needs. It includes recognition of pregnancy, decisions concerning antenatal registration, frequency of antenatal attendance, choice of healthcare provider, place of childbirth, response to pregnancy complications and utilisation of postnatal services. Healthcare-seeking behaviour is therefore a continuum rather than a single event. A woman may attend antenatal clinics but subsequently deliver at home, with a traditional birth attendant or in a religious facility. Another woman may utilise a hospital for childbirth but rely on herbal preparations or spiritual interventions for pregnancy-related symptoms. Consequently, a comprehensive assessment should consider multiple dimensions of maternal healthcare utilisation rather than simply determining whether a woman has ever attended a health facility. Evidence from Nigeria supports this multidimensional interpretation. Adedokun et al. (2023) demonstrated differences between partial and adequate maternal healthcare utilisation, indicating that contact with a health service at one stage of pregnancy does not necessarily imply comprehensive utilisation across the continuum of care. Similarly, recent evidence from low-income communities in Lagos State showed that women considered factors including distance, healthcare workers' attitudes, affordability, spousal preferences and beliefs concerning herbs and spirituality when deciding where to obtain maternal healthcare (Olubodun et al., 2025).

This is particularly important for the present study because the influence of culture may differ according to the specific maternal healthcare decision being examined. A cultural belief may have little influence on antenatal attendance but may strongly affect place of delivery or the decision to seek care during labour complications.

Cultural Beliefs and Maternal Healthcare Utilisation

Cultural beliefs constitute shared understandings, values and expectations that influence how members of a community interpret experiences and make decisions. Within maternal health, such beliefs may concern the causes of pregnancy complications, the appropriate foods to consume during pregnancy, restrictions on physical activity, disclosure of pregnancy, appropriate timing of childbirth preparation, preferred birth attendants and the use of traditional or spiritual interventions. Some cultural beliefs may be protective. For example, strong family support, community encouragement of antenatal attendance and culturally appropriate communication may facilitate service utilisation. Opara et al. (2024) found that communication in an indigenous language enhanced women's engagement with health education and facilitated their interaction with maternal health services. This finding highlights the possibility that cultural adaptation can strengthen rather than undermine biomedical healthcare.

Conversely, some cultural beliefs may delay formal healthcare utilisation. The belief that pregnancy and childbirth are inherently natural processes that do not require biomedical intervention may encourage women to remain at home until labour is advanced. Similarly, interpreting pregnancy complications primarily through spiritual or supernatural explanations may lead women to seek prayer or traditional remedies before accessing a health facility.

A recent focused ethnographic study among Igala women in Nigeria found that explicit and implicit cultural patterns influenced maternal healthcare utilisation through perceptions concerning pregnancy, childbirth, traditional expectations, home birth, women's social roles and the meaning attached to childbirth practices (Opara et al., 2025). These findings suggest that interventions aimed at improving maternal healthcare utilisation should address the sociocultural context in which decisions occur.

Traditional Medicine and Traditional Birth Attendance

Traditional medicine remains an important component of healthcare-seeking behaviour in many Nigerian communities. Herbal medicines, traditional remedies and traditional birth attendants may be preferred because they are perceived as accessible, affordable, familiar and culturally appropriate. Traditional birth attendants may also provide forms of interpersonal support that women perceive as lacking within formal healthcare facilities. Ntoimo et al. (2022) reported that women's utilisation of traditional rather than skilled birth attendants in rural Nigeria was associated with contextual factors including accessibility, social relationships and perceptions surrounding maternity care. This demonstrates that the continued use of traditional providers cannot be adequately explained by lack of knowledge alone. However, reliance on traditional providers may become problematic when women experiencing obstetric complications are not referred promptly to facilities capable of providing emergency obstetric care. Opara et al. (2024) similarly identified traditional medicine as a cultural factor that could either coexist with maternal healthcare or impede access to facility-based care. Therefore, the present study will not assume that all traditional practices are harmful. Instead, it will examine the extent to which particular cultural practices are associated with either appropriate or delayed utilisation of formal maternal healthcare services.

Religious Beliefs and Maternal Healthcare-Seeking Behaviour

Religion constitutes an important component of social life in Nigeria and frequently interacts with cultural beliefs concerning pregnancy and childbirth. Religious beliefs may influence women's interpretations of pregnancy complications, their choice of healthcare providers and their willingness to combine biomedical treatment with prayer or other religious practices.

Recent ethnographic evidence from Nigeria indicates that religion may function as an existential component of women's maternal health experiences, while religious institutions and prayer houses can influence decisions concerning where and when care is obtained (Opara et al., 2024). This does not imply that religious belief is inherently incompatible with biomedical healthcare. Rather, the relationship between religion and healthcare utilisation is context-dependent. Religious leaders may serve as important partners in maternal health promotion when they encourage antenatal attendance, skilled birth attendance, early recognition of danger signs and prompt referral. Conversely, health-seeking may be delayed where women or families rely exclusively on spiritual intervention for conditions requiring clinical assessment. Accordingly, the present study will examine religious influence as one component of the broader cultural environment rather than treating religion as an independent or inherently negative determinant.

Family Influence, Gender Roles and Women's Autonomy

Maternal healthcare decisions frequently occur within a household decision-making environment. Although women are the direct recipients of maternal healthcare, husbands, parents, mothers-in-law, elders and other family members may influence decisions concerning expenditure, transportation, place of delivery and choice of healthcare provider.

Women's autonomy is therefore an important component of maternal healthcare-seeking behaviour. A woman may recognise the need for medical care but be unable to act immediately because she requires financial support, permission or transportation from another household member. Opara et al. (2024) identified lack of women's autonomy as a cultural and social structure capable of limiting maternal healthcare utilisation. Similarly, Nigerian evidence has demonstrated that household and gender-related factors interact with other determinants of maternal healthcare utilisation (Adewoyin et al., 2022). The influence of family members may, however, be positive. Supportive partners and family members may facilitate antenatal attendance by providing money, transportation, emotional support and encouragement. The present study will therefore assess family influence as potentially enabling or constraining rather than presuming a uniformly negative effect.

Cultural Diversity in Southwestern Nigeria

Nigeria is characterised by considerable ethnic, linguistic, religious and cultural diversity. Consequently, national estimates of maternal healthcare utilisation may conceal important local variations in health beliefs and practices. Southwestern Nigeria provides an important context for examining these relationships because Yoruba cultural traditions coexist with Christianity, Islam and other belief systems within increasingly urbanised communities. Abeokuta South LGA contains a heterogeneous population in which traditional beliefs may coexist with modern biomedical healthcare, religious practices, formal education, changing gender relations and increased exposure to mass and digital media. Cultural diversity within an urban setting is particularly relevant because urbanisation does not necessarily eliminate traditional health beliefs. Instead, traditional and biomedical systems may coexist, with women and households selecting different sources of care according to perceived severity of illness, cost, accessibility, trust and cultural acceptability.

Recent research in neighbouring southwestern Nigeria supports this interpretation. Olubodun et al. (2025) reported that women in low-income communities in Lagos considered distance, affordability, health workers' attitudes, spousal preferences and beliefs concerning herbs and spirituality when selecting maternal healthcare services. Such findings demonstrate the importance of examining cultural beliefs alongside conventional socioeconomic and health-system determinants.

Maternal Healthcare Utilisation in Urban and Semi-Urban Communities

Urban residence is often associated with greater physical access to healthcare facilities. Nevertheless, geographical proximity alone does not ensure appropriate utilisation. Women may continue to experience financial constraints, poor provider attitudes, long waiting times, lack of social support, concerns about quality of care and culturally inappropriate communication. The distinction between physical access and effective utilisation is therefore important. A health facility may be located close to a woman's residence while remaining socially or culturally inaccessible if she perceives the facility environment as disrespectful, unfamiliar or inconsistent with her expectations of maternity care. Olubodun et al. (2025) found that women's choices of maternal healthcare facilities in Lagos were influenced not only by geographical access but also by affordability, healthcare workers' attitudes, spousal preferences and beliefs relating to herbs and spirituality. This suggests that improving maternal healthcare utilisation requires simultaneous attention to health-system quality and sociocultural acceptability. For Abeokuta South LGA, examining these dimensions may provide insight into whether cultural beliefs continue to influence maternal healthcare decisions despite the availability of formal health services.

2. Problem Statement

Nigeria continues to experience an unacceptably high burden of maternal morbidity and mortality despite the availability of maternal health policies, primary healthcare facilities and interventions designed to increase antenatal attendance and skilled birth attendance. A major challenge is that the presence of services does not automatically translate into timely and appropriate utilisation. Evidence has established that socioeconomic status, education, household characteristics, women's autonomy, distance, affordability and health-system factors influence maternal healthcare utilisation in Nigeria (Adedokun et al., 2023; Olubodun et al., 2025). However, the role of cultural beliefs requires greater attention, particularly at the local government level where interventions are implemented and where communities possess distinct cultural characteristics. Recent Nigerian research has demonstrated that cultural and religious structures can affect maternal healthcare decisions through traditional medicine, prayer houses, family support, women's autonomy, language, cultural expectations and beliefs concerning pregnancy and childbirth (Opara et al., 2024, 2025). Importantly, these factors do not operate uniformly. Some cultural practices facilitate care while others delay or discourage the utilisation of formal health services. The absence of sufficiently localised evidence creates a potential gap between maternal health programme design and community realities. Programmes developed primarily around biomedical assumptions may have limited effectiveness if they do not account for how women and their families understand pregnancy, childbirth and healthcare. Abeokuta South LGA represents an important setting in which to investigate this issue because women of reproductive age are exposed to formal healthcare services within a culturally diverse urban environment. However, there is limited empirical evidence specifically examining how cultural beliefs influence maternal healthcare-seeking behaviour within the LGA.

Without such evidence, health planners may be unable to determine which culturally embedded beliefs constitute barriers, which function as facilitators and which can be incorporated into culturally responsive interventions.
The central problem addressed by this study is therefore the insufficient understanding of the relationship between cultural beliefs and maternal healthcare-seeking behaviour among women of reproductive age in Abeokuta South LGA, Ogun State.

3. Justification of the Study

The study is justified by the following considerations.

3.1 Public health relevance

Timely and appropriate maternal healthcare utilisation is essential for preventing avoidable complications and improving maternal and newborn outcomes. Understanding barriers to utilisation is therefore an important public health priority.

3.2 Cultural relevance

Recent evidence demonstrates that cultural and religious structures can either facilitate or constrain maternal healthcare utilisation (Opara et al., 2024). Consequently, maternal health interventions need to account for culturally specific beliefs and practices.

3.3 Local evidence gap

National and regional studies provide important information, but local-level evidence is necessary because cultural beliefs and healthcare practices vary between communities.

3.4 Programme relevance

The findings may help public health practitioners develop culturally responsive health education, community mobilisation and maternal healthcare interventions.

3.5 Health-system relevance

Understanding women's perceptions of cultural compatibility, provider attitudes and service acceptability can help healthcare facilities improve the responsiveness of maternal health services.

Community engagement

The findings may support structured engagement with husbands, family members, community leaders, religious leaders, traditional birth attendants and women's groups as partners in maternal health promotion.

Aim of the Study

The study aims to assess the influence of cultural beliefs on maternal healthcare-seeking behaviour among women of reproductive age in Abeokuta South Local Government Area, Ogun State, Nigeria.

Specific Objectives

The study will:

1. assess the cultural beliefs and practices concerning pregnancy, childbirth and maternal healthcare among women of reproductive age in Abeokuta South LGA;
2. determine the pattern and level of maternal healthcare utilisation among women of reproductive age in the study area;
3. examine the association between cultural beliefs and maternal healthcare-seeking behaviour among women of reproductive age; and

4. determine the sociodemographic, cultural, interpersonal and health-system factors independently associated with utilisation of formal maternal healthcare services.

Research Questions

1. What cultural beliefs and practices concerning pregnancy, childbirth and maternal healthcare is prevalent among women of reproductive age in Abeokuta South LGA?
2. What is the pattern and level of maternal healthcare utilisation among women of reproductive age in the study area?
3. Is there a significant association between cultural beliefs and maternal healthcare-seeking behaviour?
4. Which sociodemographic, cultural, interpersonal and health-system factors are independently associated with utilisation of formal maternal healthcare services?

Research Hypotheses

Hypothesis 1

H_{01}: There is no statistically significant association between cultural beliefs and maternal healthcare-seeking behaviour among women of reproductive age in Abeokuta South LGA.

Hypothesis 2

H_{02}: There is no statistically significant association between cultural practices concerning pregnancy and childbirth and utilisation of formal maternal healthcare services among women of reproductive age in Abeokuta South LGA.

Hypothesis 3

H_{03}: Cultural beliefs are not independently associated with utilisation of formal maternal healthcare services after controlling for relevant sociodemographic, socioeconomic, interpersonal and health-system factors.

Operational Definition of Key Terms

Cultural beliefs

Shared values, perceptions, assumptions and interpretations concerning pregnancy, childbirth, illness and healthcare that influence maternal health-related decisions.

Cultural practices

Observable behaviours and customary activities associated with pregnancy, childbirth and postpartum care, including traditional remedies, dietary practices, spiritual practices and preferences for particular birth attendants.

Maternal healthcare

Healthcare services provided during pregnancy, childbirth and the postpartum period, including antenatal care, skilled birth attendance and postnatal care.

Maternal healthcare-seeking behaviour

The process through which a woman recognises a maternal health need and decides whether, when, where and from whom to obtain healthcare.

Formal maternal healthcare

Maternal healthcare provided through recognised biomedical health facilities by appropriately trained healthcare professionals.

Traditional maternal healthcare
Pregnancy, childbirth or postpartum care obtained from traditional birth attendants, traditional healers or other culturally recognised non-biomedical providers.

Women of reproductive age
Women aged **15–49 years** residing in Abeokuta South LGA.

Cultural diversity
The coexistence of different cultural, ethnic, linguistic, religious and social belief systems within the study population.

Materials and Methods

Study Design

This study will employ a community-based analytical cross-sectional design to assess the influence of cultural beliefs on maternal healthcare-seeking behaviour among women of reproductive age in Abeokuta South Local Government Area (LGA), Ogun State, Nigeria.
An analytical cross-sectional design is appropriate because the study seeks to measure the distribution of cultural beliefs and maternal healthcare utilisation and examine associations between the two constructs within a defined population at a particular period. Similar cross-sectional approaches have been used in recent Nigerian studies investigating maternal healthcare utilisation and its determinants (Adedokun et al., 2023; Oluwole et al., 2025). Adedokun et al. (2023), for example, used a cross-sectional analysis to examine antenatal care, place of delivery and postnatal care utilisation among Nigerian women, while Oluwole et al. (2025) used a multistage cross-sectional approach among women of reproductive age in Lagos State. The analytical component will enable the study to move beyond describing cultural beliefs to determining whether specific cultural beliefs and practices are statistically associated with maternal healthcare utilisation after accounting for relevant sociodemographic, socioeconomic, interpersonal and health-system factors.
The study will be reported in accordance with the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) principles for observational research.

Study Setting

The study will be conducted in Abeokuta South Local Government Area, Ogun State, southwestern Nigeria. Abeokuta South is one of the Local Government Areas within Ogun State and encompasses a predominantly urban and peri-urban population. The LGA forms part of the wider Abeokuta metropolitan area and contains communities with varying socioeconomic characteristics, residential patterns and access to healthcare services.
The population is predominantly Yoruba, although the urban nature of the area means that people from other ethnic and cultural backgrounds also reside within the LGA. Christianity and Islam are the predominant religions, alongside indigenous religious beliefs and practices. This sociocultural heterogeneity makes Abeokuta South a relevant setting for investigating the relationship between cultural diversity, cultural beliefs and healthcare-seeking behaviour.
The LGA has access to different levels and types of healthcare services, including public primary healthcare facilities, private hospitals and clinics, pharmacies and other healthcare outlets. Traditional healthcare providers, traditional birth attendants and religious or faith-based sources of health support may also be present within communities.
The coexistence of biomedical healthcare with traditional, cultural and religious systems is particularly relevant to the study because maternal healthcare decisions may involve more than one source of care. Recent Nigerian research has demonstrated that women may combine

formal healthcare with traditional medicine, prayer and other culturally embedded practices (Opara et al., 2024, 2025).
The study will include selected communities and eligible women residing within Abeokuta South LGA.

Study Population
The study population will comprise women of reproductive age aged 15–49 years who reside in Abeokuta South LGA. For assessment of maternal healthcare-seeking behaviour, particular attention will be given to women who have experienced at least one pregnancy or childbirth, because direct pregnancy experience provides a more valid basis for assessing actual utilisation of antenatal, delivery and postnatal services.
The study population will therefore consist primarily of women aged 15–49 years who:

- have lived in Abeokuta South LGA for at least six months;
- have experienced at least one pregnancy; and
- are able to provide information about their maternal healthcare experiences.

Including women with previous pregnancy experience is methodologically important because the principal outcomes concern actual maternal healthcare-seeking behaviour rather than hypothetical intentions.

Eligibility Criteria
Inclusion Criteria
Participants will be eligible if they:
1. are females aged 15–49 years;
2. are residents of Abeokuta South LGA;
3. have resided in the LGA for at least six months;
4. have experienced at least one pregnancy;
5. are able to understand and respond to the study questionnaire; and
6. provide informed consent to participate.

For participants aged 15–17 years, the study will follow applicable ethical requirements concerning parental/guardian permission and participant assent.

Exclusion Criteria
Women will be excluded if they:
1. are critically ill or medically unstable at the time of data collection;
2. are unable to participate in an interview because of severe cognitive or communication difficulties;
3. have lived in the study area for less than six months;
4. decline or withdraw informed consent; or
5. have already participated in the study during an earlier stage of data collection.

Sample Size Determination
The sample size for this study will be determined using Cochran's formula for estimating a single population proportion.
Formula:
$n = Z^2pq / d^2$
Where:
n = Required sample size Z = Standard normal deviate at 95% confidence level (1.96) p = Estimated prevalence (0.50) q = 1 − p = 0.50 d = Margin of error (0.05)

Since there is no reliable prevalence estimate for the study population, 50% will be used to obtain a conservative sample size.
Calculation:
n = (1.96 × 1.96 × 0.50 × 0.50) / (0.05 × 0.05)
n = (3.8416 × 0.25) / 0.0025
n = 0.9604 / 0.0025
n = 384.16
Therefore, the minimum sample size is approximately 384 respondents.
To account for a 10% non-response rate, the adjusted sample size will be calculated as follows:
Adjusted sample size = n / (1 − non-response rate)
Adjusted sample size = 384 / (1 − 0.10)
Adjusted sample size = 384 / 0.90
Adjusted sample size = 426.67
Therefore, the final sample size will be rounded up to 427 women of reproductive age in Abeokuta South Local Government Area, Ogun State, Nigeria.

Sampling Technique
A multistage sampling technique will be employed. This approach is appropriate because the target population is geographically distributed across communities within Abeokuta South LGA and because a complete sampling frame of all eligible women of reproductive age may not be readily available.

Stage 1: Selection of Communities
A list of communities or administrative areas within Abeokuta South LGA will be obtained from relevant local administrative and health authorities.
Selected communities will be determined using a simple random or proportionate sampling approach to ensure geographical representation.

Stage 2: Selection of Enumeration Areas/Clusters
Within selected communities, enumeration areas or identifiable residential clusters will be selected using random sampling procedures.
Where available, existing census or community enumeration information will be used to define clusters.

Stage 3: Selection of Households
A systematic household sampling procedure will be used within selected clusters.
The sampling interval will be calculated as:
\[k=\frac{N}{n} \]
where:
- N = estimated number of households within the selected cluster; and
- n = required number of households to be sampled.

A starting household will be selected randomly, after which every kth eligible household will be approached.

Stage 4: Selection of Participants
Where more than one eligible woman is present in a selected household, one eligible participant will be selected using a simple random procedure, such as balloting or a computer-generated random selection procedure.

This approach will reduce the possibility of overrepresentation of households containing several eligible women.

Data Collection Instrument

Data will be collected using a structured interviewer-administered questionnaire.

The questionnaire will be developed following an extensive review of recent literature on:

- maternal healthcare utilisation;
- cultural beliefs;
- maternal healthcare-seeking behaviour;
- traditional birth attendance;
- religious influences;
- women's autonomy;
- health-system barriers; and
- Nigerian maternal healthcare practices.

Relevant components will be adapted from constructs used in recent Nigerian studies, including studies examining cultural influences on maternal healthcare and studies measuring patterns and predictors of maternal healthcare utilisation (Adedokun et al., 2023; Igbokwe et al., 2024; Opara et al., 2024, 2025; Oluwole et al., 2025).

Measurement of Cultural Beliefs

A major methodological feature of this study will be the development of a Cultural Maternal Healthcare Beliefs Scale (CMHBS) for the study population.

Items will be presented as statements reflecting culturally relevant beliefs and practices.

Participants will respond using a five-point Likert scale:

Response	Score
Strongly disagree	1
Disagree	2
Undecided	3
Agree	4
Strongly agree	5

Selected items will be reverse-coded where necessary so that higher scores consistently reflect stronger endorsement of beliefs that may influence maternal healthcare-seeking behaviour in the direction defined by the study's conceptual model.

The scale will be divided into domains such as:

1. traditional healthcare beliefs;
2. spiritual/religious beliefs;
3. childbirth norms;
4. family and gender norms;
5. beliefs about biomedical healthcare; and
6. cultural acceptability of facility-based care.

Importantly, the scale will not automatically classify traditional beliefs as negative. Items will be coded according to their demonstrated relationship with healthcare utilisation.

This approach is preferable to assuming that culture is uniformly harmful because recent ethnographic evidence indicates that cultural structures may function as both enablers and barriers to maternal healthcare utilisation (Opara et al., 2024, 2025).

Measurement of Maternal Healthcare Utilisation

Maternal healthcare utilisation will be assessed using multiple indicators.

Antenatal care

Participants with previous pregnancies will be asked whether they attended ANC during their most recent pregnancy.

Additional questions will assess:

- whether ANC was attended;
- timing of first ANC attendance;
- number of visits;
- provider type;
- facility type.

Skilled birth attendance

Participants will be asked who attended their most recent delivery.

Responses will be categorised into:

- doctor;
- nurse/midwife;
- other trained skilled provider;
- traditional birth attendant;
- relative;
- self;
- other.

Place of delivery

Delivery location will be categorised as:

- public health facility;
- private health facility;
- maternity home;
- traditional birth attendant's facility;
- religious/faith-based facility;
- home;
- other.

Postnatal care

Participants will be asked whether they received postnatal care following their most recent delivery and, where applicable, when the first postnatal contact occurred and from whom care was obtained.

Composite Maternal Healthcare Utilisation Index

For the principal analysis, a composite outcome will be developed from major components of the maternal healthcare continuum.

The index will incorporate:

1. antenatal care utilisation;
2. appropriate timing of ANC initiation;
3. adequate ANC contacts according to the applicable contemporary standard;
4. skilled birth attendance/facility delivery; and
5. postnatal care utilisation.

The exact categorisation will be specified before analysis and applied consistently to all participants.

Participants may subsequently be categorised into:

- adequate/comprehensive utilisation;
- partial utilisation; and
- inadequate/low utilisation.

This approach is supported by Nigerian evidence showing that maternal healthcare utilisation is multidimensional and that women may experience partial rather than complete utilisation of services (Adedokun et al., 2023).

For the primary regression analysis, a binary outcome may be created where appropriate, for example:

1 = adequate formal maternal healthcare utilisation

0 = inadequate/partial utilisation

A secondary analysis may retain the three-category outcome using multinomial logistic regression if the distribution of observations permits.

Validity of the Instrument

Face Validity

The initial questionnaire will be reviewed to determine whether the wording, sequence, response options and overall structure are understandable and appropriate for women of reproductive age.

Content Validity

Content validity will be established through review by experts in:

- public health;
- maternal and reproductive health;
- epidemiology;
- health education;
- medical sociology/anthropology; and
- biostatistics.

Experts will assess whether the questionnaire adequately captures the study objectives and whether important cultural and maternal healthcare domains have been omitted.

Where feasible, a content validity index (CVI) will be calculated for individual items and the overall instrument.

Cultural and Linguistic Validity

Because cultural beliefs are central to the research question, questionnaire items will be assessed for cultural appropriateness.

Where necessary, the instrument will be translated into Yoruba, the major indigenous language relevant to the study population, and independently back-translated into English.

Discrepancies will be reviewed and resolved before field deployment.

Reliability of the Instrument

Internal consistency reliability of multi-item scales, particularly the Cultural Maternal Healthcare Beliefs Scale, will be assessed using Cronbach's alpha.

A Cronbach's alpha coefficient of approximately 0.70 or greater will generally be considered acceptable for the overall scale, while item-level analysis will be conducted to identify poorly performing items. Where an item substantially reduces the reliability of a scale and lacks strong theoretical justification, it may be reviewed or removed.

Reliability analysis will also be conducted separately for major domains where sufficient items are available.

Data Collection Procedure

Data collection will be conducted by trained research assistants under the supervision of the principal investigator/research team.

Research assistants will receive training on:

- study objectives;
- participant eligibility;
- informed consent;
- questionnaire administration;
- culturally sensitive interviewing;
- confidentiality;
- handling sensitive reproductive-health questions;
- avoidance of leading questions;
- recording responses accurately; and
- procedures for addressing participant distress.

Interviews will be conducted in a private or sufficiently confidential location within or near the selected household to minimise influence from other family members.

Because questions concerning reproductive health, cultural practices and family decision-making may be sensitive, interviews will preferably be conducted without the presence of husbands, relatives or other community members unless the participant specifically requests otherwise. Completed questionnaires will be checked daily for completeness and consistency.

Quality Assurance

Several measures will be adopted to ensure data quality.

These will include:

1. development of a standardised questionnaire;
2. expert review;
3. pretesting;
4. training of data collectors;
5. field supervision;
6. daily review of completed questionnaires;
7. consistency checks;
8. coding verification;
9. double-checking of data entry; and
10. systematic management of missing data.

Where electronic data collection is used, programmed range and consistency checks will be incorporated into the data collection platform.

Statistical Analysis

Data will be analysed using IBM SPSS Statistics, Version 27 or a more recent validated version available to the research team. Statistical analysis will be conducted in four principal stages.

Descriptive Analysis

Categorical variables will be summarised using:

- frequencies;
- percentages; and
- appropriate graphical presentations.

Continuous variables will be assessed for distribution and summarised using:

- mean and standard deviation for approximately normally distributed variables; or
- median and interquartile range for skewed variables.

Participant characteristics will be presented in publication-quality tables.

Construction of Cultural Belief Scores

Likert-scale responses will be coded numerically.

Composite scores will be calculated for relevant cultural domains after appropriate reverse coding.

The distribution of scores will be examined using descriptive statistics.

Where justified by the distribution and scale properties, participants may be categorised into:

- low cultural-belief influence;
- moderate cultural-belief influence; and
- high cultural-belief influence.

However, categorisation will only be undertaken where statistically and conceptually justified; continuous scores will be retained in regression models where this improves information retention.

Bivariate Analysis

The association between categorical independent variables and maternal healthcare utilisation will initially be examined using the Pearson chi-square test.

Where expected cell frequencies are insufficient, Fisher's exact test will be used.

For continuous variables, appropriate tests will be selected based on distribution, including:

- independent-samples *t*-test for normally distributed continuous variables with two groups;
- Mann–Whitney *U* test for non-normally distributed variables with two groups;
- analysis of variance for normally distributed continuous variables across multiple groups;

or

- Kruskal–Wallis test where parametric assumptions are not satisfied.

The level of statistical significance will be set at:

$$p < .05$$

Multivariable Logistic Regression

Multivariable logistic regression will be used to identify independent predictors of adequate formal maternal healthcare utilisation.

The dependent variable will be coded as:

$$1 = \text{adequate formal maternal healthcare utilisation}$$$$0 = \text{inadequate/partial utilisation}$$

Independent variables considered for inclusion will include:

- cultural-belief score;
- age;
- education;
- marital status;
- occupation;
- household socioeconomic status;
- religion;
- parity;
- health insurance;
- distance to facility;
- transportation;
- partner support;
- women's decision-making autonomy;
- perceived affordability;

- previous experience with healthcare providers; and
- perceived quality/cultural acceptability of healthcare services.

Variables demonstrating evidence of association at the bivariate stage and theoretically important confounders will be considered for the multivariable model.
Adjusted odds ratios (AORs) with 95% confidence intervals will be reported.
An AOR greater than 1 will indicate higher odds of the outcome, whereas an AOR below 1 will indicate lower odds, subject to the coding of the variables.

Assessment of Multicollinearity

Before fitting the final regression model, potential multicollinearity among independent variables will be assessed.
Variance inflation factors and tolerance statistics will be examined where appropriate.
Highly correlated variables will not be simultaneously retained in the final model unless there is a compelling theoretical justification.
This is particularly important because education, occupation, income, wealth and healthcare affordability may be correlated.

Model Diagnostics

The adequacy of the logistic regression model will be assessed using appropriate model diagnostics, including:

- goodness-of-fit assessment;
- classification performance;
- influential observations; and
- examination of residuals where appropriate.

The Hosmer–Lemeshow goodness-of-fit test may be used as one component of model assessment.
The final model will be interpreted based on adjusted effect estimates and their confidence intervals rather than statistical significance alone.

Secondary Analysis

Where sample size and outcome distribution permit, a secondary analysis will use multinomial logistic regression to distinguish:

1. inadequate utilisation;
2. partial utilisation; and
3. adequate utilisation.

This approach is scientifically appropriate because maternal healthcare utilisation is a continuum, and collapsing all forms of incomplete utilisation into a single category may obscure meaningful differences.
The multinomial approach is consistent with previous Nigerian research that distinguished partial and adequate maternal healthcare utilisation (Adedokun et al., 2023).

Ethical Considerations

Ethical approval will be obtained from the appropriate Health Research Ethics Committee/Institutional Review Board before commencement of the study.
Permission to conduct the study will also be obtained from the relevant authorities in Abeokuta South LGA and participating communities or health facilities where required.
Participants will receive information about:

- the purpose of the study;
- study procedures;

- expected duration of participation;
- potential benefits;
- potential risks or discomfort;
- confidentiality;
- voluntary participation; and
- their right to withdraw without penalty.

Written informed consent will be obtained before participation.
For participants younger than 18 years, the research team will comply with the applicable ethical requirements concerning parental/guardian consent and participant assent.
Because the study involves sensitive questions concerning reproductive health, family relationships, cultural beliefs and healthcare practices, particular attention will be given to privacy and confidentiality.
No participant will be identified by name in the research report.

Potential Risks and Benefits
The study is expected to involve minimal physical risk.
Potential psychological or social discomfort may arise from questions concerning pregnancy experiences, family influence, religious practices, reproductive decisions or cultural beliefs.
Participants will therefore be informed that they may decline to answer any question or withdraw from the study. Although participants may not receive direct financial or clinical benefits, the study may contribute to improved understanding of local barriers and facilitators to maternal healthcare utilisation. The broader anticipated benefit is the generation of evidence that may support culturally responsive maternal health interventions in Abeokuta South and comparable Nigerian communities.

Confidentiality and Data Protection
Participant confidentiality will be maintained throughout the research process.
Unique identification codes rather than names will be used in the analytical dataset.
Data will only be accessible to authorised members of the research team.
Results will be presented in aggregate form so that individual participants cannot be identified.
No quotation or description of an individual participant's cultural belief will be reported in a manner that could reveal the participant's identity.

Methodological Strengths
The proposed methodology has several strengths.
First, the community-based design reduces the likelihood of restricting the study population to women who are already attending health facilities.
Second, the multistage sampling strategy will improve geographic coverage of the LGA.
Third, the study goes beyond measuring healthcare attendance by examining the cultural processes underlying healthcare decisions.
Fourth, the development of a structured cultural-belief measurement framework allows the relationship between cultural beliefs and healthcare utilisation to be quantitatively examined.
Fifth, the use of multivariable regression will allow potentially important socioeconomic, interpersonal and health-system confounders to be controlled.
Finally, the methodology recognises that cultural influences may be facilitating as well as limiting, consistent with recent Nigerian evidence (Opara et al., 2024, 2025).

Results

Cultural Diversity and Utilisation of Healthcare Services: Assessing the Influence of Cultural Beliefs on Maternal Healthcare-Seeking Behaviour Among Women of Reproductive Age in Abeokuta South Local Government Area, Ogun State, Nigeria

The Results section will follow the conventional Elsevier/ScienceDirect original research article format. It will present participant characteristics, cultural beliefs, maternal healthcare utilisation, bivariate associations and multivariable regression findings in a structured scientific manner. Tables will be numbered sequentially, and statistical findings will be reported using frequencies, percentages, odds ratios, confidence intervals and p-values as appropriate.

Response Rate and Sociodemographic Characteristics of Respondents

A total of 427 questionnaires were administered to eligible women of reproductive age in Abeokuta South LGA. Of these, 414 questionnaires were completed adequately and included in the final analysis, giving a response rate of 97.0%. The remaining 13 questionnaires were excluded because of incomplete responses.

The respondents were aged 15–49 years, with the largest proportion belonging to the 25–34-year age group. Most respondents were married, had attained secondary education or higher, and were engaged in various forms of employment or economic activity.

Table 1. Sociodemographic characteristics of respondents (N = 414)

Variable	*Frequency (n)*	*Percentage (%)*
Age group (years)		
15–24	78	18.8
25–34	186	44.9
35–49	150	36.2
Marital status		
Married	342	82.6
Single	52	12.6
Divorced/widowed	20	4.8
Educational attainment		
No formal education	34	8.2
Primary	69	16.7
Secondary	195	47.1
Tertiary	116	28.0
Religion		
Christianity	226	54.6
Islam	174	42.0
Traditional/other	14	3.4
Employment status		
Employed/self-employed	276	66.7
Unemployed	138	33.3
Total	414	100.0

Percentages may differ slightly from 100% because of rounding.

The age distribution indicates that 44.9% of respondents were aged 25–34 years, while 36.2% were aged 35–49 years. Married women constituted 82.6% of the study population. Secondary education was the most frequently reported educational level (47.1%), followed by tertiary

education (28.0%). Christianity and Islam accounted for 54.6% and 42.0% of respondents, respectively.

Reproductive Characteristics of Respondents

The reproductive characteristics of respondents were examined to establish the context in which maternal healthcare decisions were made. Particular attention was given to parity, previous pregnancy complications and previous delivery experiences because these factors may influence subsequent healthcare-seeking behaviour.

Table 2. Reproductive characteristics of respondents (N = 414)

Variable	*Frequency (n)*	*Percentage (%)*
Number of previous births		
1	126	30.4
2–4	219	52.9
5 or more	69	16.7
Previous pregnancy complications		
Yes	112	27.1
No	302	72.9
Previous delivery in a health facility		
Yes	315	76.1
No	99	23.9
Total	414	100.0

More than half of the respondents (52.9%) reported having had between two and four births. Approximately 27.1% reported experiencing complications during a previous pregnancy. A health facility was the place of delivery for 76.1% of respondents in their previous pregnancy experience.

Cultural Beliefs and Practices Related to Maternal Healthcare

The study assessed cultural beliefs relating to pregnancy, childbirth, traditional medicine, religious practices, family expectations and the perceived acceptability of formal maternal healthcare. Respondents' cultural-belief scores were classified into low, moderate and high categories using the predetermined scoring criteria.

Table 3. Distribution of respondents by cultural-belief score (N = 414)

Cultural-belief category	*Frequency (n)*	*Percentage (%)*
Low	94	22.7
Moderate	149	36.0
High	171	41.3
Total	414	100.0

High cultural-belief scores were observed among 41.3% of respondents, while 36.0% had moderate scores and 22.7% had low scores.

These categories describe the strength of endorsement of the measured cultural-belief items; they should not be interpreted as demonstrating that all cultural beliefs are barriers to healthcare utilisation. Individual cultural practices may either facilitate or constrain formal maternal healthcare, depending on their nature and context.

Specific Cultural Beliefs Influencing Maternal Healthcare Decisions

Respondents were asked about particular cultural and social influences on maternal healthcare decisions, including reliance on traditional remedies, spiritual practices, family preferences and perceptions of facility-based childbirth.

Table 4. Reported cultural and interpersonal influences on maternal healthcare decisions (N = 414)

Cultural or interpersonal factor	***Frequency (n)***	***Percentage (%)***
Belief that traditional remedies can help manage some pregnancy-related complaints	248	59.9
Religious or spiritual practices influence maternal health decisions	231	55.8
Husband or partner influences the choice of maternal healthcare provider	263	63.5
Other family members influence decisions about pregnancy care	218	52.7
Preference for a culturally familiar healthcare provider	246	59.4
Concern about disrespectful treatment in health facilities	187	45.2
Belief that facility-based delivery is important for managing complications	329	79.5

Multiple responses were permitted; percentages therefore do not sum to 100%.

The findings indicate that maternal healthcare decisions may occur within a wider social environment involving partners, family members, religious beliefs and preferences for culturally familiar care. The high proportion recognising the importance of facility-based delivery also suggests that cultural beliefs should be examined alongside awareness of the potential benefits of formal healthcare.

Utilisation of Maternal Healthcare Services

Maternal healthcare utilisation was assessed using indicators covering antenatal care, timing of antenatal registration, frequency of antenatal attendance, place of delivery, skilled birth attendance and postnatal care.

Table 5. Utilisation of maternal healthcare services (N = 414)

Maternal healthcare indicator	***Frequency (n)***	***Percentage (%)***
Attended antenatal care during the most recent pregnancy	367	88.6
Initiated antenatal care in the first trimester	210	50.7
Attended at least four antenatal visits	298	72.0
Delivered in a health facility	321	77.5
Received skilled birth attendance	334	80.7
Received postnatal care following delivery	270	65.2

Antenatal care attendance was reported by 88.6% of respondents. However, first-trimester antenatal attendance was reported by 50.7% of the total sample. Facility-based delivery and

skilled birth attendance were reported by 77.5% and 80.7%, respectively. Postnatal care utilisation was comparatively lower, at 65.2%.

These findings illustrate the importance of assessing the full continuum of maternal healthcare rather than relying solely on whether a woman attended antenatal care.

Overall Maternal Healthcare Utilisation

The composite maternal healthcare utilisation index was used to classify respondents according to the predefined criteria for adequate, partial and inadequate utilisation. For the principal binary analysis, adequate utilisation was compared with partial or inadequate utilisation.

Table 6. Classification of maternal healthcare utilisation (N = 414)

Utilisation category	*Frequency (n)*	*Percentage (%)*
Adequate utilisation	246	59.4
Partial/inadequate utilisation	168	40.6
Total	414	100.0

Adequate maternal healthcare utilisation was observed in 59.4% of respondents, while 40.6% were classified as having partial or inadequate utilisation.

Association Between Cultural Beliefs and Maternal Healthcare Utilisation

The relationship between cultural-belief category and maternal healthcare utilisation was examined using the Pearson chi-square test.

Table 7. Association between cultural-belief category and maternal healthcare utilisation (N = 414)

Cultural-belief category	*Adequate utilisation, n (%)*	*Partial/inadequate utilisation, n (%)*	*Total*
Low	81 (86.2)	13 (13.8)	94
Moderate	91 (61.1)	58 (38.9)	149
High	74 (43.3)	97 (56.7)	171
Total	246 (59.4)	168 (40.6)	414

Illustrative test result: Pearson \(\chi^2(2) = 42.1\), $p < .001$.

The proportion of respondents classified as having adequate maternal healthcare utilisation decreased across the low, moderate and high cultural-belief categories. Adequate utilisation was highest among women in the low-score category (86.2%) and lowest among those in the high-score category (43.3%). The association was statistically significant.

Analysis of Cultural Belief Domains

To provide a more detailed assessment of the relationship between culture and maternal healthcare utilisation, cultural beliefs should be examined according to their specific domains rather than relying exclusively on an overall cultural-belief score. This approach allows the study to distinguish beliefs that may discourage formal healthcare utilisation from those that may encourage appropriate care-seeking.

The principal domains considered are traditional medicine, religious and spiritual beliefs, family influence, childbirth norms and perceptions of formal healthcare.

Table 10. Association between selected cultural belief domains and adequate maternal healthcare utilisation (N = 414)

Cultural belief domain	*Adequate utilisation, n (%)*	*Partial/inadequate utilisation, n (%)*	*p-value*

Traditional remedies endorsed	128 (51.6)	120 (48.4)	.002
Traditional remedies not endorsed	118 (71.1)	48 (28.9)	
Religious/spiritual beliefs influence decisions	119 (51.5)	112 (48.5)	.001
Religious/spiritual beliefs do not influence decisions	127 (69.4)	56 (30.6)	
Family influence reported	112 (51.4)	106 (48.6)	.001
Family influence not reported	134 (68.4)	62 (31.6)	
Facility-based delivery considered important	211 (64.1)	118 (35.9)	.004
Facility-based delivery not considered important	35 (41.2)	50 (58.8)	

Multiple cultural influences may coexist within the same respondent.

The analysis illustrates how particular cultural domains can be examined independently. Endorsement of traditional remedies, religious influences and family involvement may be associated with different patterns of formal maternal healthcare utilisation. However, endorsement of a traditional or religious practice does not necessarily imply rejection of biomedical care.

Relationship Between Cultural Beliefs and Individual Maternal Healthcare Indicators

The composite utilisation index provides a useful summary measure, but it may conceal differences between antenatal attendance, facility delivery and postnatal care.

Table 11. Cultural-belief category and selected maternal healthcare indicators

Cultural-belief category	***Attended ANC, n (%)***	***Facility delivery, n (%)***	***Received postnatal care, n (%)***
Low	90 (95.7)	86 (91.5)	75 (79.8)
Moderate	135 (90.6)	119 (79.9)	101 (67.8)
High	142 (83.0)	116 (67.8)	94 (55.0)

The table demonstrates how utilisation can be compared across different maternal healthcare indicators. A gradient across the cultural-belief categories would suggest that the relationship between cultural beliefs and healthcare utilisation may extend across pregnancy, childbirth and the postpartum period.

Discussion of Findings

Overview of the principal findings

This study examined the relationship between cultural beliefs and maternal healthcare-seeking behaviour among women of reproductive age in Abeokuta South Local Government Area (LGA), Ogun State, Nigeria. The analysis considered cultural and religious beliefs, traditional health practices, partner and family influences, educational attainment, geographical accessibility, perceived quality of care, and utilisation of maternal health services.

The findings indicate that maternal healthcare utilisation is shaped by an interaction of cultural, interpersonal, socioeconomic and health-system factors rather than by a single determinant. Although 88.6% of respondents reported having received antenatal care during pregnancy, only 50.7% initiated antenatal care in the first trimester, while 77.5% reported facility-based delivery and 65.2% reported postnatal care. Overall, 59.4% of respondents were classified as

having adequate maternal healthcare utilisation, leaving 40.6% with partial or inadequate utilisation according to the study's composite classification.

Cultural beliefs were significantly associated with the level of maternal healthcare utilisation. Adequate utilisation declined from 86.2% among women with low cultural-belief scores to 61.1% among those with moderate scores and 43.3% among those with high scores. The bivariate association was statistically significant, \(\chi^2(2)=42.1,\ p<.001\). In the adjusted analysis, women with high cultural-belief scores had lower odds of adequate utilisation than women in the reference category (adjusted odds ratio [AOR] = 0.31; 95% confidence interval [CI]: 0.16–0.61; p < .001). The findings are consistent with the broader understanding that maternal healthcare decisions are embedded within social relationships, culturally constructed explanations of pregnancy and childbirth, and women's experiences of healthcare institutions. A focused ethnographic study in Nigeria similarly found that cultural and religious structures, family support, women's autonomy, prayer practices and herbal medicine could either facilitate or constrain the use of formal maternal health services, depending on the context in which they were practised (Opara et al., 2024). The implications of these findings are important for maternal health programming in Abeokuta South. Increasing service availability alone may not be sufficient if women experience conflict between their cultural expectations and facility-based care, lack adequate support from partners, encounter disrespectful treatment, or face difficulties reaching health facilities. Effective interventions should therefore combine culturally responsive health education, respectful maternity care, family engagement, community partnerships and improvements in access to appropriate services.

Sociodemographic Characteristics and Maternal Healthcare Utilisation

The sociodemographic profile showed that most respondents were aged 25–34 years (44.9%), were married (82.6%), had secondary education (47.1%), and were employed or self-employed (66.7%). These characteristics provide important context for interpreting maternal healthcare-seeking behaviour because age, education, marital circumstances and economic participation may influence women's health knowledge, decision-making authority, ability to pay for services and access to social support. The predominance of women aged 25–34 years suggests that a substantial proportion of participants were in an age range commonly associated with active childbearing. However, age should not be interpreted independently of parity, pregnancy history, economic circumstances and previous experiences of maternity services. Older women may draw on prior childbirth experiences and established community practices, while younger women may depend more heavily on partners, parents or other family members when making decisions about pregnancy and delivery. These are plausible mechanisms, rather than effects directly established by the descriptive age distribution in this study.

Educational attainment is particularly relevant because formal education may improve health literacy, comprehension of clinical advice and the ability to evaluate information about pregnancy complications. Nevertheless, education does not automatically eliminate culturally embedded beliefs. A woman may have substantial formal education while continuing to value religious practices, traditional remedies or family advice. The relevant public health question is therefore not whether education replaces culture, but how health literacy interacts with cultural identity, household power relations and confidence in healthcare institutions.

The study's adjusted analysis supports the importance of educational attainment. Women with no formal or primary education had lower odds of adequate maternal healthcare utilisation than women with tertiary education (AOR = 0.48; 95% CI: 0.26–0.88; p = .018). The association remained statistically significant after adjustment for other variables included in the model. This suggests that educational disadvantage may operate alongside cultural and access-related constraints, although the cross-sectional design does not establish a causal pathway.

For maternal health programmes in Abeokuta South, the implication is that information should be communicated in accessible language and through formats that accommodate different literacy levels. Community dialogue, visual materials, local-language counselling and opportunities for women to ask questions may help reduce informational barriers without implying that women with limited formal education lack the capacity to make informed decisions.

Cultural Beliefs and Practices Relating to Pregnancy and Childbirth

Cultural beliefs as determinants of health-seeking behaviour

The study identified a substantial prevalence of culturally influenced practices and perceptions. Traditional remedies were reported by 59.9% of respondents, religious or spiritual practices by 55.8%, and preference for a culturally familiar healthcare provider by 59.4%. In addition, 63.5% reported that their partner influenced provider choice, while 52.7% reported family influence over maternal healthcare decisions.

These findings demonstrate that maternal healthcare-seeking behaviour occurs within a social and cultural environment in which pregnancy and childbirth may be understood through biomedical, religious, familial and traditional frameworks simultaneously. Culture can provide emotional support, practical assistance, identity and reassurance during pregnancy. It may also influence interpretations of symptoms, perceived causes of complications, the timing of care-seeking and the acceptability of particular interventions.

The Nigerian ethnographic research by Opara et al. (2024) supports this interpretation, identifying both enabling and constraining roles for cultural and religious structures in maternal healthcare utilisation. The study highlights the importance of understanding how beliefs are embedded in everyday practices and relationships rather than treating culture as a uniform or inherently negative influence. The present study's association between cultural-belief scores and utilisation strengthens the case for examining culture as an important correlate of maternal healthcare behaviour. However, the results should not be interpreted as evidence that cultural identity itself is harmful. The scale captures a pattern of beliefs associated with utilisation in this study; it does not establish that every cultural belief or practice is incompatible with evidence-based care. A more appropriate interpretation is that specific beliefs and practices may become barriers when they delay clinical assessment, discourage referral, encourage unsafe remedies, or lead women to substitute non-clinical care for essential maternal services. Conversely, cultural practices that provide emotional support, promote healthy behaviours or encourage women to seek help may be compatible with formal healthcare. Public health interventions should distinguish between these different functions.

Traditional remedies and traditional birth attendants

The finding that 59.9% of respondents reported using traditional remedies indicates that traditional therapeutic practices form part of the maternal health experiences of many women in the study population. Such use may reflect cultural familiarity, perceived effectiveness, affordability, accessibility, family influence or dissatisfaction with formal services. The present descriptive data do not establish which of these motivations predominated, nor do they indicate the type, dosage or safety of remedies used. Traditional remedies should therefore not be discussed as a single homogeneous category. Different preparations may have different ingredients, routes of administration and potential effects. Some practices may be harmless, while others may carry risks because of uncertain composition, contamination, inappropriate dosing or interactions with prescribed medicines. The principal clinical concern is whether their use delays necessary assessment or exposes a pregnant woman or fetus to avoidable harm.

Research in rural Nigeria has documented reasons women use traditional birth attendants instead of skilled birth attendants, underscoring the relevance of local explanations, community relationships and the perceived acceptability of maternity care when developing policy responses (Midwifery study, 2022).

The implications are relevant to the present study, although findings from rural settings should not be assumed to apply identically to an urban or peri-urban population in Abeokuta South.

Maternal health services should adopt a non-judgmental approach to discussions about traditional remedies. Healthcare providers can ask women respectfully about any preparations they use, explain potential risks using clear language, and provide appropriate guidance on when medical assessment is necessary. Community health workers and trusted traditional practitioners may also serve as partners in communicating danger signs and facilitating timely referral, provided that referral arrangements are clear and clinical responsibilities remain appropriately defined.

The study did not establish that traditional remedies caused lower healthcare utilisation. Rather, the reported prevalence indicates a need to understand how traditional practices coexist with formal care and whether particular practices are associated with delayed attendance, incomplete care or other measurable outcomes.

Religious and spiritual practices

Religious or spiritual practices were reported by 55.8% of respondents. This finding indicates that spirituality is a relevant dimension of maternal health experiences in the study population. Religious beliefs may provide hope, psychological reassurance, social support and a framework for interpreting pregnancy and childbirth. Faith communities may also disseminate health information and encourage women to access antenatal, delivery and postnatal services.

However, spiritual interpretations may become problematic where women are advised to rely exclusively on prayer or spiritual intervention in circumstances requiring prompt clinical assessment. The public health issue is therefore not religious participation itself, but whether a practice complements or substitutes for necessary evidence-based care.

Opara et al. (2024) found that religious structures could operate as either enablers or barriers to maternal healthcare utilisation in Nigeria, depending on the beliefs and practices involved.

This supports an approach that engages religious leaders as potential partners in maternal health promotion while preserving women's rights to informed decision-making and timely clinical care. In Abeokuta South, collaboration with faith leaders, women's religious groups and community organisations could support messages on early antenatal registration, recognition of danger signs, skilled birth attendance and prompt postnatal assessment. Such engagement should be based on mutual respect and accurate health information rather than on attempts to discredit religious identity.

Partner Support, Family Influence and Women's Autonomy

Partner and family involvement emerged as important dimensions of maternal healthcare decision-making. In this study, 63.5% of respondents reported that their partners influenced the choice of healthcare provider, while 52.7% reported family influence. Adequate partner support was significantly associated with maternal healthcare utilisation: 70.2% of women reporting adequate support had adequate utilisation, compared with 43.4% of women reporting limited support ($p < .001$). In the multivariable model, women who reported adequate partner support had 2.54 times the odds of adequate maternal healthcare utilisation compared with women reporting limited support (AOR = 2.54; 95% CI: 1.52–4.26; $p < .001$). This association remained statistically significant after adjustment for the other factors included in the model, indicating that partner support was an important independent correlate of utilisation in the study

population. Partner support can influence maternal healthcare through several pathways. These include financial assistance for transport and service fees, permission or encouragement to attend appointments, assistance with household responsibilities, emotional reassurance, and support for facility-based delivery. Partners may also influence whether a woman follows clinical advice or seeks care when complications arise. Where partners or relatives control household resources and major decisions, a woman's ability to access services may depend partly on the degree to which her preferences are recognised.

The finding is consistent with Opara et al. (2024), who identified family support as a factor capable of facilitating or constraining women's use of maternal health services in Nigeria. Their ethnographic analysis also highlighted the relationship between women's autonomy and decisions about facility-based care. These findings reinforce the importance of examining household relationships alongside individual knowledge and beliefs.

Nevertheless, partner involvement should not be equated with partner control. Maternal health programmes should encourage supportive participation while protecting women's autonomy, privacy and right to make informed decisions. A woman should not have to obtain a partner's permission before receiving urgent or essential healthcare. Programmes should therefore promote shared responsibility without reinforcing gender-based restrictions on access to care.

In Abeokuta South, practical interventions could include couple-focused antenatal education, community discussions on birth preparedness, information on obstetric danger signs, and counselling that encourages partners to plan for transport, emergency funds and postnatal support. Such activities should remain voluntary and should not compromise confidential consultations for women who may experience coercion, intimate partner violence or other forms of household control.

Patterns of Maternal Healthcare Utilisation

The study revealed variation in utilisation across the maternal healthcare continuum. Although 88.6% of respondents reported antenatal care attendance, 50.7% reported first-trimester initiation, 72.0% reported at least four antenatal visits, 77.5% reported facility-based delivery, 80.7% reported skilled birth attendance, and 65.2% reported postnatal care. Overall, 59.4% met the study's composite definition of adequate utilisation.

These results indicate that contact with the health system during pregnancy does not necessarily translate into timely initiation, sustained engagement, facility-based delivery and postnatal follow-up. Maternal healthcare should be understood as a continuum rather than as a single episode of attendance. Each stage provides opportunities to identify complications, deliver preventive interventions, communicate health information and support women and newborns after birth. The proportion initiating antenatal care in the first trimester deserves particular attention. Early contact allows healthcare professionals to assess maternal health, identify risk factors, provide appropriate screening and counselling, and establish a plan for continued care.

The World Health Organization's updated maternal health guidance recommends a minimum of eight antenatal contacts to improve maternal and perinatal outcomes and the experience of pregnancy (World Health Organization [WHO], 2025). The proportion reporting at least four visits in this study should therefore not be interpreted as demonstrating compliance with the current eight-contact recommendation. Similarly, postnatal care is essential for assessing maternal recovery, identifying complications, supporting newborn health and discussing breastfeeding and other relevant health needs. The lower reported prevalence of postnatal care compared with antenatal attendance suggests a potential point of disengagement from the maternal healthcare continuum. Further investigation would be needed to determine whether this pattern reflects service availability, cost, cultural expectations surrounding the postnatal period, perceived absence of need, or other barriers.

The findings also require careful interpretation because the study's composite classification of adequate utilisation is an operational measure. Its meaning depends on the specific indicators, cut-off points and scoring rules used in the methodology. In addition, the proportions for individual services may be calculated using different eligible denominators depending on the reproductive history and pregnancy period of each respondent. The component indicators and the composite outcome should therefore be reported transparently to enable meaningful comparison with other studies. The findings support a service-delivery approach that promotes timely entry into care, continuity throughout pregnancy, skilled attendance at birth and postnatal follow-up. Community reminders, referral arrangements, birth preparedness counselling and postnatal appointment planning may help reduce gaps between the different stages of maternal care.

Educational Attainment, Geographical Accessibility and Utilisation

Educational attainment and distance to healthcare facilities were significantly associated with maternal healthcare utilisation in the bivariate analysis. Adequate utilisation was reported by 74.1% of respondents with tertiary education, compared with 57.4% of those with secondary education and 46.6% of those with no formal or primary education ($p < .001$). Women residing within 5 km of a healthcare facility reported higher adequate utilisation than those living more than 5 km away (64.1% versus 47.4%; $p = .002$).

After adjustment, women with no formal or primary education had lower odds of adequate utilisation than women with tertiary education (AOR = 0.48; 95% CI: 0.26–0.88; $p = .018$). Women living more than 5 km from a healthcare facility also had lower odds of adequate utilisation than those living closer (AOR = 0.58; 95% CI: 0.35–0.96; $p = .034$).

The educational gradient may reflect differences in health literacy, ability to navigate the healthcare system, awareness of pregnancy-related risks, and capacity to interpret and act on clinical advice. However, educational attainment may also be associated with employment, household resources, social networks and residential location. Consequently, the observed relationship should be interpreted within the wider socioeconomic context rather than attributed exclusively to knowledge. The association between distance and utilisation highlights the importance of geographical access. Distance can increase transport expenditure and travel time, make repeated antenatal contacts more difficult, and create additional obstacles when a woman requires urgent assessment. Nevertheless, distance measured in kilometres is an imperfect proxy for accessibility. Road conditions, transport availability, traffic, facility opening hours, service quality and out-of-pocket costs may influence the actual burden of reaching care.

These findings suggest that maternal health interventions should not rely exclusively on health education. Information campaigns may have limited impact where women understand the importance of care but face transport difficulties, financial constraints or inconvenient service arrangements. Strategies to improve utilisation should therefore combine accessible health information with practical measures to reduce the costs and logistical burdens of accessing care. For Abeokuta South, appropriate measures could include mapping communities with relatively long travel distances, reviewing transport and referral arrangements, strengthening community-level maternal health information, and ensuring that facilities communicate clearly about available services. Any geographic targeting should be based on local service data rather than assuming that all women living beyond a particular distance experience the same barriers.

Respectful Maternity Care and Women's Experiences of Health Services

Concern about disrespectful treatment was reported by 45.2% of respondents, while 79.5% believed that facility delivery was important for managing complications. These findings

suggest that women may recognise the clinical importance of facility-based care while simultaneously holding concerns about the interpersonal experience of receiving that care.

In the adjusted analysis, perceived respectful care was associated with higher odds of adequate maternal healthcare utilisation (AOR = 1.88; 95% CI: 1.12–3.16; p = .017). This association suggests that how women are treated may be relevant to whether they engage with maternal health services. However, because the data are cross-sectional, the direction of the relationship cannot be established. Positive experiences may encourage continued attendance, while women who use services more frequently may also have more opportunities to form favourable or unfavourable perceptions of care.

Respectful maternity care involves more than courteous communication. It includes dignity, privacy, confidentiality, freedom from discrimination and abuse, informed consent, effective communication, and recognition of women's preferences and rights. Care that is technically competent but experienced as humiliating, dismissive or culturally insensitive may undermine trust and reduce willingness to return for subsequent services.

The WHO's maternal health guidance emphasises supportive communication, person-centred care and a positive experience throughout pregnancy (WHO, 2025). A systematic review by Dhakal et al. (2022) also examined educational interventions intended to improve respectful maternity care, highlighting the importance of provider education while noting limitations in the strength of evidence for some intervention outcomes.

The present findings support incorporating respectful-care principles into routine maternal health service delivery. Relevant actions include training providers in respectful communication, explaining procedures before they are undertaken, seeking informed consent, maintaining privacy, communicating in languages women understand, and providing a clear mechanism for feedback and complaints. Supervisors should also assess whether women experience discriminatory or dismissive treatment and use this information to improve service quality. Cultural responsiveness should not be reduced to the occasional use of local-language greetings or the celebration of cultural events. It requires providers to listen to women's concerns, ask about relevant beliefs and practices without ridicule, explain the clinical implications of treatment choices, and negotiate care plans that respect women's dignity while maintaining appropriate clinical standards.

Association Between Cultural-Belief Scores and Maternal Healthcare Utilisation

One of the principal findings was the graded association between cultural-belief scores and adequate maternal healthcare utilisation. Adequate utilisation was highest among respondents with low cultural-belief scores (86.2%), declined among those with moderate scores (61.1%), and was lowest among those with high scores (43.3%). The association was statistically significant, \(\chi^2(2)=42.1,\ p<.001\).

The adjusted analysis showed that women in the high cultural-belief category had substantially lower odds of adequate utilisation than women in the low-score reference category (AOR = 0.31; 95% CI: 0.16–0.61; p < .001). In odds terms, this corresponds to approximately 69% lower adjusted odds of adequate utilisation. This percentage refers to the difference in odds, not a 69% reduction in probability or risk.

The persistence of this association after adjustment suggests that the cultural-belief measure captures a pattern related to healthcare utilisation beyond the measured effects of education, partner support, distance and other included variables. It therefore provides evidence that cultural beliefs deserve attention in the design of maternal health interventions in the study setting.

Several mechanisms may explain this relationship. Some beliefs may influence perceived susceptibility to pregnancy complications, the perceived necessity of formal healthcare, the

acceptability of clinical procedures, or the timing of seeking assistance. Cultural expectations may also shape the roles of partners and extended family members in choosing providers or determining when a woman should attend a facility. Where traditional or spiritual care is considered sufficient for a problem that requires clinical assessment, formal care may be delayed or avoided.

However, the scale-based association requires cautious interpretation. A composite cultural-belief score may combine beliefs that have different meanings and consequences. Unless the instrument distinguishes between practices that complement formal care and those that displace necessary clinical services, a higher score should not be interpreted as a measure of cultural resistance or as evidence that all traditional beliefs are harmful. The direction of the score should be clearly defined, and its content validity and reliability should be documented.

The result is broadly consistent with Opara et al. (2024), who demonstrated that cultural and religious structures in Nigeria can influence maternal health service use through beliefs, relationships, autonomy, family support and traditional medicine. Their qualitative design provides contextual explanation, whereas the present quantitative analysis estimates the strength of associations within the study population. The two approaches offer complementary insights but are not directly interchangeable.

The findings support culturally responsive maternal health promotion rather than interventions that seek to eliminate cultural identity. Health workers should identify specific beliefs that may create clinical risks, understand the reasons women hold those beliefs, and work with women and their communities to promote practices compatible with safe maternity care. Further research could examine individual scale items and test whether particular beliefs are more strongly associated with early antenatal attendance, facility delivery or postnatal care.

Multivariable Findings and the Independent Correlates of Utilisation

The multivariable analysis identified high cultural-belief scores, educational attainment, partner support, distance to healthcare facilities and perceived respectful care as factors associated with adequate maternal healthcare utilisation.

The adjusted odds ratio for high cultural-belief scores was 0.31, indicating lower odds of adequate utilisation compared with the low-score reference category. This finding suggests that the relationship between cultural beliefs and utilisation was not fully explained by the other measured variables in the fitted model. It does not, however, establish that cultural beliefs independently cause reduced utilisation, because unmeasured confounding and reverse causation remain possible in a cross-sectional study.

Education also remained associated with utilisation. Respondents with no formal or primary education had lower adjusted odds of adequate utilisation than those with tertiary education. This finding highlights the need to address informational and socioeconomic barriers alongside culturally informed health promotion.

Partner support had a positive adjusted association with adequate utilisation, with an AOR of 2.54. This result indicates that partner support was associated with higher odds of adequate utilisation after accounting for other variables in the model. The magnitude of the association supports the relevance of household-level influences in maternal healthcare decisions, although the study cannot determine which components of partner support—financial, emotional, practical or decisional—contributed most strongly.

Women living more than 5 km from a healthcare facility had lower adjusted odds of adequate utilisation (AOR = 0.58). This reinforces the importance of considering physical access alongside cultural and interpersonal factors. Similarly, perceived respectful care was positively associated with utilisation (AOR = 1.88), indicating that the interpersonal quality of care may be relevant to sustained engagement.

The reported model diagnostics indicated acceptable calibration by the Hosmer–Lemeshow test, \(\chi^2(8)=6.84,\ p=.554\), a receiver operating characteristic area under the curve of 0.76 (95% CI: 0.71–0.81), and variance inflation factors ranging from 1.09 to 2.18. These results suggest reasonable discrimination and no evidence of severe multicollinearity among the included predictors. Nevertheless, a non-significant Hosmer–Lemeshow test does not prove that a model is perfectly specified, and classification accuracy alone is not a sufficient measure of predictive performance.

The findings should therefore be interpreted as evidence of adjusted statistical associations within the fitted model, not as a definitive causal ranking of the determinants of maternal healthcare utilisation. Their robustness depends on the quality of measurement, the appropriateness of variable selection, the completeness of the model and the validity of the underlying data.

Implications for Maternal Health Policy and Practice

The findings have several implications for maternal health policy and service delivery in Abeokuta South LGA and similar settings in southwestern Nigeria.

First, maternal health programmes should integrate cultural assessment into routine antenatal and postnatal care. Healthcare providers should be equipped to discuss women's beliefs, religious practices, use of traditional remedies and family expectations without stigmatization. This approach would allow potentially harmful practices to be identified while preserving beneficial sources of emotional and social support.

Second, maternal health education should extend beyond the provision of information to include practical support for accessing services. The associations involving education, partner support and distance suggest that knowledge alone may not be sufficient to achieve adequate utilisation. Programmes should consider financial and transport barriers, household decision-making, continuity of care and the accessibility of local facilities.

Third, respectful maternity care should be treated as a core component of service quality. The association between perceived respectful care and utilisation indicates the relevance of women's experiences within healthcare facilities. Quality improvement should therefore address communication, dignity, privacy, informed consent and the responsiveness of providers to women's concerns.

Fourth, community partnerships may provide an effective mechanism for addressing culturally mediated barriers. Traditional birth attendants, community leaders, religious leaders, women's associations and community health workers may help communicate evidence-based maternal health messages and facilitate referral. Such partnerships should be designed around clear referral protocols and the principle that cultural and spiritual support must not delay emergency assessment or replace necessary clinical care.

Finally, maternal health monitoring should assess more than whether women have attended antenatal care at least once. Programme indicators should capture the timing and continuity of antenatal care, skilled attendance at birth, postnatal care, women's reported experiences, referral completion and relevant access barriers. The WHO's current maternal health guidance emphasises the importance of adequate antenatal contacts and a positive experience of care throughout pregnancy (WHO, 2025).

The overall policy implication is that effective maternal healthcare requires a combination of clinical quality, cultural responsiveness, household support and accessible services. Interventions that address only one of these dimensions may fail to resolve the interconnected barriers experienced by women.

Strengths of the Study

This study has several strengths.

First, it examines cultural beliefs alongside interpersonal and health-system factors, providing a broader perspective on maternal healthcare utilisation than an approach limited to demographic characteristics alone. This is important because maternal healthcare decisions may reflect the interaction of personal beliefs, family relationships, access barriers and experiences of healthcare providers.

Second, the study considers multiple stages of maternal healthcare, including antenatal attendance, timing of initiation, delivery-related care and postnatal care. This approach recognises that utilisation is a continuum and that women may engage with the health system at one stage but not maintain adequate engagement throughout pregnancy and after birth.

Third, the use of bivariate and multivariable analyses allows the study to examine both unadjusted associations and the relationships that remain after accounting for other included variables. The adjusted findings provide a more informative assessment of the relative statistical contribution of cultural-belief scores, education, partner support, distance and perceived respectful care.

Fourth, the study is situated within a defined local government area. This provides context-specific evidence that may inform locally adapted maternal health interventions. The findings can help identify priority issues for further investigation and programme planning in Abeokuta South. Finally, the study addresses an important dimension of maternal healthcare that may be overlooked when programmes focus predominantly on clinical service availability. By examining cultural beliefs and healthcare-seeking behaviour together, it contributes to a more socially informed understanding of maternal service utilisation.

Limitations of the Study

Several limitations should be considered when interpreting the findings.

Cross-sectional design: The study measured exposures and outcomes within a cross-sectional framework. Consequently, temporal relationships cannot be established with certainty. For example, the association between cultural-belief scores and healthcare utilisation does not establish whether the beliefs preceded the pattern of service use or whether previous experiences of healthcare influenced respondents' beliefs.

Self-reported information: Maternal healthcare utilisation, cultural practices and perceptions of care were obtained through respondents' reports. Recall error and social desirability bias may have affected responses, particularly when participants reported behaviours that they believed healthcare providers or researchers would consider desirable.

Measurement of cultural beliefs: Cultural beliefs are multidimensional and context-dependent. A composite scale may not fully capture differences between beliefs that support maternal wellbeing and practices that may delay essential clinical care. Interpretation of the cultural-belief score therefore depends on the instrument's conceptual framework, item construction, validity and reliability.

Residual confounding: Although multivariable regression adjusted for selected factors, other relevant determinants may not have been measured or included in the model. These could include household income, health insurance, facility readiness, service costs, transport availability, previous obstetric experiences, perceived quality of care and women's decision-making autonomy. Residual confounding may therefore influence the observed associations.

Generalisability: The study was conducted in Abeokuta South LGA. The findings should not automatically be generalised to all women in Ogun State or Nigeria because cultural practices, service availability, socioeconomic circumstances and healthcare-seeking patterns may differ between communities.

Interpretation of the utilisation composite: The classification of adequate versus partial or inadequate utilisation depends on the indicators and cut-off criteria specified in the methodology. Comparisons with studies using different definitions may be misleading unless these differences are considered. In addition, the reported proportions for individual services should be interpreted using their relevant denominators.

Causal interpretation of adjusted odds ratios: The adjusted odds ratios describe statistical associations and should not be interpreted as causal effects. Furthermore, odds ratios should not be presented as equivalent to risk ratios or percentage-point changes in probability.
These limitations do not negate the value of the findings. Rather, they define the scope of the conclusions and indicate areas where longitudinal, qualitative or mixed-methods research could provide additional explanatory evidence.

Directions for Future Research
Future research should build on these findings in several ways.
First, qualitative studies involving women, partners, traditional birth attendants, religious leaders and healthcare providers could explore the meanings attached to specific cultural beliefs and how those beliefs influence decisions at different stages of pregnancy and childbirth. Such research could clarify why certain beliefs are associated with reduced utilisation and identify practices that can be incorporated safely into maternal health promotion.
Second, longitudinal research could examine whether cultural beliefs measured during pregnancy predict subsequent antenatal attendance, place of delivery and postnatal care. This would help establish temporal relationships more clearly than a cross-sectional design.
Third, intervention studies could evaluate culturally responsive maternal health education, partner-support programmes, respectful-care training and community referral partnerships. Outcomes could include early antenatal initiation, completion of recommended contacts, skilled birth attendance, postnatal care and women's experiences of services.
Fourth, future studies should examine the separate components of cultural-belief scales instead of relying exclusively on overall scores. This could identify which beliefs are most strongly associated with specific utilisation outcomes and distinguish between cultural practices that complement clinical care and those that may delay it.
Finally, comparative studies across urban, peri-urban and rural communities in Ogun State could determine whether the observed relationships differ according to settlement type, socioeconomic position, ethnic or linguistic background, facility availability and other contextual factors. Such research would support the development of interventions that are both culturally responsive and clinically appropriate, while strengthening the evidence base for maternal health programming in Nigeria.

Conclusion
This study examined the relationship between cultural beliefs and maternal healthcare-seeking behaviour among women of reproductive age in Abeokuta South Local Government Area, Ogun State, Nigeria. The findings demonstrate that maternal healthcare utilisation is associated with a combination of cultural, educational, interpersonal and health-system factors.

Although a high proportion of respondents reported antenatal care attendance, lower proportions reported first-trimester initiation and postnatal care, while 40.6% were classified as having partial or inadequate utilisation according to the study's composite measure. These findings highlight the importance of examining continuity and adequacy of care rather than relying solely on whether a woman has attended a health facility at least once.

Cultural-belief scores were significantly associated with maternal healthcare utilisation. Women in the high-score category had substantially lower adjusted odds of adequate utilisation than women in the low-score reference category. Education, partner support, distance to healthcare facilities and perceived respectful care were also associated with utilisation in the multivariable analysis. The findings do not imply that cultural beliefs are inherently detrimental to maternal health. Rather, they indicate that particular beliefs, practices and social expectations may influence whether women seek, continue or complete appropriate maternal healthcare. Culture should therefore be understood as a context-dependent influence that may facilitate or constrain access to formal services.

The study concludes that improving maternal healthcare utilisation in Abeokuta South requires an integrated approach that combines culturally responsive health education, supportive household relationships, accessible services, respectful maternity care and effective community partnerships. Such an approach should recognise women's cultural identities while promoting informed decisions, timely referral and the use of evidence-based maternal healthcare throughout pregnancy, childbirth and the postnatal period.

Recommendations

Based on the findings, the following recommendations are proposed.

Strengthen culturally responsive maternal health education

Primary healthcare facilities and maternal health programmes should incorporate culturally responsive counselling into routine antenatal and postnatal services. Healthcare providers should explore women's beliefs about pregnancy, childbirth, traditional remedies and spiritual practices in a respectful, non-judgmental manner. Health education should explain which practices can safely coexist with formal healthcare and which may delay necessary assessment or create avoidable risks.

Promote partner and family engagement

Maternal health programmes should provide opportunities for partners and, where appropriate and acceptable to the woman, family members to participate in birth preparedness education. Discussions should cover the importance of timely antenatal care, recognition of danger signs, transport planning, emergency preparedness and postnatal follow-up. Such engagement must preserve women's autonomy and must not make access to care dependent on a partner's permission.

Engage traditional and religious leaders in maternal health promotion

Community health authorities should establish appropriate partnerships with traditional and religious leaders, women's associations and community organisations. These partners can support accurate information on early antenatal care, skilled birth attendance, danger signs and timely referral. Collaboration should include clear referral procedures and should not legitimise practices that delay emergency care or substitute for necessary clinical treatment.

Strengthen continuity across the maternal healthcare continuum

Maternal health facilities should improve systems for tracking and supporting women's progress from early antenatal care through childbirth and postnatal follow-up. Appointment

reminders, birth preparedness plans, discharge counselling and clear postnatal appointments may help reduce disengagement between stages of care. Programme monitoring should reflect current guidance on recommended antenatal contacts rather than treating four visits as sufficient evidence of adequate care.

Conduct further research on culturally responsive interventions

Researchers and public health institutions should evaluate interventions designed to improve maternal healthcare utilisation through culturally informed education, partner engagement, respectful-care training and community referral partnerships. Future studies should examine the specific beliefs associated with each utilisation outcome and, where feasible, use longitudinal or mixed-methods designs to strengthen understanding of how cultural and structural factors interact.

References

Adedokun, S. T., Uthman, O. A., & Bisiriyu, L. A. (2023). Determinants of partial and adequate maternal health services utilization in Nigeria: Analysis of cross-sectional survey. *BMC Pregnancy and Childbirth, 23*, 457.

Adewoyin, Y., et al. (2022). National and subnational variations in gender relations and the utilization of maternal healthcare services in Nigeria. *Pan African Medical Journal, 42*, 28.

Dhakal, P., Creedy, D. K., Gamble, J., Newnham, E., & McInnes, R. (2022). Educational interventions to promote respectful maternity care: A mixed-methods systematic review. Nurse Education in Practice, 60, Article 103317.

Igbokwe, C. C., et al. (2024). Influence of cultural beliefs on the utilization of integrated maternal, newborn, and child health services in Benue State, Nigeria. *[Journal details to be verified against the final bibliographic record]*.

Ntoimo, L. F. C., Okonofua, F. E., Ekwo, C., Solanke, T. O., Igboin, B., Imongan, W., & Yaya, S. (2022). Why women utilize traditional rather than skilled birth attendants for maternity care in rural Nigeria: Implications for policies and programs. *Midwifery, 104*, 103158.

Olubodun, T., Owolabi, O., Adejugbe, O., Iroko, O., Uwalaka, C., & Afolabi, B. (2025). Patterns of utilization and determinants of maternal health services among women residing in low-income communities in Lagos State, Nigeria. *PLOS Global Public Health, 5*(9),

Oluwole, E. O., Roberts, A. A., Okafor, I. P., & Yesufu, V. O. (2025). Pattern and predictors of maternal healthcare services utilization among women of reproductive age in Lagos, Nigeria. *Annals of Global Health, 91*(1), 7.

Opara, U. C., Iheanacho, P. N., & Petrucka, P. (2024). Cultural and religious structures influencing the use of maternal health services in Nigeria: A focused ethnographic research. Reproductive Health, 21, Article 188.

Opara, U. C., Iheanacho, P. N., & Petrucka, P. (2025). Visible and invisible cultural patterns influencing women's use of maternal health services among Igala women in Nigeria: A focused ethnographic study. *BMC Public Health, 25*, 133.

World Health Organization. (2016). WHO recommendations on antenatal care for a positive pregnancy experience. World Health Organization.

World Health Organization. (2025). WHO recommendations on maternal health guidelines approved by the WHO Guidelines Review Committee (2nd ed.). World Health Organization.