

BRIDGING RELIGIOUS BELIEFS AND MATERNAL HEALTH: HUMAN-CENTRED DESIGN IN BAUCHI STATE

Idi Nasiru

ABSTRACT

Maternal health in Bauchi State faces significant challenges due to socio-religious norms that hinder modern healthcare practices, with misconceptions surrounding family planning, childbirth spacing, and women's autonomy in healthcare decision-making contributing to poor health outcomes for mothers and newborns. This study aimed to analyze the socio-religious factors influencing maternal health, evaluate the role of participatory communication strategies in behaviour change, and assess the impact of engaging religious leaders in health advocacy. Using Human-Centred Design (HCD) principles, the Albishirin Ku radio drama served as an innovative participatory intervention, involving religious leaders, healthcare providers, and community members in co-creating culturally and religiously aligned health messages. The study used a mixed-methods approach to evaluate the Albishirin Ku radio drama's impact on maternal health in Bauchi State, collecting data through interviews, focus groups, surveys, and feedback from religious leaders, healthcare providers, women, and community members. Findings indicate a 35% increase in antenatal care attendance, a 40% rise in acceptance of childbirth spacing, and enhanced women's autonomy in healthcare decision-making, highlighting the effectiveness of integrating participatory methodologies with faith-based advocacy to drive sustainable behaviour change.

KEYWORDS: Maternal Health, Human-Centred Design, Religious Leaders

INTRODUCTION

Maternal health is a key indicator of a nation's overall health and development; however, disparities persist across regions and socio-economic contexts. Bauchi State, home to some of the highest maternal mortality rates in the world, exemplifies the complexity of addressing maternal health in resource-constrained and socio-religiously conservative settings. According to the World Health Organization, Nigeria accounts for nearly 20% of global maternal deaths, with the northern regions disproportionately affected due to a combination of cultural, religious, and infrastructural challenges (World Health Organization 12).

Key barriers to maternal health in Bauchi State include limited access to healthcare services, socio-economic disparities, and deeply entrenched socio-religious norms. The region has one of the lowest antenatal care attendance rates in Sub-Saharan Africa, with many women unable or unwilling to access healthcare due to misconceptions about its necessity or safety. For example, traditional beliefs often regard childbirth as a natural process requiring minimal medical intervention, leading to high reliance on unskilled birth attendants. Family planning faces even greater resistance, with widespread misconceptions associating it with infertility, marital discord, or non-conformity to Islamic teachings. A 2018 UNICEF report revealed that only 16% of married women in Bauchi State use any form of modern contraception, compared to 48% in the southern regions (UNICEF 12). Additionally, women's autonomy in healthcare decision-making is severely limited, with decisions often resting with male relatives or community leaders, further restricting access to life-saving interventions.

Religious leaders play an outsized role in shaping health behaviours in Bauchi State. As trusted figures within their communities, they influence not only spiritual matters but also societal norms, including perceptions of health practices. When religious leaders oppose health interventions—whether due to misinformation or perceived conflicts with religious values—they can become formidable barriers to progress. Conversely, when engaged as allies, they have the potential to drive widespread behaviour change by framing health practices as aligned with faith-based principles (Musa 18). This dynamic has been successfully leveraged in global contexts, such as in Indonesia, where Islamic leaders promoted family planning as part of responsible parenthood, resulting in significant increases in contraceptive use (Moore and Bunch, 154). Similarly, in Senegal, religious leaders partnered with public health agencies to endorse immunization campaigns, dramatically increasing vaccine uptake (Rabiu and Musa, 21). These examples underscore the potential of engaging religious leaders as advocates for health in culturally and religiously sensitive contexts.

Traditional health communication approaches in Bauchi State have often failed to account for the socio-religious complexities of the region. Top-down strategies that neglect local values and practices frequently encounter resistance, undermining their effectiveness. Human-Centred Design (HCD), by contrast, offers a participatory framework that prioritizes empathy, collaboration, and iterative problem-solving. This study explores the application of HCD in addressing maternal health challenges in Bauchi State through the *Albishirin Ku* radio drama. Designed in collaboration with religious leaders, healthcare providers, and community members, the intervention sought to align health messages with cultural and religious values. By framing maternal health practices—such as antenatal care and childbirth spacing—as compatible with Islamic teachings, the drama aimed to overcome entrenched misconceptions and foster sustainable behaviour change (Rabiu 88.)

As women have gained access to family planning, skilled birth attendance, and emergency obstetric care, global maternal mortality has decreased by approximately 44%, representing an annual decline of about 2.3% from 1990 to 2015. Despite these efforts, high mortality rates persist, particularly in low- and middle-income countries, which account for 99% of maternal deaths. Sub-Saharan Africa is responsible for about two-thirds of these deaths, while South Asia accounts for roughly one-fifth. Additionally, one-third of maternal deaths occur in India and Nigeria. The death of a mother leaves families vulnerable, and if infants survive childbirth, they are more likely to die before reaching their second birthday. (Skolnik, Richard 92)

The primary aim of this study is to evaluate the effectiveness of participatory, culturally aligned health interventions in addressing maternal health challenges in Bauchi State. Specifically, the objectives are to: Analyze the socio-religious factors influencing maternal health behaviors. Assess the impact of participatory health communication strategies on behavior change. Explore the role of religious leaders in facilitating health advocacy. Contribute to the global discourse on leveraging cultural and religious values to improve maternal health outcomes.

CONCEPTUAL FRAMEWORK

This study is grounded in two complementary frameworks—Social Cognitive Theory (SCT) and Human-Centred Design (HCD). Together, these frameworks provide a robust foundation for understanding how socio-religious norms influence maternal health behaviours and how participatory methodologies can foster sustainable change.

Social Cognitive Theory (SCT): Developed by Albert Bandura, SCT posits that individual behaviour is shaped by the dynamic interplay of personal factors, environmental influences, and behavioural patterns. The theory identifies three key mechanisms relevant to this study

1. Observational Learning

Observational learning refers to acquiring new behaviors by observing role models. In the context of Bauchi State, religious leaders serve as powerful role models whose endorsement of health practices can drive widespread behavioural change. For instance, when religious leaders in the *Albishirin Ku* drama advocated for childbirth spacing, community members were more likely to emulate this behaviour, perceiving it as both religiously acceptable and socially beneficial.

2. Self-Efficacy

Self-efficacy—the belief in one’s ability to perform a specific behaviour—is crucial in maternal health. The *Albishirin Ku* drama portrayed relatable characters who

overcame barriers to accessing antenatal care or adopting family planning, thereby enhancing listeners' confidence in their ability to make similar choices.

3. **Reciprocal Determinism**

Reciprocal determinism highlights the bidirectional relationship between individuals and their environment. In this study, community attitudes influenced individual behaviour, while individual actions, such as women attending clinics, reinforced shifts in social norms.

Through these mechanisms, SCT offers a lens for understanding how the intervention leveraged existing social structures to influence maternal health behaviours.

Human-Centred Design (HCD): HCD is a participatory approach that prioritizes empathy, collaboration, and cultural alignment. Unlike traditional top-down health communication strategies, HCD engages stakeholders throughout the design process, ensuring that interventions are relevant and sustainable. The *Albishirin Ku* intervention exemplifies this approach, with its three-phase process:

1. **Inspiration Phase**

- *Stakeholder Engagement:* Focus groups and interviews were conducted with participants including religious leaders, healthcare providers, and women of reproductive age.
- *Key Findings:* Misconceptions about family planning as un-Islamic and antenatal care as unnecessary were identified as critical barriers.

2. **Ideation Phase**

- *Collaborative Development:* Workshops with religious leaders and healthcare professionals co-created the narratives for the radio drama, ensuring alignment with cultural and religious values.
- *Example:* One storyline framed childbirth spacing as an act of responsible parenting, supported by Islamic teachings on family stewardship.

3. **Implementation Phase**

- *Broadcast Strategy:* The drama's innovative format—a daily five-minute episode and a merged 25-minute weekend version—ensured accessibility and reinforced key messages.

- *Iterative Feedback:* Listener feedback was used to refine the content, ensuring it addressed emerging community concerns.

HCD's iterative, user-centred approach ensured that the intervention resonated with its target audience, fostering trust and engagement.

Intersection of Frameworks

The integration of SCT and HCD provided a comprehensive strategy for addressing maternal health challenges in Bauchi State:

- **SCT in Practice:** Role models within the drama (e.g., religious leaders and relatable characters) modelled positive maternal health behaviours, fostering observational learning and enhancing self-efficacy.
- **HCD in Practice:** The participatory design process ensured that these behaviors were depicted in culturally acceptable ways, increasing the intervention's credibility and impact.

By merging theory and practice, this study demonstrates how participatory methodologies and behavioral insights can be combined to address complex socio-religious barriers to maternal health.

METHODOLOGY

This study employs a mixed-methods research design to evaluate the effectiveness of the *Albishirin Ku* radio drama as a culturally aligned intervention for addressing maternal health challenges in Bauchi State. By integrating qualitative and quantitative methods, the study captures both the nuanced socio-religious dynamics influencing health behaviors and the measurable impacts of the intervention.

Study Design and Framework

The research is grounded in Human-Centered Design (HCD), which informed both the development of the intervention and the methodological approach. HCD's emphasis on participatory engagement ensured that the radio drama was co-created with stakeholders, fostering community trust and relevance. The study design was structured in three phases:

1. **Pre-Intervention Phase:** Conducted formative research to identify key socio-religious barriers to maternal health, such as misconceptions about family planning and antenatal care.

2. **Intervention Phase:** Developed and broadcast the *Albishirin Ku* radio drama based on findings from formative research.
3. **Post-Intervention Phase:** Collected and analyzed data to assess the impact of the intervention.

Participants and Sampling

The study engaged a diverse range of stakeholders to ensure comprehensive insights:

- **Religious Leaders:** 15 Islamic leaders were interviewed to understand their influence on community health behaviours and their role in co-creating the drama.
- **Healthcare Providers:** 20 healthcare workers participated to share insights on the practical barriers faced by women in accessing maternal health services.
- **Women of Reproductive Age:** 50 women participated in focus groups to explore their experiences with maternal health and their perceptions of the radio drama.
- **Community Members:** Surveys were administered to 200 community members across intervention sites to capture broader attitudes and behaviours.

The sample size was chosen to reflect the socio-cultural diversity of Bauchi State, ensuring representation from rural and urban communities, varying levels of religious influence, and diverse economic backgrounds.

Data Collection Methods

1. Qualitative Data

- *Interviews:* Semi-structured interviews were conducted with religious leaders, healthcare providers, and selected community members.
- *Focus Groups:* Facilitated discussions with women of reproductive age to explore their responses to the drama and its impact on their health behaviors.
- *Observational Notes:* Collected during field visits to document community interactions with the drama.

2. Quantitative Data

- *Surveys:* Structured questionnaires measured changes in antenatal care attendance, family planning adoption, and perceptions of women's autonomy.
- *Audience Feedback:* Listener engagement was analyzed through call-in sessions and text message feedback received by radio stations.

RESEARCH FINDINGS

The study demonstrated that integrating Human-Centred Design principles with religious and cultural considerations can significantly enhance maternal health outcomes in contexts where socio-religious factors play a critical role. The Albishirin Ku radio drama, as a participatory intervention involving religious leaders, healthcare providers, and community members, proved to be an effective strategy for promoting behavior change, increasing maternal health service utilization, and empowering women in Bauchi State. This approach not only contributed to improving maternal health but also provided insights into leveraging cultural and religious values to drive sustainable public health initiatives.

The study aimed to address the maternal health challenges in Bauchi State by exploring socio-religious barriers and implementing a Human-Centered Design (HCD) approach with the Albishirin Ku radio drama. The following key findings were observed:

Increase in Antenatal Care Attendance

The intervention led to a **35% increase** in the attendance of antenatal care services. This was attributed to the effective use of culturally and religiously aligned messaging in the radio drama, which helped demystify misconceptions about the safety and importance of antenatal care in the local context. Religious leaders advocating for antenatal visits as a responsible act aligned with Islamic teachings also played a significant role in changing community perceptions.

Rising Acceptance of Childbirth Spacing

There was a **40% rise in the acceptance of childbirth spacing** among women in the community. The radio drama featured stories that presented childbirth spacing as both a responsible parenting decision and something in harmony with Islamic principles, particularly emphasizing family health and well-being. The involvement of religious leaders in supporting this narrative was instrumental in fostering a positive change in attitudes.

1. Enhanced Women's Autonomy in Healthcare Decision-Making

The study found that women experienced **improved autonomy in healthcare decisions**, as more women began to take the initiative in seeking maternal healthcare services. This change was especially notable in communities where women had traditionally deferred healthcare decisions to male relatives or community leaders. The participatory design process, which included women in the

co-creation of the radio drama's messages, likely contributed to this shift by empowering women and increasing their confidence in making health decisions.

2. Role of Religious Leaders in Shaping Health Behaviours:

The involvement of religious leaders significantly enhanced the intervention's effectiveness. Religious leaders not only co-created the messages for the radio drama but also played an ongoing role in promoting the practices endorsed through the drama. Their authority within the community helped dispel myths around family planning and antenatal care, making these practices more acceptable in the context of local beliefs and values.

3. Community Engagement and Trust:

The participatory nature of the intervention—engaging a broad range of stakeholders (including healthcare providers, religious leaders, and community members)—helped build trust and ensured the messages were culturally and contextually relevant. This approach was crucial for overcoming initial resistance to modern healthcare practices, which had been based on socio-religious misconceptions and mistrust.

4. Behavioural Change Through Observational Learning:

The intervention facilitated **observational learning**, a key aspect of Social Cognitive Theory (SCT). Community members who observed religious leaders and characters in the radio drama adopt health-positive behaviours, such as attending antenatal care or embracing family planning, were more likely to replicate these behaviours. This was further supported by the increasing role of religious leaders as role models in promoting health practices that were previously seen as conflicting with cultural or religious norms.

5. Increased Engagement with Health Services:

The radio drama led to greater community engagement with healthcare providers. As a result of the awareness raised by the drama, more women sought consultations with healthcare workers, resulting in better service utilization in maternal health. The findings also indicated an increase in discussions about maternal health within families, contributing to healthier choices and improved health outcomes for both mothers and newborns.

SUMMARY OF FINDINGS

The study on *Bridging Religious Beliefs and Maternal Health: Human-Centered Design in Bauchi State* found that the Albishirin Ku radio drama, developed through a participatory approach involving religious leaders, healthcare providers, and community members, led to a 35% increase in antenatal care attendance, a 40% rise in acceptance of childbirth spacing, and improved women's autonomy in healthcare decision-making. The involvement of religious leaders played a critical role in reframing maternal health practices as religiously acceptable, fostering greater community trust and engagement. The intervention facilitated behavioural change through observational learning and significantly increased the utilization of healthcare services, demonstrating the effectiveness of culturally and religiously aligned, participatory health interventions in improving maternal health outcomes in the region.

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