AN EVALUATION OF RADIO PROGRAMMES AS A TOOL FOR EMPOWERING NURSING MOTHERS IN THE FIGHT AGAINST INFANT MORTALITY IN KADUNA STATE

By

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Effective communication is only possible where the correct message is disseminated to the right audience at the right time through the right channels. The importance of radio broadcasting is growing from strength to strength because it is a tool of mobilizing, sensitizing, educating, informing and entertaining the mass of its listening audience in and across the globe.

Radio broadcasting according to Adamu (2006) cited in Okpoko (2012:62) "is the most universal form of mass communication". In Africa, cheap transistor radio set have brought the oral tradition over the air wave to millions of rural African villages, towns and cities thereby breaking the barrier of illiteracy and poverty of information among Africans.

Katz (1976), adds that "the impact and the role that radio plays in the development of any society is for societal overall development, integration and safeguard which cut across all the facets of its socio-cultural existence". This was corroborated by Nwuneli (1985) that "radio accompanied with sound effects played an important role of information and mass mobilization of the public about the effect of spinal meningitis and cholera epidemic in Nigeria". Schramm (1964) adds that "the most impressive demonstration of the impact of radio was in mass mobilizing the public to participate in the real act of democratic governance".

However, community radio in its reach to the people is a veritable tool and for this reason, is considered for taking awareness message and health related issues to the millions of people who live and work in different communities (Moemeka 1986). Effective communication with the community people and their active participation in the programmes that affect them is essential for every community.

Through proactive and pragmatic radio programmes that are carefully designed, produced and packaged with the socio-cultural patterns of the community taken into consideration, it would

go a long way in empowering nursing mothers in the fight against infant mortality, particularly in Kaduna state.

Radios are effective mechanisms to increase access in the developing world because they are inexpensive, have broad coverage, and sometimes battery-powered, and no literacy is required to operate them. At least 75 percent of the world's population is within "easy access" of some form of broadcast technology, primarily radios (Mefalopulos 2008:193).

However, one of the Millennium Development Goals is the reduction of infant mortality by two thirds between 1990 and 2015. Thus, Mojekwu & Ajijola (2011:164), observes that "progress in infant mortality reduction remains unacceptable in Sub-Saharan Africa; with special reference to Nigeria, the giant of Africa". Available statistics suggest that infant mortality levels continue to be high and exhibit wide geographic disparities. This was corroborated by Ladipo (2009:11), who reveals that "the northern part of Nigeria has generally worse indicators and is also the region where polio has proven most difficult to control". Poverty and inadequate knowledge is another factor that contributes to the disparity. Ejike (2012:26) states that "in the north, poverty ranges about 70%, while in the south it ranges between 25% in the southeast to about 35% in the southwest. For a little analysis: between the northeast and the northwest, there is little disparity of about seven percentage points in terms of poverty reduction (op cit).

A maternal death has implications for the family, the community and the society in general. However, its impact is most immediate and especially severe on young children. According to the WHO, one million children worldwide are left motherless every year, primarily because their mothers had no access to or could not afford quality health care. These children are also more likely to die within two years of their mothers' death.

Similarly, infants are in many ways the most vulnerable group to adverse effects of environmental health because they are sensitive not only to conditions in their immediate environment after birth, but also to the pre and post-natal health of their mothers, and the quality of the health support services (Nuria 2003) cited by (Mojekwu & Ajijola 2011). According to

UNICEF (1990) cited in Umoh, Okesina & Dimkpa (1996:102), "many maternal and child health-care problems are embedded in the cultural beliefs, values, practices and norms of the community". Here, many parents believe that the death of their infants is caused by external factors such as care givers, relatives, anger of gods etc. As a result of such belief, most parents sometimes find it difficult to accept modern medical care for their infants. Also, Umoh & Okesina (1995:238) reveals that "the act of attributing causality to internal or external factors have no scientific basis". For example, the "Ogbanje" as supposedly a child who dies repeatedly and returns to the mother to be reborn, is one of such superstitious belief. This is because people's perception about an Ogbanje child is that it is almost impossible to bring back again when dead.

Additionally, Odu & Dotun (2007:148) opines that "there are anti-effective properties present in human milk which helps to fight against many childhood diseases that leads to long – term effects like intelligence, socialization and personality development of children". UNICEF (2008:12) further reveals that

> breastfeeding can reduce the number of deaths caused by acute respiratory infection and diarrhoea - two major child killers - as well as from other infectious diseases. It also contributes to the health of mothers, and creates a bond between the mother and child. Appropriate infant feeding can save lives, ensure optimal growth and development, and contribute to the achievement of the Millennium Development Goals.

Despite these advantages, many mothers still do not practice giving the breast milk in the appropriate way to their children (Odu & Dotun 2007:148). Moreover, research indicates close link between the health of the newborn with the health of their mothers. Ladipo (2009:14) observes that about 30-40% of neonatal and infant deaths result from poor maternal health and inadequate care during pregnancy, delivery, and the critical immediate postpartum period. Data also suggest that a mother's health affects the overall well-being of the child. Ejike (2012) adds that Nigeria is second to India in terms of absolute number of maternal death and regrettably, despite abundant resources, contributes more than 10% of all global maternal and under 5 deaths.

This is where awareness creation by government and non-governmental organisations has a major role to play.

Hence, Riman & Akpan (2010:120) reveals that "Nigerian government has over the years been in serious pursuit of programmes and policies that will ensure improvement and stability in the health status of her citizens". As such, several policies targeted at reducing infant mortality rate, improving maternal and child health as well as improved nutritional health status of the people had been established. Policies on infant health include: National Child Health Policy, National Policy on Infant & Young Child Feeding, National Strategic Plan for Implementing Global Strategy on Infant & Young Child Feeding, and National Maternal, Newborn and Child Health Strategic Document (FMJ 2009). Such policies were meant to have direct effect on the health of the poor particularly those residing in rural areas where access to health services are either limited or absent (Riman & Akpan 2010).

However, because human behaviour is a major factor in health outcomes, investments in health must focus on behaviours as well as health facilities and service provision. Solving health problems requires that people understand and are motivated to adopt or change certain behaviours. For instance, the socio-cultural factors that influence infant mortality abound. UNICEF (2008:16) reports that

> it is believed that tribal marks which pose health hazards is one of the practices influenced by culture and is observed in some parts of Nigeria. The type of incision made for scarification especially with unsterilized razor blades may lead to infant death. Therefore, such beliefs have made the task of reducing infant mortality, very difficult especially in Nigeria.

Additionally, efforts to promote general awareness of public health issues, which is the traditional goal of information, education, and communication programs have built a good foundation for health activities. Mothers should be thought that exclusive breastfeeding for the first six months of life reduces infant mortality linked to common childhood illnesses and under nutrition. The low rate of exclusive breastfeeding in Nigeria may, in part, be due to traditional beliefs, practices and rites. For example, in Yoruba and Bini communities, Davis-Adetugbo

(1997) cited in Agho, Dibley, Odiase, & Ogbonmwan, (2011) says "exclusive breastfeeding is considered dangerous to the health of the infant who is thought to require water to quench thirst or stop hiccoughs". Furthermore, because the majority of women deliver outside health facilities across the community, the Baby-Friendly Health Initiative strategy alone may not have a positive effect on exclusive breastfeeding rates (Agho et al 2011)

As such, radio programmes, for instance, should centre on teaching the community women that breastfeeding is a key tool in improving child survival and exclusive breastfeeding for the first six months of life can avert up to 13 per cent of infant mortality (UNICEF 2008).

Therefore, for such health programmes on radio to be effective, they need to influence nursing mothers and health care providers to modify their behaviours in ways that will promote healthier lives. This is in order to correct some traditional belief as Umoh et al (1996) explains that the divination system through which the oracle (Babalawo in Yoruba, Dibia in Ibo, Boki in Hausa etc) communicates messages between the people and the gods of their fore-fathers is still practiced. The importance of this is that for those who believe, information given by the oracle greatly affected their lives and behaviours. Therefore, this can influence their attribution of illness.

As such, radio health programs on infant mortality must work to influence nursing mothers to take preventive action at the household level, and build effective community support for health-seeking behaviours. This would go a long way in changing the attitudes and behaviours of the community's attribution to illnesses and also reinforce the desired healthy behaviours of nursing mothers.

1.2 STATEMENT OF THE PROBLEM

The purpose of the family as a social institution in all societies whether simple or complex is to procreate in order to perpetuate the society by providing it with new members. And also to protect the child until he/she is able to take care of himself/herself and to train him/her in socially

acceptable behaviour and norms. In African societies, the duty of taking care of infants usually rests on women. Thus Palmer (2001) opines that women in the traditional society were by social and physiological make-up responsible for child rearing and home keeping.

The reports of infant mortality abound in our newspaper reports, radio, televisions and oral media. Hornby (2000) reports that every year, nearly 11 million children die before reaching their fifth birthday; and most often they die within their first year of life. And most of these deaths take place mainly in developing countries of Africa, Asia and Latin America. This is very worrisome. Also, 340,000 infants die every year during delivery and shortly afterwards especially if the mother dies in child birth (WHO, 2006).

In Nigeria, for instance, it was reported from the National Demographic Health Survey (NDHS) (2008) that the infant mortality rate was 75 per 1,000 live births on average. The data were presented as follows: NDHS (2003) 100 per 1,000; 1990 was 87 per 1000 and 1999 was 75 per 1000. This tended to show that infant mortality is more or less on the increase in Nigeria.

The challenges became what are the strategies and programmes for empowering nursing mothers to reverse this trend in our society. Despite the involvement of government and non-governmental organizations in encouraging mothers to practise exclusive breast feeding, the trend continue to worsen. This therefore leads to increased infant mortality rate in the country. It is believed that this trend could be reversed. Slusser & Lange (2002) have suggested exclusive breast feeding among nursing mothers to the babies for six months. Yet this has not worked as some mothers fail to give the natural milk to their babies up to this recommended time, mainly because many employers and bosses frown at mothers coming to work with their babies and this disturb the nursing mothers psychologically; hence they resort to giving their babies industrial and artificial cow milk instead to lessen their problem.

Similarly, the media have been in the forefront for the campaign on meeting the 2015 target of the Millennium Development Goals (MDGs) in Nigeria, of which radio have identified with. Thus, Goal (4) of the MDGs which directly addresses the reduction of infant mortality by

two thirds between 1990 and 2015, makes it expedient for an evaluation of radio programmes as a campaign tool for empowering nursing mothers particularly and the public in general on infant health.

1.3 AIM & OBJECTIVE OF THE STUDY

The main objective of the study is to examine the role of radio programmes in empowering nursing mothers to curb infant mortality in Kaduna state.

1.3.1 SPECIFIC OBJECTIVES OF THE STUDY

1. To determine the extent of media coverage on infant mortality in Nigeria;
2. To show the role of radio programmes in empowering nursing mothers about infant illnesses;
3. To find out if radio stations in Kaduna state package relevant programmes to empower nursing mothers, such as the practice of exclusive breastfeeding, immunisation and etc;
4. To identify the problems associated with infant mortality and the role of radio programmes;
5. Suggest communication improvement measures to reduce infant mortality in Kaduna state.

1.4 RESEARCH QUESTIONS

The study shall attempt to answer the following questions:

1. Is the media effective as a medium of educating nursing mothers about infant illnesses?
2. What are the problems militating against the use of radio in solving the problems of infant mortality?
3. Are radio stations in Kaduna state packaging relevant programmes to empower nursing mothers such as the practice of exclusive breastfeeding, immunisation and etc?
4. What roles are radio programmes playing in addressing the problems of infant mortality?

5. How can relevant radio programmes create the necessary awareness to reduce infant mortality in Kaduna state?

1.5 SIGNIFICANCE OF THE STUDY

The study seeks to contribute to knowledge on areas of infant health and communication measures to empower nursing mothers in addressing the scourge of infant deaths in Kaduna state, and Nigeria as a whole. There is a dearth of research from the perspective of communication as it relates to infant health in Nigeria. Therefore, this study becomes imperative at a time like this that Nigeria is seeking to meet the MDGs target of 2015.

The result of the findings shall educate women generally on the best practices for the upkeep and growth of their infants. Thus, it would encourage media practitioners to direct more attention and coverage to maternal and child health issues particularly infants as it pertains to the MDGs Goal 4.

Nursing mothers would also be empowered to be proactive in the fight against infant mortality in Nigeria which would go a long way in improving the child health status of the country. Hence, the study revolves around the family, it would be relevant to all Nigerians seeking to have children in future.

1.6 SCOPE OF THE STUDY

The study shall focus on nursing mothers in Kaduna state and using radio programmes to empower them in the fight against infant mortality. NDHS (2008) revealed that "Kaduna State has high infant mortality rate of 115 per 1,000 live births and a burden of disease profile". The scope shall cover FRCN and KSMC vis-à-vis Supreme FM, Karama FM, Radio Nigeria Hausa Service and KSMC AM and FM stations within Kaduna state. Along with seven general hospitals vis-à-vis, Dr. Gwamna Awan Gen. Hospital, Kakuri; 44 Armed Forces Reference Hospital, Mando, Hajia Gambo Sawaba Gen. Hospital, Kofar-Gayan; General Hospital, Giwa; General

Hospital, Kafanchan; General Hospital, Makarfi; and ABU Teaching Hospital, Shika; in different local government areas of Kaduna State.

Kaduna state shall provide a comprehensive study area of infant mortality and using relevant radio programmes to empower nursing mothers.

1.7 LIMITATIONS OF THE STUDY

The major limitation in the review of relevant literature is the dearth of literature in the humanities as regards infant mortality and empowering nursing mothers. Also, in the pilot study, the midwives/nurses refused to grant the researcher interview in order to test the validity and reliability of her instruments. Also, most women found on the streets in the course of the study did not accept to grant the researcher interview or answer questionnaires as it looked sort of suspicious to them. Therefore, the major limitation of the study is that nursing mothers outside the hospital facilities could not be reached as they are scattered all around the city of Kaduna state. And because of the literacy level of the populace, most nursing mothers refused to cooperate with the researcher.

1.8 DEFINITION OF KEY TERMS

All key terms used in this study are defined within the context for which they were used in order to give a proper understanding of how they operate.

Radio Programmes: specific radio programmes that focuses on maternal and child health in the radio stations broadcasting in Kaduna state.

Radio Stations: FRCN and KSMC that include Supreme FM, Karama FM, Radio Nigeria Hausa Service and KSMC AM and FM stations in Kaduna state.

Nursing Mothers: are lactating women caring for infants not more than one year old.

Infant Mortality: is the death that occurs among children before their first birthday.

Empowerment: is the required information necessary to equip nursing mothers on how to avert infant deaths.

Behaviour Change: improved behaviour among nursing mothers in the different communities of Kaduna state on infant health.

Cultural Beliefs: the belief that the death of an infant is caused by some sort of divinity like the anger of gods, an ‘ogbanje’ child that is best to be left to die, the dictates of village ‘oracle’ or priest and similar beliefs.

CHAPTER TWO
LITERATURE REVIEW

2.1 THE TREND

This chapter shall review relevant literature in order to aid the researcher have a clear-cut background knowledge of the theme of the study. Nevertheless, every year, nearly 11 million children die before reaching their fifth birthday, and most of them during their first year of life. Ladipo (2009:11) corroborates this fact and avers that "most of these child deaths are in developing countries like Nigeria; in which more than half are due to acute respiratory infections, diarrhoea, measles, malaria, and HIV/AIDS, while malnutrition contributes about 54%".

As such, radio programmes as it relates to infant health would go a long way in providing and enhancing access to necessary information and give a voice to the voiceless in terms of empowering nursing mothers. This can be done when the radio communicates educative messages to nursing mothers on how to prevent and respond to common illnesses, including knowing when to seek care and follow treatment advice given by health experts on radio broadcasts.

2.2 RADIO AS A MASS MEDIUM IN NIGERIA

Onabajo (2004) cited in Babafemi (2009:139) sees radio as "sound which is instantaneously transported from one place to another by the use of electromagnetic waves". While, Folarin (2000:36) adds that radio broadcasting is the use of electromagnetic waves to transmit information, education, and entertainment in the form of sound signals (alone) for simultaneous reception by large heterogeneous and scattered audiences, either individually or in groups, using appropriate sound receiving apparatus".

However, from its humble beginning, radio has grown and stood the test of time by reinventing itself despite the routine threats that latest invention and technology has brought. Babafemi (2009) explains that threats like television, the theatre, live concerts of musicians that

pull crowds, the invention of digital satellite television which is so popular today, webcasting, blogging on the net, even placement of television screens in cars which today is the latest spec and iPods for music, all have not been able to efface radio. Broadcasting truly have advanced that radio can be listened to via satellite or on the internet.

The potential of radio in reaching millions of people simultaneously and with immediacy have had profound effects on the attitudes and behaviours of a society. Izuora (1993) cited by Okiyi (2007:121) believes that "the radio undertake functions that engender developmental progress and encourage social change". This is why Okiyi (2007:121) citing Abubakar (1993) states that "news is the most important single programme on both radio and television". Because in every society people want to know first what happens in their immediate environment, why it happens, when it happens, how it happens, and the consequences of that event; this is to equip the basic human instinct for any eventuality that may arise from the occurrence (op cit).

For Onabanjo (2000), "talk programmes are elemental in radio programming, and most other programmes evolve through talks, and the producers of talk programmes should be led by the talk activity of his own people". And the producer should attempt to exploit the divergent cultural views of his people through programming, especially in their local languages. This is to enable them harness their resources rather than alienate them. Asema (2011) concludes that "radio remains a very important tool of development in the rural areas because of its popularity, cheapness and can operate easily on ordinary dry cell batteries without electricity".

Again, the saliency of the message becomes more so when it is culturally administered, and put across in a format that will appeal to the target listener/audience.

According to Ladele (2010:12), radio broadcasting was introduced into Nigeria by the then British Colonial authorities in 1933. One of its main tasks was to relay the overseas service of the BBC through wired systems with loudspeakers. This service was called Radio Diffusion System (RDS). The RDS became the Nigerian Broadcasting Service (NBS) in April 1951. By 1957, The RDS underwent a name change and became the Nigerian Broadcasting Corporation

(NBC). In 1978, the Nigerian Broadcasting Corporation was re-organised to become the Federal Radio Corporation of Nigeria (FRCN) (op cit).

2.3 THE USE OF RADIO FOR COMMUNICATION AND DEVELOPMENT

Okiyi (2007:119) citing Nwosu (1990:17) observes that "development experiences in other parts of the developed world have continued to point to the fact that communication is central to rural and national development". By implication, development activities are usually rural based, especially in developing countries like Nigeria. In effect, the media according to Folarin (1998) cited by Okiyi (2007:120), should accept and help in carrying out the special development tasks of national integration, socio-economic modernisation, promotion of literacy and cultural creativity. And also, local media should give priority to local cultures and languages.

Okiyi (2007:120) further observes that

> communication experts have argued that for any development effort to succeed, the people must be provided with adequate information that will enable them to understand the significance of the project to their lives and then take an informed decision either to take part, or not. Here, radio is believed to be a resource required and utilised in order to make an informed decision.

As a result, the ability of the media to broadcast relevant messages to the specific audience would enable such to reach decisions which would ordinarily impact on their lives and the environment they are located in.

Okiyi (2007:120) cited Okonkwor (1995) observes that development is enhanced when people have access to information that will enable them discern and choose for the improvement of existing conditions. For developmental communication to be effective, it should provide information about development projects and possibilities in response to local needs and interest of the people.

With proper information, people are able to adapt and change their world views, previously held, to achieve an attitude change. The implication of all these is that the roles of the

mass media are pivotal and indeed connote the rate at which development may occur, in a given society. This becomes moreso when specific media programmes are targeted at a specific audience to achieve specific goals (Okiyi 2007:121).

As Schramm (1964) observes that "the mass media can create a climate for development… they can contribute substantially to the amount of information available to the people of a developing country". The mass media therefore makes an effort to record and influence the behaviour of individuals and groups in the society of which they are a part of.

Thus, sustainable rural development in Nigeria has come to be seen as the centre-piece or core effort at national development. Kur (2008:56) sees it as the aim of meeting the needs of the present generation without compromising those of the future generations. In this regard, Eboh (1995:5) cited by Kur (2008:56) explains it as the "management and conservation of the natural resource base, and the orientation of technological and institutional change in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generation". As such, sustainable development aims at addressing critical problems in the rural areas such as widespread poverty, illiteracy and human misery.

2.4 MEASURING INFANT MORTALITY RATES

Infant mortality rate is an important indicator of the health of a nation or community because it is associated with a variety of factors such as maternal health, quality and access to medical care, socioeconomic conditions, and public health practices (NCHS 1990).

To buttress this, the UNDP (2007) adds that infant and child mortality rates are basic indicators of a country's socio-economic situation and quality of life. The rates are important for identifying population groups at risk; planning, monitoring, and evaluating population and health programmes and policies; and monitoring progress towards the Millennium Development Goal to reduce child mortality by two-thirds by the year 2015 (NDHS 2008).

Thus, the National Centre for Health Statistics defines infant mortality as the death of an infant before his or her first birthday. The infant mortality rate per 1,000 live births is computed by dividing the number of infant deaths for a given period by the number of live births for the same period and then multiplying by 1,000 (NCHS 1990).

Additionally, Jacksonville Community Council Incorporated (JCCI 2008) explains that the Infant Mortality Rate (IMR) measures the number of live-born children who die before their first birthdays, expressed as a rate per 1,000 live births. Within the definition of infant mortality, distinctions are made according to the point at which the baby dies. JCCI (2008) explains it further as: neonatal death is one that occurs within the first 27 days after birth; post-neonatal death is one that occurs from day 28 to day 364; foetal death is one that occurs after the 20th week of gestation (pregnancy).

The maternal, newborn and child health status in Nigeria is a major focus with respect to the Millennium Development Goals. In September 2000 the United Nations Millennium Declaration was signed by 189 countries. Its aim was that poverty eradication and sustainable development should be achieved in the world by 2015 (Count-down Strategy 2010). This resolution listed a total of eight goals of which Goal 4 directly addresses the issue of child mortality (Nigeria MDGs 2010-2015).

MDGs Goal 4 is to reduce child mortality and the target is to reduce by two thirds the under-five mortality rate by 2015. The current rate of newborn mortality put Nigeria way off-track to achieving the MDGs 4. Analysis of NDHS (1990-2008) data shows that there has been no appreciable reduction in either under-five or infant mortality rates in Nigeria. Nwosu et al (2009:15) projects that if the current trend continues, Nigeria can only hope to achieve an under-five mortality of 176 per 100 live births by 2015, more than twice the MDGs target of 77 per 1000 live births.

2.5 THE USE OF STRATEGIC COMMUNICATION IN RADIO PROGRAMMES

The Progressive Communicators Network (PCN 2007) sees strategic communication as involving the greatest degree of direct involvement with communities by developing the ability of grassroots organizations to effectively use the media. In empowering nursing mothers to fight infant mortality, strategic communication can be said to be involving nursing mothers through the use of radio programmes to be well informed about infant deaths in the country and adopting measures to address the trend. Here, the health sector is a stakeholder, thereby making health communication a part of the communication strategy.

To this end, The National Cancer Institute and the Centres for Disease Control and Prevention (2000) defines health communication as the study and use of communication strategies to inform and influence individual and community decisions that enhance health. The essence is to bring about change and development that would better the lives of the people in the community. Therefore, development cannot be separated from strategic communication as it is intended to empower people to tackle a perceived problem in the community, state or country in which it is being applied. Empowerment here according to Mozammel & Schechter (2004) means the expansion of assets and capabilities of poor people to participate in, negotiate with and hold accountable institutions that affect their lives. It means giving people access to voice and information, greater social inclusion and participation, greater accountability, and organizational strength. As such, the human development angle comes to bear which is at the centre of all strategic planning, programming, organising all communication networks and medium to effect the desired change.

In furtherance of this, Anyaegbunam, Mefalopulos & Moetsabi (2004:6) explains that human development is the process of enlarging the capabilities, choices and opportunities of people, especially the rural and the poor, to lead a long, healthy and fulfilling life. This is the crux of the strategic communication targeted at human development. In other words, human development cannot be separated from strategic communication because the process includes the

expansion of people's capacity and skills to gain access to and control over factors that affect the basic needs essential to their lives. These needs can include freedom from poverty, food security, availability of safe drinking water and improved sanitation, access to primary health care and basic education as well as the opportunity to participate effectively in the social, economic and political affairs of the society and nation.

Human development puts people's empowerment at the centre of development. Anyaebunam et al (2004) says it aims to enable people to use their capabilities and resources to the fullest without destroying the richness of their cultural and natural environment. It also recognises that not much can be achieved without the improvement in the status of women and the opening up of opportunities to them.

Thus, in Anyaebunam et al (2004) words, "communication for development is the systematic design and use of participatory activities, communication approaches, methods and media to share information and knowledge among all stakeholders in a rural development process in order to ensure mutual understanding and consensus leading to action". The aim is to facilitate people's participation at all levels of the development effort to identify and implement appropriate policies, programmes and technologies to prevent and reduce poverty in order to improve people's livelihood in a sustainable way. Thus, participation of all stakeholders is very crucial if the change and development must be sustainable.

2.6 INFANT MORTALITY RATES IN NIGERIA

According to the Federal Ministry of Justice Report (FMJ 2008), in Nigeria, male child has greater probability of dying as an infant or as under-five than his female counterpart, 92 versus 79 per 1000 at infant and 144 versus 131 per 1000 live births at under-five, respectively. Infant mortality rate decreases from rural to urban sectors of the population (94 to 62 per 1000), from the non-educated to secondary school or higher educated mother's (94 to 63 per 1000), and from the poorest to the richest households (101 to 64 per 1000). There is considerable geopolitical

zonal variation in infant mortality rates from 68 per 1000 in the South West to 101 per 1000 in the North West; North-South disparity is also evident (MICS3 2007 cited in FJM 2008).

Many mothers are also ignorant of some preventive measures such as immunizations and vaccines. The immunization rate against diphtheria, pertussis and tetanus (DPT) for children between 12-23 months was about 54 percent in 2007. Many children in Nigeria die as a result of malaria, diarrhoea, tetanus and similar diseases. Most of these are preventable and curable diseases, but due to inadequate healthcare facilities and lack of money, far too many children die off from them. Like the grown-up population, many children also lack access to safe water and sanitation, which typically leads to several diseases (Ucha 2010:48).

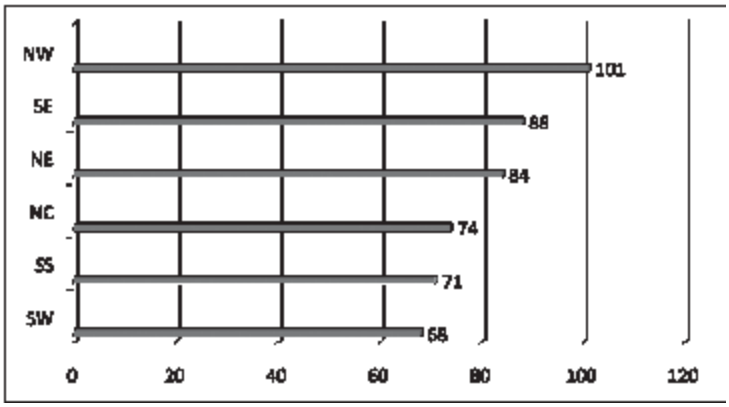
Nwosu, Odubanjo & Osinusi (2009) concludes that Nigeria has the highest absolute number of newborn deaths among countries in Africa, accounting for 255,500 of the 912,000 neonates who die annually in Africa. With a neonatal mortality rate of 48/1000 live births, and over 700 newborn deaths each day, Nigeria ranks seventh among the ten African countries where newborns have the highest risk of dying (op cit). Neonatal deaths in Nigeria account for a quarter of under-five mortality.

Nwosu et al (2009) further adds that infectious conditions such as septicaemia, pneumonia and meningitis account for the greatest proportion (42%) of deaths within the first month of life. Delivery-related complications, chiefly asphyxia and birth trauma account for 32%, and pregnancy-related complications such as eclampsia, malaria, anaemia, and malnutrition for the remaining 26% of neonatal deaths.

According to the Multiple Indicator Cluster Survey of 2007 cited in Nwosu et al (2009),

> the Infant Mortality Rate in Nigeria is 86 per 1000 live births. As with maternal mortality, this figure varies widely from one geographical zone to another with the highest rates in the Northwest (101 per 1000 live births) and the lowest in the Southwest (68 per 1000 live births). The major medical conditions leading to infant mortality in Nigeria are acute respiratory infections, diarrhoeal diseases, measles and malaria. Deaths of neonates constitute about a quarter of all infant deaths in Nigeria.

The table below shows the zonal distribution of Infant Mortality Rate per 1000 Live Births



Source: (MICS 2007) cited in Nwosu et al (2009).

Moreover, there is no reliable age distribution of mortality for Nigeria to use in deciding the right family that fits. Apart from this, Nigeria is a country which has failed to use her enormous resources to uplift the living standard of her citizen where 64 percent of people still live below the poverty line, and about 28 percent the total population are unable to read or write (SOWC, 2009) cited in Mojekwu & Ajijola (2011).

2.7 CULTURAL ATTRIBUTIONS TO INFANT MORTALITY IN NIGERIA

The prevalence of infant mortality in developing countries, especially Nigeria, has caused a lot of concern with regards to the MDGs. This Umoh, Okesina & Dimkpa (1996:102) attributes to parents' behaviour and inadequate health-care facilities. They explain that attributions of causes of infant mortality refers to what people perceive to be the causes, for instance, most of such causes are often culture-related.

According to UNICEF (1990) cited in Umoh et al (1996), many maternal and child health-care problems are embedded in the cultural beliefs, values, practices and norms of the community. Here, many parents believe that the death of their infants is caused by external factors such as care givers, relatives, anger of gods etc. Therefore, such unreasonable beliefs have made the task of reducing infant mortality, very difficult especially in the developing countries of which Nigeria is one. As a result of such belief, most parents sometimes find it difficult to accept modern medical care for their infants.

UNICEF (1990) further corroborates that the socio-cultural factors that influence infant mortality abound. It is believed that tribal marks which pose health hazards is one of the practices influenced by culture, which is observed in some parts of Nigeria. The type of incision made for scarification especially with unsterilized razor blades may lead to infant death.

Furthermore, it was discovered that an evaluation mission report on Nigeria's experience with Universal Child Immunization (UCI) found that considerable resistance to National Programme on Immunization (NPI) namely that a vaccinated child may not be able to have children when he/she comes of age (UNICEF, 1990) cited in Umoh et al (1996). It also found that due to poor administration of BCG, which leads to abscess, most groups of people, notably, farmers, traders and practitioners of traditional religion have withdrawn from the idea. As a result, many infants are still dying of preventable causes of illness.

Moreover, some of the factors causing variation in infant-child mortality rates include sex of the child, age of the mother at time of birth, birth interval and size of child at birth. Also, infant child mortality rates were highest amongst mothers in the age group of 40-49, followed by those in the under 20 age groups (UNICEF, 1995) cited in (Umoh et al 1996). The report further stated that the less frequent births occurred, the lower the mortality rates.

Furthermore, Umoh & Okesina (1995:238) reveals that the act of attributing causality to internal or external factors have no scientific basis. For example, the "Ogbanje" as supposedly a child who dies repeatedly and returns to the mother to be reborn, is one of such superstitious belief. They maintained that people's perception about an Ogbanje child is that it is almost impossible to bring back again.

2.8 CHALLENGES OF INFANT MORTALITY IN NIGERIA

There are several underlying factors that contribute to the high maternal and infant mortality rates in Nigeria. These according to Nwosu et al (2009) includes lack of antenatal care, a low proportion of women attended to by skilled birth attendants, and delays in the treatment of

complications of pregnancy. In the case of post-neonatal mortality, malnutrition is a major factor, underlying about half of all infant deaths (op cit).

Other indirect factors that affect both maternal and infant mortality rates include maternal educational level, cultural practices, and poverty. According to MICS (2007) cited in Nwosu et al (2009), there is a strong relationship between infant mortality and socio-economic status. Across Africa, the neonatal mortality rate per 1000 live births is 59 in the lowest income quintile and 23 in the highest income quintile. The IMR in the highest income quintile was 54 per 1000 live births while in the lowest income quintile it was 101 per 1000 live births, with a clear trend of decreasing mortality as wealth index increases.

According to the NDHS (2008), prenatal attendance is approximately 58%, only 35% of women deliver in health facilities, and most women deliver at home without a skilled attendant. Up to 22% are delivered by traditional birth attendants, and only 42% receive postnatal checkup after delivery. It is therefore not surprising that the National Demographic Health Service (NDHS) of Nigeria has recorded a maternal mortality ratio (MMR) of 545 per 100 000 live births, although this figure varies tremendously. The average MMR estimated by WHO, UNICEF, UNFPA, and the World Bank is 820, with a range of 460 to 1500. The NDHS also recorded an infant mortality rate of 75 per 1000 live births and an under-5-years mortality rate of 157 per 1000 live births.

2.9 RADIO PROGRAMMES FOR REDUCING INFANT DEATHS

Radio can be described as an ideal means of mass communication in a third world country like Nigeria because it provides access to communication for a large number of people, both literate and non-literate, and it is very cheap to own and maintain without depending on electricity supply (Moemeka, 1986). Also, Folarin (1990) cited by (Okpoko 2012) notes that radio messages, apart from breaking the barrier of illiteracy, reach all people without discrimination and demand less intellectual exertion from the listener than print media. This can facilitate the process of nation

building by inviting people with similar and opposing views to have interaction, debate and exchange ideas, out of which other people will learn and channel a course for community development and national consensus.

Okpoko (2012:18) reveals that the other tiers of the broadcasting institution cannot do the work alone or satisfy the broadcasting needs and aspirations of the people because of their attention and interest to satisfy the needs and interests of their owners. This accounts for the reason why many government policies, programmes and projects fail because they were not well interpreted to the people, hence the people could not understand them and therefore cannot accept and support what they did not understand. The meaning is that people hardly know what and how they can benefit from such government policies and programmes, especially the ones they did not partake in initiating, formulating or in the plans; and furthermore, adequate explanation or interpretation was not given to them by the media. Hence, Ezinwa (2010:14) explains that it is only a community radio that can handle adequately the bridging of rural information gap and get to the people since it is a radio of the people; and its programmes by the people; and directed to the people and the benefits for the people.

Therefore, community radio is an important tool for reducing infant mortality by propagating messages targeted at the family in order for improved behaviour to be achieved. The Task Force Report (2005) in Delaware proposes that radio programmes should target risks during specific stages in women's lives; involve partners and husbands in education and support tactics; continue to address social issues that contribute to the deaths; and adopt a "life course" approach to women's health based on specific life stages. These include: prenatal, neonatal and postnatal and inter-natal stages. This is because the prenatal period is an important time to address complications that may arise during pregnancy. However, the neonatal intensive care units play a crucial role in providing the care and therapies necessary to sustain premature and otherwise fragile newborns. Here, the radio programmes would educate parents about placing infants to sleep on their backs to prevent Sudden Infant Death Syndrome (SIDS). Also, inter-natal

education is very important because an adverse pregnancy outcome is the highest risk factor for a second adverse pregnancy outcome. As such, the radio programmes would continue to interview health experts in the community who would continue to throw more light in this regard.

2.10 EFFORTS BY THE FEDERAL GOVERNMENT OF NIGERIA

The Child's Rights Act (2003) Section 13 provides for the child's rights to health and health care services and imposes the duty on all levels of government and relevant bodies responsible for the healthcare and welfare of a child. It states that every child is entitled to enjoy the best attainable state of physical, mental and spiritual health. The Act mandates the reduction of infant and under-five mortality rates and the provision of necessary medical assistance and child health-care services to all children with emphasis on the development of primary health care, and the combating of childhood diseases and malnutrition within the framework of primary health care through the application of appropriate technology.

However, according to the Federal Ministry of Justice (2008), Nigeria has developed a number of policies, plans and strategies that provide enabling environment for child survival and development. These include: National Child Health Policy of May 2005, National Guidelines on Infant & Young Child Feeding (2005), National Policy on Infant & Young Child Feeding (2005), National Strategic Plan for Implementing Global Strategy on Infant & Young Child Feeding (2006) on Infant & Young Child Feeding (2005), and National Maternal, Newborn and Child Health Strategic Document (2007).

Ultimately, Section 13 of the Childs Right Act, 2003 guarantees every child the enjoyment of the best attainable state of physical, mental and spiritual health. In line with this, the Federal Government of Nigeria cited in (FMJ 2008) introduced some programmes that include: Integrated Management of Childhood Illness Strategy, the National Programme on Immunisation, the Baby-Friendly-Hospital Initiative, HIV/AIDS programmes, Adolescent Reproductive Health Guidelines, Micronutrient Control Programme, the Onchocerciasis and Guinea Worm Control

programmes, the Roll Back Malaria Initiative, the Bamako Initiative and also the role of the National Agency for Food, Drugs Administration and Control (NAFDAC) is combating the menace of fake and sub-standard drugs, contributes to child survival.

Despite these vertical programmes, marginal improvement has been recorded in terms of childhood mortality rate. In order to make significant progress in reduction of childhood mortality rate, radio programmes can be very instrumental in achieving success.

2.11 THE BENEFITS OF BREASTFEEDING ON RADIO

Lactation is the physiological completion of the reproductive cycle. The mother's breasts, body, and psyche prepare for lactation during pregnancy, and the newborn infant is prepared to suckle at the breast at birth. Breastfeeding delivers the ideal balance of nutrients, confers many forms of immunity, and creates the opportunity for maternal bonding with the infant (Heinig & Dewey, 1996) cited in (Slusser & Lange 2002). Human milk is the ideal food for promoting growth and development in the human infant. For a full-term, healthy infant, breast milk is the only source of nutrition needed for the first six months of life. Manufactured infant formulas attempt to reproduce the nutritional and physiological characteristics of human milk but differ considerably with respect to both nutritive and non-nutritive factors. Breast milk is also easier to digest and absorb than other milk. A mother's milk contains omega-3 fatty acids and other forms of fat that are important for brain growth and development (Slusser & Lange 2002:2). This analysis can be promoted by radio programmes to enable nursing mothers understand the benefits of breastfeeding to their infant health.

Breast milk provides complete nutrition for the infant, sustaining optimal hydration, nutrition and growth in the first six months of life. Breast milk confers a mother's immunity to disease that infant formulas cannot match. Slusser & Lange (op cit) explains that breastfed children are provided with significant protection from numerous infectious diseases, in particular, diarrhoea, otitis media, lower respiratory infections, meningitis, botulism and urinary tract

infections. Breastfed babies also have a reduced risk for chronic diseases, including some food allergies, Type I Insulin Dependent Diabetes, Crohn's disease, lymphoma, eczema, asthma and obesity. There has also been shown to be a reduced risk of Sudden Infant Death Syndrome (SIDS) among breastfed infants. In addition, because breast-milk does not require preparation, it is bacteriologically safe and always fresh.

The Cognitive/Developmental Benefits to the Baby according to Slusser & Lange (2002) includes: Improved IQ, Reduced risk for infant eye disease (retinopathy of prematurity), Improved performance on developmental assessments including standardized tests of reading, mathematics and scholastic ability, Better performance rating in reading and mathematics by their class teachers, Higher levels of achievement in school-exit examinations. Here, radio programmes can be used to advance these benefits to communities.

2.12 RADIO FOR IMPROVING THE PATTERNS OF BREASTFEEDING

Hornby (2000) defines breast feeding as an act of feeding from the breast. According to Makanjuola (1996) cited in Odu & Dotun (2007) breast feeding is the best type of feeding for infants particularly during the first six months of the child's life; because it provides the baby with the essential nutritional requirements when exclusively fed with the breast milk.

The Baby – friendly Hospital Initiative Newsletter 1998 (BFHI) cited by Odu & Dotun (2007) indicated that everywhere in the world, the positive advantages of breast feeding make it the best form of infant feeding. In the developing countries, it is not just a desirable option, but a necessity. It is essential for a child's survival and normal development. Breast feeding act occurs at both conscious and unconscious levels of human reasoning. This could be proved when one watches children at play particularly the female ones tend to play with their toys as if they are caring for living human beings. This is extended to animals too that breastfeed their offspring without any prior practice. Before the advent of artificial formulae, mothers depend solely on the

breast milk for feeding their infants. The demand of civilization has made mothers to partially uphold this age long practice (Odu & Dotun 2007).

Despite the involvement of government and non-governmental organizations in encouraging mothers to practise exclusive breast feeding, some still fail to give the natural milk to their babies due to some reasons proffered by Hornby (2000) such as nature of mother's work, her socio-economic status, not enough milk, cultural beliefs, interest in retaining youthful outlook and many others. Many employers and boss frown at mothers coming to work with their babies which disturb the nursing mothers psychologically and hence resolve to giving the babies artificial milk to lessen their problem. This was corroborated by Odu & Dotun (2007) that mothers of high socio-economic status hold the erroneous belief that their affluence can be proved in the purchase of costly imported feed for their babies. Some literate mothers see breast feeding as an archaic process particularly when in transit or outside their homes for any social function. They feel it belittles their status, breast feeding babies in the public or that urbanization erodes breast feeding and hence, should be relegated to the rural dwellers (Odu & Dotun 2007).

WHO & UNICEF (1998) pointed out that the major clinical paediatric problem during the first few months of life involves the infant nutrition. The calorific requirements are largely provided by breast milk and partially by cow milk which must have been altered in composition to create a nutritious product similar to mother's milk. During the first two to three months of life, breast milk will usually fulfil all the nutritional needs of the infant.

Brown (1988) cited in Odu & Dotun (2007) discovered that babies were deprived of God's gift which is the breast milk and that those who have the opportunity to breast feed, do not do it properly. Heiser (1995) opined that increased breast feeding would save health care costs in any country. She went further to say that breast feeding helps to protect the baby from diseases like measles and pneumonia and infections especially asthma and eczema.

Although there has been progress over the past 15 years, UNICEF (2008) says only 38 per cent of infants under 6 months of age in the developing world are exclusively breastfed. In

Nigeria the figure is even lower, rather than increase the gains previously made in exclusive breastfeeding are being eroded. In 1999, 22% of children were exclusively breastfed. This figure came down to 17% in 2003, today only 11.7% of children are exclusively breastfed for six months in Nigeria (UNICEF 2008).

Recent scientific studies according to UNICEF (2008) have found that education and support for mothers significantly extends the number of months that mothers' breastfeed, and is especially helpful in promoting exclusive breastfeeding. Other studies have shown that counselling and support in health facilities have led to increases in the number of mothers who initiate breastfeeding within the first hour of birth (Lancet 2000) cited in (UNICEF 2008).

Exclusive breastfeeding for the first six months of life reduces infant mortality linked to common childhood illnesses and under nutrition. UNICEF (2008) reveals that breastfeeding can reduce the number of deaths caused by acute respiratory infection and diarrhoea - two major child killers - as well as from other infectious diseases. It also contributes to the health of mothers, and creates a bond between the mother and child. Appropriate infant feeding can save lives, ensure optimal growth and development, and contribute to the achievement of the Millennium Development Goals (UNICEF 2008).

2.13 RADIO PROGRAMMES FOR EMPOWERING NURSING MOTHERS

Radio programmes is an appropriate medium for reaching rural areas which at the moment are still in the dark in terms of access to information via the mass media. This situation places the rural areas at a disadvantage vis-a-vis the urban areas. Okpoko (2012:40) opines that the rural areas as a result, is unaware and passive about government programmes and development projects instituted by government.

With programmes on radio, information is brought to the doorsteps of the rural dwellers, the illiterates and the poor, etc. The communication issues and activities brought to them ranged from trade, business, politics, government activities and entertainment.

Therefore, the relevant radio programmes can be used to empower nursing mothers at the grassroots level in the fight against infant mortality. Such programmes can be used to conscientise and raise the consciousness of nursing mothers. This is because in the rural areas, no development programme or project can succeed without effective awareness creation to the people of the area. The relevant radio programmes can serve as a source of cultural, political, educational, and enlightenment programmes for the people, leading them towards self-actualisation and the development goals of the general society. Thus, through songs, instructions, drama, music, education, etc, rural people can be effectively guided with direction on development programmes.

Radio maintains close contact with listeners thus helping to structure programme in line with the likes and needs of the people. The radio through the programme gives the people advice-on the spot advice and assistance on how to solve their social and economic problems as well as their agricultural problems through extension officers.

2.14 RADIO AND THE CHALLENGES OF WORKING NURSING MOTHERS

The purpose of the family as a social institution in all societies whether simple or complex is to perpetuate the society by providing it with new members, to protect the child until he is able to take care of himself and to train him in socially acceptable behaviour. In African societies the duty of taking care of infants usually rests on women. Thus women in the traditional system were by social and physiological make-up responsible for child rearing and home keeping (Palmer, 2001). However with the dawn of modernisation, it became difficult or almost impossible for some mothers to fully cater for their babies as it used to be. Several women became engaged in paid employment either because of economic reason or the need to improve their status (United Nations, 1995) cited in (Omotosho 2007).

Findings further show that mothers' workload in paid employment has significant relationship with the early initiation of complementary feeding (Omotosho 2007:3). This has

implications for the long-held traditional structure of the family more especially the physiological and psychological wellness of the baby. Children suffering from malnutrition became increased, leading to child mortality as a result of inadequate breast milk and mothers' attention and care.

One of the problems working mothers face is where to leave their children when they are away at work. The implications of this for the psychological and sociological wellbeing of the mother in the work place cannot be overemphasised (Mbilinyi, 1990 and UNO, 1995) cited in (Omotosho 2007). Reports indicate that women generally work longer hours than men in all regions (Sub Sahara Africa inclusive) and the number of hours outside the home is increasing (Anker 1994 and UNO, 1995) cited in (Omotosho 2007). This without doubt makes it important for them to have access to day care centre close to their work place. It appears that reverse is the case as they are still not able to get crèche centres of their choice within the work environment. United Nations has affirmed the importance of breastfeeding to infants at large in three key document provided by ILO (2005). These documents recognise the right of working mothers to breastfeeding their infants (ILO, 2005). Government in different countries have also taken a cue from these initiatives thereby stating the rights of infants and mothers to adequate and consistent information and support in child health and nutrition (UNO, 1995) cited in (Omotosho 2007). In Nigeria, several steps have been taken in this direction also especially with the promulgation of policy regarding work place crèche in 2001 (National Child Policy, 2006). But in practise, women employed in various workplaces face many different obstacles to breastfeeding, one of which is due to lack of information and access to well established and equipped crèche centre within the work environment (Oppong, 2001; Lashmi and Holla, 2004) cited in (Omotosho 2007). Some managers within some organisations make the matter worse with their attitude regarding nursing mothers. For instance, many employees don't allow mothers to be hampered with family responsibilities and most mothers don't usually have access to day care facilities due to distance barrier and this may of course hinder exclusive breastfeeding (Adepoju and Oppong 1998) cited in (Omotosho 2007). Here, radio programmes can as well introduce nursing mothers

to crèche centres around their workplace and where to get quality services in the area through advertising.

2.15 RADIO PROGRAMMES FOR NURSING MOTHERS IN KADUNA STATE

Okpoko (2012:48) concurs that radio for various reasons is considered to be the best at the level of economic development, for taking development education to the teaming population of Nigerians who live and work in the rural areas. Radio is cheap and has an immediate reach to the people. Hence, it can be seen as an appropriate medium for mass education. Message can get to the farthest part of the country even when the event is still unfolding and happening. It cuts across boundary of illiteracy and breaks the literacy barriers. There is no need to read and write before learning or listening and understanding the content of radio programme. Messages can easily be delivered in native languages.

Interestingly, Kaduna state is the third most populous state in Nigeria and is located in the North West geographical zone. It is the twelfth largest State in Nigeria accounting for some 5 percent (46,000 square kilometers) of Nigeria's total landmass. It is culturally diverse and has an estimated population of 6.06 million (2006 Census) and a population density of 130 people per sq km and an annual rate of increase of around 3 percent. The State has 23 Local Government Areas (LGAs) with 255 political wards and over 1000 health facilities (PATHS 2008:7).

However, Kaduna State has unacceptably high mortality rates and burden of disease profile. In 2003, the infant mortality rate (IMR) was 115 per 1,000 live births; under-five mortality rate (U5MR) was 205 per 1,000 live births and Maternal Mortality Ratio (MMR) was 980 maternal deaths per 100,000 live births. An alarming fact was that these figures represented a worsening trend over the previous five years. Corresponding figures for 1999 were 91, 191 and 950 respectively, according to the 2003 National Demographic and Health Survey (NDHS).

The leading causes of ill-health and death in children within the state were communicable diseases: malaria, diarrhoeal diseases, respiratory tract infections and childhood vaccine

preventable diseases topped the list. Mothers died frequently from complications of pregnancy and childbirth: anaemia, obstetric haemorrhage, obstructed labour, sepsis and other reproductive health problems. Malaria was associated with 70 percent of illnesses in pregnancy and though the use of insecticide treated nets (ITNs) was known to be an effective preventive measure, their utilisation was still low in the State. Other malaria preventive measures were not being utilised at all. Kaduna is situated in the epidemic belt of cerebro-spinal meningitis which has the highest fatality rate among the acute diseases; 84 cases of meningitis were reported in 2004. Kaduna's HIV/AIDS prevalence rate is 6 percent of the population of the State (KADSEEDS II, 2008-2010) cited in (PATHS 2008).

According to the World Bank Poverty Assessment Report (2006), approximately 41 percent of the Kaduna population are poor, and there is a high level of inequality in the distribution of wealth across the state. Poverty is associated with lower health status and increased vulnerability; the poor are far more likely to experience environmental and social conditions that contribute to poor health and an increase in risk of accident, injury, illness and death. For some, ill health is a direct cause of poverty, especially so when catastrophic expenditure is incurred in the event of a health emergency (e.g. such as a road traffic accident or a maternal complication).

The poor experience limited access to professional medical care, facilities and drugs. In the absence of other options, the poor tend to resort to traditional remedies or to the unregulated informal health sector when care-seeking, and are therefore prone to receiving sub-standard or ineffective care. Lack of affordability of health care is the main barrier of access to health services in many parts of Nigeria, closely followed by physical access barriers in some areas (World Bank 2006). Although the evidence base on the relationship between poverty and health in Kaduna is weak, it is likely that the costs associated with accessing health care, especially when combined with perceptions of poor quality care, has a major negative effect on the utilisation of public sector facilities.

However, with relevant radio programmes in the 23 local governments of Kaduna state, improvement can be made in addressing the trend. The position and the role of the mass media in the fight against infant mortality is central to improving the status of infant health in the country through vigorously developed programmes, adverts and jingles that could be placed in newspapers, magazine, television, radio and now the internet. Given the potential of the media to shape attitudes, values and perceptions of large number of people, social communicators have a responsibility to create clear messages on infant health and report them consistently.

2.16 USING RADIO PROGRAMMES TO IMPROVE BEHAVIOUR IN KADUNA STATE

Using radio programmes in the campaign on empowering nursing mothers against infant mortality in order to attain Goal 4 of the MDGs becomes imperative. The use of strategic communication on radio would further improve the status of infant health in the country and Kaduna state in particular, by educating nursing mothers about best practices in this regard. This is because, the media represent an institution so important to be called the 'fourth estate of the realm' after the executive, the legislature and the judiciary (Udeajah, 2004:02). And the radio is a part of the mass media which is transient in nature. As such, radio programmes would assume the role of informing, educating and interpreting infant health preventive care to nursing mothers and the public in general in order to change their ideology about infant mortality, particularly in rural communities where infant deaths are usually attributed to anger of gods and other cultural beliefs.

Relevant radio programmes in the 23 local government areas of Kaduna state would be particularly useful to disseminate educative messages on infant health to nursing mothers. This can be done by allocating more time and space to infant and nursing mothers' health and prioritizing the Goal 4 of the MDGs. Also, captivating radio programmes should be designed to encourage exclusive breastfeeding and their benefits to infant health should be reiterated. Specific days of the week in which hospitals organises antenatal classes should be chosen by the radio to create awareness to nursing and expectant mothers. Such programmes should be reserved to carry

only information on infant health and the first aid treatment to be given to infants when they show sign of some ailments that can lead to deaths as explained by medical practitioners. More interviews, magazine stories and chats with experts on infant health should be emphasised both in English and Hausa language within Kaduna state.

Also, radio stations should consistently grant health interviews to medical personnel to show new discoveries in terms of infant health and place the campaign strategies as part of their news item on daily basis through the use of jingles. Also, more educative programmes on infant health should be introduced and covered by the radio stations to further buttress the campaign on empowering nursing mothers. The government, civil society and non-governmental organisations should also identify with the campaign by identifying and designing more educative stories and images that are geared towards empowering nursing mothers in the fight against infant mortality.

2.17 THEORETICAL FRAMEWORK

The theoretical framework for this study is the **Development Media Theory**. The underlying factor behind the genesis of this theory is that there can be no development without media communication. However, the earliest theories were those propounded by Western theorists Siebert, Paterson and Schramm in their book *Four Theories of the Press* (1956). These were termed "normative theories" by McQuail (1987) in the sense that they "mainly express ideas of how the media ought to or can be expected to operate under a prevailing set of conditions and values." Each of the four original or classical theories is based on a particular political theory or economic scenario.

Suresh (2003) opines that under the four classical theories, capitalism was legitimized, but under the development media theory, or development communication theory as it is otherwise called, the media undertook the role of carrying out positive developmental programmes, accepting restrictions and instructions from the State. Here, the media subordinated themselves to

political, economic, social and cultural needs which led to the stress on "development communication" and "development journalism" (Suresh 2003).

Similarly, Althusser (1971) states that the theory seeks to explain the normative behaviour of the press in countries that are conventionally classified together as ‘developing countries’. There was tacit support from the UNESCO for this theory. McQuail (1987:121) sums up the tenets of the theory as follows:

- Media must accept and carry out positive development tasks in line with nationally established policy.
- Freedom of the media should be open to economic priorities and development needs of the society.
- Media should give priority in their content to the culture and language of the community.
- Media should give priority in news and information to link with other developing countries which are close geographically, culturally or politically.
- Journalists and other media workers have responsibilities as well as freedom in their information gathering and dissemination tasks.
- In the interest of development ends, the state has a right to intervene in or restrict, media operation; and devices of censorship, subsidy and direct control can be justified.

Having clearly identified the media’s role in development, the media is expected to be responsive to the development needs of the people and work with them to achieve such needs. This theory has influenced the operations of the mass media in many developing countries. In Nigeria, the media cover a lot of development issues on areas of health, education, agriculture and infrastructure. As such, applying development media theory to this study becomes relevant when talking in terms of improving the health status of infants and in relating it with Nigeria’s quest for achieving the MDGs by 2015. Similarly, relevant radio programmes is an essential tool of grassroots empowerment and development.

2.18 PHILOSOPHICAL ASSUMPTIONS OF THE THEORY

Ontological assumption believes that the theory is both determinists and pragmatist in approach. It states that the development problems are a result of prior historical, political and economic past but accepts that one is an active being capable of still influencing one's own destiny.

The epistemological assumption believes that the theory is scientific but it is not value free. Therefore, it is influenced by development needs. Whereas the axiological assumption says researches are intended to bring about developmental change, not for knowledge sake.

2.19 RELEVANCE OF THE THEORY TO THE STUDY

The topic under study is An Evaluation of Radio Programmes as a Tool for Empowering Nursing Mothers in the fight against Infant Mortality in Kaduna State. Empowering nursing mothers in this sense cannot be separated from development goals, which is an area of focus with regards to achieving the MDGs 4 target.

In looking at radio programmes, the researcher is referring to media contents that are geared towards empowerment of nursing mothers. Hence, the media must accept and carry out positive development tasks in line with nationally established policy, meeting the 2015 target of the MDGs 4 becomes a priority for the media. As such, development media theory is the most relevant to this study because the researcher is attempting to look at how radio programmes can be used to empower nursing mothers that would lead to an improvement in the health status of infants in Nigeria, with emphasis to Kaduna state.

2.20 WEAKNESS OF THE THEORY

Suresh (2003) says the weakness of the theory is that "development" is often equated with government propaganda. This is because government becomes the change agents and directs developmental efforts to sectors that favour her interest. Also, the theory gives power to the government in the interest of development to censor the media if the media fails to carry out its assigned development functions.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 THE METHOD

Research methodology can be referred to as the technique used in carrying out a research work. Thus, the researcher adopted the use of triangulation in the collection of data for the study. This segment discusses the methods and procedures used in the collection of data under research design, study variables, population of the study, area of study, sampling techniques, sample size, method of data collection, instrument of data collection and method of data presentation and analysis.

3.2 AREA OF STUDY

Kaduna State is one of the most populous states in Nigeria and is located in the North West geographical zone of Nigeria. The State has 23 Local Government Areas (LGAs) with 255 political wards and over 1000 health facilities (PATHS 2008). Also, the state has unacceptably high mortality rates and a burden of disease profile. In 2003, the infant mortality rate (IMR) was 115 per 1,000 live births, (NDHS 2003). KADSEEDS II, (2008-2010) cited in (PATHS 2008) attributes the leading causes of ill-health and death in children within the State to "communicable diseases: malaria, diarrhoeal diseases, respiratory tract infections and childhood vaccine preventable diseases".

Similarly, the World Bank Poverty Assessment Report (2006), indicates that "approximately 41 percent of the Kaduna population are poor, and there is a high level of inequality in the distribution of wealth across the state". Poverty is associated with lower health status and increased vulnerability; the poor are far more likely to experience environmental and social conditions that contribute to poor health and an increase in risk of accident, injury, illness and death. For some, ill health is a direct cause of poverty, especially so when catastrophic

expenditure is incurred in the event of a health emergency (e.g. such as a road traffic accident or a maternal complication). As such, the state provides a veritable area for the research.

3.3 RESEARCH DESIGN

The use of triangulation research method is both qualitative and quantitative in nature. Hammersley, (1989:1) sees qualitative method as using unstructured forms of data collection, both interviewing and observation and employing verbal description and explanations rather than quantitative measurement and statistical analysis. Leach (1968:175) explains that most aspect of culture is susceptible to being studied through the qualitative method. The method is extensively used in psychology, criminology, sociology, anthropology, and political science and in the medical field. It is relevant in any research that calls for insight into intimate relationships, behaviour of individuals in society and complex clandestine and sensitive social phenomena. Qualitative research provided the researcher in this study the opportunity to view existing work so as to seek data for solving the research questions.

On the other hand, Baran (2003) says quantitative research method utilise number based observations in the analysis of the research process. The three methods most common to this type of research are experimental, survey and content analysis. Here, the researcher adopted the use of survey method to reach the bulk of the study population i.e. nursing mothers. The survey method according to Wiseman & Aaron (1970) is for collecting and analysing social data via highly structured and often very detailed interviews or questionnaires, in order to obtain information from large number of respondents presumed to be a representative of a specific population. Also content analysis which Wimmer & Dominick (2003) says is a method of studying in a systematic, objective and qualitative manner for the purpose of measuring variables. Since radio programmes involves media content, hence content analysis was employed to examine the relevant radio programmes on infant health and how they impact nursing mothers.

3.4 STUDY VARIABLES

Central to this study are two variables; dependent and independent variables. Usually, the dependent variables rely on the independent variables to occur. In this study, the dependent variables have direct bearing on nursing mothers and their infants. Such variables include the age, educational level and status of nursing mothers that can determine how they react to media messages and care for their infants. Radio programme is the form of radio communication geared towards empowering nursing mothers in fighting infant mortality. In this study, empowering nursing mothers refer to the radio programmes that educate nursing mothers about natal care for their infants. Whereas, the infants are children from the age of one year and below. On the other hand, the independent variable is the role of the radio programmes in influencing nursing mothers' behaviour that prevents infant mortality. This refers to the power of communication to have an effect on the way someone or something develops, behaves or thinks without the direct use of force or coercion.

3.5 POPULATION OF THE STUDY

Babbie (2001) says a study population is that aggregation of the elements from which the sample is to be drawn. In other words, a population is a group of individuals that share similar characteristics. The study population include, nursing mothers, relevant radio programmes in Supreme FM, Karama FM, Radio Nigeria Hausa Service, and KSMC FM and AM radio stations. Hence, the study is centring on radio programmes as a tool for empowerment which in other words means improved health behaviour of nursing mothers as regards their infants. The population was streamlined to all nursing mothers and their infants attending post-natal classes in different hospitals of Kaduna state. Since Kaduna is a vast city, days of natal care in hospital was most appropriate in accessing mothers and their infants. As such, the researcher picked by sample nursing mothers attending natal care to distribute the research instruments.

3.6 SAMPLING TECHNIQUE

Anyaegbunam et al (2004) avers that "sampling is essential because populations tend to be large and resources and time available limited with the result that it is usually not possible to study each person". For this reason there is little choice but to select a sample from the population and from it make projections or generalisations regarding the entire population. Therefore, it is important for the researcher to know how to determine the appropriate sampling procedure as it determines the success of the research. Similarly, Obaze & Onosu (2009) explains that sampling methods are divided into two major sub-groups: probability and non-probability sampling. In probability sampling, the population have the same characteristics and the sample can be used to generalise on the population because of its representativeness. On the other hand, non-probability sampling cannot be used to generalise because it was particularly chosen to suit the researcher's purpose.

The sampling methods used for the study include:

1. Cluster random sampling: Anyaegbunam et al (2004:76) says this type "involves the use of sampling frames that identify groups or clusters of enumeration units". Here, the population is divided into mutually exclusive and exhaustive clusters based on geographical, administrative or political criteria. In other words, it means picking the geographical area where the population is concentrated by research. Here, the researcher used cluster random sampling method to pick Supreme FM, Karama FM, Radio Nigeria Hausa Service, KSMC FM and KSMC AM Radio stations to content analyse for the study; and seven general hospitals to administer questionnaires and carry out participatory observation. This is because, Supreme FM, Karama FM and Radio Nigeria Hausa Service are under FRCN and has the widest reach in Kaduna state; covering all the 23 LGAs of the state and even beyond. KSMC FM and AM is Kaduna state's radio station that broadcasts relevant programmes to people within the state. These stations have wide reach within Kaduna state and are easily accessible by people.

i. **Radio Nigeria, Kaduna National Station**

Radio Nigeria Kaduna National Station has a sustained history of excellence which dates back to 1962 when the station was established by Late Sir Ahmadu Bello as the Northern Nigeria Broadcasting Company (NNBC).

The station is a multi-frequency (channel) that broadcast on short wave, medium wave and FM in both English and Hausa. At present, it is the only radio station in Nigeria with short wave menu which covers almost the entire country. This rare combination has made its services uniquely packaged to the satisfaction and admiration of her teeming listeners (www.radionigeriaonline.net).

Radio Nigeria Kaduna National Station along with its eight (8) FM stations has long adopted the modern broadcasting approach of digitalisation and computerisation. This provides for clear signals in the various frequencies and makes the stations a must use for advertisers and sponsors. The programme on these stations are appealing, penetrating, informative, educative and entertaining. Listed below are the functional stations under the zone.

1. Hausa Service Channel I (506 meters medium wave) (49 meters short wave)
2. English Service Channel II (4.77 megahatz on 60 meters short wave) (11.07 kilohatz on 271 meters medium wave).
3. Supreme FM, Kaduna (96.1 MHz)
4. Globe FM, Bauchi (98.5 MHz)
5. Pride FM, Gusau (102.5MHz)
6. Pyramid FM, Kano (103.5 MHz)
7. Companion FM, Katsina (104.5 MHz)
8. Peace FM, Maiduguri (102.5 MHz)
9. Fonbina FM, Yola (101.5 MHz)

10. Karama FM, Kaduna (92.1 MHz) (www.radionigeriaonline.net).

2. **Kaduna State Media Corporation** (KSMC) is the mother name for Capital Sounds 90.9 FM, KADA 89.9 FM and AM639 KHz. The mission statement of the station is: to produce programmes and news that are professionally and intellectually appealing to the audience in order to widen their knowledge and enlarge their ideas and opinions; to mirror the society and give adequate expressions to its customs, traditions and other peculiarities by way of well researched and produced programmes; to provide the people with meaningful relaxation through well produced and presented entertainment programmes (KSMC 2012).

The 90.9 FM Service has 20 Kwatts transmitter and covers the entire Kaduna State and parts of the neighbouring states of Kano, Katsina, Zamfara, Plateau, Nassarawa, Benue, Niger and the FCT Abuja. The AM Services has 50 Kwatts AM transmitter and cover the entire northern states of the country including parts of the southern states as well as some of our neighbouring countries of Chad, Niger, Benin and Cameroun. The KADA FM 89.9 operate with 5 Kwatts transmitter and is purely a Hausa FM station. It covers most parts of the Kaduna state. Its programme content is youths focused. Queen FM Zaria and Rockside FM Kafanchan are the community stations of the corporation. The former covers 7 to 8 local government areas of the northern part of the Kaduna state and latter covers 8 local governments of the southern part of the state (KSMC 2012).

Also, the seven hospitals picked by cluster sampling include: Dr. Gwamna Awan Gen. Hospital, Kakuri; 44 Armed Forces Reference Hospital, Mando, Hajia Gambo Sawaba Gen. Hospital, Kofar-Gayan; General Hospital, Giwa; General Hospital, Kafanchan; General Hospital, Makarfi; and A B U Teaching Hospital, Shika. This was chosen

because they have national outlook in Kaduna state and healthcare is easily affordable in them, thereby making them a preferred choice amongst the mass of Kaduna state populace.

2. The other technique used in reaching respondents in the cluster is the systematic random sampling technique. Anyaegbunam et al (2004:76) says it is a method of selecting a sample from the population through the use of a sampling interval. Here, the nth number is picked by dividing the population with the sample size. Hence, the population of general hospitals is 7 and the sample size for questionnaires is 350, it therefore means that by dividing 350 with 7, 50 would be the sample size for each general hospital in the sample. The 50 were further divided by the number of nursing mothers attending natal care in the hospitals to arrive at the nth number of which questionnaires were administered unto.

3.7 SAMPLE SIZE

The study sampled three hundred and fifty (350) respondents from teaching/general hospitals who constitute the researcher's sample size for the survey research. While the relevant health programmes of the five radio stations were content analyse to draw data for the study. As observed by Wimmer & Dominick (2000) that "the size of a sample is important because the larger the sample size, the more representative it is of the total population and therefore, the more reliable a researcher's generalizations to be made".

3.8 INSTRUMENT OF DATA COLLECTION

The researcher adopted the use of triangulation research method and the instruments for the research include: questionnaires, content analysis, interview and participatory observation to generate data for the findings of the study.

Since survey is one of the methods used for collecting data, the researcher employed the interview and questionnaire, both techniques of survey to collect data. The interview schedule contains questions meant for journalists working in the radio stations. While the questionnaires was meant for nursing mothers to elicit responses in order to answer the research questions.

The third instrument for the research is code sheet, which includes unit of analysis and subject category. Subject categories in the code sheet are:

1. News: according to Rodman (2006), is the presentation of information that is timely, important and interesting to its audience. In content analysing the station, any news item which is linked to infant and maternal mortality is assigned a code. Coding was done with the unit of analysis.
2. Features: Akagbosu (2003) posit that a feature is an extended news story in the media; it is an elaborate news story which give more depth and breadth to events that occurred. Feature stories that have link with the study were coded. Coding was done with the unit of analysis.
3. Jingles: Rodman (2006) says it is a short easily remembered slogan, verse or tune on radio that is aired frequently as a social message to educate the listener.
4. Talk/Interview: Ogbemi (2008) says interview is a news story obtained by talking with the person involved or affected with the news or talking with someone to get news. Talk/Interview programmes which centre on the study topic were coded.
5. Entertainment: Akagbosu (2003) sees it as the action of providing amusement to the listener. It can be in the form of music, drama, play, song, dances etc. This was equally coded.
6. Advertorials: Ogbemi (2008) says it is paid for by a sponsor to enlighten the listener about particular issues in the society in a humorous way.

All of the above were used to ascertain the level of coverage given to infant health and empowering nursing mothers in the media. The main unit of analysis is space; this is one of the

items listed by Bernard Berelson as items used to content analyse manifest contents. However, space was viewed in three dimensions which include:

1. Location: this explains the times of the day that programmes are aired. Usually serious minded programmes are aired in the mornings and evenings on radio.
2. Time: this describes the amount of time allotted to particular programmes such as 1min, 5mins, 10mins, 15mins, 25mins, 30mins, 1hour, etc.
3. Placement: shows the number of times that particular programmes are aired. It can be daily, bio-weekly or weekly.

3.9 VALIDITY AND RELIABILITY

A pilot study was conducted with Ahmadu Bello University Health Services and Samaru FM to ensure the validity and reliability of the instruments to be used for the data collection and analysis.

Wimmer & Dominick (1991) sees validity as "the degree to which an instrument actually measures what it sets out to measure". A content analysis for instance must yield valid results. On the other hand, reliability is crucial to content analysis. Reliability is said (op cit) to be present when repeated measurement of the same material results in similar decisions or conclusions.

The research instruments used for the pilot test were participatory observation, questionnaires and interview questions. The test was important to the study because analysis of response of data gathered from the pilot study was used to restructure some of the questions in the questionnaire and the interview schedule. For instance, the participatory observation put the researcher in the midst of nursing mothers during child welfare clinic (post-natal) for the period of July 2012, in which the classes were held on Wednesdays between 9am and 11am. In the cause of such classes, nursing mothers were taught to observe exclusive breastfeeding for the first six months of life of their infants. Also, immunisation against infant illnesses were administered. Nursing mothers were also taught how to place their infants to sleep on the belly position to avoid

naval disturbances. Mothers were equally encouraged to eat highly nutritious foods that would aid growth and development of their infants. The medical experts that were teaching the nursing mothers were midwives/nurses and they encouraged mothers to have paracetamol syrup as a first aid treatment for their infants whenever they start having high temperature. The participatory observation enabled the researcher to realise that the instrument is very useful in gathering data for the study.

Questionnaires were administered to 10 nursing mothers at the end of the child welfare clinic. The results showed that 6 out of the 10 mothers listened to radio programmes that relates to child health and were encouraged to come for the post-natal clinics for immunisation to avoid their infants falling prey to some illnesses that easily lead to death. The other 4 came for the clinic because they were advised to do so by the health experts.

The interview questions were also tested with the head of the University health services, Dr. S.K. Musa, who revealed that to a very large extent, they have recorded success in the fight against infant mortality. Because, for the span of one year, the case of infant deaths among nursing mothers registered with their clinic is like 1 out of 50, which he believes is a success in the campaign. The test provided the researcher the opportunity to also amend questions for the research.

Content analysis was carried out with the programmes on Samaru FM located within the campus of Ahmadu Bello University in Samaru. The coding sheet shows that no specific programme on the station directly addresses infant mortality or empowering nursing mothers. However, the station is new and is still packaging programmes that would be introduced in the next calendar schedule of which infant and mothers health may be considered as opined by the programmes manager. This enabled the researcher to restructure her scope in order to expunge radio stations that are not more than one year old in broadcasting within Kaduna state.

The concept of reliability is crucial to content analysis. If a content analysis is to be objective, its measures and procedures must be reliable. Reliability is present when repeated measurement of the same material results in similar decisions or conclusions.

Coding sheet inter-coder agreement, or testing for the reliability of the instrument was conducted with the subject category of Radio Nigeria Hausa Service; the coding sheet is to content analysis what the questionnaire is to the survey research. The process of assigning numbers to content categories is called coding; it is facilitated by the use of coding sheet. The coding sheet is a document containing a summary of what codes have been assigned to each anticipated response, fact, category, value or attitude, (Obaze & Onosu, 2004).

Three persons were given a coding sheet each to content analyse programmes on Radio Nigeria Hausa Service for the month of August 2012. The three persons analysed the programmes based on the subject category and unit of analysis, at the end of the exercise, Hoslti formula was used to compute the result of the reliability test. Intercoder reliability refers to the levels of agreement among independent coders, who code the same content using the instrument. Hoslti is an American political scientist, he suggests that when human coders are used in content analysis, reliability translates to intercoder reliability or the amount of agreement of correspondents. Hoslti reported a formula for determining the reliability can be calculated by several formulas but why the researcher used the Hoslti formula is because, the three coders agreement are close. See Hoslti formula below:

$$\frac{2(m)}{N_1 + N_2}$$

m = number of coding decisions which coders agree

$N_1 + N_2$ = total number of decisions by the first and second coders respectively.

The items in the unit of analysis which coders agree on were five, which are; news, jingles, talk/interview, entertainment and advertorials. Each coder had the following result;

Items	Coder			
	A	B	C	
1	ix	ix	ix	
2	v	iv	v	point of difference
3	xi	xi	xi	
4	viii	viii	viii	
5	x	x	x	

The result above reveals how the coders agree. What the researcher did was to look at the coders' decision on each of the subject category they content analysed and see how their result came out. It was discovered that only one subject category of Radio Nigeria Hausa Service i.e. jingles that the decisions of the coders on the topic were different.

Coder one = 5 unit

Coder two = 4 unit

Coder three = 5 unit

Since two people agree alike and the other coder agree on all the eight items, the two coders whose results are alike were picked for the test.

Therefore: $\frac{2(m)}{N_1 + N_2}$

$\frac{2(4)}{5 + 5} = \frac{8}{10} \times \frac{100}{1} = 80\%$

Given the fact that the intercoder agreement of two persons was 80%, the instrument was taken by the researcher to be a reliable instrument for the research.

3.10 DATA ANALYSIS METHODS

The response to each item of the questionnaire was presented with a table and pie chart to show the percentage and degree calculations. Discussion of findings followed the expressed percentages. In the analysis and presentation of data, responses were grouped in relation to the research questions. The coding sheet was used to present the results for the content analysis. And the Interview/participatory observation were discussed in the analysis. The different method of presentation of data is to aid clearer understanding of the findings of the research.

CHAPTER FOUR

DATA PRESENTATION, INTERPRETATION AND ANALYSIS

4.1 Analysis

This chapter deals with presentation, interpretation, analysis/discussions of data from the survey, content analysis, participatory observation and interview.

The data from survey were calculated with simple percentage and presented on a table, pie chart and bar chart in order to bring in variety. After the presentation, interpretation followed the figures. The content analysis data were analysed with simple percentage and presented with tables. The interview was presented in the form of discussions and the participatory observation was presented in the cause of the data analysis and discussion of findings. This approach is to aid clear understanding of the information provided.

4.2 Presentations and Interpretations of Data

The following is the presentation of the survey method data; every item in the questionnaire is presented. Of the total number of 350 questionnaires administered, 342 were retrieved, 4 were rendered invalid on account of the respondent's inability to answer the questions completely, but rather left items in Section B of the questionnaire blank. Therefore, 338 questionnaires were analysed and presented below. Before the presentation, the following is explanation on the procedure for which the researcher used in drawing the charts.

First was to calculate the proportion of the frequency of each category of the variables, out of the total frequency of the data, this gave the percentage e.g.

$$\frac{\text{Items}}{\text{Total frequency}} \times \frac{100}{1} = \text{percentage}$$

Second step was to convert the percentage to Degree for the pie chart e.g.

$$\frac{\text{Percentage}}{100} \times \frac{360}{1} = \text{degree}$$

Example, Age is: $\frac{63}{338} \times \frac{100}{1} = 19\%$

Pie chart degree is $\frac{19}{100} \times \frac{360}{1} = 68.4^{o}$

The figures are represented on tables and pie chart for questions with closed-ended response, while bar chart is used for questions with open-ended response to make the analysis explicit and well understood.

Table 1: shows the age distribution of respondents.

Variables	**Frequency**	**Percentage**
15-19yrs	63	19%
20-29yrs	158	47%
30-39yrs	86	25%
40-49yrs	29	8%
50yrs above	2	1%
Total	**338**	**100%**

The table above shows that nursing mothers within the age range of 20 – 29years constitute the majority of respondents with 158 (47%) and those within 30 – 39years of age came next with 86 (26%). Whereas those under the age-range of 15 – 19years constitute 63 (19%), 40 – 49years constitute 29(8%) and 50 years above are 2 (1%). This shows that women within the ages of 20 to 29 years are more in having children than others. The table above captured very well the age brackets that are within the child bearing category.

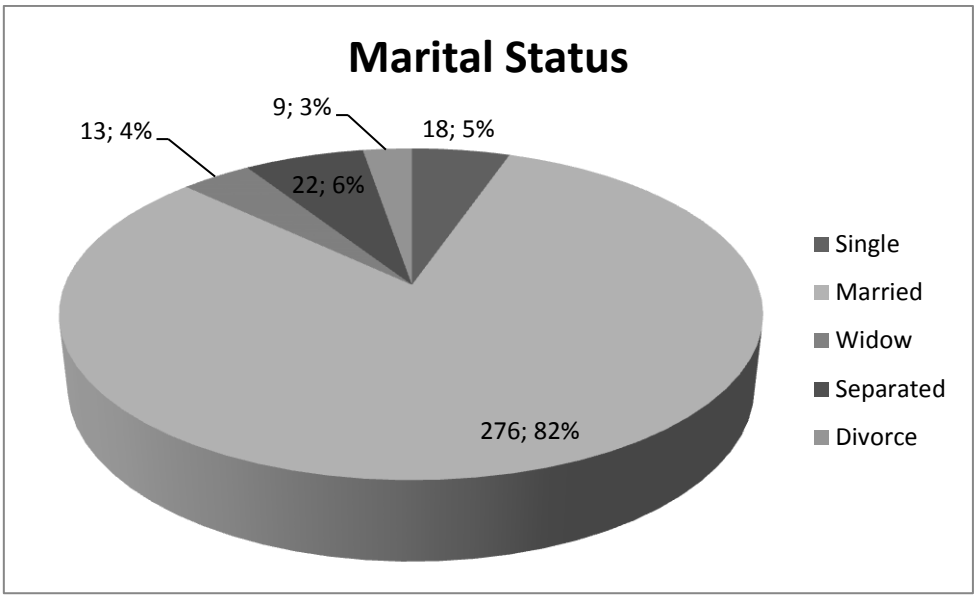


Figure 1: shows the marital status of respondents

The chart above shows that majority of the respondents i.e. nursing mothers are married with 276 (82%), while 18 (5%) are single, 13 (4%) are widow, 22 (6%) are separated and 9 (3%) are divorced. This shows that there are more married women as nursing mothers than single, widow, separated or divorced women.

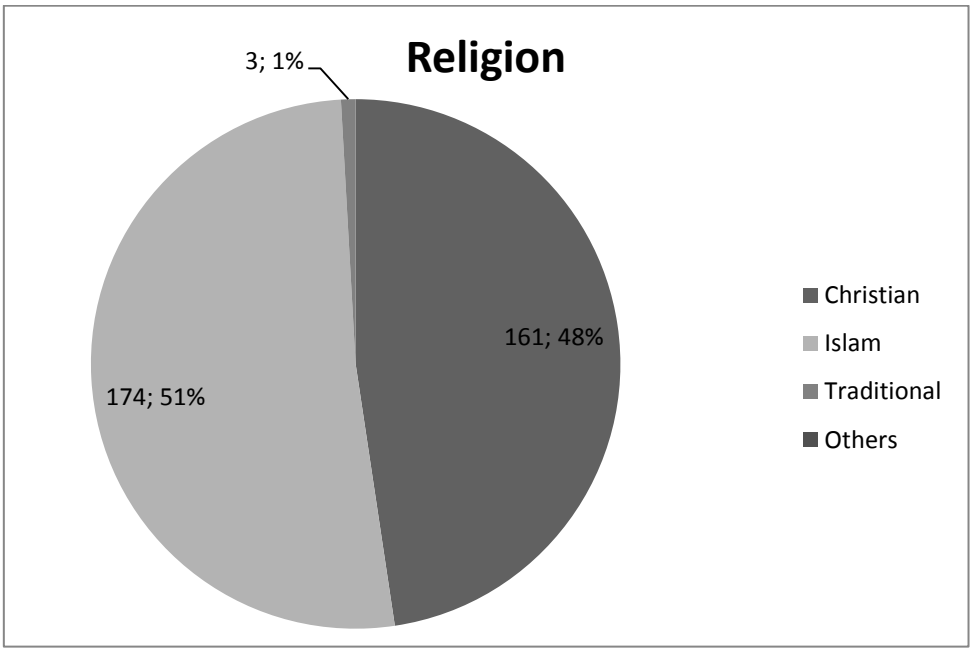


Figure 2: shows the religion of respondents

The above shows that 174 (51%) respondents practice Islam, while 161 (48%) practice Christianity. 3 (1%) are traditional religious practitioners and none fell into the category of others. It shows that there are more Islam and Christian faithful as nursing mothers than any other religion in Kaduna state.

Table 2: shows the occupation of respondents

Variables	Frequency	Percentage
Private Employee	51	15%
Civil Servant	79	23%
Unemployed	26	8%
House wife	96	28%
Self-Employed	86	26%
Total	**338**	**100%**

The table above shows that housewives constitute 96 (28%) respondents, closely followed by self-employed 86 (26%) and civil servants 79 (23%). While 51 (15%) are private employee, 26 (8%) are unemployed. This shows that most nursing mothers are housewives, self-employed or civil servants in Kaduna state.

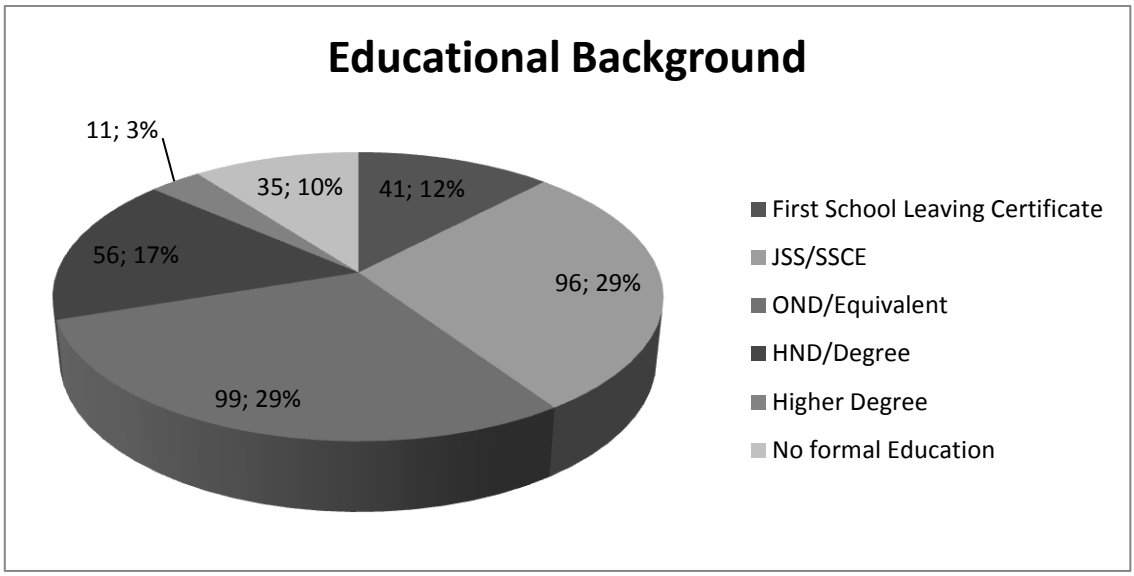


Figure 3: shows the educational background of respondents

The chart above shows the educational qualification of respondents. Those with OND/Equivalent and JSS/SSCE are more with 99 (29%) each, followed by those with HND/Degree at 56 (17%) then followed by those with first school leaving certification of 41 (12%) and no formal education of 35 (10%). While those with no formal education constitute the minority with 11 (3%). This shows that majority of the respondents are averagely educated.

Table 3: shows the number of children of respondents

Variables	Frequency	Percentage
One	29	8%
Two	47	14%
Three	70	21%
Four	105	31%
More	87	26%
Total	**338**	**100%**

The table above shows that respondents who have four children 105 (31%) are more, followed by those with more than four children 87 (26%) and those with three children 70 (21%). While the

minority are those with two children 47 (14%) and one child 29 (8%). This shows that nursing mothers in Kaduna state have on the average four children and more.

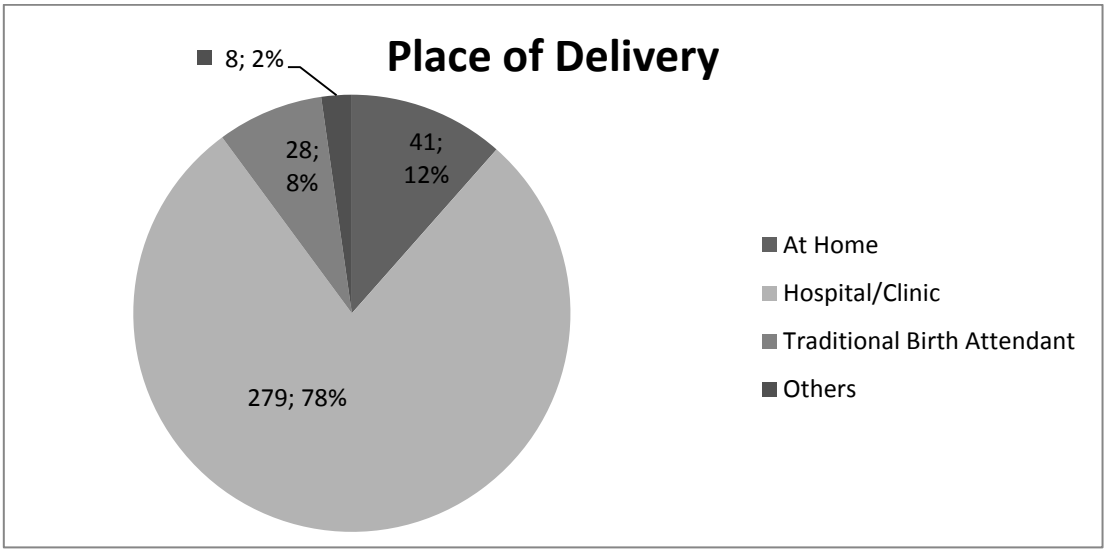


Figure 4: shows where respondents deliver their baby

The above shows that majority of the respondents delivered their babies in the Hospital/clinic with 279 (78%). While 41 (12%) delivered at home, 28 (8%) delivered through traditional birth attendant and 8 (2%) delivered in other places. This shows that majority of nursing mothers delivered in the hospital to avoid complication that leads to loss of life of the infant or mother.

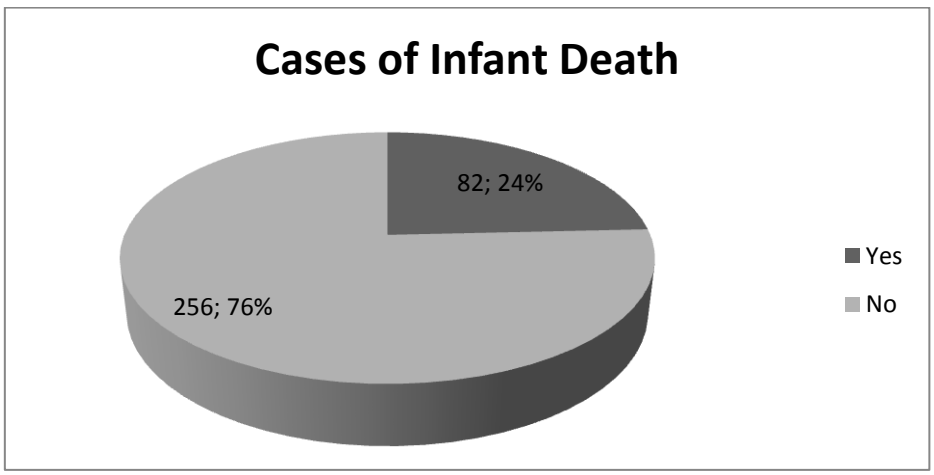


Figure 5: shows the number of cases of infant death

The above shows that 82 (24%) have recorded cases of infant death in their history. While, 256 (76%) have never recorded any case of infant mortality in their history. This shows that cases of infant mortality is low among mothers attending post-natal care in Kaduna state.

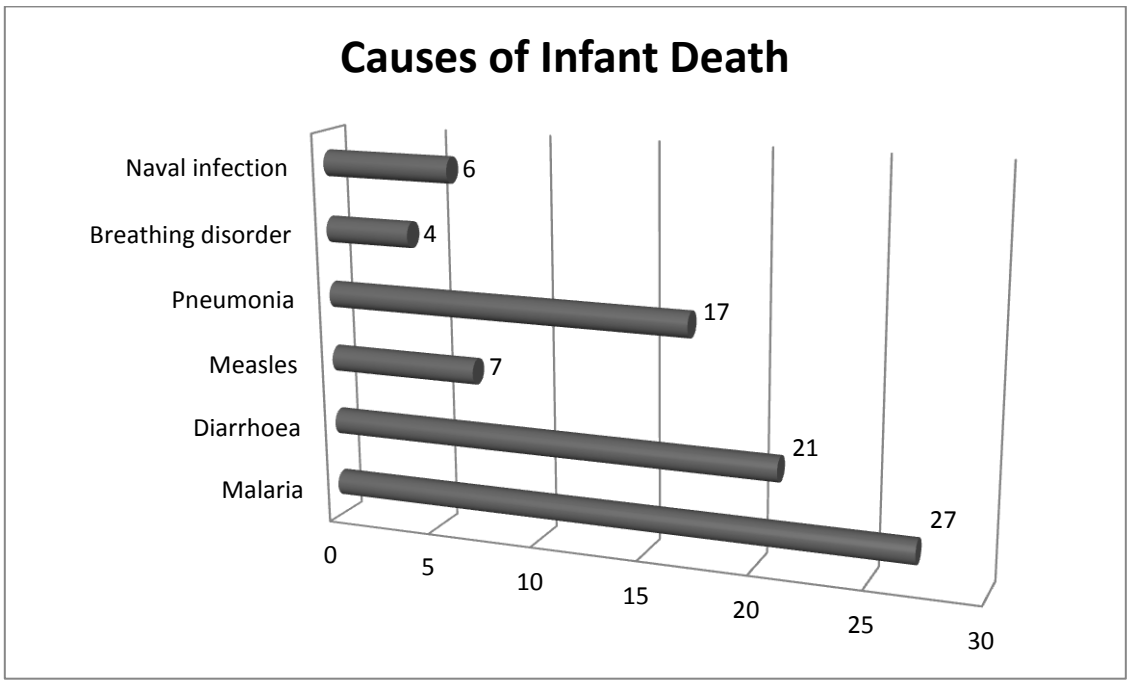


Figure 6: causes of infant death

Amongst the cases of infant deaths in Kaduna state, the above shows the causes of which malaria ranks highest at 27 followed by diarrhoea at 21 and next is pneumonia 17. Measles, naval infection and breathing disorder ranks lowest at 7, 6 and 4 respectively. This shows that malaria, diarrhoea and pneumonia are among the leading cause of infant deaths in Kaduna state.

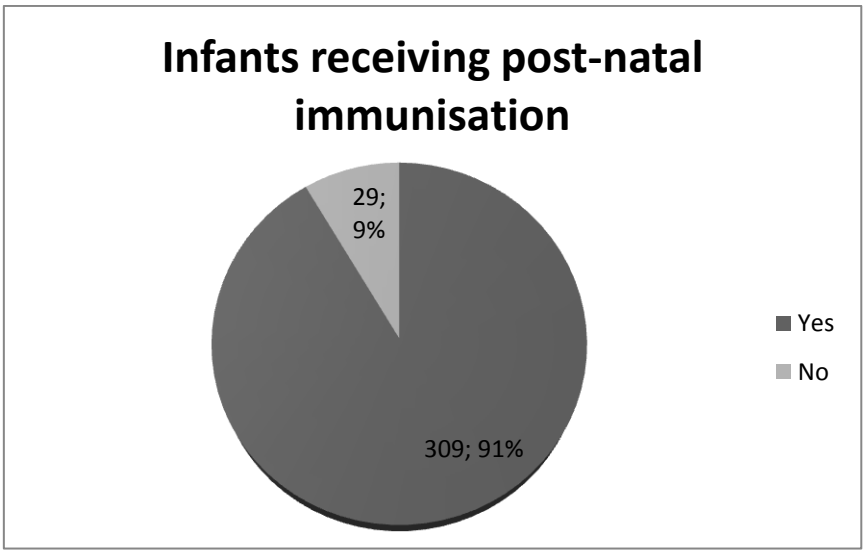


Figure 7: infants receiving post-natal immunisation

The above shows that 309 (91%) respondents take their infants for post-natal immunisation. While 29 (9%) don't take their infants for post-natal immunisation. This shows that the infants stand the chance of living healthier and sound among those that receive immunisation.

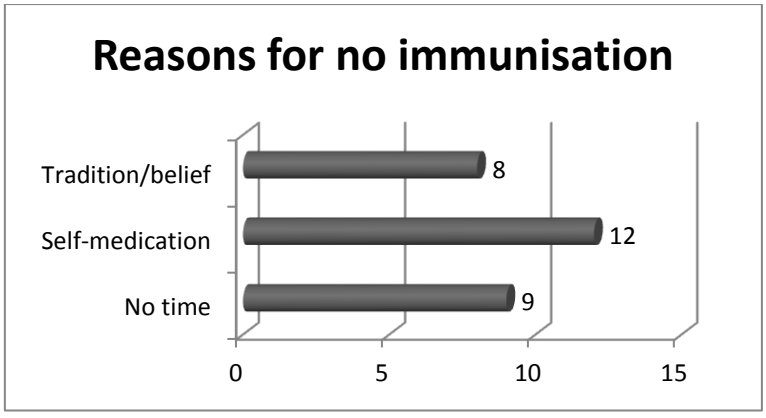


Figure 8: reasons of no immunisation for infants

This shows that among nursing mothers who don't take their infants for post-natal immunisation, self-medication ranks highest at 12 followed by no time at 9 and against traditional belief 8. It shows that some of the respondents prefer to administer self-medication on their infants than to take them for post-natal immunisation. While others don't have time to go for immunisation, others stick to their traditional belief system which is against the practice of immunisation.

Table 4: respondents awareness of infant illnesses

Variables	Frequency	Percentage
Yes	338	100%
No	0	0

This table shows that all respondents i.e. nursing mothers are aware of infant illnesses that can lead to death. In other words, it means they can take precautionary measures against infant death and know when to seek care.

Table 5: medium of awareness

Variables	Frequency	Percentage
Radio News/Programme	124	37%
Television News/Programmes	54	16%
Newspapers/Magazines	11	3%
Social Media	2	1%
Natal Classes	130	38%
Books/Journal Articles	13	4%
Others	4	1%
Total	**338**	**100%**

The above shows that most of the respondents got to know about infant illnesses in natal classes organised in hospitals/clinics for nursing mothers with 130 (38%). Radio news/programmes follows next with 124 (37%) and television news/programmes is 54 (16%). Amongst the minority is newspapers/magazines 11 (3%), social media 2 (1%), books/journal articles 13 (4%) and others 4 (1%). This shows that majority of nursing mothers get informed through the natal classes and mass media, thereby making this study very relevant.

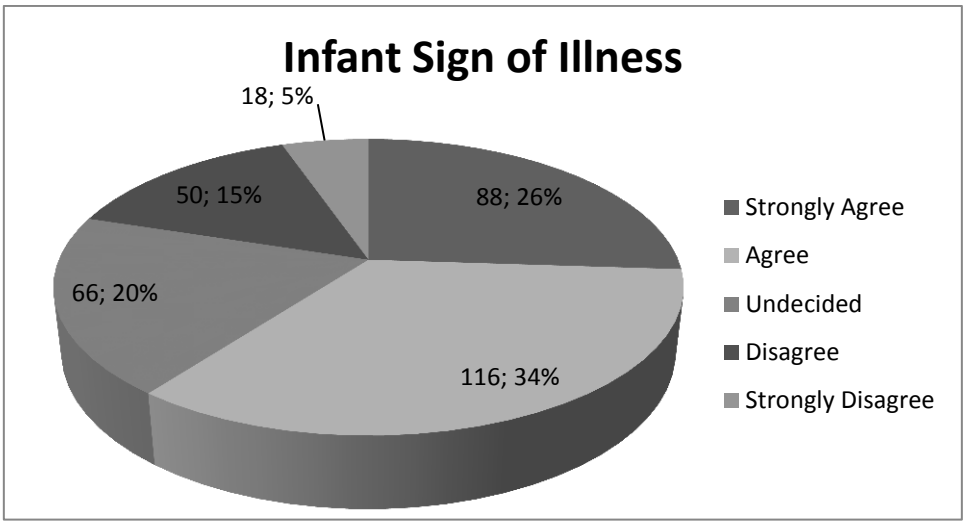


Figure 9: response to infant sign of illness

From the above, 116 (34%) are in the majority of those who agree that their infants show sign of infant illnesses that leads to death. Followed by 88 (26%) who strongly agree, 66 (20%) who are undecided 50 (15%) who disagree and 18 (5%) who strongly disagree in this regard. This shows that majority of the infants do sometimes show sign of such illnesses.

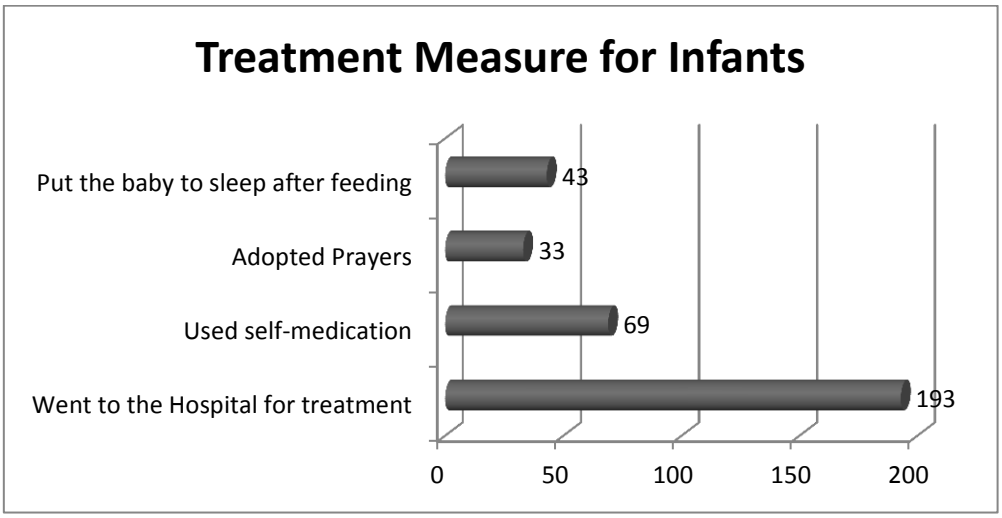


Figure 10: treatment measure for infants

The above shows that 198 respondents rushed to the hospital when their infants show sign of such illness, 69 used self-medication to treat the infant, 33 prayed earnestly for the infant and 43 put the baby to sleep after feeding them. It shows that majority of the nursing mothers in Kaduna state rush their infants to the hospital for treatment when they fall prey to illnesses.

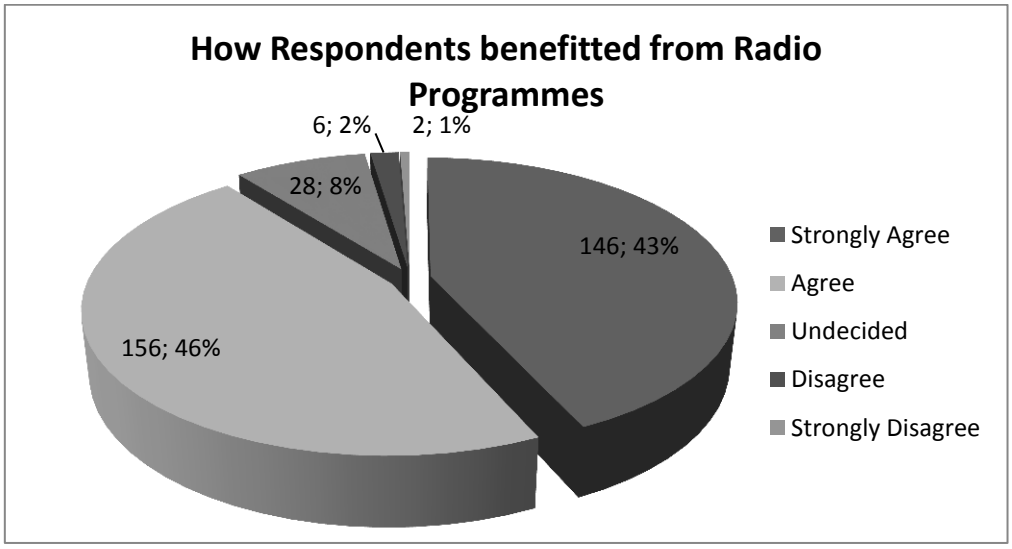


Figure 11: how respondents benefitted from radio programmes

The above shows that 146 (43%) strongly agree and 156 (46%) agree that they benefitted from radio programmes on infant health. While 28 (8%) are undecided, 6 (2%) disagree and 2 (1%) strongly disagree. This shows that radio has a wide reach and has significantly being of benefit to nursing mothers as regards their infants.

Table 6: radio stations that respondents got relevant information

Variables	Frequency	Percentage
Supreme FM	97	29%
Karama FM	68	20%
Radio Nigeria Hausa Service	89	26%
KSMC FM	48	14%
KSMC AM	36	11%
Total	**338**	**100%**

The above shows the radio stations that respondents got information on infant health from. Amongst the highest are Supreme FM 97 (29%), Radio Nigeria Hausa Service 89 (26%) and Karama FM 68 (20%). The lowest are KSMC FM 48 (14%) and KSMC AM 36 (11%). This

shows that respondents listen more to Supreme FM, Radio Nigeria Hausa Service and Karama FM more than any other station in Kaduna State.

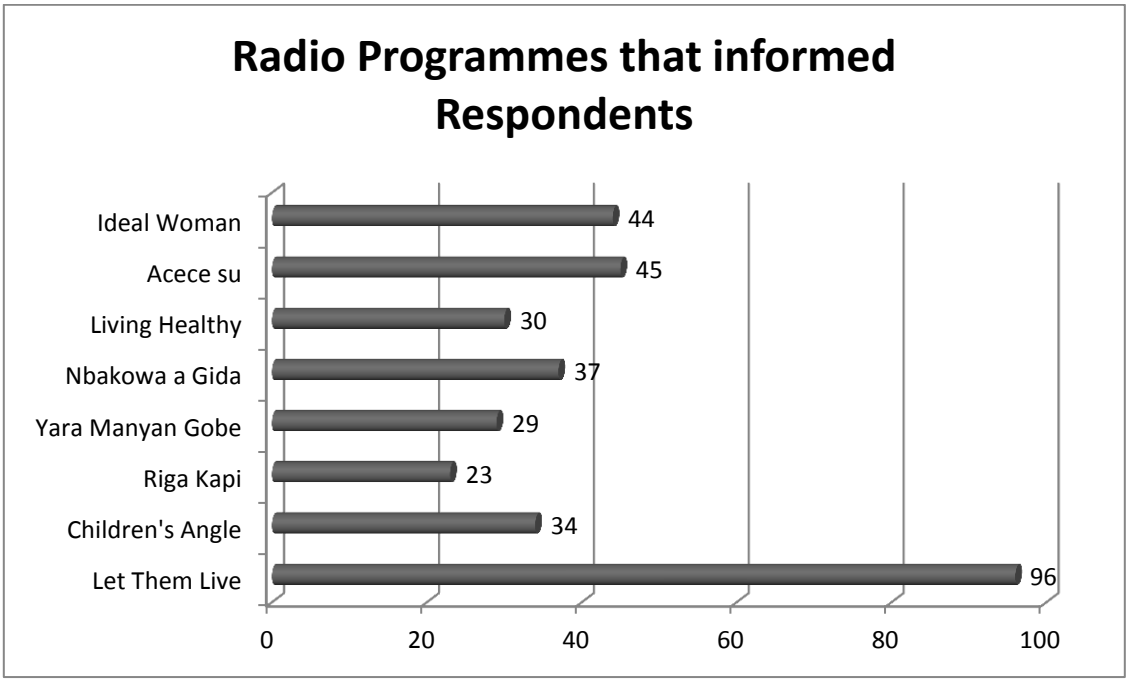


Figure 12: the programmes respondents benefitted from

The above shows that 'Let them Live' got the highest number of listenership at 96 followed by 'Acece su' at 45, then 'Ideal Woman' at 44, next is 'Nbakowa a Gida' at 37, then 'Children's Angle' at 34, next is 'Living Healthy' at 30, 'Yara Manyan Gobe' at 29, and 'Riga Kapi' at 23. This shows that majority of the radio programmes have really benefited nursing mothers in Kaduna state.

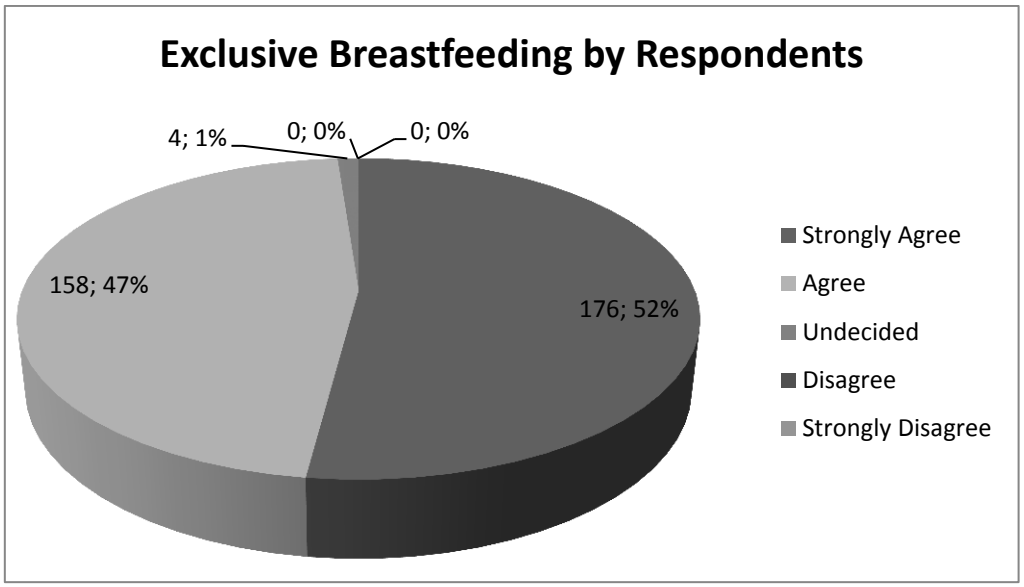


Figure 13: the adoption of exclusive breastfeeding by respondents

From the above, 176 (52%) strongly agree that they practice exclusive breastfeeding and 158 (47%) agree, while 4 (1%) are undecided. This shows that majority of the nursing mothers in Kaduna state practice exclusive breastfeeding for their infants.

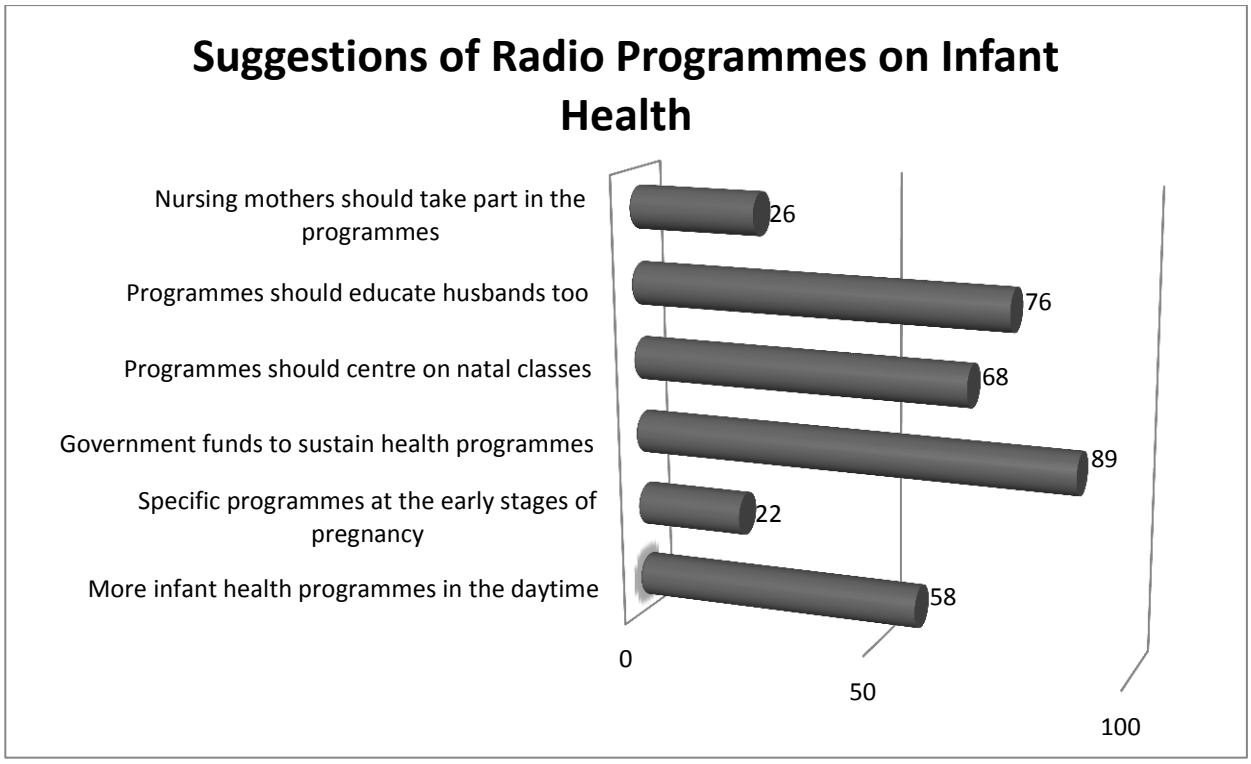


Figure 14: respondents suggestions of radio programmes on infant health

The above shows the suggestions of nursing mothers on programmes to empower nursing mothers against infant mortality. Various suggestions were made in both English and Hausa languages. The researcher had to read them carefully and group them into the following categories. Respondents who suggested more infant health programmes in the daytime are 58, those for specific programmes at the early stages of pregnancy are 22, Government funds to sustain health programmes are 89, post-natal classes should be organised on radio are 68, programmes should educate husbands too are 76 and nursing mothers should take part in the programmes are 26. It therefore shows that nursing mothers are well aware of the challenges of infant and how they can be improved upon using radio programmes.

CONTENT ANALYSIS

The following is the presentation of content analysis data in line with the research questions. Before the analysis, explanation on how the percentage was gotten is done below:

$$\frac{\text{Frequency of item}}{\text{Total frequency}} \times \frac{100}{1}$$

$$\frac{39}{198} \times \frac{100}{1} = 20\%$$

The researcher did the calculation of each radio station as 100%, though the five stations are presented on the same table, e.g. Supreme FM 100%, Karama FM 100%, Radio Nigeria Hausa Service 100%, KSMC FM 100% and KSMC AM 100%.

RESEARCH QUESTION THREE: Are radio stations in Kaduna state packaging relevant programmes to empower nursing mothers such as the practice of exclusive breastfeeding, immunisation and etc?

Table 7: Roles of Radio Programmes in Kaduna State.

Subject Category	Supreme FM		Karama FM		Radio Nigeria Hausa		KSMC FM		KSMC AM	
	Frequency	*Percentage*	*Frequency*	*Percentage*	*Frequency*	*Percentage*	*Frequency*	*Percentage*	*Frequency*	*Percentage*
News	39	20%	27	29%	34	28%	9	16%	16	27%
Jingles	56	28%	14	15%	16	13%	14	25%	4	7%
Talk/Interview	31	16%	11	12%	22	18%	12	21%	25	42%
Entertainment	14	7%	17	19%	12	10%	16	28%	5	9%
Advertorials	58	29%	23	25%	37	31%	6	18%	9	15%
Total	**198**	**100%**	**82**	**100%**	**121**	**100%**	**57**	**100%**	**59**	**100%**

SUPREME FM RADIO:

From the above table, within the six months period the content analysis was done, radio programmes on infant health was given 20% (39) news stories, 28% (56) jingles, 16% (31) talk/interview, 7% (14) entertainment and 29% (58) advertorials. A total of 198 broadcast items on the subject was recorded in *Supreme FM.*

KARAMA FM:

In Karama FM, within the six months period the content analysis was done in the table above, the coverage was given 29% (27) news reports, 15% (14) jingles, 12% (11) talk/interview, 19% (17) entertainment and 25% (23) advertorials. A total of 82 broadcast stories were recorded relating to the subject.

RADIO NIGERIA HAUSA SERVICE:

Radio Nigeria Hausa Service had 28% (34) coverage of the news reports on the issue, 13% (16) jingles, 18% (22) talk/interview, 10% (12) entertainment and 31% (37) advertorials. A total of 121 broadcast items were recorded on the subject for the period under review.

KSMC FM:

KSMC FM had 16% (9) news items, 25% (14) jingles, 21% (12) talk/interview, 28% (16) entertainment and 18 (6%) advertorials within the period of the content analysis. A total of 57 broadcast items were recorded.

KSMC AM:

The AM station of KSMC had 27% (16) news items, 7% (4) jingles, 42% (25) talk/interview, 9% (5) entertainment and 15% (9) advertorials within the period of the content analysis. A total of 59 broadcast items were recorded.

Table 8: Number of items recorded on each of the months the stations were content analysed.

Subject Category	**Supreme FM**		**Karama FM**		**Radio Nigeria Hausa**		**KSMC FM**		**KSMC AM**	
	Frequency	***Percentage***	***Frequency***	***Percentage***	***Frequency***	***Percentage***	***Frequency***	***Percentage***	***Frequency***	***Percentage***
May	19	10%	7	8%	16	13%	5	9%	8	13%
June	16	8%	9	11%	11	9%	4	7%	7	12%
July	17	9%	10	12%	19	16%	10	18%	11	19%
August	112	56%	36	44%	43	43%	25	44%	24	41%
September	20	10%	12	15%	17	14%	7	12%	5	8%
October	14	7%	8	10%	15	12%	6	10%	4	7%
Total	**198**	**100%**	**82**	**100%**	**121**	**100%**	**57**	**100%**	**59**	**100%**

The table above shows the frequency of occurrence of items recorded on the subject in the months' content analysed. For the six months period, a total of 198 broadcast items were recorded for Supreme FM, 82 for Karama FM, 121 for Radio Nigeria Hausa Service, 57 for KSMC FM and 59 for KSMC AM. In all, the frequencies, the month that had the highest frequency of reportage is August which cannot be unconnected with the World's Breastfeeding Week that usually holds every first week of August annually. It is a time that the mass media identifies with the campaign on breastfeeding to sensitize and conscientize women on the benefits of exclusive breastfeeding for the first six months of the infant. This accounts for why Supreme

FM had 56% (112) broadcast items on the subject, Karama FM had 44% (36), Radio Nigeria Hausa Service had 43% (43), KSMC FM had 44% (25) and KSMC AM had 41% (24). This shows that all the media houses were fully involved in the campaign.

RESEARCH QUESTION ONE: Is the media effective as a medium of educating nursing mothers about infant illnesses?

The survey method have provided a beat of explanation and answer to Research Question One that radio programmes are effective as a medium of educating nursing mothers about infant illnesses. However, content analysis would provide further explanation on this question.

Table 9: location of broadcast news items on radio to educate nursing mothers about infant illnesses

News	**Supreme FM**		**Karama FM**		**Radio Nigeria Hausa**		**KSMC FM**		**KSMC AM**	
Location	***Frequency***	***Percentage***	***Frequency***	***Percentage***	***Frequency***	***Percentage***	***Frequency***	***Percentage***	***Frequency***	***Percentage***
Morning	11	28%	6	22%	10	29%	2	22%	5	31%
Afternoon	13	33%	7	26%	12	35%	3	34%	6	37%
Evening	8	21%	9	33%	8	24%	3	33%	3	19%
Night	7	18%	5	19%	4	12%	1	11%	2	13%
Total	**39**	**100%**	**27**	**100%**	**34**	**100%**	**9**	**100%**	**16**	**100%**

From the table above, Supreme FM had the highest news reports on educating nursing mothers in the afternoon at 33% (13), Karama FM is in the evening at 33% (9), Radio Nigeria Hausa in the afternoon 35% (12), KSMC FM in the afternoon at 34% (3) and KSMC AM in the afternoon at 37% (6). Whereas, the lowest location of news reports for all the stations is in the night. This shows that afternoon period had more news reports on educating nursing mothers than others.

Table 10: the time allotted to news items on radio in educating nursing mothers about infant illnesses

News	**Supreme FM**		**Karama FM**		**Radio Nigeria Hausa**		**KSMC FM**		**KSMC AM**	
Time	***Frequency***	***Percentage***	***Frequency***	***Percentage***	***Frequency***	***Percentage***	***Frequency***	***Percentage***	***Frequency***	***Percentage***
10mins	0	0%	0	0%	0	0%	0	0%	0	0%
5mins	19	49%	15	56%	22	65%	3	33%	12	75%
1min	20	51%	12	44%	12	35%	6	67%	4	25%
Total	**39**	**100%**	**27**	**100%**	**34**	**100%**	**9**	**100%**	**16**	**100%**

The table above shows that 1min had the highest news reports for Supreme FM and KSMC FM at 51% (20) and 67% (6) respectively. While, 5mins had the highest news reports for Karama FM, Radio Nigeria Hausa and KSMC AM at 56% (15), 65% (22), and 75% (12) respectively. This shows that more news reports on educating women is covered within 5 to 1minute than any other.

Table 11: the placement of news items on radio to educate nursing mothers about infant illnesses

News	**Supreme FM**		**Karama FM**		**Radio Nigeria Hausa**		**KSMC FM**		**KSMC AM**	
Schedule	***Frequency***	***Percentage***	***Frequency***	***Percentage***	***Frequency***	***Percentage***	***Frequency***	***Percentage***	***Frequency***	***Percentage***
Daily	26	67%	17	63%	28	82%	6	67%	9	60%
Bio-Weekly	11	28%	9	33%	6	18%	2	22%	6	40%
Weekly	2	5%	1	4%	0	0%	1	11%	0	0%
Total	**39**	**100%**	**27**	**100%**	**34**	**100%**	**9**	**100%**	**16**	**100%**

The table above shows that placement of news items on educating nursing mothers had the highest for daily with Supreme FM at 67% (26), Karama FM at 63% (17), Radio Nigeria Hausa at 82% (28), KSMC FM at 67% (6) and KSMC AM at 60% (9). While, weekly received the lowest news reports. This shows that more stories on educating nursing mothers about infant illnesses are carried more by daily news reports than any other.

INTERVIEW

RESEARCH QUESTION FOUR: What roles are radio programmes playing in addressing the problems of infant mortality?

In an interview for this study, the Programmes Manager of FRCN Kaduna confirms that the wide reach of the station puts it in a vantage position to empower nursing mothers through her programmes on infant health. She gave a comprehensive list of all women and infants programmes in the station that are presented below.

RADIO NIGERIA: HAUSA (CHANNEL I) AND ENGLISH (CHANNEL II) SERVICE STATIONS

NO	TITLE	DURATION	DAY & TIME	REPEAT	TYPE	LANGUAGE	STATION
1	Homemaker	30mins	Tues 21:30	Friday 09:45	Women	English	Radio Nigeria
2	Ideal Woman	30mins	Tues 12:45	Friday 11:30	Islamic Women Program	English	Radio Nigeria
3	Let them live (child survival and development programme) UNICEF sponsored	30mins	Sat 2:00pm	Thurs 5:30pm	Child Health	English	Radio Nigeria (English Service)
4	Our Young Ones	30mins	Sat 09:15	Thurs 19:30	Children	English	Radio Nigeria
5	Children's Angle	15mins	Sat 9:00am	Sun 6:00pm	Children	English	Radio Nigeria
6	Riga Kapi (infant mortality) UNICEF sponsored	30mins	Thurs 3:15pm	Sat 2:00pm	Infant health	Hausa	Hausa Service
7	Yara manya gobe	30mins	Tues 11:15am	Sat 14:30	Children	Hausa	Hausa Service
8	Asara re mu	15mins	Sat 4:00pm	Sun 10:00am	Children	Hausa	Hausa Service
9	Kallabi tsakanin rawuna	30mins	Thurs 12:45	Sat 11:45	Women	Hausa	Hausa Service
10	Uwar Gida Barka da aiki	30mins	Sun 12:00	Wed 10:00	Women	Hausa	Hausa Service
11	Healthy living (Health and Environment)	Live program	Call-in, sms	Expert on healt	Health	English	English Service
12	Jekar Magori (General Magazine Programme)	30mins	Daily 10:30am	5:30am	Generalised	Hausa	Hausa Service
13	People and events (people, environment, family)	30mins	Daily 10:30am	3:15pm	Generalised	English	English Service
14	Kiwan Lafiya (Our health)	15mins	Mon 10:15am	Wed 2:15pm	General health	Hausa	Hausa Service
15	Lafiya Man Gan Efu	30mins	Mon 14:30pm		Health Program	Nupe	English Service
16	Kamuma Fatowo	25mins	Wed 13:15	Sun 20:36	Women/Children	Kanuri	English Service
17	Nilefa	15mins	Sat		Health	Kanuri	English

			13:30hr				Service
18	Dada Sare	20mins	Wed 8:10hr		Women/Children	Fulfulde	English Service
19	Njame Muhalliyi	20mins	Sun 8:10hr		Health	Fulfulde	English Service

Similarly, the anchor/presenter of the programme 'Ideal Woman' believes that the program empowers nursing mothers because it uses interviews, music and drama to make emphasis on certain health challenges confronting nursing mothers and how they can manage it.

In addition, the anchor/presenter of 'Kiwan Lafiya' says the program is a general health programme that have been running for over a year since. It mostly interviews health specialist on a health topic chosen to be discussed for every edition of the programme.

Nevertheless, the Head, Desk of Women and Children agrees that the programme does help a lot of women know some of the health challenges confronting their infants and how to seek for medical help. She gave a list of programmes on women and infants health that includes the following:

KARAMA FM

NO	TITLE	DURATION	DAY & TIME	REPEAT	TYPE	LANGUAGE	STATION
1	Yara Manyan Gobe	30mins	Sat 17:00	Sun 12:30	Health	Hausa	Karama FM
2	Nbakowa a gida	30mins	Wed 12:30	Sat 19:03	Women	Hausa	Karama FM
3	Don Iyali (General program for the family).	30mins	Mon 12:30	Wed 18:00	Family	Hausa	Karama FM
4	Lahyaika Yarinka	15mins	Sun 14:45	Fri !5:30	Health	Hausa	Karama FM

Additionally, the General Manager of Supreme FM and in an interview for this study; explains that in the aspect of malaria coverage, radio has the widest reach. According to him, "every first week of August is World's Breastfeeding Week. During this period, Supreme FM aligns with its campaigns by producing jingles on breastfeeding and educating nursing mothers about infant health". He continued further that "the programmes are not continuous but used to empower nursing mothers about the advantage of breastfeeding of a child for one and half years. It can also take the form of discussion programmes".

The GM stressed further that "some programmes are not sustainable but run on specific times to identify with a world health campaign or national campaign. Health related programmes are usually featured on segments, example is 'Morning Ride' and 'Kada City Show'. These programmes can decide to float health programmes on segments." 'Close Encounter' is also another programme and it is a personality interview that runs on Sundays at 7:30pm for 30mins. He explains that a health personnel can be interviewed on any health topic to empower the listener. 'Evening Delight' or 'Cool Stretch' is another programme that the presenter/anchor can invite a personality to enlighten the listener on a health issue. 'Woman to Woman' is another specialised magazine programme for women. It runs every Wednesday by 6:30pm on the network service. 'Living Healthy' is another programme anchored and runs on Wednesdays by 9:20am to 9:40am on the Supreme FM. It is a live magazine programme that makes use of interviews, call-in, sms, and others to inform and enlighten the listener, he avers.

However, in KSMC AM and FM stations, the program presenter explains that they have only one health program titled 'Let them Live'. It is a programme on family planning and spacing of children to avoid infant deaths in Kaduna state. It usually holds on Mondays from 4:00pm to 4:30pm in the AM station and is anchored by her. The Hausa version 'Acece su' is anchored by another presenter in the same station on Friday 1:30 – 2:00pm. Letters and sms are sent in by listeners to tell how the programmes have helped them. Also, there is a 10minute programme titled 'Health Tips' every Monday from 10:30am to 10:40am on the station. Health experts are usually brought in to speak to the listener.

She could not give the details of the station but agrees that the FM station transmit in English language and mostly use music to entertain the listener. While the AM is the mother channel and transmit both in Hausa and English where serious issues are discussed. She affirms that the AM is on 639 medium wave, while the FM is 90.9 MHz and that the station generally has wide reach according.

4.3 Data Analysis and Discussion of Findings:

The survey technique used for this research is questionnaire; results from using this technique is discussed here in line with the research questions. This study was intended to provide answers to research questions raised in chapter one. The data obtained from using the questionnaires reveal that the research questions received adequate answers. Data from the participatory observation was useful in the discussions and analysis.

The implications of the results from the content analysis method were explained, and the extent to which the results answered the research questions. Content analysis was used for this study, to ascertain whether radio stations in Kaduna state are packaging programmes that empower nursing mothers about infant illnesses. The research questions were analysed and discussed with the data presented from the content analysis method.

RESEARCH OBJECTIVE ONE: To determine the extent of media coverage on infant mortality in Nigeria;

Table 5 of the questionnaire provides a clear answer to this research objective. This is because radio had 37% of the total number of nursing mothers who got to know about infant illnesses through radio programmes. This shows that radio is to an appreciable extent, doing well in empowering nursing mothers in Kaduna state about infant illnesses. Also figure 11 of the questionnaire analysis shows that 89% of nursing mothers strongly agree and agree that they benefitted from radio programmes on infant health. This further confirms that radio programmes are effective in educating nursing mothers about infant illnesses.

Similarly, the age range of nursing mothers shows that majority of them are matured enough to decode radio messages effectively. Table 1 of the questionnaire clearly illustrates this, whereby the majority of nursing mothers fell within the age range of 20 – 29years at 47%, followed by those within 30 – 39years at 26%. Thus, it means that nursing mothers are within the matured ages to decipher media messages through the radio broadcast. Equally, as majority of the

nursing mothers educational qualification level is between OND/Equivalent 29% and JSS/SSCE at 29% shown in Table 3 means that they decode radio messages without much supervision. Additionally, Figure 1 shows that majority of the nursing mothers are married at 82%. Thereby pointing to the fact that their spouses would educate them about managing certain illnesses in their infants that was aired on radio.

Moreover, the fact that majority of the nursing mothers in Kaduna state practice Islam as Figure 2 shows that 51% of nursing mothers are Muslims and 48% are Christians means that women religious programmes like 'Ideal Woman' which educates women from the Islamic point of view and others would empower nursing mothers. Similarly, the occupation of majority of the nursing mothers are housewives at 28% and self-employed at 26% as shown in Table 2, clearly indicates that they are fully disposed to listening to radio programmes on infant and maternal health. Also Table 9 in the content analysis shows that afternoon period had more news reports on educating nursing mothers than at other times of the day. Table 10 shows that more news reports on the subject are covered within 1 to 5 minutes. Table 11 shows that more stories on educating nursing mothers about infant illnesses are carried by daily news reports. By implication, it means that news on educating nursing mother are aired daily for not less than one minute and not more than five minutes mostly in the afternoon.

Furthermore, Table 4 shows that all nursing mothers are aware of infant illnesses that can lead to death. In other words, it means they can take precautionary measures against infant death and know when to seek care.

Nevertheless, Figure 9 shows that 60% of nursing mothers are in the majority of those who agree and strongly agree that their infants do sometimes show sign of infant illnesses. However, Figure 10 shows that 198 of the respondents rushed to the hospital when their infants show sign of such illnesses, 69 say they used self-medication to treat the infant, 33 say they engage in earnest prayers for their infant and 43 say they put the baby to sleep after feeding them. It shows that majority of the nursing mothers in Kaduna state rush their infants to the hospital for

treatment when they fall prey to illnesses. Further pointing to the fact that the radio is effective in this regard.

RESEARCH OBJECTIVE TWO: To show the role of radio programmes in empowering nursing mothers about infant illnesses;

This question was answered in the content analysis table 1, whereby a total of 198 broadcast items was recorded in Supreme FM. In Karama FM, a total of 82 broadcast stories were recorded, in Radio Nigeria Hausa Service, a total of 121 broadcast items were recorded, in KSMC FM, a total of 57 broadcast items were recorded, and KSMC AM had a total of 59 broadcast items within the six months that contents were analysed. Also, Figure 13 of the questionnaire provides some answers to this question which shows that 99% of nursing mothers agree and strongly agree that they practice exclusive breastfeeding for their infants.

Similarly, 31% of the nursing mothers have four children, followed by those with more than four children at 26% and those with three children at 21% as seen in Figure 3. The meaning is that exclusive breastfeeding is practiced to a large extent for the number of children that they have. In the participatory observation, during post-natal immunisation, women were taught to breastfeed their babies with only breast milk for the first six months of life. The midwife officiating the lecture, taught the women present to put the whole nipple into the baby's mouth during breastfeeding to avoid the mother having pains on the nipple.

Additionally, relevant entertainment programmes frequency of airtime and placement varies from station to station. Some take place in the morning, others at afternoons and yet others at evenings. They can be for 10mins, 15mins or even 30mins on weekly or bio-weekly basis. This is done to use entertainment programmes like drama, music, storytelling and etc to further educate nursing mothers.

Furthermore, table 8 of the content analysis shows the frequency of occurrence of items recorded on exclusive breastfeeding and reducing infant mortality for a period of six months. A

total of 198 broadcast items were recorded for Supreme FM, 82 for Karama FM, 121 for Radio Nigeria Hausa Service, 57 for KSMC FM and 59 for KSMC AM. In all the frequencies, the month that had the highest frequency of reportage is August which cannot be unconnected with the World's Breastfeeding Week that usually holds every first week of August annually. It is a time that the mass media identifies with the campaign on breastfeeding to sensitize and conscientize women on the benefits of exclusive breastfeeding for the first six months of the infant's life. This accounts for why within August alone, Supreme FM had 56% broadcast items on the subject, Karama FM had 44%, Radio Nigeria Hausa Service had 43%, KSMC FM had 44% and KSMC AM had 41%. This shows that all the media houses played significant roles during the period of the campaign.

Interestingly, advertorials on educating nursing mothers are aired frequently in the mornings on radio stations for the listenership of the entire family; and that adverts airtime depends on the capacity of the sponsors, i.e. 1min, 30secs or 10secs, in national, regional or local stations. Placements of the adverts are usually on daily basis.

RESEARCH OBJECTIVE THREE: To find out if radio stations in Kaduna state package relevant programmes to empower nursing mothers, such as the practice of exclusive breastfeeding, immunisation and etc;

The content analysis of relevant radio programmes shows that they package both health and family programmes to empower nursing mothers in Kaduna state. This is buttressed by Tunde Akinkumi in the interview with Supreme FM that they package time-bound health programmes to identify with a campaign like the World's Breastfeeding Week and etc. Also, Halima Balarabe of Radio Nigeria confirms that the relevant health programmes in the station have empowered nursing mothers in the state due to the wide reach of the station. Binta Aliyu of Karama FM equally agrees that they package some of these programmes to help improve the health status of women and children in the state. Patricia Andrew Zemoh of KSMC FM and AM adds that

stations in Kaduna state packages health programmes to empower women generally. Thus, agreeing with McQuail (1987) that the mass media (radio) should identify with the development objectives of any society.

Moreover, Figure 11 of the questionnaire shows that 43% and 46% of nursing mothers strongly agree and agree that they benefitted from radio programmes on infant health. Thus showing that radio has a wide reach and has significantly being of benefit to nursing mothers as regards their infants. Similarly, Table 6 showed that nursing mothers got relevant information as regards their infants from radio stations that include; Supreme FM at 29%, Radio Nigeria Hausa Service at 26%, Karama FM at 20%, KSMC FM at 14% and KSMC AM at 11%. This confirms that radio stations packages relevant programmes. This is seen in the content analysis interpretation, which shows that relevant jingles of 10secs are more often aired daily and in the mornings to educate nursing mothers.

Furthermore, Figure 12 shows that 'Let them Live' got the highest number of listenership at 96 followed by 'Acece su' at 45, then 'Ideal Woman' at 44, next is 'Nbakowa a Gida' at 37, then 'Children's Angle' at 34, next is 'Living Healthy' at 30, 'Yara Manyan Gobe' at 29, and 'Riga Kapi' at 23. This shows that majority of the radio programmes on infant have benefited nursing mothers in Kaduna state.

RESEARCH OBJECTIVE FOUR: To identify the problems associated with infant mortality and the role of radio programmes;

The questionnaire provided answers to this research objective. Figure 5 shows that 82 nursing mothers out of the total number of 338 nursing mothers sampled have recorded cases of infant mortality in Kaduna state. Moreover, amongst these cases of infant deaths, malaria ranks highest at 27 cases, followed by diarrhoea at 21 cases and pneumonia 17 cases. Measles, naval infection and breathing disorder ranks lowest at 7, 6 and 4 cases respectively. This is shown in Figure 6 of the questionnaire analysis. Therefore, it means that relevant radio programmes have done and are

still doing a lot in reducing the causes of infant mortality. This is seen in the content analysis interpretation, which shows that relevant talk/interview takes place in the morning and afternoon within 30mins of airtime weekly than at other times for the radio stations used in this study.

Similarly, that majority of the nursing mothers delivered their babies in the Hospital/clinic at 78% as shown in Figure 4, is an indication that nursing mothers are adhering to programmes encouraging them to deliver in the hospitals to avoid health complications that may lead to death. Additionally, majority of the respondents 91% take their infants for post-natal immunisation as shown in Figure 7. This shows that the infants stand the chance of living healthy and sound, which is the idea that relevant radio programmes promotes.

However, 9% of nursing mothers don't take their infants for post-natal immunisation. This is seen in Figure 8, where 'self-medication' ranks highest at 12, followed by 'no time' at 9 and 'against traditional belief' at 8. It shows that minority of nursing mothers prefer to administer self-medication on their infants than to take them for post-natal immunisation. While others don't have time to go for immunisation, others stick to their traditional belief system which is against the practice of immunisation. Thus confirming Umoh et al (1980) that culture and belief patterns of people affects their attribution of illnesses and measures to adopt for treatment.

Suggestions were raised in Figure 14 on radio programmes to empower nursing mothers that include: more infant health programmes in the daytime, specific programmes at the early stages of pregnancy, government funding to sustain health programmes, post-natal classes be organised on radio, programmes should educate husbands too and nursing mothers should be part of the programmes. This buttresses the fact that nursing mothers are well aware of the challenges of infant and how they can be improved upon using radio programmes.

RESEARCH OBJECTIVE FIVE: Suggest communication improvement measures to reduce infant mortality in Kaduna state.

Here, the participatory observation can provide an answer to this objective. This is because as more nursing mothers listen to radio programmes, it sinks into their subconscious such that when a health challenge arises in their infants, they quickly adopt the method they heard on radio.

Thus confirming Onabanjo (2000) assertion that, "talk programmes are elemental in radio programming, and most other programmes evolve through talks, and the producers of talk programmes should be led by the talk activity of his own people". And the producer should attempt to exploit the divergent cultural views of his people through programming, especially in their local languages. This is to enable them harness their resources rather than alienate them. Asema (2011) concludes that "radio remains a very important tool of development in the rural areas because of its popularity, cheapness and can operate easily on ordinary dry cell batteries without electricity".

Again, the saliency of the message becomes more so when it is culturally administered, and put across in a format that will appeal to the target listener/audience. This way, the programmes can significantly bring about the needed awareness against infant mortality to nursing mothers in Kaduna state.

General analysis of findings:

The findings show that radio programmes to some extent empowers nursing mothers in Kaduna state to be proactive in the fight against infant mortality. This is seen in the packaging and dissemination of the programmes in different languages of Kaduna state to ensure that no tribe is completely secluded in the broadcast items. Thereby, confirming the role of radio as a tool for change and development because of its wide reach and simplicity of the radio set.

Thus development media theory is visible here because as the radio programmes empowers the nursing mothers, the rate of infant mortality in the state is reduced. However, this is not the case in reality. Despite radio empowering messages, infant mortality still continue to rise. It now leaves a gap to be filled by future researchers in this area. However, advancing the

goals of development as regards attaining the MDGs target of 2015 to reduce by half the number of infant mortality in the country, Kaduna state still have a long a way to go in terms of empowering nursing mothers because as Kaduna records low infant mortality, it is therefore extended to other states in the north particularly, and the country in general to package programmes that can fight the menace of infant deaths and give Nigeria the good name of being interested in her future generation.

To overlook the role of radio in terms of development and improvement of the health status of Nigerians, particularly women and children would amount to being short-sighted and negligent of the nations development objectives.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Case

This study is an attempt to shed light on the role of radio programmes as a tool for empowering nursing mothers in the fight against infant mortality in Kaduna state. The study adopted the method of triangulation that include content analysis, survey method of questionnaires, participatory observation and interview to achieve its objectives. Radio as a blind medium of mass communication is a veritable tool of change and development when considering its wide reach and the simplistic nature of radio sets. As such, it allows for other activities while paying limited attention to it and yet the messages can be clearly decoded and understood by the listeners, particularly in rural areas because of its popularity, cheapness and can operate easily on ordinary dry cell batteries without electricity.

Therefore, relevant research literature was reviewed to provide an insight into the role of radio in the quest for empowerment amongst nursing mothers. This led to the adoption of the development media theory, which is founded on the tenets that the mass media should be used as a tool to advance the overall goals of development in every society.

5.2 Summary

In the year 2000, 189 countries came together under the UN General Assembly to define the goals of development for both developing and underdeveloped countries. That meeting gave birth to the Millennium Development Goals (MDGs) to be achieved by the year 2015. The MDGs are 8 explicit goals of which Goal 4 directly addresses the issue of infant and child health to be reduced by half within the target period of 2015. As such, countries began to include the goals in their objectives of development. This led to the introduction of many programmes regarding the MDGs and sustained efforts to achieve them.

The mass media equally joined the campaign by airing programmes and contents that directly addresses the issues raised in the MDGs. The radio was equally not left out of this campaign. Infact, it became a very pertinent tool in addressing change and improvement in status of the country because of its simplistic instrument and transient nature. A whole lot of programmes on infant, child, maternal, HIV/AIDS, girl-child education, poverty alleviation and etc were carried at different times to identify with the MDGs.

However, as it relates to this study, radio programmes on child-spacing, infant care, maternal care, exclusive breastfeeding, mother and child hygiene became part and parcel of its programme contents. These programmes were geared towards empowering women – nursing mothers inclusive, to fight the menace of child deaths particularly infants who die before their first year of life. In Kaduna state alone, where the population of this study is centred, there are numerous programmes from the existing radio stations in the state that addresses infant, child and mother health. This further reinforces the tenets of the Development Media Theory, that the media should be used as teaching tool for the betterment of the society.

Interestingly, in the Federal Radio Corporation of Nigeria (FRCN) Kaduna, which is the mother name for Radio Nigeria, Kaduna (English and Hausa Service), Supreme FM and Karama FM stations, programmes that focuses on infant and child health, includes ‘Let them Live’ and the Hausa version ‘Riga Kapi’, sponsored by the UNICEF amongst others that are the station’s

programmes. Similarly, in Kaduna State Media Corporation (KSMC) FM and AM stations, programmes on infant and child health includes ‘Let them Live’ and the Hausa version ‘Acece su’ amongst others to empower nursing mothers generally.

Hence, this study evaluated some of these programmes to ascertain the level of empowerment amongst nursing mothers within Kaduna state. The findings reveal that majority of the nursing mothers listen to these programmes and know the approach to adopt when their infant fall prey to some illnesses they got to know about on radio. However, others still stick to their belief patterns by rejecting every new idea taught to them on radio, but rather believe that the illnesses are caused by ‘anger of the gods’, ‘oracle’ or the child is an outcast i.e. Ogbanje (in Ibo), or Iska (in Hausa) and therefore must go back to where the child came from even if the illness is treatable like convulsion.

This shows that more needs be done by the mass media particularly radio stations in education and enlightenment for rural populace in the state to understand that some of these primitive practices should be disregarded. A child that is born to the family has great potentials in the future if given opportunity to realise his potentials. As such, adequate medical care should be sought by parents when the need arises in their infants to make the child grow to become the adult that would make the nation better for the generality of the populace.

5.3 Conclusion

The study ‘An Evaluation of Radio Programmes as a Tool for Empowering Nursing Mothers in the Fight against Infant Mortality in Kaduna State’ is an attempt at empirical research to ascertain the role of radio programmes in improving the infant mortality status in Nigeria with Kaduna state as a study.

Findings of the research show that radio programmes in Kaduna state have to a significant extent empowered nursing mothers to be proactive in the fight against infant mortality in general. Though, the status of infant deaths in Kaduna state is still high, poverty accounts for its major cause as majority of the nursing mothers are full-time housewives who cannot contribute financially to the upkeep and sound health of their infants.

The findings further reveal that some men cling unto their cultural belief patterns that prevent them from allowing their wives to take part in post-natal immunisation for their infants. Also, radio programmes only concentrate on empowering nursing mothers about infant health. There are no programmes on radio that educates families as an attempt at correcting the erroneous belief pattern about a witch or witchcraft from the village being responsible for a child’s death. More needs be done in this regard by radio stations and the mass media in general to sensitise and conscientise Nigerians.

The media is not only a watchdog of the society by keeping the public abreast about events around them, but also a teaching and empowering tool of the public. As it is said ‘information is power’ and it is the media that disseminates that information that gives power. Therefore, the mass media need to do more as regards infant health in Nigeria and giving power to the powerless through disseminating empowering messages to the generality of Nigerians.

5.4 Recommendations

In consideration of the title of this study, the following recommendations have been made:

1. Radio stations in Kaduna state should identify with the MDGs particularly as it pertains to infant health by introducing more and new programmes at the appropriate time. Nursing mothers should benefit maximally from the programme's information, education and skill acquisition that will help to empower them to fight against infant mortality.
2. Specific programmes on infants' health should be given titles that reflect the programmes type so that nursing mothers would prepare their minds for such and keep in tune with the programme. This would help both nursing and expectant mothers to be abreast with infants health challenges as they grow into adulthood, such that diseases that wait till adulthood before they manifest can be tackled and effectively handled at the infant stage to avoid such progressing to adulthood.
3. Programmes that will help teach some entrepreneurial skills and how to-do-it yourself will be structured to help women and nursing mothers in particular acquire needed skill to take care of themselves from degenerating to abject poverty which is equally a "disease" as well as a "sin". This will make them support the upkeep of their children at all costs, no matter the situation.
4. Programmes that educate men, husbands should also be introduced to conscientize and sensitize men's awareness to the problem of infant mortality and associated problems like maternal health problems, coupled with traditional belief systems that prevent men from allowing women and their wives to partake in post-natal immunization.
5. Organization, both international and national in nature such as "save the children" and "UNICEF", "ICRC" should step in to sponsor health programmes relating to infants and women on infant health in order for such programmes to be sustainable and achieve the desired impact in public life.

6. The government too has a major role to play by educating nursing mothers about where to get affordable or even free healthcare for their infants. Government sponsored programmes on infant health would give credibility to her genuine interest on child health and place her in good image among her citizens.

5.5 Contribution to the Existing Body of Knowledge

1. The findings have added emphasis to the traditional role of the mass media, particularly radio, which is 'empowering' after the traditional role of information, education and entertainment.

2. The study has extended the development media theory beyond the discipline of Mass Communication to the medical field of Community Medicine as it pertains to infant and maternal health. Thereby showing the interconnectedness of the medical field with that of mass communication, which both cannot exist in isolation. This is because, the medical field needs the mass media particularly the radio to educate the public about health matters and the mass media needs the medical field to disseminate health messages to the public that would improve their lives, and also help Nigeria attain the health related MDGs.

3. The study can be replicated by any researcher interested in the replication of the study. This is because it has generated data and source materials for future scholars interested in related study. Furthermore, it has provided a lesson on the power of the mass media particularly radio, which can be used to give power to the people and improve their lifestyles to reflect a healthy society and improve the status of Nigeria as regards the MDGs.

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DEPARTMENT OF MASS COMMUNICATION
FACULTY OF SOCIAL SCIENCES
AHMADU BELLO UNIVERSITY, ZARIA.

Dear respondent,

REQUEST FOR COMPLETION OF QUESTIONNAIRE

I am a master degree student of mass communication in the above mentioned institution. I am conducting a study on "Radio Programmes as a Tool for Empowering Nursing Mothers in the Fight Against Infant Mortality in Kaduna State." I hereby request that you kindly assist me in completion of the questionnaire below.

You are to please give honest answers to the questions. All information provided by you is strictly for the purpose of this research and shall be treated with utmost confidentiality.

Thank you for the anticipated cooperation.

Yours faithfully

Vivian Azienge
(07064413772)

QUESTIONNAIRE

SECTION A: DEMOGRAPHIC DATA

1. Age:
   (a) 15-19yrs ( ) (b) 20-29yrs ( ) (c) 30-39yrs ( )
   (d) 40-49yrs ( ) (e) 50 above ( )

2. Marital Status:
   (a) Single ( ) (b) Married ( ) (c) Widow ( )
   (d) Separated ( ) (e) Divorce ( )

3. Religion:
   (a) Christian ( ) (b) Islam ( ) (c) Traditional ( )
   (d) Others (specify)_____

4. Occupation:

(a) Private Employee ( ) (b) Civil Servant ( ) (c) Unemployed ( )

(d) House wife ( ) (f) Self-Employed ( )

5. Educational Background:

(a) First School Leaving Certificate ( ) (b) JSS/SSCE ( )

(c) OND/Equivalent ( ) (d) HND/Degree ( )

(e) Higher Degree ( ) (f) No formal Education ( )

SECTION B: NURSING MOTHERS

6. How many children do you have?

(a) One ( ) (b) Two ( ) (c) Three ( ) (d) Four ( )

(e) More (specify)_____

7. Where do you deliver your baby?

(a) At Home ( ) (b) Hospital/Clinic ( )

(c) Traditional Birth Attendant ( ) (e) Others (specify) _____

8. Have you recorded any case of infant death in your history?

(a) Yes ( ) (b) No ( )

9. If yes, what was the cause of the death? specify _____

_____

10. Is your infant receiving post-natal immunisation? (a) Yes ( ) (b) No ( )

11. If No to (10), Why_____

12. Are you aware of some infant illnesses that may lead to death before the first year of life?

(a) Yes ( ) (b) No ( )

13. How did you get to know about these infant illnesses?

(a) Radio News/Programmes ( ) (b) Television News/Programmes ( )

(c) Newspapers/Magazines ( ) (d) Social Media ( )

(e) Antenatal Classes ( ) (f) Books/Journal Articles ( )

(g) Others (specify)_____

14. Do your infant sometimes show sign of such illnesses?

(a) Strongly Agree ( ) (b) Agree ( ) (c) Undecided ( )

(d) Disagree ( ) (e) Strongly Disagree ( )

15. What measures did you adopt in the treatment of your infant (specify) _____

_____

16. Have you benefited from radio programmes on infant health?

(a) Strongly Agree ( ) (b) Agree ( ) (c) Undecided ( )

(d) Disagree ( ) (e) Strongly Disagree ( )

17. Which radio station did you get relevant information that helped you care for your infant?

(a) Supreme FM [ ] (b) Karama FM [ ] (c) Radio Nigeria Hausa Service [ ]

(d) Radio Nigeria English Service [ ] (e)KSMC FM [ ] (f) KSMC AM [ ]

18. Please specify the programme/programmes on radio that you benefited from _____

_____

19. Do you adopt exclusive breastfeeding on your infant?

(a) Strongly Agree ( ) (b) Agree ( ) (c) Undecided ( )

(d) Disagree ( ) (e) Strongly Disagree ( )

20. Suggest radio programmes to empower nursing mothers against infant mortality

_____

_____

_____

INTERVIEW SCHEDULE

Question 1:

How would you assess the radio in educating nursing mothers about infant health?

Question 2:

Would you agree that radio programmes have encouraged nursing mothers to practice exclusive breastfeeding?

Question 3:

Do you think radio stations in Kaduna state are packaging relevant radio programmes to empower nursing mothers?

Question 4:

To what extent can radio programmes be said to be effective in creating awareness to reduce infant mortality in Kaduna state?

CONTENT ANALYSIS CODE SHEET ON:

Radio Programmes as a Tool for Empowering Nursing Mothers in the Fight Against Infant Mortality in Kaduna State.

Supreme FM									Karama FM							
Category	Location/Placement				Time				Location/Placement				Time			
	Morning	Afternoon	Evening	Night	1hour	30min	15min	5min	Morning	Afternoon	Evening	Night	1hour	30min	15min	5min
News																
Feature																
Jingles																
Talk/Interview																
Entertainment																
Advertorials																
Total																

Radio Nigeria Hausa Service									KSMC FM and AM							
Category	Location/Placement				Time				Location/Placement				Time			
	Morning	Afternoon	Evening	Night	1hour	30min	15min	5min	Morning	Afternoon	Evening	Night	1hour	30min	15min	5min
News																
Feature																
Jingles																
Talk/Interview																
Entertainment																
Advertorials																
Total																