

Role of Radio in Promoting Primary Health Care among Residents of Isoko North Local Government Area of Delta State, Nigeria

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ABSTRACT

This study explores the effectiveness of radio as a tool for promoting primary health care among rural populations in Delta State, Nigeria, with a focus on communities within Isoko North Local Government Area. Given the limited access to television and print media due to infrastructural and economic barriers, radio emerges as the most practical and far-reaching medium for health communication in these areas. Grounded in Agenda Setting Theory, the research investigates four key dimensions: awareness of radio health programs, frequency of exposure, influence on health knowledge, and the role of radio in addressing local health challenges. Using a multi-stage sampling method, five communities Owhegbo, Ozoro, Otor-Owhe, Emevor, and Ellu were selected for the study. Data were collected through structured questionnaires administered to 100 respondents and analyzed using descriptive statistics, chi-square tests, Pearson correlation, and multiple regression analysis. Results indicate that a majority of participants regularly engage with health-related radio content, which significantly enhances their awareness and adoption of healthy practices ($\beta = 0.829$). The findings affirm radio's pivotal role in rural health advocacy and underscore the need for strategic partnerships between media outlets, government agencies, NGOs, and international health organizations such as WHO and UNICEF. Such collaborations can amplify the reach and impact of health initiatives. The study recommends further exploration into the integration of digital platforms to complement radio and extend health messaging to broader underserved populations.

Keywords: Radio, Health Communication, Awareness, Rural Communities, Primary Health Care, Delta State



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INTRODUCTION

The saying “health is wealth” has become a widely accepted truth, reminding everyone regardless of social, political, or academic standing that health is a universal concern. No one is immune to illness, and this reality compels society to prioritize health matters. Among the most accessible and cost-effective sources of health information is the radio. As a powerful agent of socialization and a tool for community mobilization, radio continues to play a vital role in public awareness, even in the face of globalization, media convergence, and the rise of digital platforms. Its enduring relevance lies in its ability to reach local audiences effectively. Radio's flexibility gives it an edge over other forms of communication, especially in times of health crises. Whether before, during, or after a disease outbreak such as the sudden emergence of Ebola radio has proven to be an indispensable medium for disseminating timely and life-saving information.

Mass media are known to entertain, educate, enlighten, and inform. Radio, through its health-focused programming, seamlessly combines all four functions. Initiatives like the Society for Family Health's “Healthtainment” programs blend health education with entertainment, making vital information more engaging and accessible. For instance, radio campaigns on malaria prevention are both informative and enlightening. Moreover, radio alerts communities to outbreaks and health risks in specific areas, helping people stay informed and take preventive action.

Although, there are lots of health communication media one of the best approaches is the use of mass media advocacy especially a credible radio. For many decades, mass media have been employed as an instrument for health campaigns in order to change the behaviours of a larger audience. Most of the campaigns have notably been aimed at tobacco use and heart-disease prevention, but have also addressed alcohol and illicit drug use, cancer screening and prevention, sex-related behaviours, child survival, and many other health-related issues (Wakefield, Loken and Hornik, 2015).

Wakefield, *et. al.* (2015) posits that media campaigns can be of short duration or may extend over long periods depending on the objective of the campaign and the fund available for such efforts. They may stand alone or be linked to other organized programme components, such as clinical or institutional outreach and easy access to newly available or existing products or services, or may complement policy changes. Multiple methods of dissemination might be used if health campaigns are part of broader social marketing programmes.

Through this, community radio stations serve as agents of social change, community health mobilization, tools for development that support two-way communication systems that enable dialogue and that allow communities to speak out, express their aspirations and concerns and participate in community health development (UNICEF,

2012). However, there is a causal relationship that exists between community radio and the people, for people to accept the community radio as a source of knowledge and as a mouthpiece for the marginalized, the community and people must work hand in hand. The community radio, which is the most diverse mode of communication in community health care, plays an essential role in the collection and passing of information, also in helping the public inform the right opinion about health care. It is against this background that the research examines the role of radio in promoting primary health in Isoko North Local government area of Delta State with the hope to know the extent to which radio stations have performed this especially in terms of airtime allotted to health-related programmes.

Mass media health educational programmes over time have been regarded as effective tools in educating and informing the masses on health-related issues. These programmes can be read, listened to or viewed by the masses. Community radio plays important role in educating community members on health issues, especially those health challenges that are rampant or still seen in communities where such radios are located. Issues like child mortality, measles, diabetes, high blood pressure, sexually transmitted diseases and more are predominant in many communities. According to Airhihenbuwa & Obregon (2012), there has been a significant increase in the use of radio-based interventions for health at international and community levels in recent years. This showed that radio play important role in health intervention messages in communities but are these health intervention programmes being felt by the community members? This study therefore examine the role of radio in promoting health care in Delta State.

Objectives of the Study

- i. Determining the level of awareness among residents of Isoko North LGA regarding health program broadcasted on radio stations
- ii. To determine the frequency of exposure among Isoko North LGA residents regarding health programs broadcasted on radio stations
- iii. Determining the extent to which radio health programme affect the awareness of various health issues among residents of Isoko North LGA
- iv. To determine how radio health broadcast contributed to addressing health issues among residents of Isoko North LGA

Research Questions

1. To what extent are residents of Isoko North LGA are exposed to health programmes on the radio?
2. To what extent are the residents of Isoko North LGA frequently exposed to health programs broadcasted

on radio stations?

3. To what extent are radio stations disseminates primary health and other health-related matters to the residents of Isoko North LGA residence?

Hypothesis of the study

The study formulated and tested the following hypothesis in order to achieve the research objective

H₀₁: There is no significant difference on the impact of Radio on the level of awareness of health programme among residents of Isoko North LGA of Delta State

H₀₂: There is no significant difference on the frequency of exposure of residents of Isoko North LGA to radio broadcast of health programme

LITERATURE REVIEW

Mass Media

Mass media is a channel, medium, utility, device, or instrument used in the mass communication process. The mass media also includes printed media, electronic media and Cyber media. Printed media such as newspapers, magazines, books, pamphlets, billboards and other technical tools that bring out the message by touching the senses of sight. Electronic media such as radio and recorded programs use the senses of hearing and television programs, motion picture and video recording covering both senses which is hearing and vision (Ray 2019). Meanwhile the online media (online media, cybermedia) is the internet-based mass media. Mass media is happen to be the suggestions for cultural development, not just culture in the sense of art and symbol but also in the sense of the development of settings, fashion, lifestyle and norms (Pate & Abubakar, 2013). Thus, the mass media is any medium used to transmit mass information. The categorical classifications of what could be termed as mass media forms comprise the eight industries of the mass media industries; books, newspapers, magazines, and recordings, radio, movies, television and the Internet. Mass media has attained rapid and remarkable expansion, resulting in proliferated dynamism over its content, platforms, and devices, following technological innovations over a long period of years. These developments have provided some dimensions of influence over various industries and social institutions. One major element of the media is the nature of its audience, which refers to its relatively large audience. Mass media is any medium which is intended for a large audience (Smith, 2003). It either takes broadcast or print media form. The broadcast form of media is also referred to as electronic media and is peculiar to radio and television technology. Print media, on the other hand, operates in the form of newspapers, magazines, journals and other print media.

Role of Mass Media

The existence of society depends to a large extent on the meeting of certain communication needs. These needs existed long before Johann Gutenberg's printing press and Samuel Morse's electric telegraph. Cases exist, however, where mass communication's functions are undesirable from society or the individual's point of view. Called dysfunctions, these harmful effects will be treated later. For society, mass communication performs the functions of surveillance; interpretation; linkage; transmission of values; socialization and entertainment (Baran and Davis, 2012).

The surveillance function is popularly regarded as the information and news role of the media. In Nigeria, several millions expose themselves to mass-mediated news daily on local radio and television and also on the networks. Surveillance can be 'warning or beware' surveillance or 'mental' surveillance. In warning surveillance, the media informs us about threats, while in mental surveillance they transmit useful and helpful information about everyday life. It is noteworthy that in the world, people rely on others for news on different matters. For this to happen, trust, otherwise called credibility, must exist for the media to be chosen as the source of believable news. Closely linked with surveillance is the interpretation function (Huwiler, 2015).

The mass media provide information on the meaning and significance of events. It is not possible to report everything that happens in the news or in the papers. So, whatever news that makes it into the paper or onto radio and television newscasts must have been adjudged by gatekeepers as important. Many elements of society that are not directly connected are linked by the mass media. Advertising, for instance, links buyers to sellers; legislators keep in touch with their constituents by reading local papers; and so on. Sadly, some linkage sites have been known to have harmful consequences. 'Hate' sites are now on the Internet. They can be used by terrorists to spread pernicious propaganda and to recruit new members. Subtle but nonetheless important, transmission of values is another function of the mass media. Mass media enhances cultural socialization. Madamombe, (2015) writes that it refers to "the way an individual comes to adopt the behaviour and values of a group.

The mass media portrays our society and what values are important". In the area of socialization, there are countless examples of values and behaviour socialized through the media. The media sometimes consciously tries to instill values and behaviour in the audience. Smoking cigarettes is an example. Fastening of seat belts is another.

But it must be noted that not every attempt by the media to enforce social norms succeeds. Mass media plays the role of entertainment. Pate and Abubakar (2013), is another media function. Motion pictures and sound recordings, and some books, magazines, and newspapers are devoted to entertainment.

Radio

Radio is an audio device for passing messages to a large audience. Radio involves the process by which messages are sent through electrical waves. In other words, the sound could be sent and received through these waves (Adelana, 2020). According to Ajibade & Alabi, (2017), the word radio is defined as the process of sending and receiving messages through the air using electromagnetic waves. It is also about the activity of broadcasting programmes for people to listen to the programmes being broadcast. According to Akingbulu, (2017), radio as a word has its origin in the Latin instrument through which signals are beamed out via electromagnetic process and distributed via a transmitter to a scattered audience who receive them via an antenna on a receiving set. Akingbulu, (2017) adds that radio involves the process by which messages are sent through electrical waves. Radio can also be seen as a medium used for sending and receiving messages through the air using electronic waves. It is also about the activity of broadcasting programmes for people to listen to the programmes being broadcast. It can also be defined as the broadcasting of programmes for the public to listen to. It is the system for sending sound over a distance by transmitting electrical signals (BBC English Dictionary, 2019).

According to Ajibade *et al.* (2017), radio is one of the most important means of communication. Through radio, people send spoken words, music, and other communication signals through the air to any part of the world. Radio broadcasts now feature music, news, discussion, interviews, descriptions of sports events and advertising. People drive to their jobs listening to their car radios and spend leisure hours hearing their favorite programs on the radio. Radio also has a wide variety of news. In addition to broadcasting, airplane pilots, astronauts, construction workers, policemen, sailors, and others who do many kinds of jobs use radio for quick communication. Scientists send radio waves into the sky to learn about weather. Telephone companies send messages by radio as well as by telephone.

Characteristics of Radio

As a medium of mass communication, radio has the following characteristics, according to Ajibade & Alabi (2017).

- Portability
- It is a mass medium:
- Transient messages
- Audio medium
- Cheap

Concept of Health Communication

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Disease Control and Prevention (CDC) as: "The study and use of communication strategies to inform and influence individual and community decisions that enhance health." According to WHO Constitution 1948, health is defined as: "A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." To improve the quality of life and standard of living of the society, it is highly needed to increase the health awareness of the public. Healthy citizens are essential for the development of the nation. Good health is the important factor of human happiness and wellbeing in which health information is an indispensable tool for achieving the goal by empowering people with the proper information of health. In every aspect of life, information is very much needed to produce socially, economically and politically change. Information is very valuable services that can changes mind and behavior of the individuals thereby bringing change in the society. Information is delivered to public through various medium of which radio is very popular and common one. Radio particularly in remote and rural area plays a great role in communication that connects the individuals (Payne & Harris ,2004).

Effectively communicating health information to individuals and communities is a primary focus in public health (Freimuth & Quinn, 2004; Miranda *et al.*, 2009; Office of Disease Prevention and Human Promotion, 2000; Parrott, 2004; Rimal & Lapinski, 2009). Timely and accurate communication holds potential to positively affect individuals, communities, and societies. Effective health communication can "affect individuals' awareness, knowledge, attitudes, self-efficacy, skills, and commitment to behavior change" For communities and societies, effective health communication serves to positively alter "norms and values, attitudes and opinions, [as well as] laws and policies" (U.S. Department of Health and Human Services, 2004).

Effective health communication is also a central component of health education and promotion. A core competency of Certified Health Education Specialists is the ability to analyze media and discern which form is most appropriate to disseminate health information to the intended audience (National Commission for Health Education Credentialing, 2008). The importance of effective health message transfer to the general public has contributed to the widespread study and utilization of social channels and mass media among health communicators, health educators, and health promoters.

Importance of Health Care

Healthcare means paying attention to health-related issues to accomplish a satisfactory general level of wellness that strengthens productive, normal life for individuals affected, for instance pregnant women and their unborn babies. The provision of healthcare in Nigeria, is on the concurrent legislative list, this means that both

the federal and state governments can improve and support the well-being of citizens by making provision such as healthcare delivery infrastructure such as hospitals, medical equipment, support personnel, medical consumables necessary in proffering solution to the medical needs of citizens (Odesanya et al., 2015).

According to WHO (2014), primary healthcare is basically healthcare that is low-cost, easily obtainable by all in the community and fully unrestricted, and whose aim is to achieve better health for all and sundry. Primary healthcare (PHC) In Nigeria is accessible at community-based healthcare facilities, such as primary healthcare centres. Primary healthcare centres are proximate to the people, and serve as a first point of contact for medical consultation by residents in the communities they are stationed. At this stage, primary care providers (PCPs), be they doctors, nurses, qualified community/public health professionals, attend to important health needs relating to high blood pressure, vaccination, immunization, hypertension, including maternal and child health-related services like family planning. It is part of a comprehensive healthcare support plan of governments throughout the world. The primary care givers refer patients to these care givers (Torrey, 2014). Secondary healthcare services are services offered by medical practitioners that do not have first contact with patients. It is the care offered by a certified expert who has more experience than the professionals working at the primary healthcare centre. This type of health care places emphasis on specialization and is at the mid-level. Tertiary healthcare is a higher level that offers special care. This involves the expertise of highly specialized medical equipment and help of practitioners in areas such as plastic surgeries, vaginal reconstruction, renal dialysis, surgery to separate conjoined twins, chemotherapy, and other complications related to health. Teaching hospitals in Nigeria are at this level (Torrey, 2014).

Public Perception of Radio Broadcast Programmes on Health Matters

Broadcast media are transmitters which generates waves (electronic impulses) that carry voice transmissions or messages which make up radio and television programmes. These waves travel through the air, carrying the programmes to homes and other locations where they are received through radio and television sets (Okunna, 2012). In Nigeria, research evidence shows that the use of radio as a medium of information is truly widespread, even among rural populations (Okunna, 2012; Okigbo, 2015; Sobowale & Sogbanmu, 2014). It has, therefore, been identified as the best mass medium at the country's level of development for education of rural dwellers (Moemeka, 2021). Okigbo (2015) points out some of the advantages of radio. According to him, the attraction radio has for rural dwellers are derived from its cheap price and cost of operation. Radio is easily portable and can be used by both the educated and illiterate. At the state level, some

radio stations broadcast more than 80 per cent of their programmes in the vernacular.

Theoretical Frame Work

For the purpose of this study, the Theory of Planned Behaviour was used for the study.

Theory of Planned Behaviour

The Theory of Planned Behaviour an extension of Fishbein and Ajzen's Theory of Reasoned Action (Fishbein & Ajzen, 1975) has been the predominant theoretical method to guide works on health-related attitudes for three decades. The theory is known to research scholars, students, practitioners and policy-makers (Ajzen, 1989). The theory posits that behaviour is determined by behavioural intention, which is in turn predicted by Attitude to the behaviour, Subjective Norms and Perceived Behavioural control (PBC) (Ajzen, 1988). Attitude is predicted by instrumental beliefs about the consequences of performing the behaviour (e.g. 'it will save time'), weighted by outcome evaluations of the desirability of those consequences (e.g. 'saving time would be a good/bad thing'). A more recent development to the TPB is the idea that attitude consists of two components; affective attitude reflecting enjoyment or pleasure associated with performance of the behaviour, and cognitive attitude reflecting perceived benefit (e.g. whether the behaviour is judged to be good, beneficial and wise). There is confirmation that affective attitude is the better predictor of intention to perform a health behaviour although, Paisley and Sparks (2018) found both types of attitude to be equally predictive of expectations to reduce fat intake. Subjective Norms are predicted by normative beliefs about whether significant 'referents' (e.g. mother, partner) would approve of one performing the behaviour in question, weighted by one's motivation to comply to behave in a manner which would meet each referent's approval. PBC is thought to influence behaviour both directly and through behavioural intentions. PBC can be defined simply as perceived ease of performing or refraining from a particular behaviour, or as the product of two sets of factors, control beliefs about one's ability to perform or refrain from the behaviour in various circumstances and control frequency: how often one is in those circumstances (Stead, Mackintosh, Tagg & Eadie, 2002). To put simply, the theory of planned behaviour predicts that human activities are regulated by three forms: readily accessible beliefs about the possible outcomes of the behaviour and the evaluations of these outcomes (behavioural beliefs), readily available beliefs about the normative expectations and actions of important referents and motivation to comply with these referents (normative beliefs) and readily available beliefs about the existence of certain parameters that may help or obstruct the execution of the perceived power and behaviour of these parameters (control beliefs).

The theory of planned behaviour can be used to design

interventions that target health enhancing individual behaviour that may be socially unacceptable such as condom use, smoking cessation, self-check-ups, voluntary testing, medication adherence and other behaviours that warrant individual decisions but have a varying level of social acceptability (WHO, 2008).

Empirical Studies

Yahaya et al. (2009) studied Attitude and the Effect of Health-Based Entertainment-Education Strategies on the Knowledge and Behaviour of women in Lagos State they discovered that information, entertainment and education are very significant to women. Hence, health presenters on broadcast media should always add elements of information, education and entertainment in their health and developmental messages targeted at women to attract their attention and change their attitude. They found and concluded from their study in Lagos that women had a significant improvement in awareness and a positive change in their health behaviour as a result programmes on family planning on radio and television. Atakiti and Ojomo (2015) on the influence of television programme on maternal health in Nigeria inter-land found that while TV health programmes had a moderate effect on women in the two local government areas in Lagos State, their level of exposure is equally low. The study came to a conclusion that women health programmes should be a blend of not just educational but also entertainment (edutainment).

METHODOLOGY

The study was conducted in Delta State. Delta State covers a landmass of about 18,050km² (6,970sqm), of which more than 60% is land. The state lies approximately between 5°00' and 6°45' E and 5°00' and 6°30' N. It is geographically located in Nigeria's Midwest, bounded in the north and west by Edo State for 350km (218 miles), the east by Anambra and Rivers States for about 93km and about 50km respectively, southeast by Bayelsa State across the Niger River for 17km and the Forçados River for 198km, and on the southern extreme is the Bight of Benin which covers about 160 kilometres of the state's coastline. Delta State is generally low-lying without any remarkable hills. The state has a wide coastal belt interlaced with rivulets and streams, which form part of the Niger Delta. This study was carried out in Isoko North Local Government Area of Delta State to examine the role of radio in promoting primary health care in Delta State. Hence, the population of this study comprises of all residents of the 13 communities in Isoko North LGA of Delta State and they are Emevor, Oghara-Iyede, Otor-Owhe, Owhelogbo, Oyede, Ellu, Ozoro, Iyede-Ame, Ofagbe, Bethel and Igbuku. Isoko North Local Government has an estimated land area of 410 km² and a population of 196,700 according to the National population census carried out March 2006 (NPC 2006). It is bounded to the North by Ndokwa West Local Government Area and

to the East by Ndokwa East Local Government Area, to the South by Isoko South Local Government Area, and to the West by Ughelli North Local Government Area, all in Delta State.

In this study, the researcher adopted mixed methods approach of sampling techniques in selecting respondents for the study (Singleton & Straits, (2009). The first stage involved a purposive selection of Isoko North LGA, second stage involved a purposive selection of five (5) communities (Owhelogbo, Ozoro, Otor-Owhe, Emevor and Ellu towns) out of the thirteen communities that makes up Isoko North LGA. While the last and the final stage involved the selection of 20 respondents using simple random sampling techniques from each community making a total of 100 respondents for the study.

Research Instrument and Administration

The research instrument used in this study is the questionnaire. The questionnaire were administered by the researcher. The questionnaire contained questions relating to the objectives of the study.

Data Analysis

In this study both descriptive and inferential statistical procedure were used. The descriptive statistics used includes mean value, standard deviation, simple percentage and frequency counts to achieve the objectives. Inferential statistics such as independent sample t-test and regression analysis) was used to indicate the nature of statistical relationship that exists among variables in order to validate or reject the stated hypotheses.

RESULTS AND DISCUSSION

Table 1 shows that the majority of respondents were female (65%), while males accounted for 35%, indicating higher female participation in the study. In terms of age distribution, most respondents (45%) were above 40 years, followed by those aged 31–40 years (35%), suggesting that the sample was dominated by mature adults. The marital status distribution reveals that 87% of the respondents were married, reflecting a predominantly family-oriented population. Regarding educational background, 37.8% of respondents had primary education, 28.6% had secondary education, 22.7% had tertiary education, while 10.9% had no formal education. This implies that most respondents possess at least basic literacy, which could influence their ability to understand and respond to health information disseminated via radio.

Question 1: To what extent are residents of Isoko North LGA are exposed to health programmes on the radio?

From the responses obtained as expressed in (Table 2);

Table 1: Socio-economic characteristics of Respondents.

Socio-economic characteristics	Frequency	Percentage
Gender		
Male	35	35%
Female	65	65%
Age		
20-30 years	20	20%
31-40 years	35	35%
Above 40 years	45	45%
Marital Status		
Single	13	13%
Married	87	87%
Educational background		
No formal	13	10.9
Primary	45	37.8
Secondary	34	28.6
Tertiary	27	22.7

Source: Researcher's Analysis (2025).

Table 2: Respondent on question 1

Options	Frequency	Percentage
High	61	61
Low	17	17
Undecided	22	22
Total	100	100

Source: Researcher's Analysis (2025)

Table 3: Respondent on question 2

Options	Frequency	Percentage
High	63	63
Low	20	20
Undecided	17	17
Total	100	100

Source: Researcher's Analysis (2025)

Table 4: Respondents' view on question 3.

Options	Frequency	Percentage
High	60	60
Low	20	20
Undecided	20	20
Total	100	100

Source: Researcher's Analysis (2025)

61 respondents constituting 61% said high (Table 2). 17 respondents constituting 17% said low, while the remaining 22 respondents constituting 22% were undecided. This shows that residents of Isoko North LGA are exposed to health programmes on the radio.

Question 2: To what extent are the residents of Isoko North LGA frequently exposed to health programs broadcasted on radio stations?

From the responses obtained as expressed in (Table 3), 63 respondents constituting 63% said high. 20 respondents constituting 20% said low, while the remaining 17 respondents constituting 17% were undecided (Table 3).

primary health and other health-related matters to the residents of Isoko North LGA?

From the responses obtained as expressed in (Table 4), 60 respondents constituting 60% said High. 20 respondents constituting 20% said Low while the remaining 20 respondents constituting 20% were undecided. From the above table, the result shows that radio stations disseminate other health related matters on a high scale to residents of Isoko North LGA (Table 4).

Determining the impact of radio on the level of awareness among residents of Isoko North LGA regarding health program broadcasted on radio stations

Question 3: To what extent are radio stations disseminate Table 5 presents the impact of radio on the level of Official Publication of Direct Research Journal of Social Science and Educational Studies. Vol. 13, 2025, ISSN: 2449-0806

Table 5: The impact of Radio on the level of awareness among residents of Isoko North LGA regarding health program broadcast on radio stations.

Items	Strongly agree	Agree	Undecided	Disagreed	Strongly disagreed	SD	Mean
Am aware that health program are being aired on radio	45 (45.0)	35 (35.0)	10 (10.0)	5 (5.0)	5 (5.0)	1.096	4.1
Radio has made me to be more engaged and motivated in listening to health program	60 (60.0)	20 (20.0)	5 (5.0)	10 (10.0)	5 (5.0)	1.214	4.2
I feel confident listening to health program on radio while engaged in other activities	40 (40.0)	35 (35.0)	15 (15.0)	10 (10.0)	0 (0.0)	0.978	4.1
Radio made it easier for me to be aware of certain health program	30 (30.0)	40 (40.0)	20 (20.0)	5 (5.0)	5 (5.0)	1.067	3.9
Availability of radio made it convenient to listen to health program	5 (5.0)	15 (15.0)	10 (10.0)	35 (35.0)	35 (35.0)	1.214	2.2
Integration of health program to be aired on radio is a good development.	35 (35.0)	45 (45.0)	5 (5.0)	10 (10.0)	5 (5.0)	1.123	3.9

Source: Researcher's analysis (2025).

Means ≥ 3.0 = often agree and means ≤ 3.0 = disagree**Table 6:** The impact of Radio on the level of awareness of health programme among resident of Isoko North LGA of Delta State.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.967	0.503		3.914	0.000
Radio	0.847	0.036	0.829	23.307	0.000

Field survey, (2025)

awareness among residents of Isoko North LGA regarding health program broadcasted on radio stations. The results showed that respondents agreed that radio have significantly improved their level of awareness regarding health program broadcast on radio stations (mean = 4.1). They also agreed that the use of radio has made them more engaged and motivated in listening to health program broadcasted on the radio (mean = 4.2) and that they felt confident in listening to health program on radio as it enhance the listening while engaged in other activities simultaneously (mean = 4.1). The respondents also agreed that radio has made it easier to be more aware of certain health program that are being broadcasted (mean = 3.9), and that the integration of health program to be aired on radio is a good development which has led to better knowledge by many persons especially those in rural areas of be aware of health programme (mean = 3.9). However, they disagreed that the availability of radio in their homes was not sufficient to stop them from not listening to health program (mean = 2.2).

Testing of Hypotheses

H₀₁: There is no significant difference on the impact of Radio on the level of awareness of health programme in Delta State

H₀₂: There is no significant difference on the frequency of exposure of residents of Isoko North LGA to radio broadcast of health programme

Decision

The regression result in the table above showed that radio has significant ($p < 0.05$) effect on the level of awareness of

health program among resident of Isoko North LGA of Delta State. The null hypothesis stated earlier is therefore rejected (Table 6) and alternate accepted. The result showed that Radio has significant ($p < 0.05$) impact on the level of awareness of health broadcast among resident of Isoko North LGA of Delta State. The result indicates that there is a significant ($p < 0.05$) difference in the level of Radio awareness on health program broadcast among residents of Isoko North Local Government Area. Adelana (2020) examined the Nigeria, Radio Dramas are set to Burst Myths around COVID-19. Adelana (2020) revealed that that: there is a positive relationship between Radio and the level of awareness on health program broadcast in Nigeria. Radio offers a wider coverage range in terms of making people especially those in rural areas to be aware of health program that are broadcasted on daily basis.

The regression analysis examined the effect of entrepreneurial skill on product portfolio development among manufacturing firms. The result revealed that entrepreneurial skill has a positive and significant effect on product portfolio development ($\beta = 0.51$, $t = 5.00$, $p < 0.05$). Since the p-value (0.000) is less than 0.05, the null hypothesis (H_{02}), which states that *entrepreneurial skill has no significant effect on product portfolio development*, is rejected (Table 7). Consequently, the alternative hypothesis (H_1) is accepted, indicating that entrepreneurial skill significantly enhances the development of product portfolios among manufacturing firms in Delta State. The coefficient of determination ($R^2 = 0.261$) suggests that about 26.1% of the variation in product portfolio development is explained by entrepreneurial skill, while the remaining 73.9% may be attributed to other factors not captured in the model.

Table 7: Regression Coefficients Showing the Effect of Entrepreneurial Skill on Product Portfolio Development

Predictor Variable	B (Unstd.)	Std. Error	Beta (Std.)	t
(Constant)	1.02	0.18	—	5.67
Entrepreneurial Skill (X)	0.45	0.09	0.51	5.00
R ² = 0.261 Adj. R ² = 0.257 F(1, 248) = 25.00 Sig. = 0.000				

Source: Field survey (2025).

Conclusion

This study has demonstrated that radio remains a critical instrument in the promotion of primary health care in Delta State, particularly within Isoko North Local Government Area. The findings affirm that radio continues to serve as an accessible, credible, and far-reaching medium for health communication, effectively bridging the information gap between health institutions and the general populace. Its ability to penetrate both urban and rural communities underscores its enduring relevance in driving health awareness and behavioural change across diverse socio-economic groups. Moreover, the study establishes that although other media platforms such as print and digital outlets play supportive roles in public health communication, radio retains a comparative advantage due to its immediacy, affordability, and cultural resonance with local audiences. The high level of awareness of radio-based health programmes observed among respondents demonstrates the platform's continued potential to influence health knowledge, attitudes, and practices. Nevertheless, infrastructural and socio-economic factors such as inadequate power supply, cost implications, and signal reach remain barriers to optimal radio access and utilisation. Addressing these challenges requires a collaborative approach involving media practitioners, public health professionals, and government institutions. Enhanced funding, professional training, and regulatory support will be essential to sustain quality health programming and ensure message accuracy, reliability, and inclusivity. In essence, radio's role in promoting primary health care remains indispensable. By integrating participatory communication models, strengthening institutional partnerships, and reinforcing professional ethics, radio can continue to serve as a powerful tool for advancing health literacy and social wellbeing. Future research may focus on comparative analyses of emerging digital platforms and their potential to complement radio in achieving sustainable health communication outcomes in Nigeria.

REFERENCES

- Adelana, O. (2020). Nigeria, Radio Dramas are set to Burst Myths around COVID-19, Retrieved from: <https://www.wsscc.org/media/resources/nigeria-radio-dramas-are-setburst-myths-around-covid-19>
- Airhienbuwa, P. and Obregon, A. (2012). Health Communication. New York.
- Ajibade, O. and Alabi, S. (2017). Community Radio in Nigeria, Issues and Challenges, *Covenant Journal of Communication* 4 (1) 26 - 38
- Ajzen, I G. (1988). Attitudes, Personality and Behaviour. Open University

- Press, Milton Keynes.
- Ajzen, I. and Fishbein, M. (2000). Attitudes and the attitude-behaviour relation: reasoned and automatic processes. In W. Stroebe and M. Hewstone (Eds), *European Review of social psychology*, 11, 1-33.
- Akingbulu, A. (2017). Building community radio in Nigeria: issues and challenges. Lagos: Imeso and PIWA
- Atakiti, E. and Ojomo, S. (2015). Information preferences of women receiving chemotherapy for breast cancer. *European Journal of Cancer Care*, 16(6), 543–550.
- Freimuth, P. and Quinn, D.L (2004). *Mass communication theory: Foundations, Ferment, and Future*. (6th edition). Wadsworth: Cengage Learning.
- Huwliler, E. (2015). Storytelling by Sound: A Theoretical Frame for Radio Drama Analysis, *The Radio Journal International Studies in Broadcast and Audio Media* 3 (1):45-59 DOI: 10.1386/rajo.3.1.45/1
- McQuail, D. (2010). *McQuail's Mass Communication Theory*. Sage Publication Ltd.
- Media Council of Kenya, (2012). The Performance of Vernacular Stations in Kenya. Media Council of Kenya.
- Miranda, S. Vercellesi, M., Pozzi, T. and Bruno, E. (2009). Radio Production. Focal Press, United Kingdom.
- Moemeka, E. (2021). *Public Opinion*. New York: Macmillan.
- Odesanya, E., Hassan, B. and Olaluwoye, O. (2015). The influence of three mass media campaigns on variables related to adolescent cigarette smoking: Results of a field experiment. *American Journal of Public Health*, 81(5), 597–604.
- Okigbo, S. (2015). In the internet age radio still rules the world, Retrieved from: <https://www.aljazeera.com/news/2016/02/radio-worldmedia-primary-source-information-2016-160213130238088.html>
- Okunna, O. (2012). Health coverage in mass media: a content analysis. *J Commun*; 1(1): 19–25.
- Paisley, R. and Sparks, S. (2018). Promoting healthy eating and physical activity: Short-term effects of a mass media campaign. *American Journal of Preventive Medicine*, 32(3), 217–223.
- Parrott, B. (2004). The influence of three mass media campaigns on variables related to adolescent cigarette smoking: Results of a field experiment. *American Journal of Public Health*, 81(5), 597–604.
- Pate, U. and Abubakar, A. (2013). The Struggle for Community Broadcasting in Nigeria, *Malaysian Journal of Media Studies*, 15 (1) 1-19.
- Payne, J. and Harris, M. (2004). *Teaching with Cases; A Practical Guide*. Harvard Business Review Press.
- Ray, B.C. (2019). *Approaches to social research* (5th ed.). New York: Oxford University Press.
- Rimal, Y. and Lapinski, T. (2009). Patterns and trends of malaria morbidity in western highlands of Kenya. *In Journal: International Journal of Education and Research* Vol. 1 No. 12.
- Singleton, R. A., & Straits, B. C. (2009). *Approaches to social research* (5th ed.). New York: Oxford University Press.
- Smith, A.T. (2003). Participatory communication. A research practical guide. Working paper N0. 170. Washington, DC: The World Bank.
- Sobowale, O.M. and Sogbanmu, P.E. (1984). *Understanding The Basic Concepts of a Research Process –iprojectblog*.
- Stead, R. Mackintosh, M., Tagg, M and Eadie, C. (2002). *Mass communication theory: Foundations, Ferment, and Future*. (6th edition). Wadsworth: Cengage Learning.
- Torrey, V. (2014). *Research Methodology Made Easy-iprojectblog*
- U.S. Department of Health and Human Services, 2004
- UNICEF, (2012). *World Malaria Report*. Geneva, Switzerland.
- Wakefield, M., Loken, S. and Hornik, T. (2015). A comparative study of Mbaitu and Musyi vernacular radio stations on their role in dissemination of Hiv/Aids messages. M.A. Dissertation, University of Nairobi.
- WHO, (2008). *World Malaria Report*. Geneva, Switzerland.
- Yahaya, M., Fadaio, O. and Ogundele, O. (2009) Assessing the role of the media in the prevention and control of meningitis in Nigeria. *Journal of International Medical Research*. <https://doi.org/10.1177/0300060519841168>.