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## Vaccine Hesitancy in Nigeria: Overcoming Cultural, Linguistic and Religious Obstacles

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### Abstract

Vaccine hesitancy poses a significant challenge to public health efforts in Nigeria, a country characterized by immense cultural and linguistic diversity. The interactions among linguistic obstacles, cultural and religious beliefs, and historical elements that lead to vaccine hesitancy among Nigeria's many ethnic groups are examined in this review article. It analyzes the decision-making processes and information needs of Nigerian parents regarding childhood vaccinations. The article evaluates the effectiveness of existing vaccine promotion interventions and communication strategies, highlighting successes, limitations, and areas for improvement. By consolidating research findings, the review aims to inform the development of culturally appropriate and context-specific approaches to address vaccine hesitancy and enhance vaccine uptake in Nigeria. Recommendations emphasize formative research, community engagement, capacity building for healthcare workers, and the strategic use of diverse communication channels to reach diverse populations with tailored vaccination information and support.

### Keywords

Vaccine hesitancy, vaccine, hesitant determinants, promotion interventions, vaccine promotion, prevention,

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## Introduction

The World Health Organization (WHO) has acknowledged vaccine hesitation as a prominent global health issue. Vaccine hesitancy refers to the deliberate delay or refusal of immunizations, even when readily accessible (Organization, 2019). Although vaccinations have been scientifically demonstrated to be very efficient in avoiding the spread of infectious illnesses and have saved millions of lives annually, there is still a significant reluctance or resistance towards vaccination among individuals and communities globally (Larson et al., 2014). The reluctance might arise from an intricate interaction of several variables, such as apprehensions over the safety and efficacy of vaccines, religious or philosophical convictions, and a lack of confidence in healthcare systems and government institutions (MacDonald & others, 2015).

Overcoming vaccine hesitancy is especially difficult in situations that involve multiple cultures and languages. Language difficulties, cultural beliefs, and historical circumstances can greatly impact people's views towards vaccination in these scenarios (Dubé et al., 2014). A standardized strategy to vaccination marketing and communication is unlikely to be beneficial in these situations, as it does not take into account the unique demands, concerns, and viewpoints of various populations (Jarrett et al., 2015). There is an increasing acknowledgment of the necessity for interventions and communication strategies that are culturally sensitive and customized to the unique circumstances and experiences of varied people (Nowak et al., 2015).

Nigeria, known for its abundant cultural and linguistic variety, offers a compelling opportunity to explore the challenges and advantages of tackling vaccination hesitancy in a multicultural setting. The country comprises more than 250 distinct ethnic groups, each with its own distinct languages, customs, and systems of belief (Commission, 2018). The diversity among communities has important consequences for health communication and the acceptance of vaccines. This is because different communities may have different levels of trust in healthcare providers, understanding of vaccine-related information, and adherence to cultural practices that affect their decision-making about vaccination (Ophori et al., 2014).

Research has indicated that language difficulties might have a substantial effect on the ability of various ethnic groups in Nigeria to access and comprehend vaccine-related information (Adamu et al., 2019). For instance, a research carried out in northern Nigeria revealed that mothers who were provided with vaccine material in their own language, Hausa, were more likely to approve immunization for their children in comparison to those who got information in English (Ghinai et al., 2013). This emphasizes the need of delivering vaccination information in a language that is easily understandable and accessible to the intended audience.

Cultural and religious beliefs exert a substantial influence on attitudes towards vaccination in Nigeria. Within certain groups, adherence to traditional medicinal practices and the belief in supernatural origins of illnesses might result in a hesitancy to embrace contemporary vaccinations (Jegede, 2007). Furthermore, several Muslim groups in Nigeria have expressed religious concerns with vaccination, specifically citing the presence of porcine-derived components in vaccines, which are prohibited in Islam (Murele et al., 2014). To effectively address these cultural and religious issues, it is necessary to adopt a tactful and considerate strategy that include collaborating with community leaders and faith-based groups. The goal is to devise techniques that are culturally suitable and effective in encouraging acceptance of vaccines.

Vaccine reluctance among certain groups in Nigeria might be influenced by historical events, such as previous encounters with medical research or government health efforts. The Pfizer Trovan trial issue in 1996, involved allegations of unethical conduct by a pharmaceutical corporation during a meningitis epidemic in Kano, northern Nigeria. This incident has contributed to many Nigerians' skepticism against Western medicine and vaccinations (Yahya, 2007). To restore confidence in these communities, it is necessary to recognize previous concerns and demonstrate a dedication to promoting and delivering vaccines transparent, ethical, and participative.

Considering the intricate interaction of several variables that contribute to vaccination hesitancy in Nigeria, it is evident that there is a strong requirement for treatments and communication techniques that are culturally sensitive and based on a thorough comprehension of the local context. This review article aims to consolidate the existing research on language obstacles, cultural beliefs, and vaccination reluctance across distinct ethnic groups in Nigeria. Additionally, it attempts to analyze the consequences of these factors to design effective and context-specific strategies for boosting vaccine adoption. This review aims to analyze existing interventions and communication strategies to identify best practices, areas for improvement, and opportunities for reducing vaccine hesitancy and increasing vaccine uptake among Nigeria's diverse population. The findings will be used to develop more focused and culturally-appropriate efforts.

### **Nigeria's Linguistic and Cultural Diversity**

Nigeria exhibits significant cultural and linguistic variety, with more than 250 distinct ethnic groups and over 500 indigenous languages spoken throughout its 36 states and Federal Capital Territory (Ethnologue, 2021). The three predominant ethnic groups in Nigeria are the Hausa-Fulani in the northern region, the Yoruba in the southwestern region, and the Igbo in the southeastern region. These three communities collectively make up almost 70% of the country's population (Commission, 2018). Additional

notable ethnic groups are the Ijaw, Kanuri, Tiv, Edo, Nupe, and Ibibio, among others (Mustapha, 2006). Each ethnic group possesses unique language, customs, traditions, and belief systems that have been influenced by an intricate history of migration, inter-ethnic interactions, and colonial impacts (Westin, 2010). The country's rich cultural legacy spans a diverse array of art forms, music, dance, apparel, and food, reflecting its vast spectrum of variety (Falola & Heaton, 2008).

Nevertheless, the language and cultural diversity in Nigeria poses significant barriers for health communication and the acceptance of vaccines. Language challenges can hinder the ability to obtain and comprehend health information, especially among rural and less educated populations (Adamu et al., 2019). A study done in Ondo State, Nigeria, revealed that using local languages in health education materials had a substantial impact on enhancing mothers' knowledge and attitudes about vaccination (Olabode, 2023).

Cultural attitudes and practices can impact individuals' tendencies to seek healthcare and their willingness to receive vaccines. For instance, within certain Nigerian communities, traditional healers and practitioners of alternative medicine are held in high regard and may be sought out instead of or alongside contemporary healthcare services (Isola, 2013). A qualitative study conducted in Kano State, located in northern Nigeria, revealed that certain parents exhibited a predilection for traditional treatments instead of vaccinations. Their rationale stemmed from apprehensions over vaccine safety and a firm conviction in the effectiveness of herbal medications (Podolsky, 2015).

Religious beliefs and practices substantially influence attitudes towards health and immunization in Nigeria. The nation is geographically divided among a mostly Muslim region in the north and a mostly Christian region in the south, with a notable minority following traditional African faiths (Agbibo, 2013). Religious leaders and faith-based groups possess significant sway on health-related choices, such as the acceptance of vaccines (Anyene, 2014). Religious opposition to vaccination has arisen in certain instances due to the notion that vaccinations may include chemicals obtained from pigs, which are prohibited in Islam, or that vaccination may disrupt divine intervention (Jegede, 2007). The intricate interaction of linguistic, cultural, and religious elements in Nigeria has significant consequences for the development and execution of vaccination promotion initiatives. Health communication materials and treatments should be customized to meet the specific requirements and preferences of diverse ethnic and linguistic groups, while considering their distinct beliefs, practices, and communication styles (Ophori et al., 2014). Interacting with community leaders, religious authority, and traditional healers can foster trust and enhance the adoption of vaccines across various communities (Nasir et al., 2014).

Moreover, it is crucial to consider Nigeria's historical background when tackling vaccination hesitancy, taking into account previous encounters with medical studies and government health initiatives that have undermined confidence in some populations (Yahya, 2007). Establishing collaborations with local groups and stakeholders, and including communities in the design and execution of vaccination promotion initiatives, can cultivate a feeling of ownership and confidence in the healthcare system (Warigon et al., 2016).

### **Language Barriers and Vaccine Hesitancy in Nigeria**

The influence of language barriers on the comprehension and availability of vaccine information varies considerably across ethnic groups in Nigeria. Given the presence of more than 500 indigenous languages spoken throughout the nation (Ethnologue, 2021), it is of the utmost importance to ensure that all individuals, irrespective of their linguistic heritage, have the ability to access and comprehend vaccine-related information. Research has indicated that language barriers may impede vaccination rates and vaccine reluctance in Nigeria. According to a systematic review of the factors influencing vaccine hesitancy in the region, language barriers emerged as a substantial impediment to vaccine adoption in sub-Saharan Africa, specifically among rural and less educated communities (Adeloye et al., 2017). Misunderstandings and mistrust may result from using English in health communication materials and interactions with healthcare providers in Nigeria, where English is the official language but not the first language of many individuals (Chen et al., 2006).

A research conducted in Zamfara State, located in northern Nigeria, revealed that utilizing local languages in vaccine promotion initiatives was linked to increased vaccination rates, as opposed to using English or Hausa, which, although widely spoken, is not the primary language for many individuals in the area (Ghinai et al., 2013). Similarly, a qualitative investigation conducted in Borno State, located in northeastern Nigeria, revealed that parents who were provided with vaccine information in their native language, Kanuri, exhibited higher levels of trust in the material and a stronger inclination to consent to vaccination for their children (Michael et al., 2014).

Utilizing local languages in vaccination communication is crucial for effectively reaching disadvantaged and inaccessible groups, including individuals residing in distant rural regions or those with little access to formal schooling. Research conducted in Bauchi State, located in northern Nigeria, discovered that using community-based volunteers fluent in the local language, Fulfulde, successfully enhanced the acceptance of vaccines within nomadic Fulani communities (Hanemann, 2014).

Nevertheless, creating vaccination communication materials and training healthcare personnel in many local languages might require significant resources and present practical difficulties. Many approaches have been suggested to tackle this problem. One approach involves utilizing visual communication tools that may be comprehended regardless of language differences (Abdulraheem et al., 2011). Another approach involves involving local community people as interpreters and cultural intermediaries (Warigon et al., 2016). Language barriers and the intricate interaction of cultural, religious, and historical variables might influence vaccine hesitancy in Nigeria. For instance, research conducted in Kano State revealed that relying solely on local languages was inadequate in addressing vaccination hesitancy within some Muslim groups. These populations indicated apprehensions over vaccine safety and religious acceptability (Musa, 2014). This emphasizes the necessity for a thorough and culturally aware strategy for communicating about vaccines considering the many aspects of vaccination reluctance.

It is crucial to consider the influence of health literacy and trust in the healthcare system to address linguistic hurdles and encourage vaccination adoption in Nigeria. Research conducted in Oyo State, located in southern Nigeria, revealed that vaccination hesitancy was linked to low health literacy and a lack of confidence in healthcare practitioners. This association was observed even among those who shared the same language as their healthcare providers (Fatiregun & Okoro, 2012). By engaging the community, utilizing participatory methods, and including recognized local leaders, it is possible to build trust, enhance health literacy, and ultimately improve vaccination uptake by addressing the root causes of vaccine hesitancy (Nasir et al., 2014).

### **Cultural and Religious Beliefs Influencing Vaccine Hesitancy in Nigeria**

The influence of cultural and religious convictions on attitudes towards vaccination in Nigeria is substantial. These beliefs, often deeply ingrained and closely tied to individual and community identities, can contribute to vaccine hesitancy and pose challenges for immunization programs.

Traditional medicine and alternative therapies are extensively practiced in Nigeria, especially in rural regions where access to contemporary healthcare services is restricted (Bamidele et al., 2009). Some people may choose traditional medicines over vaccinations because they believe they are more effective, natural, or culturally acceptable (Jegade, 2007). Qualitative research in Kano State discovered that some parents preferred traditional therapies, such as herbal medications and spiritual healing, to vaccinations (Adedin et al., 2021). Addressing these ideas necessitates a

careful approach that recognizes traditional traditions' value while emphasizing the advantages of immunization.

In Nigeria, religious practices and beliefs also substantially impact vaccine acceptance. The nation is approximately dichotomous, consisting primarily of a Christian south and a predominantly Muslim north; a sizeable minority observes traditional African religions (Reed & Mberu, 2015). Religious authorities and faith-based institutions can significantly influence vaccination attitudes, either by disseminating false information that promotes vaccination acceptance or by inciting skepticism (Anyene, 2014). Several Muslim communities in northern Nigeria have been influenced by religious concerns regarding the permissibility and safety of vaccines, which have resulted in vaccine reluctance and opposition. As an illustration, Islamic leaders in Kano State asserted that the polio vaccine was adulterated with anti-fertility agents and HIV during the 2003-2004 vaccination boycott (Yahya, 2007), alleging that this was part of a Western conspiracy to sterilize Muslim children. Despite subsequent disproof of these assertions, the boycott exerted a substantial influence on endeavors to eradicate polio in the area (Ghinai et al., 2013).

To foster acceptance of vaccines and resolve religious concerns, immunization programs in Nigeria have endeavored to establish partnerships with faith-based organizations and religious leaders. An illustration of this can be seen in the Nigerian Supreme Council for Islamic Affairs (NSCIA), which has been instrumental in fostering vaccine adoption within Muslim communities through the dissemination of religious fatwas (rulings) in favor of vaccination and collaboration with immunization initiatives to debunk fallacies and erroneous information (Nasir et al., 2014). In a similar vein, Christian leaders and organizations, including the Christian Health Association of Nigeria (CHAN), have actively participated in initiatives aimed at promoting vaccines and addressing vaccine apprehension within their respective congregations (Ophori et al., 2014).

Historical aspects, including prior encounters with government health interventions and medical research, have additionally played a role in the development of vaccine hesitancy within certain communities in Nigeria. The Pfizer Trovan trial controversy of 1996, which implicated a pharmaceutical company in unethical practices during a meningitis outbreak in Kano, has been attributed by some Nigerians to a lack of confidence in Western medicine and vaccines (Wise, 2001). Rebuilding trust and addressing these historical grievances requires a commitment to ethical, participatory, and transparent vaccine delivery and promotion strategies.

To effectively overcome cultural and religious obstacles to vaccination acceptability in Nigeria, it is crucial to develop strategies that are customized to the unique beliefs and

concerns of various groups. This may entail collaborating with conventional healers and practitioners of alternative medicine to advocate for vaccination in conjunction with traditional methods, involving religious leaders and faith-based organizations to address religious apprehensions and promote vaccine acceptance, and engaging community members in the design and execution of immunization programs to foster trust and participation (Warigon et al., 2016).

### **Decision-Making Processes and Information Needs of Nigerian Parents**

The development of effective communication strategies and interventions to combat vaccine hesitancy requires an in-depth knowledge of the decision-making processes and information demands of Nigerian parents in relation to children vaccines. How parents decide to vaccinate their children and what information they look for are topics that have been the subject of several qualitative research. Parents' perceptions of the risks and benefits of vaccines, their faith, social norms and influences, and their trust in healthcare providers and the health system were among the many factors considered in a study of patents (Lin et al., 2021). Vaccination was widely embraced by parents who trusted their healthcare experts' recommendations and wanted to shield their children from avoidable illnesses. On the other hand, parents who were hesitant or denied immunization cited religious objections, distrust in the health system, and worries about vaccine safety, side effects, and perceived ineffectiveness (Majid & Ahmad, 2020).

The importance of social factors and community norms in determining parental decision-making on infant vaccines was emphasized in another qualitative study conducted in northern Nigeria (Ohammah, 2020). When making decisions on vaccination, parents frequently sought advice and information from friends, family, and community leaders, according to the research. Some parents were reluctant to vaccinate their children because they felt pressured by their peers to do the same (Peretti-Watel et al., 2019). This was likely influenced by social norms as well.

Moreover, other research have investigated the information demands of Nigerian parents in relation to childhood vaccines. More information on vaccine dangers and benefits, illnesses prevented by vaccines, and the recommended vaccination schedule was requested by parents in Ebonyi State, southeast Nigeria, according to a research (Umoke et al., 2021). A number of parents have voiced the need for reliable sources, such healthcare professionals and community leaders, to communicate with their children in plain English (Glenton et al., 2013).

Research conducted in the southern Nigerian state of Lagos revealed that parents' information requirements differed in relation to their socioeconomic class and degree of education (Okoye & Nwagwu, 2018). Parents with greater access to education and resources relied more on healthcare professionals and community leaders for



information. In contrast, parents with fewer resources relied more on the Internet and social media (Tway et al., 2007). Several strategies have been proposed to address the information needs of Nigerian parents and support informed decision-making about childhood vaccinations. These include:

1. Creating customized educational resources and communication strategies that accommodate diverse parent demographics' unique concerns and information requirements, including educational attainment, socioeconomic standing, and cultural heritage.
2. Training healthcare providers to communicate effectively with parents about vaccines, using clear, simple language and addressing common concerns and misconceptions (Limaye et al., 2021).
3. Engaging community leaders, religious authority, and other trusted influencers to increase vaccination uptake and give parents with accurate details (Syed et al., 2023).
4. Using a variety of communication platforms, including mass media, social media, and interpersonal contact, to provide vaccination information to parents and assist their decision-making process (Smith et al., 2024).

By understanding the decision-making processes and information needs of Nigerian parents and developing targeted, culturally appropriate communication strategies, immunization programs can work to address vaccine hesitancy and support informed decision-making about childhood vaccinations.

### **Effectiveness of Existing Vaccine Promotion Interventions and Communication Strategies in Nigeria**

Several vaccine hesitancy initiatives and outreach strategies have been implemented in Nigeria to raise vaccination rates. These treatments' outcomes have varied; therefore, assessing their efficacy is essential to pinpointing best practices and areas needing development.

The involvement of religious leaders in Nigeria has been one of the most noteworthy vaccine promotion initiatives, especially in the northern areas where vaccination reluctance has been significant. According to a research assessing the effect of including Muslim clerics in a northern Nigerian polio eradication effort, the intervention significantly increased vaccination uptake and decreased vaccination refusal rates (Ezezika et al., 2022). The study emphasized how crucial it is to incorporate reputable community leaders in campaigns to promote vaccines and to modify communication tactics to fit the religious and cultural norms of the area.

Using community health workers, often referred to as town announcers or community mobilizers, to provide vaccination information and encourage community

vaccination is another strategy that has demonstrated potential in raising vaccine uptake in Nigeria (Hammanyero et al., 2018). The use of community mobilizers resulted in a considerable increase in immunization coverage and a decrease in the number of vaccination chances missed, according to a research conducted in Sokoto State, northern Nigeria (Tijjani, 2020). The capacity of community mobilizers to establish trust with parents, address their worries and misunderstandings about vaccinations, and deliver information in local languages that is culturally relevant has been credited with the intervention's effectiveness.

In Nigeria, mass media efforts have also been used to encourage vaccination, with varying degrees of success. According to a research assessing the effect of a mass media campaign on the regular coverage of vaccinations in northern Nigeria, exposure to the campaign was linked to higher vaccination intention and knowledge, but it had no discernible effect on the actual uptake of vaccines (Haenssger et al., 2021). According to the study, mass media campaigns could work better in tandem with other treatments like community mobilization and interpersonal communication.

Mobile phone-based initiatives have become a potential approach for promoting immunization in Nigeria, especially in locations that are difficult to access and lack sufficient services. A research conducted in northern Nigeria, discovered that the act of sending text message reminders to parents on impending immunization sessions resulted in a substantial rise in vaccination coverage and adherence to the recommended schedule (Obanewa, 2019). Nevertheless, the study also observed that the efficacy of mobile phone-based treatments can be constrained by variables such as inadequate literacy levels and insufficient network connectivity in certain regions. Although specific initiatives have been successful, there are still barriers to overcome to ensure that vaccination promotion methods in Nigeria are culturally relevant and acceptable. A comprehensive analysis of communication tactics promoting childhood vaccination in Nigeria revealed that numerous interventions failed to cater to the distinct requirements and apprehensions of various ethnic and religious communities. Moreover, these interventions did not sufficiently tackle the social and cultural obstacles hindering vaccine acceptance (Oku et al., 2017). To enhance the efficacy of vaccine promotion initiatives in Nigeria, several recommendations have been offered, including

1. The process of designing customized, culturally-appropriate treatments begins with doing formative research to identify the specific factors that influence vaccination uptake across various groups (Oh et al., 2022).
2. Engaging community stakeholders, such as parents, religious leaders, and traditional healers, in the development and execution of vaccination promotion

initiatives to guarantee local ownership and long-term viability (Oyo-Ita et al., 2020).

3. Enhancing the proficiency of healthcare personnel to deliver exceptional vaccination services and effectively communicate with parents regarding vaccines (Nour, 2019).
4. Utilizing a combination of communication channels, such as interpersonal communication, mass media, and digital technology, to effectively reach a wide range of people with vaccination information and assistance (Stockwell & Fiks, 2013).

Nigeria can improve vaccination coverage among its diverse population and address vaccine hesitancy by assessing the efficacy of current initiatives and implementing evidence-based measures to enhance vaccine promotion and communication.

### Conclusion

Overcoming vaccine hesitancy in Nigeria's culturally and linguistically diverse landscape requires a multifaceted, culturally sensitive approach. Sustained efforts should prioritize formative research to understand the nuanced drivers of vaccine hesitancy across communities, capacity building for healthcare workers to deliver culturally competent services, and the strategic utilization of various communication channels, including interpersonal outreach, mass media, and digital technologies.

By leveraging local languages, engaging with community leaders and faith-based organizations, and fostering trust through transparent and participatory approaches, interventions and communication strategies can be tailored to the specific contexts and needs of diverse ethnic and linguistic groups. Continuous collaboration, evidence-based strategies, and a commitment to addressing historical concerns are crucial for enhancing vaccine acceptance and promoting the well-being of all Nigerians. With a culturally inclusive approach, Nigeria can navigate the complex landscape of vaccine hesitancy and safeguard public health through improved vaccine uptake.

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