

Factors affecting communication of family planning media messages among reproductive aged population in Obio/Akpor Local Council, Rivers State, Nigeria

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Abstract

Background: Effective communication of family planning messages through media is essential for improving reproductive health outcomes. However, various factors influence whether these messages are received, understood, and accepted. This study assessed factors affecting communication of family planning media messages among residents of reproductive age in Obio/ Akpor Local Council, Rivers State, Nigeria.

Methods: A community-based analytical cross-sectional study was conducted between July and August 2025 among 310 residents of reproductive age selected through multistage random sampling. Data were collected using a structured, self-administered questionnaire. Descriptive statistics, chi-square tests, and binary logistic regression were used for analysis, with statistical significance set at $p < 0.05$.

Results: The mean age of participants was 31.8 years (SD = 7.2), with females constituting 67.1%. Cultural beliefs were identified as a barrier by 71.9% of respondents, followed by a lack of education (79.4%) and religious beliefs (70.6%). Only 58.1% agreed that the language used in messages suits their community. Health worker involvement was endorsed by 86.5% as making messages more effective. Binary logistic regression revealed that rural residence (AOR = 3.71; 95% CI: 1.70–8.10), Muslim religion (AOR = 6.36; 95% CI: 2.04–19.81), Binary logistic regression revealed that rural residence (AOR = 3.71; 95% CI: 1.70–8.10), Muslim religion (AOR = 6.36; 95% CI: 2.04–19.81), and lower educational levels (secondary: AOR = 2.51; 95% CI: 1.27–4.96; primary: AOR = 1.95; 95% CI: 1.02–3.73; non-formal: AOR = 2.25; 95% CI: 1.01–5.02) were independent predictors of perceiving cultural beliefs as a barrier.

Conclusion: Cultural and religious beliefs, educational attainments, and language barriers. significantly affect family planning media communication. Rural residents, Muslims, and those with lower education face the greatest barriers. Culturally sensitive approach, linguistically appropriate strategies involving trusted health workers are needed to improve family planning communication.

Keywords: Family Planning; Media Messages; Communication Barriers; Cultural Beliefs; Religious Beliefs; Nigeria

1. Introduction

Effective communication is essential for the success of family planning programmes. Media platforms such radio, television, newspapers, and social media serve as important channels for sharing reproductive health information with large and diverse audiences.¹ In Nigeria, the government and health organisations have invested heavily in media campaigns to promote family planning and increase contraceptive use.² However, the effectiveness of these campaigns depends not only on message content but also on how well they navigate various barriers that affect communication.

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Communication of family planning messages does not happen in a vacuum. Several factors influence whether people receive, understand, and accept these messages. These factors can be cultural, religious, educational, linguistic, or structural in nature.³ Understanding these factors is crucial for designing messages that resonate with target audiences and lead to behaviour change.

Cultural norms play a significant role in shaping how family planning messages are received. In many Nigerian communities, open discussion about sexuality and contraception is considered inappropriate or taboo.³ Such cultural beliefs can discourage people from engaging with family planning content or discussing it with others. Women and young people, in particular, may avoid media messages on family planning due to fear of stigma or social disapproval. These cultural barriers can undermine even well-designed campaigns when messages clash with deep-rooted community values.

Religious beliefs also influence how people respond to family planning messages. Some religious teachings discourage the use of modern contraceptives or encourage large families as a sign of blessing.⁴ Both Christian and Muslim communities may view contraception as interfering with God's will. When media messages do not consider these religious sensitivities, they may be seen as culturally invasive and rejected by audiences. Studies in Northern Nigeria have shown that perceived conflicts between media content and religious teachings significantly reduce message acceptance.

Educational level affects people's ability to understand and act on health information. Individuals with higher education tend to have better health literacy and can more easily comprehend complex reproductive health concepts. Those with limited education may struggle to understand messages, particularly when they are delivered through print media or use technical language. In the study area, where education levels vary across communities, this factor may create disparities in how different groups respond to family planning communication.

Language appropriateness is another critical factor. Nigeria is a linguistically diverse country with over 500 languages. While English is the official language, many people are more comfortable communicating in Pidgin English or their local languages. When family planning messages are delivered only in English, they may not reach or resonate with audiences who have limited English proficiency. Research has shown that messages in local languages significantly increase comprehension and acceptance.

Source credibility also matters. People are more likely to trust and act on health information when it comes from sources they perceive as reliable and authoritative. Messages from the Ministry of Health, healthcare providers, or recognised health organisations carry more weight than those from unknown or commercial sources. Health worker involvement in message delivery can enhance credibility and provide opportunities for clarification and interpersonal reinforcement.

Access to media and structural factors also affect communication. In rural areas, limited access to electricity, radio signals, or internet connectivity may reduce exposure to family planning messages. Even when messages are received, practical barriers such as distance to health facilities or cost of contraceptives may prevent people from acting on the information.¹

Obio/Akpor Local Council, located in South South Nigeria, offers a valuable setting for investigating factors affecting family planning media communication. With over one million residents across urban, semi urban, and rural communities, the area has diverse media access patterns, educational levels, cultural norms, and religious affiliations.¹¹ The population includes multiple ethnic groups including Ikwerre, Ijaw, and Ogoni peoples, each with distinct languages and cultural practices that may influence how family planning messages are received.

This study assessed the factors affecting communication of family planning media messages among residents of reproductive age in Obio/Akpor Local Council, examined how these factors vary across different demographic groups, and identified predictors of perceiving cultural beliefs as a communication barrier.

2. Materials and methods

2.1. Study Design and Population

This was a community based analytical cross sectional study carried out among residents of reproductive age in Obio/Akpor Local Council, Rivers State, Nigeria, between July and August 2025. The study was conducted in Obio/Akpor Local Council, which is one of the 23 local councils in Rivers State and lies within the Port Harcourt metropolitan area.

It has an estimated population of over one million people and includes urban, semi urban, and rural settlements. The area is inhabited by diverse ethnic groups including Ikwerre, Ijaw, and Ogoni peoples, and residents have considerable media access through radio, television, and smartphones.

The study population comprised females aged 16 to 49 years and males aged 16 years and above living in Obio/Akpor Local Council. These age groups cover the reproductive years when family planning information matters most, and both genders were included because reproductive decisions and responses to media messages typically involve both partners. Inclusion criteria were females aged 16 to 49 years resident in Obio/Akpor Local Council who consented to take part, and males aged 16 years and above resident in Obio/Akpor Local Council who consented to take part. Exclusion criteria were individuals with communication difficulties.

A total of 310 residents participated in the study. The sample size was calculated using the Cochran formula based on 26% contraceptive prevalence from the The sample size was calculated using the Cochran formula based on 26% contraceptive prevalence from the Nigeria Demographic and Health Survey.⁴ Using a 95% confidence level and 5% margin of error, the minimum sample size was calculated, and an additional 10% was added to account for non-response, giving a final sample size of 310 participants.

A multistage random sampling technique was used to select participants. First, three wards were randomly chosen from the 17 wards in Obio/Akpor Local Council: Rumuodomaya, Rumuokwursi, and Rumuigbo, the selected wards are heterogeneous. Comprising from each selected ward, two communities were randomly selected, giving six communities in total. Households were chosen using systematic random sampling, selecting every third household from a random starting point in each community. From each selected household, one eligible person was randomly selected to complete the questionnaire. Where multiple eligible persons resided in a household, a simple random method using balloting was used to select one participant.

2.2. Data Collection Instruments and Procedures

Data were collected using a structured, self-administered questionnaire adapted from WHO family planning instruments. The questionnaire captured socio-demographic characteristics and factors affecting communication of family planning media messages.

The instrument was reviewed for clarity, relevance, and content validity by the principal investigator, co-investigator, and an expert familiar with the subject matter.

A five point Likert scale with responses ranging from Strongly Agree to Strongly Disagree was used to measure responses to factor related statements.

A pretest was conducted among 30 respondents in a community with similar characteristics but outside the study area to identify comprehension issues, ambiguous wording, and question flow problems. Necessary modifications were made based on pretest feedback. The reliability of the instrument was assessed using Cronbach's alpha coefficient, which gave a value of 0.85, indicating good internal consistency.

Trained research assistants administered the questionnaires. They provided clarification when needed without influencing responses. For respondents with low literacy, questions were read aloud neutrally in Pidgin English or local languages including Ikwerre and Ijaw as needed, and answers were recorded exactly as given. Completed questionnaires were checked immediately for completeness to minimise missing data.

Ethical approval was obtained from the Research Ethics Committee of the Faculty of Basic Medical Sciences, Rivers State University with approval number RSU/FBMS/REC/25/251. Permission was also obtained from community leaders. All participants provided informed consent after receiving clear explanations of the study purpose, procedures, benefits, and risks. Confidentiality was assured throughout, and participants were informed of their right to withdraw at any time without consequences.

2.3. Statistical Analysis

Data were entered into SPSS version 25.0 for analysis. Descriptive statistics including frequencies, percentages, means, and standard deviations were used to summarise socio demographic characteristics and factors affecting communication of family planning media messages.

Chi square tests were employed to examine associations between demographic factors (residence, religion, educational level) and agreement with key communication barriers. Binary logistic regression was conducted to identify independent predictors of perceiving cultural beliefs as a communication barrier. Variables that were statistically significant at $p \leq 0.05$ in the bivariate analysis were included in the regression model. Adjusted odds ratios (AOR) with 95% confidence intervals were reported. All statistical tests were conducted at a 95% confidence level, and p values less than 0.05 were considered statistically significant.

3. Results

3.1. Characteristics of Study Participants

A total of 310 residents of reproductive age participated in the study, yielding a response rate of 95.1%. The mean age of participants was 31.8 years with a standard deviation of 7.2 years. The largest age group was 26 to 35 years, accounting for 151 respondents (48.7%). This was followed by those aged 36 to 45 years with 85 respondents (27.4%). Respondents aged 16 to 25 years numbered 58 (18.7%), while those in the 46 to 55 years age group comprised 16 respondents (5.2%).

Regarding gender distribution, females constituted the majority of participants with 208 respondents (67.1%), while males numbered 102 (32.9%). With respect to marital status, more than half of the respondents were married, representing 178 participants (57.4%). Single respondents numbered 107 (34.5%), while those cohabiting or in other arrangements accounted for 25 respondents (8.1%).

Educational attainment showed that the majority of participants had post-secondary education, with 166 respondents (53.5%). Those with secondary education numbered 99 (31.9%), while respondents with primary education accounted for 27 individuals (8.7%). Only 18 participants (5.8%) had no formal education.

In terms of residence, most respondents resided in urban areas, with 197 participants (63.5%). Those in semi urban areas numbered 88 (28.4%), while rural residents accounted for 25 respondents (8.1%). Employment status revealed that 139 respondents (44.8%) were employed, while 120 participants (38.7%) were self-employed. Unemployed participants numbered 28 (9.0%), and those in other employment categories represented 23 respondents (7.4%).

The majority of participants were Christians, with 268 respondents (86.5%). Muslims numbered 36 (11.6%), while those belonging to other religions accounted for 6 respondents (1.9%). Most respondents (78.4%) had no health insurance coverage. When asked whether income affects contraceptive use, approximately two thirds of respondents, 200 participants (64.5%), indicated that income does not affect their contraceptive use, while 110 respondents (35.5%) reported that income does affect their contraceptive use. These characteristics are summarised in Table 1.

Table 1 Socio-demographic characteristics of respondents (n = 310).

Variable	Frequency (n)	Percentage (%)
Age Group (years)		
16–25	58	18.7
26–35	151	48.7
36–45	85	27.4
46–55	16	5.2
Gender		
Male	102	32.9
Female	208	67.1
Marital Status		
Single	107	34.5
Married	178	57.4

Cohabiting/Other	25	8.1
Educational Level		
No formal education	18	5.8
Primary	27	8.7
Secondary	99	31.9
Post-secondary	166	53.5
Employment Status		
Employed	139	44.8
Self-employed	120	38.7
Unemployed	28	9.0
Other	23	7.4
Residence		
Rural	25	8.1
Urban	197	63.5
Semi-urban	88	28.4
Religion		
Christianity	268	86.5
Islam	36	11.6
Other	6	1.9
Health Insurance Coverage		
Yes	67	21.6
No	243	78.4
Income Affects Contraceptive Use		
Yes	110	35.5
No	200	64.5

3.2. Factors Affecting Communication of Family Planning Media Messages

Table 2 presents the factors affecting communication of family planning media messages among respondents. Most respondents (84.5%) agreed that family planning messages are common in the media.

Cultural beliefs were identified as a significant barrier, with 71.9% agreeing that cultural beliefs in their community discourage open discussion about family planning. Similarly, religious beliefs were reported as affecting acceptance by 70.6% of respondents.

Educational barriers were prominent, with 79.4% agreeing that lack of education limits people's understanding of family planning messages. Language appropriateness was a concern, with only 58.1% agreeing that the language used in messages suits people in their community. Additionally, 65.8% agreed that some people find family planning messages difficult to understand.

Health worker involvement was strongly endorsed, with 86.5% agreeing that family planning messages are more effective when health workers are involved in their delivery.

Table 2 Factors affecting communication of family planning media messages

Variable	Frequency (n)	Percentage (%)
FP messages are common in the media		
Agree	262	84.5
Neutral	34	11.0
Disagree	14	4.5
Cultural beliefs discourage open discussion		
Agree	223	71.9
Neutral	57	18.4
Disagree	30	9.7
Religious beliefs affect acceptance		
Agree	219	70.6
Neutral	62	20.0
Disagree	29	9.4
Lack of education limits understanding		
Agree	246	79.4
Neutral	44	14.2
Disagree	20	6.5
Language in messages suits my community		
Agree	180	58.1
Neutral	85	27.4
Disagree	45	14.5
Some find FP messages difficult to understand		
Agree	204	65.8
Neutral	75	24.2
Disagree	31	10.0
Health worker involvement makes messages more effective		
Agree	268	86.5
Neutral	33	10.6
Disagree	9	2.9

3.3. Association Between Demographic Factors and Communication Barriers

Table 3 shows the association between demographic factors and agreement with key communication barriers. Cultural beliefs as a barrier varied significantly by residence ($p = 0.007$). Among rural or semi urban residents, 85.8% agreed that cultural beliefs discourage open discussion about family planning, compared to 64.0% of urban residents.

Religious beliefs as a barrier varied significantly by religion ($p = 0.001$). Muslims reported the highest agreement (88.9%), followed by Christians (69.8%). No respondents from other religious groups agreed that religious beliefs affect acceptance.

Lack of education as a barrier did not vary significantly by educational level ($p = 0.540$). However, agreement was high across all groups: 84.4% among those with non formal or primary education, 80.8% among those with secondary education, and 77.1% among those with post secondary education.

Table 3 Association between Demographic Factors and Agreement with Key Communication Barriers

Variable/Category	Agree n (%)	Not Agree n (%)	χ^2	p-value
Cultural Beliefs Barrier – Residence			7.34	0.007
Urban (n = 197)	126 (64.0)	71 (36.0)		
Rural/Semi urban (n = 113)	97 (85.8)	16 (14.2)		
Religious Beliefs Barrier – Religion			10.45	0.001
Christian (n = 268)	187 (69.8)	81 (30.2)		
Muslim (n = 36)	32 (88.9)	4 (11.1)		
Other (n = 6)	0 (0.0)	6 (100.0)		
Lack of Education Barrier – Education Level			1.23	0.540
Non formal/Primary (n = 45)	38 (84.4)	7 (15.6)		
Secondary (n = 99)	80 (80.8)	19 (19.2)		
Post-secondary (n = 166)	128 (77.1)	38 (22.9)		

3.4. Predictors of Perceiving Cultural Beliefs as a Communication Barrier

Table 4 presents the binary logistic regression analysis showing factors independently associated with perceiving cultural beliefs as a barrier to family planning communication. Variables that were statistically significant in the bivariate analysis were included in the multivariable model.

Residence emerged as a significant predictor. Respondents residing in rural areas had 3.71 times higher odds of perceiving cultural beliefs as a barrier compared to those in urban areas (AOR = 3.71; 95% CI: 1.70–8.10; $p = 0.001$). Those in semi-urban areas also had significantly higher odds compared to urban residents (AOR = 2.18; 95% CI: 1.10–4.33; $p = 0.026$).

Table 4 Binary logistic regression analysis of predictors for perceiving cultural beliefs as a communication barrier.

Variable	aOR (95% CI)	p-value
Residence		
Urban (Ref)	1.00	
Semi-urban	2.18 (1.10–4.33)	0.026
Rural	3.71 (1.70–8.10)	0.001
Religion		
Christian Non-Catholic (Ref)	1.00	
Christian Catholic	1.54 (0.84–2.82)	0.166
Muslim	6.36 (2.04–19.81)	0.001
Other	0.59 (0.23–1.52)	0.279
Educational Level		
Post-secondary (Ref)	1.00	
Secondary	2.51 (1.27–4.96)	0.009
Primary	1.95 (1.02–3.73)	0.042
Non-formal	2.25 (1.01–5.02)	0.048

aOR = Adjusted Odds Ratio; CI = Confidence Interval; Ref = Reference category.

Religion was a strong predictor. Muslim respondents had 6.36 times higher odds of perceiving cultural beliefs as a barrier compared to Christian non-Catholics (AOR = 6.36; 95% CI: 2.04–19.81; $p = 0.001$). Christian Catholics did not differ significantly from Christian non-Catholics.

Educational level was also significantly associated. Respondents with secondary education had 2.51 times higher odds of perceiving cultural beliefs as a barrier compared to those with post-secondary education (AOR = 2.51; 95% CI: 1.27–4.96; $p = 0.009$). Those with primary education had 1.95 times higher odds (AOR = 1.95; 95% CI: 1.02–3.73; $p = 0.042$), and those with non-formal education had 2.25 times higher odds (AOR = 2.25; 95% CI: 1.01–5.02; $p = 0.048$).

4. Discussion

This study assessed factors affecting communication of family planning media messages among residents of reproductive age in Obio/Akpor Local Council, Rivers State, Nigeria. The findings revealed that cultural beliefs, religious beliefs, educational limitations, and language appropriateness significantly influence how family planning messages are received and understood. Rural residents, Muslims, and those with lower education face greater cultural barriers, while health worker involvement was strongly endorsed as a way to enhance message effectiveness.

The finding that most respondents agreed that cultural beliefs discourage open discussion about family planning is consistent with studies from other Nigerian settings. Research in Southeast Nigeria found that cultural norms around sexuality and reproduction create significant barriers to family planning communication.¹³ In many Nigerian communities, discussions about sex and contraception are considered private matters not suitable for public discourse. This cultural context means that even well-designed media campaigns may struggle to gain traction when they touch on sensitive topics. Women and young people, in particular, may avoid engaging with family planning content due to fear of stigma or social disapproval.³

The significant variation in cultural barriers by residence, with higher agreement among rural and semi urban residents compared to urban residents, reflects the stronger influence of traditional norms in less urbanised areas. This finding aligns with research from Northern Nigeria, where rural communities tend to be more culturally conservative and less open to family planning messages.⁵ Urban areas, with greater exposure to diverse ideas and lifestyles, may have more permissive attitudes toward reproductive health discussions. This urban rural divide has important implications for communication strategies, suggesting that messages may need to be tailored differently for audiences in different settings. Rural communities may require more community-based approaches that engage local leaders and work within existing cultural frameworks, while urban audiences may be more receptive to mass media campaigns.

Religious beliefs were identified as a barrier by most respondents, with Muslims reporting significantly higher agreement than Christians. This finding is consistent with the Nigeria Demographic and Health Survey, which identified religious opposition as one of the main reasons for not using contraceptives among Nigerian women. Some religious teachings, both Christian and Muslim, encourage large families and discourage the use of modern contraceptives. When media messages do not acknowledge or address these religious perspectives, they may be rejected by faithful adherents. The higher barrier among Muslims in this study may reflect the specific religious context in the study area and warrants further exploration. Similar patterns have been documented in Northern Nigeria, where religious beliefs significantly influence family planning attitudes. Engaging religious leaders in message development and delivery could help address these sensitivities by framing family planning within religiously acceptable parameters.

The finding that most respondents agreed that lack of education limits understanding of family planning messages highlights the critical role of health literacy in effective communication. This aligns with research from Ethiopia¹ and South Africa¹ that identified educational attainment as a key determinant of reproductive health knowledge. Education provides foundational literacy skills that enable individuals to comprehend complex health information, evaluate message credibility, and seek clarification when needed. Without these skills, even motivated individuals may struggle to understand and act on media messages. The high agreement across all educational levels in this study suggests that even educated respondents recognise this barrier for others in their community. This finding underscores the need for communication strategies that use simple, non-technical language and visual aids to reach audiences with limited education.

Language appropriateness emerged as a concern, with less than two thirds of respondents agreeing that the language used in messages suits their community. This finding is consistent with research from Northern Nigeria, where messages in local languages significantly increased comprehension and acceptance. Nigeria's linguistic diversity means that messages delivered only in English may not reach audiences who are more comfortable in Pidgin English or local languages. In Obio/Akpor Local Council, where multiple ethnic groups including Ikwerre, Ijaw, and Ogoni coexist,

language barriers may be particularly pronounced. The finding that most respondents agreed that some people find messages difficult to understand further underscores the need for clearer, more accessible communication. Producing content in local languages and Pidgin English, using simplified language, and incorporating visual elements could enhance comprehension across diverse linguistic groups.

The strong endorsement of health worker involvement aligns with research from across sub-Saharan Africa demonstrating that interpersonal communication enhances media message effectiveness. Studies in Tanzania¹ and Uganda¹ found that community health workers play a crucial role in reinforcing media messages and providing opportunities for clarification. Health workers are trusted figures who can address questions, correct misconceptions, and provide personalised guidance. Their involvement bridges the gap between mass media campaigns and individual decision making, creating a more comprehensive communication ecosystem. In settings where cultural and religious sensitivities create barriers, health workers who are members of the community may be particularly effective at navigating these sensitivities and framing messages in culturally acceptable ways.

The multivariable analysis revealed that rural residence, Muslim religion, and lower educational levels were independent predictors of perceiving cultural beliefs as a barrier. These findings highlight the intersecting vulnerabilities that shape family planning communication. Rural residents may have less exposure to diverse perspectives and stronger adherence to traditional norms. Muslims may face specific religious teachings that discourage contraceptive use. Those with lower education may have fewer resources for critically evaluating messages and seeking additional information. These intersecting factors suggest that targeted, multifaceted approaches are needed to address communication barriers in different population segments. A one size fits all approach to family planning communication is unlikely to be effective given the diverse barriers identified in this study.

The finding that respondents with secondary education had higher odds of perceiving cultural barriers than those with post-secondary education, while those with primary and non-formal education also had elevated odds, suggests a gradient in how education shapes perceptions of cultural barriers. Higher education may provide individuals with tools to critically evaluate cultural norms and potentially resist those that limit reproductive health choices. Alternatively, those with higher education may live in more diverse, urban environments where cultural norms are less rigidly enforced. This educational gradient reinforces the need for communication strategies that are tailored to different educational levels.

Therefore, the findings of this study demonstrate that effective family planning communication in Obio/Akpor Local Council must navigate multiple barriers simultaneously. Cultural and religious sensitivities require messages that are respectful and framed within community values. Educational and linguistic barriers demand simplified, accessible content in appropriate languages. The strong endorsement of health worker involvement suggests that interpersonal communication should complement mass media campaigns. Rural residents, Muslims, and those with lower education face the greatest barriers and should be prioritised in communication strategies. Addressing these barriers through culturally sensitive, linguistically appropriate, and multichannel approaches could significantly enhance the effectiveness of family planning communication in this setting.

Study Limitations and Strengths

This study has limitations. Data were based on self-reported perceptions of communication barriers without objective verification of actual barriers. Social desirability bias may have influenced responses, with some participants potentially underreporting sensitive cultural or religious attitudes. Without a comparison group, relative barrier levels compared to other populations cannot be determined.

However, strengths include the community-based design, multistage random sampling, large sample size (n=310), and high response rate (95.1%), enhancing generalizability to similar urban and peri-urban populations in South-South Nigeria. The questionnaire was reviewed by the research supervisors, and a pretest was conducted to ensure clarity and comprehension. The validated instrument with good internal consistency (Cronbach's alpha = 0.85) and comprehensive assessment of multiple communication factors strengthen data quality.

5. Conclusions

Cultural beliefs, religious beliefs, educational limitations, and language appropriateness significantly affect family planning media communication in Obio/Akpor Local Council, with most respondent reporting these barriers. Rural residents, Muslims, and those with lower education face the greatest barriers. The 14.5% of respondents with primary

or no formal education represent a critical target population requiring specifically designed communication approaches.

Health worker involvement was strongly endorsed as a way to enhance message effectiveness. Culturally sensitive, linguistically appropriate strategies involving trusted health workers are needed to improve family planning communication. Messages should directly address cultural and religious sensitivities using language and formats accessible to those with limited education, while leveraging the credibility of health workers to reinforce media content through interpersonal contact.

Recommendations

- Family planning media messages should be culturally tailored to address the specific norms of rural and semi-urban communities where cultural barriers are highest.
- Religious leaders should be engaged in message development and delivery to address religious sensitivities, particularly within Muslim communities where 88.9% reported religious beliefs as a barrier.
- Relevant health authorities should produce content in local languages (Ikwerre, Ijaw, Ogoni) and Pidgin English, using simplified language for the 14.5% of the population with primary or no formal education.
- Health workers should be actively involved in family planning communication to reinforce media messages through interpersonal contact during community outreach, given that 86.5% endorsed this approach.
- Communication strategies should combine mass media campaigns with community-based interventions that engage trusted local figures to address cultural and religious barriers comprehensively.
- Message designers should ensure content is accessible to audiences with limited literacy by using visual aids, audio formats, and simple, non-technical language.

Compliance with ethical standards

Disclosure of conflict of interest

The authors declare no conflicts of interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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