



Men's Knowledge and Attitudes toward Cultural Practices Influencing Maternal Health Outcomes in North West Nigeria

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Abstract

Background: Despite numerous maternal health interventions in Nigeria, harmful cultural practices and patriarchal norms continue to impede women's access to safe maternal healthcare, particularly in the North West region. While existing studies have explored women's experiences, limited attention has been given to men's knowledge and attitudes, despite their decisive role in maternal health decisions. This study examined men's knowledge and attitudes toward cultural practices influencing maternal health outcomes in North West Nigeria. **Materials and Methods:** A descriptive cross-sectional research design was employed, and data were collected from 165 men across selected states in the region using a semi-structured questionnaire. The instrument's reliability coefficient was 0.79, confirming internal consistency. Data were entered into SPSS version 25.0 and analysed using frequency distribution table and percentages, mean, and standard deviation and chi-square statistics were used to test the level of knowledge and attitude with socio-demographic data at a 5% significance level. **Results:** Findings revealed that 96.9% of men possessed high knowledge regarding cultural practices affecting maternal health, while 61.1% demonstrated negative attitudes toward cultural practices. The study found no significant relationship between men's knowledge and attitudes, suggesting that awareness alone does not necessarily translate into behavioural change. Moreover, only religion showed a significant association with men's knowledge, while no socio-demographic variable significantly influenced their attitudes. **Conclusion:** The study concludes that although men are well-informed about the dangers of harmful cultural practices, their attitudes remain largely shaped by patriarchal and religious ideologies. It recommends community-based male-targeted education, religious engagement, and behavioural change campaigns to promote positive male participation in maternal health decision-making.

Keywords: Men's knowledge, Cultural practices, Maternal health outcomes, Attitudes, North West Nigeria

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Introduction

Maternal mortality remains a major public health challenge in Nigeria, particularly in the North West region, where cultural traditions, religious norms, and gendered power structures strongly influence women's access

to skilled maternal health services (Ugwu & de Kok, 2020). Despite increased investments in maternal health, the North West region of Nigeria continues to record mortality levels above the national average, with many deaths

driven by preventable causes (World Health Organisation [WHO], 2023). The maternal mortality ratio (MMR) in this region is estimated at 1,120 deaths per 100,000 live births, well above the national average of 512 per 100,000 (National Population Commission [NPC] & International Classification of Functioning [ICF], 2023). According to WHO (2019), 810 women die each day as a result of avoidable causes related to pregnancy, and 94% of these deaths are in developing regions. Sub-Saharan Africa and South Asia alone have more than 86% of the total deaths in the world (Alkema et al., 2016).

In North West Nigeria, culture is a major factor in determining maternal health outcomes (Ariyo et al., 2017). According to Ibe (2017), culture affects everything ranging from religion, marriage, diet, and family relations, and continues to be patriarchal, restricting women's freedom. In many societies, women need their husbands' permission to make decisions about healthcare or contraception, even in an emergency. Religion also plays a dominating role in maternal health in this region. Given that Islam, as the majority religion in North West Nigeria, promotes the value of life and wellbeing, specific interpretations of Islamic doctrine persist in informing women to avoid receiving medical care from male healthcare professionals unless female practitioners are available (Abubakar et al., 2022).

Cultural traditions related to large family size also play an important role in maternal mortality (Ahmed et al., 2021). In most communities of North West Nigeria, high fertility rates are linked to prestige, wealth, and divine favour, thus putting pressure on women to produce as many children as possible (Ahmed et al., 2021). Early marriage and adolescent pregnancy add to maternal health problems (Ahmed et al., 2021; UNICEF, 2023). According to the United Nations Children's Fund (UNICEF, 2023), 68% of girls in North West Nigeria are

married before 18 years old, and many of the girls become mothers in adolescence. Furthermore, the continued use of TBAs is also one of the contributing factors for the high maternal mortality rate in the region. TBAs are culturally respected but lack any formal medical training, which causes delays in referrals and the inappropriate management of complications (Iliyasu et al., 2021).

Men hold substantial decision-making authority within households, making their knowledge and attitudes toward maternal health a critical determinant of women's access to timely and appropriate care (Yaya et al., 2019). Deeply rooted traditions, gender inequality, and religious connotations still restrict women's access to critical health care services (Okolocha et al., 2019; Ugwu & de Kok, 2020). This study, therefore, identifies men's knowledge and attitudes toward cultural practices affecting maternal health in North West Nigeria and the association between men's knowledge and attitudes and their socio-demographic data.

Methods and Materials

A descriptive cross-sectional research design was used to determine men's knowledge and attitudes across selected communities in North West Nigeria. The population comprised men across the seven states (Jigawa, Kaduna, Kano, Katsina, Kebbi, Sokoto, and Zamfara). A total sample size of 165 men was determined using the Cochran sampling technique.

A multi-stage sampling procedure was employed to ensure adequate representativeness across the region. In the first stage, three states: Sokoto, Kebbi, and Zamfara were purposively selected based on their notably high maternal mortality rates, cultural diversity, and health infrastructure characteristics. In the second stage, two Local Government Areas (LGAs) were selected from each of the three states using purposive sampling, one urban LGA and one rural LGA, to ensure that both settlement types were adequately represented. The selected LGAs

were as follows: Sokoto North LGA (urban) and Tambuwal LGA (rural) in Sokoto State; Birnin-Kebbi LGA (urban) and Fakai LGA (rural) in Kebbi State; and Gusau LGA (urban) and Zurmi LGA (rural) in Zamfara State. This yielded six LGAs in total across the three states. In the third stage, two communities were selected from each LGA using simple random sampling, giving a total of twelve communities across the six LGAs. Within each community, households were selected

using systematic random sampling, and in each household, the most senior eligible male resident who provided informed consent was recruited.

Proportionate allocation was applied to distribute the total sample of 165 respondents across the three states and their respective LGAs, as presented in Table 1 below. Overall, 90 participants were recruited from urban LGAs and 75 from rural LGAs.

Table 1: Sample Distribution across States, LGAs, and Settlement Types

State	LGA	Settlement Type	No. of Communities	Sample (n)
Sokoto	Sokoto North	Urban	2	30
	Tambuwal	Rural	2	25
Kebbi	Birnin-Kebbi	Urban	2	30
	Fakai	Rural	2	25
Zamfara	Gusau	Urban	2	30
	Zurmi	Rural	2	25
Total			12	165

Data were collected using a researcher-developed questionnaire specifically designed for this study to assess men's knowledge and attitudes toward cultural practices affecting maternal health in North West Nigeria. The instrument comprised three main sections:

(1) Socio-demographic characteristics including age, educational status, religion, and marital status;

(2) Knowledge assessment section containing 10 dichotomous (Yes/No) items. Each correct response (Yes) was scored 2 points, while each incorrect response (No) was scored 1 point, yielding a maximum possible score of 20 points. Knowledge levels were categorised as: inadequate (0-6 points), Moderate (7-13 points), and adequate (14-20 points).

(3) Attitude measurement section consisting of 15 statements assessed using a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Total attitude scores ranged from 15 to 75 points and were classified as: Positive attitude (≥ 56.25 , representing $\geq 75\%$ of the maximum score) and Negative attitude (< 56.25 , representing $< 75\%$ of the maximum score). Some items were reverse-coded to ensure consistency in interpretation. The instrument demonstrated acceptable reliability with a Cronbach's Alpha of 0.79.

Data Collection Procedure: Data collection was conducted over 6 weeks (4th August to 12th September 2025) by four trained research assistants fluent in both English and Hausa. Face-to-face questionnaire distribution was conducted in participants' homes. Each

questionnaire took approximately 15-20 minutes. Participants who could not read were assisted through verbal administration of the questionnaire in their preferred language.

Data Analysis: Completed questionnaires were checked for completeness and coded. Data were entered into SPSS version 25.0 and cleaned before analysis. Descriptive statistics (frequencies, percentages, means, and standard deviations) were computed to summarise socio-demographic characteristics,

knowledge levels, and attitude scores. The chi-square test of independence was used to examine associations between categorical variables at the 0.05 significance level.

Ethical approval for the study was obtained from the Kebbi State Ministry of Health with approval number “KSHREC Reg. No.: 107:047/2025”. Participation was voluntary, and informed consent was obtained from all respondents. Confidentiality and anonymity were strictly maintained.

Results

Table 2: Description of the Socio-demographic Characteristics of the Respondents (n=162)

Variables	Frequency (n)	Percent (%)
18-25 years	21	13.0
26-35 years	37	22.8
36-45 years	41	25.3
46-55 years	42	25.9
Above 55 years	21	13.0
Educational Status		
No Formal Education	23	14.2
Primary Education	20	12.3
Secondary Education	45	27.8
Diploma/Certificate	64	39.5
Bachelor's degree	8	4.9
Postgraduate degree	2	1.2
Religion		
Christianity	3	1.9
Islam	154	95.1
Traditional	5	3.1
Other	0	0.0
Marital Status		
Single	29	17.9
Married	103	63.6
Divorced	5	3.1
Widowed	25	15.4

Table 2 presents the socio-demographic characteristics of the 162 respondents. The age distribution shows relatively even representation across age groups, with the largest proportion in the 46-55 years category

(25.9%) and the smallest in the 18-25 and above 55 categories (13.0% each). Regarding educational status, the majority held Diploma/Certificate qualifications (39.5%), followed by Secondary education (27.8%).

Only 14.2% had no formal education, while 4.9% possessed a bachelor's degree, 1.2% possessed a postgraduate degree. Religion-wise, Islam was predominant (95.1%), with minimal representation of Christianity (1.9%)

and traditional religion (3.1%). Most respondents were married (63.6%), while 17.9% were single, 15.4% widowed, and 3.1% divorced.

Table 3: Knowledge Levels of Men Regarding Cultural Practices as They Affect Maternal Health Outcomes (n=162)

SN	Knowledge Category	Score Range	Frequency n (%)
1	Adequate Knowledge	14 – 20 points	157 (96.9%)
2	Moderate Knowledge	7 – 13 points	4 (2.5%)
3	Inadequate Knowledge	0 – 6 points	1 (0.6%)
		Total	162 (100%)

As shown in Table 3, the overwhelming majority of respondents demonstrated adequate knowledge regarding cultural practices that affect maternal health outcomes, with 157 men (96.9%) scoring 14 points or above out of a maximum of 20. Only 4 respondents (2.5%) fell within the moderate

knowledge category, and just 1 respondent (0.6%) recorded inadequate knowledge. This distribution confirms that awareness about the harmful effects of cultural practices on maternal health is nearly universal among the sampled population in North West Nigeria.

Table 4: Men's Attitudes toward Cultural Practices as They Affect Maternal Health Outcomes (n=162)

Attitude Category	Frequency (n)	Percentage (%)
Positive Attitude (Score: ≥ 56.25)	63	38.9
Negative Attitude (Score: < 56.25)	99	61.1
Total	162	100.0

Table 4 present result on the men's attitudes toward cultural practices as they affect maternal health outcomes. About 99 (61.1%)

demonstrated a positive attitude, while 63 (38.9) demonstrated a negative attitude.

Table 5: Association between Socio-Demographic Characteristics and Knowledge of Cultural Practices as it Affects Maternal Health Outcomes (n = 162)

SN	Variable		AwaKnowledgePV vaccination			X ²	Df	P
			Inadequate (%)	Moderate (%)	Adequate (%)			
1	Age	18 – 25	0 (0.0)	0 (0.0)	21 (13.0)	7.254	8	.509
		26 - 35	1 (0.6)	0 (0.0)	36 (22.2)			
		36 – 45	0 (0.0)	2 (1.2)	39 (24.1)			
		46 – 55	0 (0.0)	2 (1.2)	39 (24.1)			
		Above 55	0 (0.0)	0 (0.0)	21 (13.0)			
2	Religion	Christianity	0 (0.0)	0 (0.0)	3 (1.9)	31.762*	4	.000
		Islam	0 (0.0)	4 (2.5)	150 (92.6)			
		Traditional	1 (0.6)	0 (0.0)	4 (2.5)			
3	Highest Educational	No Education	1 (0.6)	0 (0.0)	22 (13.6)	8.217	10	.608
		Primary	0 (0.0)	0 (0.0)	20 (12.3)			
		Secondary	0 (0.0)	2 (1.2)	43 (26.5)			
		Diploma/Cert	0 (0.0)	2 (1.2)	62 (38.3)			
		Bachelor	0 (0.0)	0 (0.0)	8 (4.9)			
		Postgraduate	0 (0.0)	0 (0.0)	2 (1.2)			
4.	Marital Status	Single	1 (0.6)	0 (0.0)	28 (17.3)	8.721	6	.190
		Married	0 (0.0)	2 (1.2)	101 (62.3)			
		Divorced	0 (0.0)	0 (0.0)	5 (3.1)			
		Widowed	0 (0.0)	2 (1.2)	23 (14.2)			

Table 5 examines the association between socio-demographic characteristics and knowledge levels. The analysis revealed that only religion showed a statistically significant association with knowledge ($\chi^2=31.762$, $df=4$, $p=.000$). Christians (100%) and the vast majority of Muslims (97.4%) demonstrated adequate knowledge, while traditional religion adherents showed more varied knowledge

levels. Age ($\chi^2=7.254$, $df=8$, $p=.509$), educational status ($\chi^2=8.217$, $df=10$, $p=.608$), and marital status ($\chi^2=8.721$, $df=6$, $p=.190$) showed no significant associations with knowledge levels, suggesting that knowledge of cultural practices affecting maternal health transcends these demographic variables in this population.

Table 6: Association between Socio-Demographic Characteristics and Attitude Towards Cultural Practices as it Affects Maternal Health Outcomes (n = 162)

S/N	Variable		Attitude				
			Positive (%)	Negative (%)	X ²	Df	P
1	Age	18 – 25	10 (6.2)	11 (6.8)	4.305	4	.366
		26 - 35	12 (7.4)	25 (15.4)			
		36 – 45	12 (7.4)	29 (17.9)			
		46 – 55	19 (11.7)	23 (14.2)			
		Above 55	10 (6.2)	11 (6.8)			
2	Religion	Christianity	1 (0.6)	2 (1.2)	998	2	.607
		Islam	59 (36.4)	95 (58.6)			
		Traditional	3 (1.9)	2 (1.2)			
3	Highest Educational	No Education	10 (6.2)	13 (8.0)	3.100	5	.685
		Primary	7 (4.3)	13 (8.0)			
		Secondary	16 (9.9)	29 (17.9)			
		Diploma/Cert	28 (17.3)	6 (3.7)			
		Bachelor	2 (1.2)	8 (4.9)			
4.	Marital Status	Postgraduate	0 (0.0)	2 (1.2)	0.137	3	.987
		Single	12 (7.4)	17 (10.5)			
		Married	39 (24.1)	64 (39.5)			
		Divorced	2 (1.2)	3 (1.9)			
		Widowed	10 (6.2)	15 (9.3)			

Table 6 presents the association between socio-demographic characteristics and attitudes toward cultural practices. None of the examined variables showed statistically significant associations with attitudes. Age ($\chi^2=4.305$, $df=4$, $p=.366$), religion ($\chi^2=0.998$, $df=2$, $p=.607$), educational status ($\chi^2=3.100$, $df=5$, $p=.685$), and marital status ($\chi^2=0.137$, $df=3$, $p=.987$) were all non-significant.

Discussion

This study examined men's knowledge and attitudes toward cultural practices that influence maternal health outcomes in North

West Nigeria. The findings uncover a troubling reality: despite near-universal adequate knowledge about the dangers of harmful cultural practices, the majority of men hold negative attitudes that continue to sustain those very practices. The discussion below is structured around the study's two core objectives.

The findings revealed that the vast majority of respondents (96.9%) demonstrated adequate knowledge regarding cultural practices that negatively affect maternal health outcomes, while only 1.9% had moderate knowledge and

1.2% had inadequate knowledge. This pattern of near-universal adequate knowledge is consistent with Yaya et al. (2019), who similarly documented considerable maternal health awareness among men in Nigeria. What this study adds, however, is a clearer picture of just how widespread that awareness is, cutting across age groups, educational backgrounds, and marital status categories with remarkable uniformity.

The reach of this knowledge across demographic groups, including men with no formal education, suggests that community-based communication strategies and religious instruction have served as effective supplementary channels for health information. Organisations such as the Society for Family Health and various non-governmental organisations have conducted sustained awareness activities across Northern Nigeria in recent years, and the results of this study indicate that those efforts have successfully penetrated even populations that formal education systems have not fully reached.

Notably, religion was the only socio-demographic variable that showed a statistically significant association with knowledge levels ($\chi^2=31.762$, $df=4$, $p=.000$), with Christians (100%) and Muslims (97.4%) both demonstrating predominantly adequate knowledge, while traditional religion adherents showed greater variability. This finding supports Ugwu and de Kok (2020), who highlighted that religious institutions function as primary health information channels in Northern Nigeria. When Islamic teachings are oriented around the sanctity of life and maternal wellbeing, they can be powerful vehicles for health awareness, potentially eclipsing the role of formal education as a knowledge source. This diverges from Ariyo et al. (2017) and Adebawale and Udjo (2016), who found that age and formal education were also significant determinants of health knowledge, a difference that may reflect the strong religious

homogeneity of the communities studied here, where mosques and Islamic scholars wield considerable influence over health perceptions.

Despite the high proportion of men with adequate knowledge, the majority of respondents (61.1%) exhibited negative attitudes toward cultural practices affecting maternal health, while only 38.9% demonstrated positive attitudes. This stark contrast between knowledge and attitude levels is perhaps the most significant finding of the study, and it directly challenges the assumptions underpinning many conventional health education programmes, which presuppose that adequate awareness will naturally lead to attitudinal and behavioural change.

The negative attitudes observed were wide-ranging and deeply rooted. Most concerning among them was the strong endorsement, by 77.2% of respondents, of women bearing as many children as their husbands desire, regardless of the health consequences. Equally alarming was the belief held by 76.5% of men that seeking modern maternal care signals weakness, and the view of 65.4% that prayers are more effective than hospital treatment for pregnancy complications. These findings align with Ugwu and de Kok (2020), who documented strong resistance among men in Northern Nigeria to allowing their wives access to skilled maternal care, and with Ariyo et al. (2017), who noted that cultural and religious expectations frequently override evidence-based knowledge in determining healthcare behaviour. Unlike Ariyo's study, which focused on women's experiences, the current findings reveal that men's gatekeeping role actively amplifies these barriers at the point where healthcare decisions are made.

The acceptance that male healthcare providers should not attend to women during childbirth is particularly concerning from a structural standpoint. As Abubakar et al. (2022) observed, gender preferences in provider selection represent a major obstacle to

institutional delivery in this region. In communities where female healthcare providers are already scarce, this attitude translates into a practical denial of potentially life-saving care.

Despite these predominantly negative attitudes, some encouraging patterns emerged. The majority of respondents (59.3%) disagreed that girls should marry and bear children before age 18, and 65.9% acknowledged that women who have undergone FGM may require hospital care during childbirth. While these positive attitudes remain in the minority overall, they represent entry points for targeted interventions.

The absence of a significant association between any socio-demographic variable and attitude is equally revealing. Whether a man is educated or uneducated, young or old, his attitudes remain comparably negative, a finding that closely aligns with Abubakar et al. (2022), who described patriarchal values in Northern Nigeria as operating like a hegemonic system that transcends individual characteristics. Dike (2019) similarly observed that cultural rigidity in Nigerian communities tends to limit the moderating influence of individual socioeconomic factors on health attitudes. The implication is important: these are not personal positions but collectively enforced social norms, maintained through socialisation, family expectations, and community sanction from childhood onward. This means that change will require community-level, rather than individual-level, interventions, ones that engage the very institutions (religious bodies, community leadership, and peer networks) that currently sustain negative norms.

The knowledge-attitude gap revealed by this study validates the theoretical framework of Conner et al. (2002), who, drawing on the Theory of Planned Behaviour, argued that knowledge alone cannot modify attitudes without simultaneously addressing subjective norms and perceived behavioural control.

What the findings demonstrate is that men in North West Nigeria understand, at a cognitive level, which harmful cultural practices endanger women's lives, yet this understanding does not translate into attitudinal change because the perceived social cost of deviating from community norms far outweighs the abstract health argument. Yaya et al. (2019) observed similar dynamics, noting that Nigerian men often possess good maternal health knowledge yet continue to uphold restrictive cultural practices due to social pressure and fear of community judgment.

Conclusion

This study concludes that while men in North West Nigeria possess predominantly adequate knowledge regarding cultural practices that affect maternal health, this awareness has not translated into positive attitudes. The majority of men hold negative attitudes driven by deeply entrenched patriarchal norms and religious ideologies that no socio-demographic variable could significantly moderate. The sole exception was religion's influence on knowledge levels, underscoring the critical role that faith institutions and religious leaders must play in any effective maternal health strategy in this region. Knowledge-based interventions alone are clearly insufficient; what is needed are sustained, community-level behavioural change strategies that address the ideological and social structures sustaining harmful attitudes.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. Given that religion was the only variable significantly associated with men's knowledge, health authorities should formally engage Islamic scholars and community imams as frontline maternal health advocates, training them to reframe Islamic teachings in ways that actively encourage skilled birth attendance and address the

religious misconceptions that discourage women from accessing care.

2. Since the majority of men demonstrated negative attitudes despite adequate knowledge, health programmes in this region should move decisively beyond information dissemination and invest in community-level behavioural change communication that directly confronts the patriarchal norms and collective social expectations underpinning men's attitudes, including structured male peer support groups, couples' dialogue initiatives, and social norm change campaigns engaging respected community leaders.

Strengths and Limitations

This study has a number of important strengths. It addresses a critical gap in the literature by focusing specifically on men's perspectives in a region where male decision-making authority is a key, yet understudied, determinant of maternal health outcomes. The multi-stage sampling procedure, incorporating both urban and rural communities across three high-burden states, strengthens the representativeness of the findings within the study region. The instrument's acceptable reliability (Cronbach's Alpha = 0.79) further supports confidence in the internal consistency of the measures used.

Nonetheless, several limitations should be considered when interpreting these findings. The cross-sectional design does not permit causal inferences, and the reliance on self-reported data introduces the possibility of social desirability bias, particularly given the sensitive nature of gender and cultural topics in this context. The study's scope was also limited to three of the seven states in North West Nigeria, which may constrain the generalisability of findings to the wider region. Future research should consider qualitative and longitudinal approaches to more fully capture the complexity and trajectory of men's attitudes over time.

Conflict of Interest

The authors declare no conflict of interest.

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