

# An Assessment of the Role of Radio in Preventing Infant Mortality in North Central Nigeria

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## Abstract

Infant mortality has continued to be a major issue affecting Nigeria and indeed, the whole world. The media can be said to have played their roles in preventing infant mortality as they most times air programs, talk shows, documentaries and panel discussion on this subject but yet, infant mortality has remained prevalent. The study investigated the level of awareness of infant mortality, level of awareness of the causes of infant mortality in North central Nigeria, the frequency of Radio health programs aired, the role of radio in preventing infant mortality and factors that impede the success of Radio health programs in preventing infant mortality in North Central Nigeria. The agenda setting theory and development media theory were used for this study. In order to assess the role of Radio in preventing child death, the survey research design was used. Questionnaire and interview were used as research instruments to obtain data; multi-stage sampling was used to select states, local governments and community in the North central Zone of Nigeria. Analysis of the data collected showed that the respondents are aware of the causes of infant mortality and the radio occasionally air programs on infant mortality. The data analyzed also shows that the radio perform some specific roles geared towards preventing infant mortality but the message is not delivered because of hindrances like language, culture, and boring health programs. The study recommends that programs on Infant mortality should be given more prominence by Radio stations and community radio should be set up to address the community in the language and way they can understand. Radio stations are also encourage to evaluate and assess themselves frequently to know if the approach used to pass health message is yielding results or not.

**Keywords:** infant, mortality, infant mortality

## Introduction

Every single day, Nigeria loses about 2,300 under-five year olds and 145 women of childbearing age. This makes the country the second largest contributor to the under-five and maternal mortality rate in the world. Underneath the statistics lies the pain of human tragedy, for thousands of families who have lost their children. Even more devastating is the knowledge that, according to recent research, essential interventions reaching women and babies on time would have averted most of these deaths and sorrow (UNICEF, 2017).

The rates of infant mortality have been significantly reduced in the developed world mainly due to improvements in basic health care and technological advances in the medical field. However, infant mortality remains a cause for major concern in developing countries especially in sub-Saharan Africa. Sub-Sahara remains the most difficult place in the world for a child to survive until age five (Hammer, Gaël P., et al., 2006 in Adam 2006). UNICEF (2008) cited in Adam (2006) noted that In 2006, the under-five mortality rate for sub-Saharan Africa was 160 per 1,000 live births, meaning that roughly 1 in every 6 children failed to reach his/her fifth birthday. This represented a 14% reduction since 1990 but remains by far the highest rate of under-five mortality in the world. West Africa has been hit the hardest with under-five mortality in Africa and the world at large. West Africa accounted for more than 40% of Africa's child deaths in 2006 constituting 2.1 million children (WHO, 2006 cited in Adams, 2016, pg 105). The Central Intelligence Agency world infant mortality rankings for 2007 showed clearly that infant mortality rates in sub-Saharan African countries are tens to hundreds of times that of industrialized countries.

WHO reported that rural infants, infants of uneducated mothers, and infants in poorer households continue to have higher mortality (WHO, 2006). There are also gender discrepancies in infant mortality where mortality rates may be higher for males than females in one country or community and vice versa in another. The risk factors for such discrepancies may be biological, social, behavioral, or a combination of all three.

The media has been used over time to promote public health thereby reaching a large audience. Matamoros (2011) explained that Mass media campaigns are generally aimed primarily to change knowledge, awareness and attitudes, contributing to the goal of changing behavior. There have been cases where the mass media was used to sensitize the populace on some health behaviors, an example is the Ebola breakout in (2014), the deadly meningitis (2017), HIV/AIDs, Polio, Measles, Malaria etc.

Radio is an effective tool to use to promote public health. Radio remains the most powerful, and yet the cheapest, mass medium for reaching large numbers of people in isolated areas. It is cheap to purchase and

therefore is the one mass medium with which rural and slum communities are familiar; it is versatile and anyone - literate or illiterate can learn from it. (Moemeka, 1994 cited in Andesia, 2015).

Radio has put in some efforts in promoting health. This is evident in programs aired in radio stations as regards health behavior. However, infant mortality as a health issue continues to surge, families continue to lose infants before they get to really know them. This study evaluated the ongoing activities of radio as regards this issue and suggested ways to remedy the situation.

### **Statement of problem**

The birth of a child brings so much joy to the family. Most families begin to celebrate the child right from his/her first day in the world. So one can only imagine the rude shock it will be if that child should die. The death of a child brings disappointment and carries a huge burden of grief, pain and heartbreak. The menace of infant death is one that is aggressively damaging to numerous households, terminating innocent lives and resulting in alarming unwarranted and preventable deaths. UNICEF stated that Infant mortality are caused by unpreventable and preventable or treatable infectious disease factors like Sudden infant Death Syndrome (SIDS) malaria, pneumonia, diarrhea, measles and HIV/AIDS account for more than 70 per cent of the estimated one million under-five deaths in Nigeria.

The mass media are intensively engaged in public health. Vast sums are spent annually for materials and salaries that have gone into the production and distribution of booklets, pamphlets, exhibits, newspaper articles, and radio and television programs. These media are employed at all levels of public health in the hope that three effects might occur: the learning of correct health information and knowledge, the changing of health attitudes and values and the establishment of new health behavior (Matamoros, 2011).

No doubt Radio has been playing its role by promoting health through talk shows, jingles, drama, etc despite this, there is still a surge in Infant mortality rate. Issues associated with broadcast media in general require attention. This includes whether broadcast health programs devote enough time to issues bothering on infant mortality and health? Are these programs planned to adequately address core infant issues such as immunization, danger signs to watch out for, family planning, etc?. This study examined and assessed the role the Radio has been and is still playing in preventing infant mortality and why it has not led to its decrease over the years. If these roles are performed and there seem to be no improvement, then there is a need for assessment and re-assessment, this is what this study seeks to do.

### **Objective**

The general objective of this study is to assess the role of Radio in preventing infant mortality in North Central Nigeria. The following are the specific objectives:

1. To ascertain the level of awareness of the inhabitants of North Central Nigeria on the causes of infant mortality
2. To examine the frequency of Radio health programs on infant health
3. To determine the extent of the role of Radio health programs in preventing infant mortality in North Central Nigeria.
4. To identify the factors that impede the success of Radio health programs in preventing infant mortality in North Central Nigeria

### **Research question**

The following research questions were framed to guide the study

1. What is the level of awareness of the inhabitants of North Central Nigeria on the causes of infant mortality?
2. How often are Radio health programs on infant health aired?
3. What is the extent of the role of Radio health programs in preventing infant mortality in North Central Nigeria?
4. What are the factors that impede the success of Radio health programs in preventing infant mortality in North Central Nigeria?

## **CONCEPTUAL FRAME WORK/LITERATURE REVIEW**

### **Infant mortality**

One of the most terrifying experiences in a new parent's life is to put their sleeping infant to bed and return a few hours later to find him not breathing. Sadly, this happens to many new parents in Nigeria and across the world due to a combination of circumstances. The definition of infant mortality rate is simply the number of infant deaths in a single year out of every 1,000 live births that year. "The infant mortality rate is a common indicator of health and social development" (Ma and Finch 2010). Infant mortality as seen in Adam (2016) is a major public health problem especially in developing countries. It is an indicator of quality and accessibility to primary

healthcare as well as the overall health status of a country.

Infant mortality rate is one of the most significant indications of human development. Ayenigbara and Olurunmaye (2012) asserts that included in the IMR are the neonatal mortality rate (calculated from deaths occurring in the first four weeks of life), and post neonatal mortality rate (from deaths in the remainder of the first year). Neonatal deaths are further subdivided into early (first week) and late (second, third and fourth weeks). In prosperous countries, neonatal deaths account for about two-third of infant mortalities (Insel and Roth, 2006 cited in Ayenigbara and Olurunmaye, 2012). The IMR is usually regarded more as a way of evaluating social affluence than a measure of the quality of antenatal and obstetric care. The infant mortality rate is widely accepted as one of the most useful single measure of health status of the community (Ayenigbara and Olurunmaye, 2012).

The infant mortality rate may be very high in communities where health and social services are poorly developed. For example, the neonatal death rate is related to problems arising during pregnancy (congenital abnormalities, low birth weight); delivery (birth injuries, asphyxia), after delivery (tetanus, other infections). Thus, neonatal mortality rate is related to maternal and obstetric factors. The post neonatal mortality rate on the other hand, is related to a variety of environmental factors and especially, to the level of child care (Ayenigbara and Olurunmaye, 2012). However, experts affirmed that poverty, inadequate health care, congenital problems, infectious diseases and injuries are the causes of infant mortality. Another cause is sudden infant death Syndrome (SIDS) which in the United States of America, accounted for about 2,800 infant deaths per year (Insel and Roth, 2006 cited in Ayenigbara and Olurunmaye, 2012).

Child mortality is a core indicator for child health and well-being. In 2000, world leaders agreed on the Millennium Development Goals (MDGs) and called for reducing the under-five mortality rate by two thirds between 1990 and 2015 – known as the MDG 4 target. In recent years, the Global Strategy for Women's and Children's Health launched by United Nations Secretary- General Ban Ki moon and the Every Woman Every Child movement boosted global momentum in improving newborn and child survival as well as maternal health. In June 2012, world leaders renewed their commitment during the global launch of Committing to Child Survival: A Promise Renewed, aiming for a continued post-2015 focus to end preventable child deaths. With the end of the MDG era, the international community is in the process of approving a new framework – the Sustainable Development Goals (SDGs). The projected SDG target for child mortality represents a renewed pledge to the world's children: By 2030, end preventable deaths of newborns and children under five years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 deaths per 1,000 live births and under-five mortality to at least as low as 25 deaths per 1,000 live births. (UN Inter-agency Group for Child Mortality Estimation, 2015).

Gurmu and Mturi (2014) are of the opinion that the survival status of children is one of the determinants of social economic development of a county. A number of developing countries are however finding it difficult to tackle causes of infant morbidity and mortality due to poor public health measures and a lack of access to good health facilities.

In a research on the Disease-Specific Cause of Infant Death at 37 Military Hospital, Accra from January-December, 2007, it was discovered that five major disease/conditions were responsible for the deaths of the infants at the military hospital. Malaria and malaria related conditions accounted for most of the infant deaths. Out of the 98 infant deaths, 29 were due to malaria making up 31% of all infant deaths at the hospital in 2007. This finding is consistent with report from Ghana reproductive health annual report of 2006 that malaria continues to be the major cause of under-five mortality and morbidity in Ghana (UNICEF, 2008). Severe anemia was also a major source of concern for the area and was the second major cause of infant deaths (23%), an indication that malnutrition of mothers and babies is still a problem among women and children even in urban centers of the country. Awolu further asserts that "Congenital heart disease and Respiratory disease were responsible for 9% and 7% of infant deaths respectively.

Factors which affect foetal and neo-natal deaths as given by Avasarkar (2012) are primarily endogenous, while those which affect post-neo-natal deaths are primarily exogenous. The factors as explained by Avasarkar;

### **Endogenous/Biological Factors**

The endogenous factors are related to the formation of the foetus in the womb and are, therefore, mainly biological in nature. Among the biological factors affecting foetal and neo-natal infant mortality rates, the important ones are the age of the mother, the birth order, the period of spacing between births, prematurely, weight at birth and the fact of multiple births. Of all the factors listed above, the following have been studied in great depth: the age of the mother, the parity of the mother and the order of pregnancy and or of birth. It has been generally observed that foetal and neo-natal mortality rates are higher at the younger ages of the mother (that is, below the age of 19), at first parity and for the first birth order. These mortality rates start declining up to the age of 29 of the mother and at the second and third parity and then again increase with higher age of the mother, higher parities, and high birth orders. Thus, if a graph of foetal and neo-natal mortality rates is drawn with

respect to these factors, it would more or less resemble a U-shaped curve.

The maturity of an infant at birth has also been found to be an important factor affecting neo-natal and infant mortality rates. It has been observed that the weight of the baby at birth is also an important factor affecting neo-natal and post-neo-natal deaths. In the United States, it was observed that a low birth weight was the cause of two-thirds of all the neo-natal deaths in 1950. It was also found that the chances of survival increased considerably with even a moderate increase in the birth weight the optimum birth weight ensuring survival being 3,501-4,000 gms. It may be noted here that the still-birth rate and the neo-natal mortality rate are both very high in the case of multiple births. It may be concluded from this discussion that the causes of foetal and neo-natal deaths so far considered arise mainly out of genetic factors, and may be traced back to the intrauterine life of the foetus and to the damage occurring during the process of birth.

#### **Exogenous/Social-economic/Environmental factors**

Social, cultural, economic and environmental factors are also found to affect infant mortality, especially during the post-neo-natal period. Post-neo-natal deaths are therefore mainly due to various epidemics caused by communicable diseases, both of the digestive systems, such as diarrhea and enteritis, and of the respiratory system, such as bronchitis and pneumonia, as well as by faulty feeding patterns and poor hygiene. The underlying environmental factors include crowding and congestion, in sanitary surroundings, lack of proper sunshine and fresh air, etc.

Illegitimacy is also an important factor contributing to a high infant mortality rate. The difference between infant mortality rates of legitimate and illegitimate births is usually found to be quite marked. The reason for this difference is quite obvious. A child conceived and born out of wedlock is generally unwanted both by the mother as well as society. Consequently such a child does not receive the care, in terms of nutrition and other facilities that it needs.

#### **Radio as an educational tool to promote health**

Radio is often used to broadcast health information because it has a large reach while at the same time, maintaining a strong impact. Certain media interventions have been determined to be particularly cost-effective, considering the benefits that are associated with expenditure. Radio-disseminated health messages have been found to be more cost-effective than television, as radio can reach people in their homes, cars, or at work. Brief educational radio segments can be inserted between programs during primetime hours, when the maximal number of people are tuned in. An American study demonstrated that people who listen to the radio have a surprisingly accurate ability to recall details of broadcasts from months earlier; in this way, the study findings support the potential of radio to disseminate educational messages that significantly affect listeners. (Unite for sight, 2015)

Unite for sight (2015) further stated that the use of radio to disseminate health education messages is particularly advantageous because of the wide range of people it can reach. In developing countries, many rural villages do not have access to electricity or television, but battery operated radios are commonplace. Consequently, its ability to reach people in a diverse range of settings has made radio a prime medium for educational initiatives, and various health topics have been addressed through radio programming throughout the developing world. In Kenya, for example, the national weekly radio program, "Giving Birth and Caring for Your Children," has been effective in educating audiences about modern childcare practices by using a program framework that combines entertainment, humor and instruction. (Hostetler, 1976 in Unite for Sight, 2015). Radio in this sense can be used to educate mothers on certain health care procedures, before, during and after child birth. This will cause a reduction in preventable infant mortality.

#### **Entertainment**

For years now entertainment education (E-E) has been a tool for changing health behavior. E-E uses drama, music, or other communication formats that engage the emotions to inform audiences and change attitudes, behavior, and social norms. Worldwide, several hundred major projects have used E-E to improve health. Entertainment-education has encouraged people to live healthier lives. For example, E-E projects for family planning and reproductive health have helped motivate people to use contraception, to prevent HIV infection by having fewer sex partners, and to use antenatal care services.

Entertainment-education dramas can persuade because they show characters who change their behavior to improve their lives. Stories have unique power and nuance to describe people's behavior and interactions, and their consequences. When audience members see that they could be in the same situation as the characters, stories can move them to change, too. E-E is particularly able to influence behavior rooted in traditions that are hard to change (Info Report, 2008).

### **Information**

Dissemination of information is the major function of mass media. Since information is knowledge and knowledge is power, media offer authentic and timely facts and opinions about various event and situations to mass audience as informative items. Information provided by Radio can be opinionated, objective, subjective, primary and secondary. Informative functions of mass media also lets the audience knows about the happening around them and come to the truth. Moreover, advertisements are also mainly for information purpose (Online media, 2012). Radio can be used to inform the audience on certain health practices. This will also bring to limelight, the plight of citizens especially those in rural areas to the government, who in turn act by providing health care facilities and professionals.

### **Persuasion**

Persuasion involves making influence on others mind. Radio influences audience in varieties of ways. Media content builds opinions and sets agendas in the public mind. It influences votes, changes attitudes and moderates behavior. Using editorials, articles, commentaries and among others, mass media persuades audience. However, all audiences are not well known about it. Many of them become influenced or motivated unknowingly towards it. Advertisement is the example which is designed to persuade (Online media, 2012). The media can use their power of persuasion to influence citizens, positively and in this regards towards a health behavior that could reduce preventable infant mortality.

### **Theoretical Framework.**

This research is anchored on certain theories in mass communication that are very relevant to this study. Relating them to this study would add more flesh and substance to the research. These theories include: Development theory and Agenda Setting Theory.

#### **Agenda Setting Theory.**

Zhu & Blood, (1970), McCombs and Shaw (1972) posit that “agenda setting is the process whereby the news media lead the public in assigning relative importance to various public issues. In this situation, the media agenda influences the public agenda not by saying this issue is important” in an overt way but by giving more space and time to that issue and by giving it more prominent space and time (Griffin, 2012). The application of agenda-setting has a potential to offer high versatility in health promotion. The field of health education places a significant focus on intrapersonal, interpersonal, organizational and community-change process theories. This is well applicable in the fight against infant mortality by making information on infant mortality the top agenda especially in the community radio station. In relation to this study, it is very clear that this theory is very relevant. Undoubtedly, infant mortality has always been a major public health issue in the developing countries and specifically Nigeria. Therefore, such an issue could equally be set as top agenda from the media to the general populace. More space and time can be allocated to issues related to infant mortality and its scourge, its causes, symptoms, effects and prevention. Information, communication and education (ICE) on the scourge of infant mortality can be taken as a top agenda by community radio stations thereby contributing immensely in the prevention and reduction of infant mortality.

#### **Developmental media theory**

This theory propounded by Dennis McQuail (1987) canvasses media support for an existing government and its efforts to bring about socio-economic development. “This theory believes in regulating press freedom according to socio-economic needs of the society” it rests on the belief that the media should be at the vanguard of development. The bottom line should be that the media should be an instrument of development (Wogu, 2008, pg75). The development media theory is relevant to the study because it places emphasis on using the media (radio) for developmental purposes. The radio can be used to prevent/reduce infant mortality.

#### **Empirical review**

Andesiah (2013) study investigated vernacular radio and health promotion: exploring the programmes, the use and impact of vernacular radio in the control of malaria in Emuhaya District, Kenya. The primary data was obtained using questionnaires, interview guides and focus group guides which were administered to a sample size. The data was analyzed by the use of descriptive statistics. The findings of the study were: there were several vernacular radio stations broadcast in Emuhaya District that have health programmes addressing malaria control; these health programmes specifically give information on the causes, effects, symptoms and preventive measures against malaria and that there is a close relationship between malaria attacks, its prevention and the messages presented on vernacular radio stations broadcast in Emuhaya District. Based on the results of the findings, the study concluded that there are health programmes broadcast on vernacular radio and that they are very effective, complementary and capable of making a great impact on the populace in the fight against malaria.



Therefore, the study strongly recommended that the stakeholders in the Ministry of Health and media owners should work closely together and using radio, more so vernacular radio; incorporate the communities in the fight against malaria in Emuhaya District and beyond.

Anatsui (2014) paper on “Communicating Health Information at Grassroots in Nigeria” focuses on the roles communication can play in promoting health information, especially on the medicinal plant and other materials relating to health in Africa and Nigeria in particular. It also recognizes the importance and popularity of television and Internet, but the radio as the most effective medium for grassroots mobilization in developing countries. It can be used to stimulate community dialogue and national debate, and the provision of public information and specialized training about health risks and disease prevention. The survey research method of quantitative and qualitative data analysis was employed. The study employed purposive random sampling technique and structured interview guide as an instrument. The paper concluded that emphasis should be devoted to preventive rather than curative measures, and recommends that use of appropriate language and communication style to fit in with the cultural context of the recipients.

### Methodology

The survey research design was used for this study. The population of this study is made up of states in the North Central geopolitical zone. The choice of this population is greatly influenced by the rate of infant mortality in the area. Population of North Central according to the 2006 National Population Census is Benue; 4,253,641, Kogi; 3,314,043, Kwara; 2,365,353, Nasarawa; 1,869,377, Niger; 3,954, 772, Plateau; 3,206,531, Abuja; 1,406,239, Total; 20, 369, 956. To get the figure for 2016, the researcher used the United Nations Population Fund (UNFPA) estimated of 3.2 percent annual growth rate to calculate the population over a 10-year period, applying the straight line method or approach formula the current population is 26,806,941.

The sample size was determined using Australian Sample Size Calculator. Using a confidence level of 95 percent and margin error of 0.5, the sample was brought down to 385.

The multi stage sampling design will be used in this study. The ballot system was used to select 2 states (Kogi and Nasarawa State). A local government was selected randomly from the two states (Lokoja LGA in Kogi state and Nasarawa in Nasarawa state) and a community each was purposively selected from the two local governments (Oworo land in Lokoja and Mangorogoma in Nasarawa). These communities were selected based on the fact that they are rural communities and it will be best to assess if Radio is changing their beliefs and practices on Infant mortality. 193copies of questionnaire was distributed in Oworo land while 192 in Mangorogoma purposively to mothers. The instrument adopted for this study is the questionnaire. This is comprised of two sections. The first section dealt with demographic characteristics while the section dwelt on questions on the subject matter. The answers gathered from the questionnaire were used to answer the research questions. The questionnaire was administered by research assistants in the designated area over a period of two weeks. Most of the respondents have to be interpreted to. The questionnaire was retrieved immediately.

The validation of research instrument was done by an expert who assess if the items in the instrument are best suited to address the measurable variables. The questionnaire was administered to the same group of 20 respondents from the population of study, the results were collated using the Crobach’s Alpha statistical package for social science (SPSS) arriving at 0.778

Data collected in the demography section were analyzed and presented using pie charts. The Likert’s scale was used to analyze the other data collected from the questionnaire. A four point Likert’s scale was used and the responses were combined into two categories: “accepted” and “rejected” based on the value of the mean for each response. A mean of 2.5 and above implies that the questionnaire item should be accepted while a mean below 2.5 should be rejected.

### PRESENTATION OF DATA

**Table 1: Level of awareness of the causes of infant mortality**

	Items	S A	A	D	SD	Total	Mean	SD	Decision
1	Death at birth	169	114	78	11	372	3.19	0.87	Accepted
2	Pre term/low birth weight	74	140	131	27	372	2.70	0.87	Accepted
3	Respiratory Diseases	110	66	180	16	372	2.73	0.94	Accepted
4	Maternal Complications	167	151	46	8	372	3.23	0.76	Accepted
5	Injuries	66	124	143	39	372	2.58	0.90	Accepted
6	Malaria	198	142	24	8	372	3.42	0.71	Accepted
7	Malnutrition	225	107	32	8	372	3.48	0.74	Accepted
8	Illiteracy	103	151	80	38	372	2.86	0.94	Accepted
9	Lack of access to health care facilities	203	144	9	16	372	3.44	0.74	Accepted
10	Poverty	252	57	45	18	372	3.46	0.88	Accepted

**Table 3: Frequency of Radio health programs**

	Items	SA	A	D	SD	Total	Mean	SD	Decision
11	Daily	87	43	118	124	372	2.25	1.15	Rejected
12	2-3 times in a week	35	61	120	156	372	1.93	0.98	Rejected
13	Weekly	9	54	156	153	372	1.80	0.79	Rejected
14	Monthly	129	75	85	83	372	2.67	1.17	Accepted
15	Quarterly	85	123	104	60	372	2.63	1.01	Accepted

**Table 4: Extent Radio perform their roles**

	Items	VL E	L E	SE	V SE	Total	Mean	SD	Decision
16	Disseminate accurate information from trusted sources about infant mortality, its transmission, prevention and treatment so you could protect yourself, your family and community.	102	170	77	23	372	2.94	0.85	Accepted
17	Organize training workshops in partnership with the ministry of health, the federal medical centre, state hospital and community health centres	66	149	50	107	372	2.47	1.09	Rejected
18	Public service announcements in your languages/dialect to reinforce important information and support behaviour change.	121	165	51	35	372	3.00	0.92	Accepted
19	Educate you on how to care for yourself before, during and after pregnancy	160	106	84	22	372	3.09	0.94	Accepted
20	Educate you on how to care for your baby and symptoms to watch out for	120	143	73	36	372	2.93	0.95	Accepted

**Table 5: factors militating against the success of radio health programs**

	Items	SA	A	D	SD	Total	Mean	SD	Decision
21	Cultural belief/practices of Members of a community	121	77	107	67	372	2.68	1.11	Accepted
22	Language used in broadcasting the message	128	127	84	33	372	2.94	0.96	Accepted
23	Lack of access to the Medium (Radio)	151	118	57	46	372	3.01	1.03	Accepted
24	Presentation of health programs	145	154	36	37	372	3.09	0.94	Accepted
25	Lack of access to health care facilities.	156	82	97	37	372	2.96	1.04	Accepted

### Discussion of findings

Table 1, items 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 answers research question 1 which seeks to establish the level of awareness on the causes of infant mortality in North central Nigeria. Responses to the items on the table revealed clearly that the respondents are aware of the causes of infant mortality with variance in their level of knowledge.

Item 1 with a Mean of 3.19 shows that the respondents agree that a baby can die a natural death at birth. Item 2 with mean 2.70 reveals that they are aware of pre-term/low birth weight as a cause of infant mortality. Items 3, 4, 5, 6, 7, 8, 9, and 10 show respondents are aware that respiratory diseases (2.73), maternal complications (3.23), injuries(2.58)which is a weak acceptance, malaria (3.42), malnutrition (3.48), illiteracy (2.86), lack of access to health care facilities (3.44) and poverty (3.46) respectively are the causes of infant mortality.

The response to research question 1 implies that respondents are aware of the causes of infant mortality. This agrees with Awolu (2016) who said

four causes account for more than half of all infant deaths; birth defects, disorders relating to short gestation and unspecified low birth weight, sudden infant death syndrome (SIDS), and respiratory distress syndrome

This study also revealed that radio health programs are not aired daily, 2-3 times in a week and weekly.

Responses from item 11, 12 and 13 with mean of 2.25, 1.93, and 1.80 respectively. Radio need to be constant in delivery health messages, this is because infant mortality is what happens on a regular basis. It could come in form of short jingles, public service announcement (PSAs) etc, this will serve as a constant reminder and a way of changing the behavioral patterns that incite infant mortality and also draw the attention of the government, policy makers and NGOs to the issue on ground. On the other hand, item 14 with mean 2.67 and item 15 with mean of 2.63 were accepted. This reveals that Radio health programs especially those bothering on infant mortality are aired monthly and quarterly. This is not really good, radio programs on infant mortality need to be aired more frequently. Findings from this research also showed that radio perform the roles that will lead to the prevention of infant mortality to an extent. This is evident in items 16, 17, 18, 19, and 20. Item 16 with a mean of 2.94 agreed that the radio disseminate accurate information from trusted sources about infant mortality, its transmission, prevention and treatment so you could protect yourself, your family and community. This is supported by Andesiah, (2013;pg19) "Health communication can contribute to all aspects of disease prevention and health promotion and its relevant in a number of contexts which include: health professionals-patient relations, individual's exposure to search for health information and adherence to clinical recommendations, the construction of public health messages, campaigns and images of health in mass media and the culture at large and the education of consumers on how to gain access to the public health care systems". Item 18 with a mean of 3.00 shows that the radio gives public service announcements in the respondent's languages/dialect to reinforce important information and support behaviour change. Item 19 with a mean of 3.09 revealed that the radio educate the respondents on how to care for themselves before, during and after pregnancy. Item 20 with a mean of 2.93 also shows that the radio educate the respondents on how to care for their babies and symptoms to watch out for. On the other hand, item 17 with a mean of 2.47 is rejected. This reveals that the radio does not organize training workshops in partnership with the ministry of health, the federal medical centre, state hospital and community health centers. This shows that the radio station do not go beyond their comfort zone to organize programs for the communities.

Items 21, 22, 23, 24, and 25 on the questionnaire sought to find out factors that militate against the success of radio health programs in North Central Nigeria. Item 21 with mean of 2.68 accepted that Cultural belief/practices of Members of a community hinder the success of radio health programs. Item 22 with mean 2.94 reveals that Language used in broadcasting the message affects the success of radio health program. Item 23 with mean of 3.01 shows that lack of access to the Medium (Radio) also militate against the success of radio health programs. Item 24 with mean of 3.09 reveals that presentation of health programs affects the success of radio health program negatively. And finally, item 25 with mean of shows that lack of access to health care facilities renders radio health programs a waste. This is not in tandem with this statement by Andesiah (2013) Community radio in Nigeria should be poised to elevate development initiative through an all-inclusive and participatory approach to public communication. The ultimate goal is changing the lives and circumstances of the people by ensuring that health communication is effectively done.

## Conclusion

This study assessed the role of Radio in preventing infant mortality in North Central Nigeria. Its findings revealed that the respondents are aware of the causes of infant mortality. This is ranging from the Biological causes (Endogenous) to the environmental/socio-economic causes (exogenous). The study also showed that respondents listen to the radio on a regular basis, which means they are exposed to these health programs. It was revealed that the radio perform certain roles as regards infant mortality, such roles include; dissemination of accurate information from trusted sources about infant mortality, its transmission, prevention and treatment so you could protect yourself, your family and community, organizing training workshops in partnership with the ministry of health, the federal medical centre, state hospital and community health centers, Public service announcements in respondent's languages/dialect to reinforce important information and support behavioural change, educating respondents on how to care for themselves before, during and after pregnancy, educating respondents on how to care for their babies and symptoms to watch out for with the exception of organizing training workshops in partnership with the ministry of health, the federal medical centre. The study found out that external factors (Cultural belief/practices of Members of a community, Language used in broadcasting the message, Lack of access to the Medium (Radio), Lack of access to the Medium (Radio), Lack of access to health care facilities) mainly account for the failure of radio health programs.

The study therefore concludes that the radio has been playing its role, but not to its full utilization. Message delivery is important for the content of a program to be termed successful, the Radio has been missing this as most respondents felt the messages were not personal, were ambiguous and uninteresting. The radio should be put to full utilization in all capacity to actually deliver these health messages with the goal of reducing and if possible prevent infant mortality in North central Nigeria.



## Recommendation

For the radio to play their part in preventing Infant Mortality or reduce IMR in North Central Nigeria, the following are recommended:

1. Radio stations should always assess themselves to ascertain if a program is actually achieving its intent. This can be done through evaluation during the course of a program or at a given period.
2. Government should sponsor enlightenment programs through local government announcements, drama, and phone-in programs that will encourage community participation in issues that touch them
3. Community radio should be established in LGAs so that these messages can be brought closer home. This will give members of the community a sense of belonging. The health messages will also be more personal as the radio will air in their local dialect.
4. Radio stations should spice up their health programs by introducing drama, comedy involving members of the community. Members of the community can be involved in radio health programs to talk about their understanding on some key issues. Radio health programs should not always be filled with medical jargons that members of the community cannot recon with
5. Persuasive public interest advertisements should be aired on radio for preventing infant mortality. This should draw the attention of the government and policy makers
6. There should be a Radio listening centre for those who cannot afford Radios to listen to health programs
7. NGOs should swing into action, carrying the government along to sponsor publicities, advocacy and public enlightenment programs on Radio
8. Further studies should be carried out in the North West and North East zone as they account for 43% and 33% of infant mortality in Nigeria respectively (UNICEF, n.d)
9. The government should also make available, good medical facilities and professionals in the rural areas.

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