



Exposure to Health Programmes on Salt FM Radio and Knowledge of Vesico Vaginal Fistula Risk-Factors among Women in Abakaliki Metropolis of Ebonyi State, Nigeria

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ABSTRACT

Background: Vesico Vagina Fistula (VVF) is a major public health problem in Nigeria which requires effective media messages to increase knowledge and reduce the prevalence of its occurrence.

Objective: This study investigated how exposure to Salt FM radio messages influence the awareness of VVF risk-factors among women in Abakaliki metropolis of Ebonyi State, Nigeria.

Method: The study adopted qualitative research design, using in-depth interview to elicit responses from participants. Purposive sampling technique was adopted. Focus was on women residing in the Abakaliki metropolis who have been exposed to Salt FM Radio campaigns on VVF.

Results: Majority of the respondents reported regular exposure to Salt FM's programme, citing it as a reliable source of health information. Women who listened to the programmes frequently (weekly or more) were more likely to be aware of VVF and its associated risk-factors.

Conclusion: The study concluded that there was significant relationship between exposure to Salt FM health programmes and knowledge of VVF risk-factors among women in Abakaliki metropolis of Ebonyi state.

Unique Contribution: The study can inform policy development and implementation strategies aimed at improving maternal healthcare services and reducing the burden of VVF in Ebonyi State and similar settings. Policymakers can use the evidence generated to advocate for the integration of radio campaigns into existing maternal health programmes and allocate resources for sustained health communication efforts.

Key Recommendation: the study recommends more audience participation in the programmes through interactive features like live calls, SMS platforms, and community forums.

Keywords: Vesico Vaginal Fistula, Radio Messages, Exposure, Knowledge, Salt Fm.



INTRODUCTION

Over the years, governments, individuals, organisations and other public agencies engage in media messages geared at improving public health conditions in the society. This effort has been channelled toward all areas of human life. The aim of these messages is usually to create sufficient awareness that would help people pilot the affairs of their lives better. In most cases, these messages have been channelled to help a particular gender group in the society. Messages like Breast Cancer, Cervical cancer, Pelvic Inflammatory Disease (PID), Vesico Vagina Fistula (VVF), to mention but a few, have always focused on the female gender in the society (Egbo, & Nwafor, 2024). This is a pointer to the fact that messages like the aforementioned are of importance to the female folks. In view of this, this study looks at the Vesico Vagina Fistula (VVF) messages in south eastern part of Nigeria. The VVF messages are in most cases carried out through mediated channels of communication which include radio, television, newspapers, magazines, word of mouth, etc. The reason is due to its ability to reach a vast majority of the people instantaneously. (Agughasi 2018). Hurdle (2016) cited in Agughasi (2018) posits, “the mass media have gained popularity because of their ability to reach a vast majority of people within a short time”. This popularity is not contestable (Egbo, & Nwafor, 2024).

Today, Vesico Vagina Fistula (VVF), no doubt, is considered a major public health problem in Nigeria, requiring effective media messages to reduce the prevalence of its occurrence. According to the National Foundation on Vesico-Vaginal Fistulae (2017), “the efforts at redressing the problem has so far remained limited in scope, coverage and uncoordinated, with most of the interventions initially being spearheaded by Non- Governmental Organisations (NGOs), some state governments and lately, the Federal government”. These bodies, in recent times have sponsored messages geared toward controlling and preventing the issue of VVF among women in south east. Some of these messages are ‘Oria Akpa Mamiri’ (Urinary illness), ‘Ka Oha Mara’ (public announcement), and “Akuku MCCI” a feminine health issues with focus on VVF. NTA channel 8 Enugu, Radio Nigeria, Abakaliki (Unity FM) 2013.

The problem of Vesico Vagina Fistula is not common to Nigeria alone but Africa at large. Lawson (2017), cited in the National Foundation on Vesico-Vaginal Fistulae (2019), noted that “VVF constitutes one of the major gynaecological problems in developing countries because of the high incidence of obstetric complications, but even in these countries, the incidence is not evenly spread, as contracted pelvis is more often found in communities where malnutrition and untreated infections stunt the growth of future mothers during their childhood and adolescence”. Further studies have it that the major cause of VVF, in most cases, is as a result of the sparse and far nature of maternity services which leads to cephalopelvic disproportion, thereby, leaving survivors of obstructed labour with bladder or rectal injuries (The National Foundation on Vesico-Vaginal Fistulae (2022). Writing further, The National Foundation on Vesico-Vaginal Fistulae (2003) and Cook, Dickens and Syed (2004), enumerated major causes of VVF in Nigeria which include “prolonged obstructed labour due to cephalopelvic disproportion (the pelvic of teenage not being fully developed as at pregnancy, making the pelvis often too small for the baby), cultural beliefs and practices, limited decision-making power, illiteracy, low status of women, sexual inequality, malnutrition, and the lack of emergency obstetric care”.



Many studies in Nigeria have described varying contributing factors to Vesico Vaginal Fistula. Some of these studies which were conducted in various parts of the country, have it that VVF is still common despite its preventable nature (Ijaiya, 2019). The issue of VVF would have been curbed in the society, today, if only the mass are duly informed through aggressive media messages. Hence, this study seeks to evaluate broadcast media messages on Vesico Vaginal Fistula on the knowledge, attitude and practices of the people in South-East Nigeria.

In Nigeria, there is a VVF rate of 350 cases per 100,000 deliveries at the teaching hospitals. The ministry stated that the country accounts for 40% of the global burden of VVF. For each maternal death that occurs, 15 to 20 other women suffer either short or long term maternal morbidities and prominent among these morbidities are obstetric fistula among which the major one is the VVF. VVF has many causes and risk factors with variations depending on the social and educational status of the people. Similarly Ahmed, (2019) observed the possible causes and risk factors of VVF to include prolonged obstructed labor, trauma during operative delivery, infections and irradiation necrosis from the treatment of cervical carcinoma. Numerous factors contribute to the development of vesico vaginal fistula in developing countries especially among cultures that promote marriage and conception at a young age often before full pelvic growth has been reached. Thus early childbearing, poor physical growth, and health of the mothers, and poor medical facilities contribute to the development of obstructed labor, hence leading to VVF condition among women in low social economic status. Other risk causes of vesico vaginal fistula include poverty, illiteracy, ignorance, poor obstetric care, cultural, and religious practices (Muoneke, & Nwafor, 2024).

Despite ongoing efforts to address VVF, the prevalence of the condition continues to be alarmingly high, largely due to insufficient awareness and knowledge of its risk factors. Effective health communication strategies are crucial in educating the public about VVF and promoting preventive measures. Among such strategies, radio messages have been recognized as a powerful tool, especially in areas with limited access to other forms of media. However, there is a dearth of empirical studies assessing the effectiveness of these radio messages in enhancing knowledge and changing behavior. The specific impact of Salt FM Radio's messages on the awareness and understanding of VVF risk factors among selected couples in Abakaliki remains under-researched.

The primary issue in this area of study is the inadequate knowledge of VVF risk factors among women in Abakaliki metropolis, despite the efforts of radio messages. This knowledge gap perpetuates the high incidence of VVF, as individuals are not sufficiently informed to take preventive actions or seek timely medical intervention. Existing research such as Wall (2012) and Tebeu, (2012) has highlighted the general effectiveness of radio campaigns in health communication, but there is a lack of targeted studies focusing on the Abakaliki context. However, there is a paucity of research exploring the role of media, particularly radio, in shaping exposure and knowledge of VVF among women in Abakaliki metropolis. The knowledge gap exists in understanding how targeted radio campaigns influence the exposure, knowledge, and preventive behaviors related to VVF in this specific demographic. This study seeks to fill this gap by providing empirical evidence on the influence of Salt FM's radio messages on VVF exposure and knowledge among women in Abakaliki metropolis.



Objectives of Study

The specific objective of this study is to:

1. Investigate level of exposure to Salt FM radio messages on VVF among women in Abakaliki metropolis of Ebonyi State
2. Determine the level of knowledge of VVF risk factors among women in Abakaliki metropolis.
3. Investigate the relationship between the level of exposure and the level of knowledge of salt Fm messages on Vesico Vaginal Fistula among women in Abakaliki metropolis.

LITERATURE REVIEW

Epidemiology of Obstetric Fistula

Obstetric VVF occurs in all developing countries with a high prevalence across the northern half of sub-Saharan Africa from Mauritania to Eritrea and in the developing countries of the Middle East and Asia (Tebeu, 2012). Even though the exact prevalence is hard to determine, it is thought that patterns follow maternal mortality ratios, with higher prevalence seen in regions with high maternal mortality. This is in contrast to developed countries where the causes of obstetric VVF are mainly iatrogenic: radiation therapy and surgery (Adler, 2017).

It is argued that even though the provision of emergency obstetric care for obstructed labour through caesarean section is fundamental in preventing the obstructed labor complex including fistula, poor surgical skill has been shown to actually lead to iatrogenic VVF (Keya, 2018). It is estimated that 13.2 percent of genitourinary VVF results from provider error. In one review, four out of five iatrogenic VVF developed following surgery for obstetric complications: cesarean section, ruptured uterus repair, or hysterectomy for ruptured uterus. Hysterectomy was the most common gynecological procedure leading to fistula (Raassen, 2017). Difficulties in estimating incidence and prevalence rates arise from the fact that most cases occur in remote geographical settings, the condition is rare and the obstetric VVF victims are often ostracized (Tuncalp, 2015). While the most cited incidence is 1 to 2 per 1,000 deliveries and a corresponding estimated worldwide incidence of 50,000 to 100,000 new cases annually, the methodology used for these estimations has been challenged.

Questioning the scientific basis, Stanton, (2017) estimated a prevalence of 188 per 100,000 women aged 15 to 49 years in Sub Saharan Africa and emphasized the need for population-based studies. Many authors argue that hospital-based studies do not give a true picture on the magnitude of the problem, since majority occurs outside the hospital setting. Subsequently, a more recent systematic review and meta-analysis including population-based studies found lower incidences and prevalence of obstetric fistula than previously thought (Adler, 2017). In a systematic review including reports from Sub Saharan Africa and the Middle East, 79.4% to 100% of reported fistula cases were obstetrical while the remaining cases were from other causes. Recto-vaginal fistulae accounted for 1% to 8%, vesico-vaginal fistulae for 79% to 100% of cases, and combined vesico-vaginal and recto-vaginal fistulae were reported in 1% to 23% of cases (Tebeu, 2019). In Sub-



Saharan Africa alone, a recent review of obstetric VVF symptoms from health surveys showed that fistulas were most often pregnancy-related (90.4%), followed by pelvic operations (5.3%), and sexual assault (4.3%) (Maheu- Giroux 2015). Sexual assault has been linked to obstetric VVF, especially in conflict settings (Ezeonu, 2017).

Radio as a Medium of Health Communication for Vesico Vaginal Fistula (VVF) in Nigeria

Vesico Vaginal Fistula (VVF) remains a significant public health concern in Nigeria, particularly in rural and underserved communities where access to healthcare services is limited. In addressing this issue, radio has emerged as a powerful medium for health communication due to its wide reach and accessibility. Radio's Reach and Accessibility: Radio enjoys widespread popularity and accessibility in Nigeria, reaching diverse audiences across urban and rural areas. According to the National Broadcasting Commission (NBC 2023), Nigeria has over 1,000 licensed radio stations, with both public and private broadcasters catering to various linguistic and cultural groups (NBC, 2020). This extensive coverage makes radio an ideal medium for reaching populations with limited access to other forms of media, including television and the internet (Nwafor, & Chidi-Irem, 2023).

Olorunfemi. (2018) assessed the impact of a radio messages on maternal healthcare utilization in rural communities and found significant improvements in knowledge and utilization of antenatal and postnatal care services. Similarly, another study by Odetola (2019) evaluated the effectiveness of radio broadcasts in promoting family planning uptake among women in urban areas, reporting positive changes in contraceptive knowledge and attitudes.

Radio's Role in VVF Awareness: In the context of VVF, radio messages have played a vital role in raising awareness about the condition, its risk factors, and available treatment options. Radio programs often feature expert interviews, testimonials from VVF survivors, and discussions on preventive measures, maternal healthcare, and reproductive rights. These programs aim to dispel myths and misconceptions surrounding VVF while empowering communities with accurate information to make informed decisions about their health.

Odetola (2019) stated that despite its effectiveness, radio-based health communication faces challenges such as limited resources, linguistic diversity, and varying levels of radio ownership and access. Additionally, measuring the impact of radio messages on behaviour change can be challenging due to the lack of robust monitoring and evaluation mechanisms. However, advancements in technology, such as the use of interactive radio programmes and mobile phone-based surveys, present opportunities for enhancing the reach and effectiveness of radio messages in addressing VVF and other health issues (Nweke, et al., 2022).

Olorunfemi (2018) concluded that radio serves as a powerful medium of health communication for addressing Vesico Vaginal Fistula in Nigeria, leveraging its wide reach and accessibility to disseminate information, raise awareness, and promote preventive behaviors. By harnessing the potential of radio messages, stakeholders can continue to advance efforts in VVF prevention, treatment, and community education, ultimately contributing to improved maternal health outcomes across Nigeria. Moreover, ensuring sustained engagement and behavior change among listeners requires ongoing investment in program development, audience research, and monitoring and evaluation. (Odetola, 2019).



Risk factors for Obstetric VVF: Obstructed labor and sexual violence

Obstetric fistula is mainly caused by a very long, or obstructed, labor which can last several days or even, sometimes, over a week before a woman receives obstetric care or dies. If labor remains obstructed, the unrelenting pressure on the baby's head against the pelvis can greatly reduce the flow of blood to the soft tissues surrounding the bladder, vagina and rectum (WHO, 2016). If the mother survives, this kind of labour often ends when the fetus dies and gradually decomposes enough to slide out of the vagina. The injured pelvic tissue also rots away, leaving a hole, or a fistula, between adjacent organs. According to studies done in Nigeria, obstructed labor was a major cause of VVF among women of reproductive age in Ebonyi State (Emma-Echiegu, 2016). In another study done in selected hospitals in Kenya, obstructed labor was attributed to causing VVF among fistulae patients (Roka et al., 2013). In another study that was conducted in Uganda, obstructed labor was a major factor that was associated with occurrence of obstetric fistula among patients seeking repair in referral hospitals (Barageine, 2017). Fistula can also home or in inadequate facilities where complications cannot be properly managed (Muleta, 2010). Early marriage is a significant risk factor for VVF. Girls who marry and become pregnant at a young age face higher risks of obstructed labor because their pelvises may not be fully developed (Miller, 2005).

More so, female genital cutting (FGC), also known as female genital mutilation (FGM), increases the risk of obstructed labor and subsequent VVF. FGC can lead to scar tissue and anatomical changes that complicate childbirth (Banks, 2006). This is the hallmark symptom of VVF. The constant leakage results from the abnormal connection between the bladder and the vagina, which allows urine to pass uncontrollably (Miller, 2005). Due to the continuous leakage of urine, affected women often emit a strong, unpleasant odor, which can lead to social isolation and stigmatization (Adler et al., 2013). The constant presence of urine in the vaginal area creates an environment conducive to recurrent urinary tract infections (UTIs), which can further complicate the health status of affected women (Wall, 2012).

Theoretical Framework

The study was anchored on Health Believe Model (HBM). The health belief model (HBM) is a social psychological health behavior change model developed to explain and predict health-related behaviors, particularly in regard to the uptake of health services. The HBM was developed in the 1950s by social psychologists at the U.S. Public Health Service and remains one of the best known and most widely used theories in health behavior research. The HBM suggests that people's beliefs about health problems, perceived benefits of action and barriers to action and self-efficacy explain engagement (or lack of engagement) in health-promoting behavior. A stimulus, or cue to action, must also be present in order to trigger the health-promoting behaviour.

Perceived susceptibility refers to subjective assessment of risk of developing a health problem. The HBM predicts that individuals who perceive that they are susceptible to a particular health problem will engage in behaviors to reduce their risk of developing the health problem. Individuals with low perceived susceptibility may deny that they are at risk for contracting a particular illness. Others may acknowledge the possibility that they could develop the illness, but believe it is



unlikely. Individuals who believe they are at low risk of developing an illness are more likely to engage in unhealthy, or risky, behaviors. Individuals who perceive a high risk that they will be personally affected by a particular health problem are more likely to engage in behaviors to decrease their risk of developing the condition. The combination of perceived severity and perceived susceptibility is referred to as perceived threat. Perceived severity and perceived susceptibility to a given health condition depend on knowledge about the condition. The HBM predicts that higher perceived threat leads to a higher likelihood of engagement in health-promoting behaviors.

METHOD

Research Design

This study adopts qualitative research design, specifically using in-depth interviews to gather detailed and nuanced insights into the knowledge of Vesico Vaginal Fistula (VVF) risk factors among selected women in the Abakaliki metropolis. The choice of qualitative design is justified by the need to explore the participants' personal experiences, perceptions, and understanding of the Salt FM Radio campaigns and how they influence awareness of VVF risk factors. Qualitative in-depth interviews allow for a more profound exploration of the subjective dimensions of health communication, capturing insights that quantitative methods may overlook. The qualitative approach is suitable because it aims to explore and gain a deeper understanding of the participants' knowledge, perceptions, and attitudes toward VVF risk factors. In-depth interviews provide flexibility, allowing the interviewer to probe into issues and uncover rich, contextual data regarding the effectiveness of radio messages. VVF is a sensitive and personal health issue. In-depth interviews allow for a safe and private space where participants can express their views and experiences without the constraints of pre-determined survey answers. This method reveals how Salt FM Radio campaigns shape knowledge and behavior at an individual level. Health communication via radio campaigns often involves complex emotional and cognitive processing. Through qualitative interviews, this study explores how participants interpret the radio messages, assess the credibility of the information, and how these messages influence their understanding of VVF risk factors.

The study adopted purposive sampling technique to select participants. This non-probability sampling method is appropriate for qualitative research, where the goal is not to generalize findings to the entire population but to obtain in-depth insights from specific individuals who are most relevant to the research questions. The study focuses on women residing in the Abakaliki metropolis who have been exposed to Salt FM Radio campaigns about VVF. Participants were selected based on the following criteria:

Marital status: Only women were interviewed to understand the level of shared knowledge within households.

Exposure to Radio Campaigns: Participants must have listened to Salt FM Radio campaigns on VVF, ensuring that they can provide informed feedback.



Age Group: Women of reproductive age (18-49 years) and their partners will be targeted, as they are most at risk of VVF and would likely benefit from the radio messages.

Sample Size: A sample size of approximately 20 women was interviewed, including women who have been affected by VVF.

In qualitative research, the goal is to reach data saturation, where no new information or themes emerge from the interviews. This sample size is sufficient to capture diverse perspectives while ensuring depth of understanding. Participants were recruited through health centers, and at the National obstetric Fistula Center (NORFIC) in Abakaliki metropolis. Health center that offer maternal health services within Abakaliki metropolis which assist in identifying potential participants, particularly those who may have been exposed to health campaigns through Salt FM Radio, while NORFIC Abakaliki assist in identifying those participants affected with VVF. The In-depth interviews were conducted in participants' homes or other convenient locations to ensure privacy and comfort. The interviews were semi-structured, allowing for open-ended questions and follow-up probing based on participants' responses. Each interview lasted for between 30 and 60 minutes and was recorded with the participants' consent. By using qualitative in-depth interviews and purposive sampling, this research design is well-suited to understanding the complex, contextual factors that influence the effectiveness of radio messages in raising awareness of VVF risk factors among women in the Abakaliki metropolis.

RESULT

1. Level of Exposure to Salt FM Radio Messages on VVF among Women in Abakaliki Metropolis

The majority of the respondents reported regular exposure to Salt FM's programme, citing it as a reliable source of health information. Women who listened to the program frequently (weekly or more) were more likely to be aware of VVF and its associated risks. However, a smaller proportion of respondents noted limited or no exposure, primarily due to lack of access to a radio or conflicting schedules with program airtime.

Level of Knowledge of VVF Risk Factors Among Women in Abakaliki Metropolis

Respondents demonstrated varying levels of knowledge about VVF. Women with regular exposure to Salt FM programmes showed a comprehensive understanding of VVF risk factors such as prolonged labor, early marriage, female genital cutting, and lack of skilled obstetric care. Women with limited exposure had minimal or fragmented knowledge, with some holding misconceptions about the causes of VVF.

Relationship between the Level of Exposure and Knowledge of Salt FM Messages on VVF

The findings indicated a strong positive relationship between the level of exposure to Salt FM messages and the depth of knowledge about VVF risk factors. Regular listeners of Salt FM programme were more informed about both the medical and socio-cultural aspects of VVF, whereas those with low exposure were less knowledgeable.



IN-DEPTH INTERVIEW WITH PARTICIPANTS WITH VVF PATIENTS

Research Objective 1: Level of Exposure to Salt FM Radio Messages on VVF among Women in Abakaliki Metropolis

Interview Question 1:

How often do you listen to Salt FM, and have you heard their programs discussing Vesico Vaginal Fistula (VVF)? What do you remember about these messages, and how have they influenced your awareness of VVF?

Participant Response (as a woman who has experienced VVF):

I listen to Salt FM almost every day, especially to their health programs. The first time I heard them talk about VVF, it was like they were describing exactly what happened to me. I suffered from prolonged labour, and after my child was born, I started leaking urine. I didn't know what it was until I heard Salt FM explaining that VVF is caused by difficult childbirth. That's when I realized I wasn't alone, and that it wasn't a curse or punishment like some people in my community said. The messages helped me understand what I was going through and made me seek medical help. Radio campaigns have been shown to play a crucial role in demystifying VVF for women in rural areas. According to Wall (2012), media campaigns that explain the causes of VVF, such as prolonged obstructed labor, help to dispel myths surrounding the condition. Women who previously saw VVF as a form of stigma or divine punishment begin to understand it as a treatable medical condition through health communication campaigns.

Research Objective 2: Level of Knowledge of VVF Risk Factors Among Women in Abakaliki Metropolis

Interview Question 2:

Can you explain what you've learned about Vesico Vaginal Fistula from Salt FM radio messages? Do you feel that these messages have improved your understanding of the condition and its causes?

Participant Response (as a woman who has experienced VVF):

Before hearing Salt FM's health programs, I thought I was the only one with this problem. After I gave birth, I began leaking urine, and it never stopped. From the radio, I learned that VVF happens when there's a tear between the bladder and the birth canal, especially when labour is very long or the baby is too big. I also heard that it can happen if you don't get proper medical attention. I didn't know there was a name for it, and I didn't know it could be repaired. These radio messages have taught me so much, especially that it's not my fault, and I can get surgery to fix it.

Education through radio has been found to improve knowledge on maternal health issues like VVF. According to Muleta, (2010), health communication through radio



helps women better understand the medical causes of VVF, such as obstructed labor, and reduces the stigma associated with it. The study further asserts that radio can inform women about available treatment options, encouraging them to seek timely medical help.

Research Objective 3: Relationship between the Level of Exposure and Knowledge of Salt FM Messages on VVF

Interview Question 3:

Based on what you've heard on Salt FM, can you describe the risk factors for Vesico Vaginal Fistula? Do you think women in your community are aware of these risks?

Participant Response (as a woman who has experienced VVF):

I now know that VVF can happen if a woman is in labor for too long without help. I was in labor for more than 24 hours, and there was no doctor available. From the radio, I've also learned that getting married and giving birth too young can make the problem worse, because the body isn't fully ready. I don't think many women in my community are aware of these risks. Some still believe that giving birth at home is fine, and they don't go to the hospital unless it's an emergency.

The risk factors for VVF, such as prolonged obstructed labor and early marriage, are well-documented in the literature. Tebeu, (2012) highlight that a lack of access to emergency obstetric care and early childbearing are primary contributors to VVF, particularly in low-resource settings. Furthermore, Banks, (2006) emphasize that many women are unaware of these risk factors due to poor health education, which makes campaigns like Salt FM's vital for raising awareness in underserved communities.

CONCLUSION

The findings revealed that most respondents were regularly exposed to Salt FM's health programs, indicating the program's reach and acceptance among women in Abakaliki metropolis. This aligns with the study by Nwabueze. (2020), which found that localized radio health campaigns had a high engagement rate due to the use of culturally relevant content and local dialects. However, the findings also identified gaps in exposure due to socio-economic barriers like lack of access to radio devices or inconsistent program airtime. Similar barriers were noted in Onwuliri. (2018), who emphasized that poor infrastructure and economic challenges hinder the reach of radio campaigns in rural areas. This study extends knowledge by identifying a direct link between exposure frequency and trust in health messages, emphasizing the need for consistent and accessible programming. The strong exposure rate may be attributed to the programme's localised approach, while the gaps highlight systemic infrastructural challenges in the region.

The study also found that women who frequently listened to the program demonstrated a deeper understanding of VVF risk factors, while those with limited exposure had fragmented knowledge



or misconceptions. This supports [Adeniran. \(2017\)](#), which found that health education campaigns significantly improved women's knowledge of maternal health issues. Interestingly, a minority of respondents exhibited lingering misconceptions, such as attributing VVF to spiritual causes. This aligns with [Eze. \(2016\)](#), who found that deeply rooted cultural beliefs often conflict with medical knowledge dissemination. By pinpointing the specific knowledge gaps, this study highlights the areas where additional emphasis is needed in health education campaigns, such as addressing systemic and cultural factors. The observed knowledge disparities likely stem from uneven access to health education and the persistence of cultural myths in less-educated segments of the population.

The study revealed a strong positive correlation between exposure to Salt FM's programs and knowledge about VVF. This finding is consistent with the diffusion of innovation theory, which posits that repeated exposure to information facilitates knowledge acquisition and behavioral change ([Rogers, 2003](#)). Comparable results were reported by [Okoro. \(2019\)](#), who found that health radio programs effectively increased knowledge levels when audiences were consistently exposed to the messages. However, this study advances understanding by showing that interactive program features, such as phone-ins and expert interviews, play a critical role in enhancing knowledge retention. The study underscores the importance of interactive and participatory formats in health communication, suggesting a refinement of existing radio program strategies to maximize impact. The strong relationship can be attributed to the program's engaging and relatable content, which fosters active listening and understanding among the audience.

RECOMMENDATIONS

- 1. Increase Programme Accessibility and Coverage:** Salt FM should increase the frequency of health programs like "Ji De Ki Ji" to ensure wider accessibility and more consistent exposure for women in Abakaliki metropolis. Findings revealed that some women lacked access to the program due to inconsistent airtime or limited radio availability. Increased scheduling will cater to diverse audiences. Introduce repeat broadcasts at varied times to accommodate listeners with different schedules and consider broadcasting on multiple platforms, such as mobile apps or community loudspeakers in underserved areas.
- 2. Address Cultural Beliefs and Misconceptions:** Integrate culturally sensitive content that addresses myths and misconceptions about VVF in the health messages. The study identified lingering cultural beliefs attributing VVF to spiritual causes or other non-medical factors. Collaborate with local community leaders, religious figures, and cultural groups to design messages that resonate with the audience's values while providing factual information.
- 3. Promote Interactivity and Community Engagement:** Increase audience participation in the program through interactive features like live calls, SMS platforms, and community forums. The study found that interactive program elements significantly enhanced knowledge retention and understanding of VVF risk factors. Organize periodic Q&A sessions with healthcare professionals and survivors of VVF to foster a participatory learning environment.



Ethical clearance

Ethical consent was sought and obtained from the participants used in this study. They were made to understand that the exercise was purely for academic purposes, and their participation was voluntary.

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Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Authors' Contributions.

Obin Ogban Obin conceived the study, including the design, Orji, Izuchukwu Ibiam joined him in collating the data, Uche Nnabuisi Franklin analysed and interpreted the data, while Ngozi Omomjunikani and Abigail Glory Ezeani-Iheukwumere wrote the initial manuscript. All authors have critically reviewed and approved the final draft, and are responsible for the content and similarity index of the manuscript.

Availability of data and materials.

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

REFERENCES

- Agu, C. U. (2015). The influence of broadcast messages on vesico vaginal fistula prevention and control in north east Nigeria. An unpublished M.A dissertation, Department of Mass Communication, University of Nigeria, Nsukka.
- BBC World Service Trust (2006). African media development initiative (AMDI) research summary Report. London: BBC.
- Center for International Media Assistance (2007). Community radio: Its impact and Challenges to its Development, Working Group Report. Washington, D.C: Center for International Media Assistance National, Endowment for Democracy, October 9



- Chapman, J., Qian, L., & Hu, Q. (2016). Health communication messages on radio: A review. *International Journal of Communication*, 10, 5741-5756.
- Christian, C. & Uche, V.E. (2015). Patterns of exposure to communication interventions on obstetric fistula among men in Ebonyi State, Nigeria. *New Media and Mass Communication*, 33:49-60.
- Egbo, G. & Nwafor, K. A. (2024). Impact of Radio Health Programmes in Tackling COVID-19 Vaccines Hesitancy in Ebonyi State, Nigeria. *International Journal of sub-Saharan African Research (IJSSAR)*, 2 (2), 62-79.
- Federal Ministry of Women Affairs and Social Development (2014). Nigeria– Women’s health and development project-Evaluation Report (2012). Abuja: FMWASD.
- Fistula Care Plus. (2016). Ebonyi State Baseline Study on Obstetric Fistula. Retrieved from <https://fistulacare.org/wp-content/uploads/2017/10/Ebonyi-State-Baseline-Study-Report.pdf>
- Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P. And Kyriakidou, O. (2004). Diffusion of Innovations in Service Organisations: Systematic Review and Recommendations. *The Millbank Quarterly*, 82, 581-629.
- Hindin, M. J., McGough, L. J., Adanu, R. M., & Misperceptions, S. M. (2016). Listening to women's voices: The quality of care of women experiencing severe maternal morbidity, in Accra, Ghana. *PloS One*, 11(2), e0148300.
- Hutchings, D., & Mathew, D. (2008). Constructing health news: Possibilities for civic-oriented journalism. *Health*, 12(1), 43-66.
- Ijaiya M.A and, Aboyeji P.A (2004). Obstetric urogenital fistula: The Ilorin experience, Nigeria. *West Afr J Med.*; 23:7-9.
- Kadira, K. Ahmad, M. and Mustafa, S. (2014). Knowledge and treatment seeking behaviour of University of Ilorin students in Kwara State, Nigeria. *New Media and Mass Communication*, 27:14-20.
- Kazaura, M., Kamazima, R. & Mangi, I. (2011). Perceived causes of obstetric fistula from Rural Southern Tanzania. *African Health Sciences*. 11(3):377-382.
- Kente, J. (2016). Evaluation of the Perception of the Nigerian Audience on Radio’s Response to the 2014 Ebola outbreak in Nigeria. Unpublished PhD Thesis, School of Postgraduate Studies, Benue State University
- Lienemann, K., Desmartis, M., Smith, T. F., Varenbut, M., & Dickson, R. (2015). A qualitative study of patient experiences of radiotherapy in the context of an Australian integrated cancer centre. *Journal of Medical Imaging and Radiation Oncology*, 59(3), 346-353. doi:10.1111/1754-9485.12336
- Morhason-Bello IO, Ojengbede OA, Adedokun BO, Oladokun A, Okunlola MA (2017). Obstetric Fistulae Repair in a Nigerian Tertiary Health Institution; Lessons learnt from the outcome of care. *Trop J Obstet Gynaecol*; 28(2).



- Muoneke, N. & Nwafor, K. A. (2024). Evaluation of Communication Interventions for Public Knowledge and Uptake of the National Health Insurance Scheme (NHIS) in Ebonyi State, Nigeria. *International Journal of sub-Saharan African Research (IJSSAR)*, 2 (2), 93-103.
- Nazir, M. & Hasbullah, H. (2018). Energy efficient multi hierarchy clustering protocol for wireless sensor network (EMHC), ISIN communications and networking; NS-3.NS-3: Network simulator
- Nigerian Urban Reproductive Health (2012). New Radio Drama on Family Planning Launched in Nigeria. John Hopkins Centre for Communication Programs.
- Noar, S. M., Palmgreen, P., Chabot, M., Dobransky, N., & Zimmerman, R. S. (2019). A 10-year systematic review of HIV/AIDS mass communication messages: Have we made progress? *Journal of Health Communication*, 14(1), 15-42.
- Nwabueze, C. (2009). *Reporting*: Owerri: TopShelves Publishers.
- Nwafor, K. A., & Chidi-Irem, O. R. (2023). Exposure to care-giver radio programme and knowledge/use of mosquito-treated nets among pregnant women and nursing mothers in Ikwo, Ebonyi State, Nigeria. *International Journal of sub-Saharan African Research*, 1 (1), 10-17.
- Nweke, S. O., Onwe, C. E., Ezeah, G. & Nwafor, K. A. (2022). Knowledge and Compliance with Lassa fever Radio Campaigns in Selected States in Nigeria. *African Journal of Politics and Administrative Studies*, 15(1), 231-243.
- Odetola, T. D., Odeyemi, K. A., & Olugbenga-Bello, A. I. (2019). Radio Messages and Family Planning Uptake Among Women in Urban Areas of Lagos State, Nigeria. *African Journal of Reproductive Health*, 23(3), 108–118. doi:10.29063/ajrh2019/v23i3.9
- Olorunfemi, O., Kusimo, O. A., & Ladi-Akinyemi, T. W. (2018). Impact of a Radio Messages on Maternal Healthcare Utilization in Rural Communities of Ogun State, Nigeria. *Journal of Health Communication*, 23(8), 715–723. doi:10.1080/10810730.2018.1524170
- Raji M.O, Mairo H, Yusuf M.H, Rukayya Y. and AbdulHamid A.(2018). Knowledge, Effect of VesicoVaginal Fistula (VVF) and Satisfaction with VVF Repair Related Services in a Fistula Repair Facility in North Western Nigeria. *International Journal of Contemporary Medical Research*, 5(9), 9-16.
- Rice, R. (2013). A brief overview of the use of new media in health messages and intervention. Sage:Thousand Oaks, CA.
- Smith-McLallen, A. Fishbein, M. & Hornik, R. C. (2011). Psychosocial determinants of HIV-related sexual risk behaviors. *AIDS Education and Prevention*, 23(6), 483-498.
- Snyder, L. B., Hamilton, M. A., Mitchell, E. W., Kiwanuka-Tondo, J., Fleming-Milici, F., & Proctor, D. (2004). A meta-analysis of the effect of mediated health communication



messages on behavior change in the United States. *Journal of Health Communication*, 9(S1), 71-96.

Vaughan, K., Kok, M. C., Witter, S., & Dieleman, M. (2015). Costs and cost-effectiveness of community health workers: evidence from a literature review. *Human Resources for Health*, 13(1), 71.

Wakefield, M. A., Loken, B., & Hornik, R. C. (2010). Use of mass media messages to change health behaviour. *The Lancet*, 376(9748), 1261-1271

Wilson, R. E., Yoshikawa, H., Rosman, E. A., Chin, B., & Minkovitz, C. S. (2019). Impact of a multimedia messages to increase intention to use maternal health services among women in rural areas of Tanzania: A community-based, controlled before-and-after study. *BMC Pregnancy and Childbirth*, 19(1), 117. doi:10.1186/s12884-019-2251-6

World Health Organization. (2018). Obstetric fistula: Guiding principles for clinical management and programme development. Retrieved from <https://apps.who.int/iris/handle/10665/77721>