AN EVALUATION OF THE COMMUNICATION STRATEGIES AGAINST OPEN DEFECATION IN SABON-GARI LOCAL GOVERNMENT OF KADUNA STATE

BY

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DEPARTMENT OF THEATRE AND PERFORMING ARTS,

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ZARIA, NIGERIA

OCTOBER, 2017

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A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY ZARIA, IN PARTIAL FULFILLMENT OF THE AWARD OF MASTER OF ARTS IN DEVELOPMENT COMMUNICATION

DEPARTMENT OF THEATRE AND PERFORMING ARTS,

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ZARIA

OCTOBER, 2017

DECLARATION

I, Salaudeen, Habeeb Adebayo hereby declare that this dissertation titled ***An Evaluation of the CommunicationStrategies against Open Defecation in Sabon-Gari Local Government of Kaduna State***is written by me and is a product of my own research. It has not been submitted in any previous application for a higher degree. All quotations are indicated and all sources of information are duly acknowledged by means of reference.

_____ _____

Salaudeen, Habeeb Adebayo. **Date**

CERTIFICATION

This Dissertation entitled "***An Evaluation of the CommunicationStrategies against Open Defecation in Sabon-Gari Local Government of Kaduna State***" by SALAUDEEN, Habeeb Adebayo (**P13ARTP8005)**, meets the regulations governing the award of the degree of Master in Development Communication of Ahmadu Bello University, Zaria and it is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This dissertation is ultimately dedicated to Almighty Allah, the God of incomparable majesty for His endless favour, mercy and guidance in my life and for the completion of this work (Alhamdulillah). To the memory of my late parents Alhaji Salaudeen Akande & Alhaja Salaudeen Hafsat; may Allah admit you in the best of paradise.

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ABSTRACT

The effect of open defecation on human health is quite detrimental. The outbreak of cholera and diarrhea has become an annual epidemic in Sabon-Gari Local Government area of Kaduna State. This study therefore evaluates the communication approaches deployed by primary healthcare department in Sabon-Gari Local Government Area of Kaduna State towards addressing open defecation and proposes better strategies for promoting behaviour change and healthy living. The study examines the attitude of the people towards the practice of open defecation, and identifies effective communication approaches that can improve environmental sanitation and discourage open defecation prevalence in local communities in Nigeria especially within the study location. Premised upon the Health Belief Model (Becker, 1974)and Participatory Communication theory (Freire, 1983), the study employed both quantitative and qualitative research approaches and the instruments deployed for data collection include, questionnaire, focus group discussion, key informant interview and observation. The targeted population is drawn from Bomo, Chikaji and Bassawa wards with a sample size of 400 respondents.The study identified 'house to house inspection', 'use of local announcer', 'health talk at various PHC centre', 'the use of mobile phones' and 'radio' as the communication approaches used by the Primary Healthcare in Sabon-Gari LGA in curbing open defecation. Based on the findings from this study, the communication strategies deployed by the Primary Healthcare in Sabon-Gari LGA are feeble, partially participatory and incapable of directing the people towards adopting a healthier lifestyle and people are not aware of polio as an open defecation related disease. Meanwhile, Kaduna is one of the six states where polio is currently endemic.The study therefore recommends that the Primary Healthcare Department of Sabon-Gari LGA should employ the use of multiple communication media with strong emphasis on alternative communication such as Community Festival, Theatre for Development and Community Led Total Sanitation that will target all categories of people and eventually lead to the adoption of healthy behaviour and drastic reduction of open defecation practice.

CHAPTER ONE

INTRODUCTION

1.0 Background to the Study

Central to human endeavour is the issue of health. Health is an age-long concept whose definition is changing overtime. It is a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity (WHO, 1948). It is a phenomenon that has attracted a global attention due to its importance in achieving a disease-free and advanced healthier society. Arguably, the development of any country has been linked to the state of health of its people (WHO, 2005). Therefore, the state of health of a country's population is a strong determinant of its development. The health care system in Nigeria is ravaged by several preventable diseases like cholera, diarrhea, polio, dysentery, and malaria among others and the prevalence of these diseases leads to maternal mortality, child morbidity and the reduction in life expectancy (UNICEF WASH Fact Sheet, 2010:1). In tackling these preventable diseases, the Primary Healthcare (PHC) has been singled out as the most suitable health care setting to meet the increasing need for health promotion interventions and to curb the rising number of chronic and preventable diseases (Frankish, et al 2006, Wise, 2007 &Watson, 2008).

Primary Healthcare delivery is the foundation of rural health care system and forms an integral part of National Healthcare system (Media Lab Asia Report, 2006:1). Primary Healthcare service was introduced to Nigeria in 1975, when General Yakubu Gowon, the former Military Head of State, announced the Basic Health Service Scheme (BHSS) as part of the Third National Development Plan (1975-80). The objectives of the scheme was to increase the proportion of the population receiving health care from 25 to 66 percent and to establish a health

care system best adapted to the local conditions and to the level of health technology in this information age (Sorungbe, 1989 cited in Anie, 2011).

According to Ademiluyi and Aluko-Arowolo (2009:3), "Primary Healthcare Centres are meant to provide healthcare services for the treatment of malaria fever, cold, nutrition disorder, maternal and pregnancy matters, open defecation related diseases, among others." Iluyemi, added that:

> Primary Healthcare also performs specialist functions such as providing reproductive health and family planning, nutrition education, sanitation, and community rehabilitation for convalescing and disabled patients. The centres are also to undertake such functions as health education, diagnosis and treatment of common ailments through the use of appropriate technology, infrastructure and essential drug list (Iluyemi, 2009:5).

From the quotation above, it is apparent that sanitation is one of the significant responsibilities of the primary healthcare centres across the nation. Sanitation according to UNICEF&Water Aid (2008:2) "is measures necessary for improving and protecting health and well-being of the people. It is any system that promotes proper disposal of human and animal wastes, proper use of toilet and avoiding open space defecation." In addition, UN-Water (2008) sees Sanitation as "the collection, transport, treatment and disposal or reuse of human excreta, domestic waste, water and solid waste, and associated hygiene promotion." Water Aid (2011:9) observes that:

> Sanitation refers to the safe management of human excreta from the point of defecation to its disposal, treatment or re-use. In the urban environment especially, sanitation also includes the management of solid waste, grey water and surface drainage. In the wider context, sanitation includes not only physical systems, but also the policies, legal and management frameworks and investments necessary to achieve sanitation for all.

The above quotation suggests that sanitation issues are broad in scope. It includes open defecation, public-personal hygiene, environmental and food sanitation and water hygiene among others. However, central to other sanitation challenges is practice of open defecation. According to World Health Organization, open defecation is the 'riskiest sanitation practice of all' (Khan, 2013). UNICEF &WaterAid (2008:2) see open defecation as "the practice of passing

out excreta in open field and indiscriminately." Open defecation refers to the practice whereby people go out in fields, bushes, forests, open bodies of water, or other open spaces rather than using the toilet to defecate (UNICEF, 2014).

It is detrimental to the human health. One gram of excreta contain: 10,000,000 viruses, 1,000,000 bacteria, 1,000 parasites cysts, 100 parasite eggs (UNICEF, 2014).Open defecation involves passing excreta in public spaces or outside the toilet area. The pathogen (disease causing agents) present in the faeces however travels from hand to the mouth of people. Flies, rainwater, contaminated water, wind, hoofs of domestic animals, shoes, children's toys, footballs, are different agents or pathways through which faeces pathogens enter one's home. The human excrement can further get into the mouth through unwashed hands, fruits, vegetables and untidy fingernails. Human faeces get into the mouth through the perching of flies on uncovered food, and utensils washed with contaminated water etc. (Center for Legislative Research and Advocacy *CLRA, 2013:*2).

Furthermore, open defecation in most cases is responsible for the manifestation of different diseases. Human excreta have been implicated in the transmission of many infectious diseases including cholera, typhoid, infectious hepatitis, polio, cryptosporidiosis, and ascariasis WHO Report, (2004). UN, (2014) indicates that "open defecation is deeply rooted in unhealthy health behaviours, poverty, and customs in some countries and societies." The 2012 WHO/UNICEF joint monitoring report stated that "over 1 billion people (15 percent of the global population) are involved in open defecation".

The United Nations Report (2014:2) states that, "In sub-Saharan Africa where 25% of the population practice open defecation, diarrhea becomes the third biggest killer of children under five years old in such region." Studies estimated that a child dies every 2.5 minutes through

diarrhea. Children with diarrhea eat less and are less able to absorb the nutrients from their food and these make them even more susceptible to bacteria related illnesses (Dittmer, 2009:6).

In addition, children that are most vulnerable to acute diarrhea also lack access to potentially life-saving health services (UN, UNICEF&WHO, 2014). Agberemi (2014:1) emphasized that "No fewer than 49 million Nigerians still defecate openly. The high prevalence of open defecation in Nigeria has implications for the general health, well-being and socio economic development of its citizenry**.** Nigeria is ranked 4th in the world based on the prevalence of open defecation practice.Although Nigeria has initially set a target date of 2018 for eradication of open defecation, and this has now been shifted to 2025 for the total eradication of open defecation (UN, UNICEF &WHO, 2016). Yet, sanitation coverage is currently around 40 percent and open defecation is widespread in most parts of the country but largely endemic in the northern part of Nigeria. (Lyla Mehta, ID21, 2008:3 Water Aid, 2015:10).

More so, various factors are said to be responsible for the prevalence of open defecation in Nigeria among which are poor communication, lack of proper education and over population. Paramount among these factors is the poor communication campaign against this practice and the inability of concerned agencies to achieve the eradication of open defecation in several locations within the country. Also, many people do not have knowledge about the dangers associated with open defecation. Other factors could include the unavailability of effective Primary Healthcare Centres and unhealthy cultural practices.

Communication is key and central to effective healthcare system. The ability to communicate information and ideas effectively is increasingly recognized as critical to the success of any healthcare system. Several media agencies including the Television, Radio, Newspaper and alternative media such as Theatre for Development, Educational drama, Entertainment Education and Social Media have been used to communicate several health issues.

However, these media are incapable of ameliorating pervasive health issues without the design of effective communication messages. Effective communication is required for successful interactions and campaign against open defecation among individuals, community people and healthcare providers. The continued increase in the rate of open defecation poses greater challenge to people's health. This challenge is further exacerbated by health care professionals who may lack the ability to communicate effectively (Schwartz, F., Lowe, M. and Sinclair, L., 2010).

Communication is a major player to achievepositive health outcomes. Most effective health care delivery system recorded in several literatures has been attributed to effective communication strategies. The success recorded by the Nigerian government over the Ebola outbreak was primarily as a result of the use of multiple communication strategies, channels and media. For the youth, social media helped a great deal; for adults and people in the urban areas, the newspaper and television served effectively; and for the people at the grassroots level, the radio, town criers, interpersonal communication and advocacy visits assisted in message dissemination. Kreps et al (1998) maintained that communication is essential in creating, gathering and sharing health information. This means that if people must change their attitudes, practices and adopt a healthier life style, then communication is inevitable. There is a pressing need for awareness and sensitization on the prevalence of open defecation and related practices so that people can make better choices that will enhance their health and environment.

This researcher is aware of governmental, non-governmental and international agencies that have carried out several campaigns, health talks, sensitization and awareness on the dangers associated with open defecation in Nigeria. However, the efforts of most of these agencies especially were merely geared towards giving information on people's unhealthy attitude and proposing practices that can promote healthy living.

Among the organizations involved in the campaign are UNICEF, Water Aid, WHO, State Water and the Disease Control and Prevention Unit of the Primary Healthcare at the Local Government Area (LGA) level across Nigeria, to mention a few. UNICEF in collaboration with State Water and Sanitation Department is committedly working towards achieving an open defecation free country through the use of Community-Led Total Sanitation (CLTS) approach. CLTS is a new participatory approach to "trigger" large-scale community action to improve sanitation. It was first piloted in Bangladesh in 1999 by an Indian consultant, Kamal Kar, who found it highly urgent to mobilize communities in order to completely eliminate open defecation (OD) by building household toilets. CLTS quickly spread to other parts of Asia and to Africa where it has been taken up with enthusiasm (Kidd, 2013:197).

Campaigns are also being carried out to tackle open defecation within local communities in Nigeria. Among these communities is Sabon-Gari Local Government Area in Zaria, Kaduna State. Sabon-Gari is one of the 23 Local Government Areas of Kaduna State. It is a semi-urban community located in North Western part of Nigeria. The Primary Healthcare Department of the Local government is responsible for handling the health cases of the people in local communities in order to fulfill its mandate. There are five basic units under the primary healthcare Department in the LGA under study. These units include:

1. The Disease Control unit;
2. Medical unit;
3. Essential Drug unit;
4. Maternal and Child healthcare/family planning unit and
5. Monitoring and Evaluation unit.

The Disease Control unit is primarily in charge of carrying out proactive and reactive interventions before and during outbreak. It has seven health offices dispersed across the local government area. The responsibilities of this unit include village and house-to-house inspection, refuse evacuation, drainage spray, waste management and collection, sanitary inspection, inspection of industrial pollution and general prevention and control of communicable diseases. All these activities are geared towards maintaining a hygienic environment which is free of disease.

Campaign against open defecation is central to the activities of the Sabon-Gari Local Government. The primary healthcare department usedcommunication strategies such as house to house inspection, radio, and mobile telephones, especially in an epidemic situation to inform the people on safety tips. The Local Government also trains local health officers for easier intervention.

However, despite the attempts to arrest open defecation through several efforts and interventions, open defecation is still prevalent within the LGA as the practice is seen along railway lines, road sides, bush paths, backyards, open fields, and refuse-dump sites, in market places and restaurants. The consequence of open defecation in Sabon-Gari Local Government is highly devastating. On the 9th of April, 2011, Daily Trust Online Newspaper reported several cases of cholera/diarrhea outbreak within Sabon-Gari Local Government Area, killing several and affecting over 1000 persons. The most worrisome case was that the outbreak was not recorded by the Local Government's Monitoring and Evaluation department as they rely only on reported cases by the community people. The Daily Trust report stressed that majority of the people affected adopted self-medication which further worsened their health situation (Daily Trust, 2011).

In 2015, statistics from the Monitoring and Evaluation Unit of the Sabon-Gari LGA revealed that 8,721 diarrhea/cholera cases were recorded in 2015 only. This implies that the information and communication strategies employed by the L.G.A on the consequences of open defecation and other related un-healthy behaviour among the people of Sabon-Gari LGA are inadequate. This perceived communication gap is therefore what this research wants to address. This study seeks to examine the communication approaches deployed by the Sabon-Gari Local Government Area to tackle open defecation with a view to suggesting more effective ways of enhancing sanitary situation among local communities in Nigeria especially within the study location.

1.1 Statement of the Research Problem

Open defecation remains a critical global health challenge which is reported to affect almost 1 billion people around the world. It is estimated that 842,000 people die each year because of poor sanitation and hygiene practices and unsafe water supplies (Devine, 2016:3). One of the major consequences of open defecation is diarrhea. Diarrhea is sanitation and hygiene related disease and the second main cause of infant mortality after malaria and the main cause of child under-five mortality rate in Nigeria. Open defecation practice is prevalent among developing countries like Nepal, Bangladesh, India, Indonesia, and some African countries like Malawi, Kenya, Uganda, Gambia, Cameroun, Nigeria among others.

The effect of open defecation on human health is quite detrimental. The outbreak of cholera and diarrhea has become an annual epidemic in Sabon-Gari Local Government Area of Kaduna State and Nigeria. Various factors are said to be responsible for the prevalence of open defecation in Nigeria among which are poor communication, inadequate facilities, lack of proper education and over population. Paramount among these factors is the poor communication

campaign against this practice and the inability of concerned agencies to achieve the eradication of open defecation in several locations within the country.

This problem is largely connected to the fact that the health communication interventions deployed by the LGA may be partially effective. Thus, the desired result especially in addressing open defecation has not been achieved. The lack of proper education and care especially for the Almajiri students could be a contributing factor to the prevalence of open defecation practice in northern Nigeria.

Studies on open defecation by Reuben (2008), UNICEF (2014) and Performance Monitoring & Accountability 2020 (2016)have identified factors responsible for the prevalence of open defecation and established varieties of ways through which open defecation can be completely eliminated but none seems to have examined the communicative role of the primary healthcare department in Local Governments across Nigeria in the campaign against open defecation practice.

It is in view of the gaps in these earlier studies on primary healthcare and open defecation that this study intends to evaluate the communication strategies deployed by the primary healthcare department in Sabon-Gari Local Government Area of Kaduna State in the campaign against open defecation practice, with a view to determining their strengths and weaknesses.

1.2 Aim of the Study

The aim of this study is to enhance the communication approaches deployed by Sabon-Gari Local Government Area of Kaduna State, against open defecation practice for promoting behavior change and healthy living.

1.3 Objectives of the Study

The study has the following objectives:

1. To examine the attitude of the Sabon-Gari LGA people towards the practice of open defecation.

2. To establish the level of peoples' awareness about the dangers associated with open defecation.

3. To identify the communication approaches deployed by the Primary Healthcare Department of Sabon-Gari Local Government Area of Kaduna State in tackling open defecation.

4. To determine the effectiveness of these communication strategies in the campaign against open defecation in Sabon-Gari LGA.

5. To identify effective communication approaches to improve environmental sanitation and discourage open defecation practice in local communities in Nigeria especially within the study location.

1.4 Research Questions

1. What are the attitudes of people towards open defecation practice in Sabon-Gari Local Government?
2. What he level of peoples' awareness about the dangers associated with open defecation?
3. What are the communication strategies deployed by the Primary healthcare department of Sabon-Gari LGA of Kaduna State in tackling open defecation?
4. How effective are these communication strategies in the campaign against open defecation in Sabon-Gari LGA?
5. What are the effective communication approaches that can be adopted for the improvement of environmental sanitation and reduction of open defecation in Sabon-Gari Local Government Area?

1.5 Justification for the Study

Open defecation remains a great development challenge in Nigeria due to factors like unplanned urban area, urban migration, among others. The prevalence of open defecation in Nigeria has implications for the general well-being and socio economic development of Nigerians. Open defecation has resulted in several diseases such as cholera, typhoid, parasitic worm, malnutrition, respiratory infection and diarrhea. The diarrhea prevalence for children below age five is estimated to be at 14% and it is a major contributor to under-five mortality rate of 158/10000 in Nigeria (MICS, 2011). The rate of maternal mortality is 19 times higher in developing countries than in developed countries, and children in developing countries are eight times more likely to die before they are five years (WHO, 2015:3). Given the prevalence of preventable and controllable diseases, this study aims at analyzing communication structure and activities of the disease prevention and control unit of primary healthcare services in the campaign against open defecation.

Currently, government and non-governmental organizations in Nigeria have increased their campaign against open defecation in order to avoid several diseases and out-break, which leads to increase in maternal and child mortality rates. This is exceptionally important for the extreme poor and less privileged populations that majorly practice open defecation. This study is therefore significant because the eradication of open defecation within Sabon-Gari Local Government Area will bring about healthy living, reduce child mortality rate, eliminate outbreak and increase the life span of the people. It will also drastically reduce government expenditure on health. More so, the study will add to the existing scholarly literatures on open defecation and communication in relation to primary healthcare delivery.

1.6 Scope of the Study

This study evaluates the Primary Healthcare Department of Sabon-Gari Local Government Area of Kaduna State which consists of six departments. This study is restricted to the Disease Prevention and Control Unit which has seven health offices that are responsible for communicating health issues. Therefore, this study is focused on evaluation of the communication approaches utilized by the disease and control unit of Sabon-Gari primary healthcare department in the mitigation of open defecation practice.

There are 11 wards in Sabon-Gari LGA which are Samaru, Hanwa, Muchia, Chikaji, Bassawa, Bomo, Dogarawa, Zabi, Jama'a, Hayin Ojo and Jushia. It has an estimated population of 397, 095. The LGA has 22 primary health care facilities consisting of seven family environmental health units, nine health clinics and five health posts. The disease prevention and control unit has seven health offices under its control with one in charge at each office. However, the scope of this study is restricted to the, Disease and control unit, the health in-charge officers of the seven health offices and three wards namely Bomo, Chikaji and Bassawa. These communities were selected because they have the same characteristics with the rest of the wards and the Primary healthcare department has previously carried out open defecation campaigns in the wards. Also, record from the Monitoring and Evaluation unit has it that out of the 11 wards in Sabon-Gari Local Government, Chikaji and Bomo recorded the highest diarrhea cases while Bassawa (Palladan) has the least. Therefore, the study tends to also find out the factors responsible for such possibilities.

CHAPTER TWO

2.0 Review of Related Literature

This chapter reviews literature that are related to the discourse of Health Communication, curative and preventive Communication, Behaviour Change Communication, the role of media in communicating health issue, Communication Primary Healthcare Delivery, Caregiver-Patient Communication, preventive and curative communication, the state of Primary Healthcare in Africa and empirical studies on Primary Healthcare in Nigeria. This chapter also consists of the theoretical frameworks used to underpin the study.

2.1 Health Communication

Health, according to World Health Organization (WHO) is "a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity" (1974:2).However, the World Health Organization (WHO) definition gives us the three global classification of health which is known as the Health triangle (Physical health, mental health and social health). However, several criticisms have rendered WHO's definition ineffective because of the realities of the day. There is high prevalence of chronic diseases which can only be managed therefore, WHO definition becomes counterproductive as it declares people with chronic diseases and disabilities definitively ill. It minimizes the role of the human capacity to cope autonomously with life's ever changing physical, emotional, and social challenges and to function with fulfillment and a feeling of wellbeing with a chronic disease or disability. Machteld Huber et al (2011) propose changing the emphasis towards the ability to adapt and self-manage in the face of social, physical, and emotional challenges. This is done through vivid explanation of the health triangle.

Several dimensions of health can be identified in the social domain, including people's capacity to fulfill their potential and obligations, the ability to manage their lives with some

degree of independence despite a medical condition, and the ability to participate in social activities including work. Health in this domain can be regarded as a dynamic balance between opportunities and limitations, shifting through life and affected by external conditions such as social and environmental challenges (Huber, Machteld et al. 2011:2).

In the physical domain of health, when an organism is confronted with physiological stress, a healthy organism is able to mount a protective response, to reduce the potential for harm, and restore an (adapted) equilibrium. If this physiological coping strategy is not successful, damage (or "allostatic load") remains, which may finally result in illness (McEwen J.B, 2003).

In the mental domain, Antonovsky (1984) describes the "sense of coherence" as a factor that contributes to a successful capacity to cope, recover from strong psychological stress, and prevent post-traumatic stress disorders. The sense of coherence includes the subjective faculties enhancing the comprehensibility, manageability, and meaningfulness of a difficult situation. A strengthened capability to adapt and to manage self often improves subjective wellbeing and may result in a positive interaction between mind and body. For example, patients with chronic fatigue syndrome treated with cognitive behavioural therapy reported positive effects on symptoms and wellbeing (Antonovsky 1979, 1984). This implies that the word health is complicated and its definition can be viewed from different perspectives. For the purpose of this study, health is defined as a situation whereby human environment is free of open defecation practice and its manifest consequences.

Communication is defined as a means of passing messages across from one person to another. The basis of communication process as postulated by Berlo's formula (1960) is the SMCR which means the SENDER+ MESSAGE+ CHANNEL+ RECEIVER. From the above, Berlo's formula, SMCR, connotes that someone has to be in charge of sending the message

through a designated channel or medium and such message must get to another person who in this case is the receiver. The message however must be understood. It is an age-long concept from a Latin word- *COMMUNIS*, which means *common* or *shared understanding.* Communication is at the heart of who we are as human beings. It is our way of exchanging information. Communication therefore is a purposeful effort to establish *commonness* between a source and receiver (Schramn 1965:1). Whatever is being shared could be associated with knowledge, experience, thought, ideas, suggestion, opinions, feelings etc. Communication is a common phenomenon that cuts across the daily activities of human being. As food and water are very important to man's survival so is communication. It is on the basis of this that Ugboajah (2001) cited in Obe (2008:2) defines communication as:

> The processes which involve all act of transmitting messages to channels which link people to the language and symbolic code used to transmit such message. It is also the means by which such messages are received and stored. It includes the rules, customs and conventions which define and regulate human relationships and events.

The above definitions signify that communication is a multi-dimensional concept that takes place using different medium. These media could be conventional, folkloric, new media or interpersonal media. Meanwhile, the main goal of communication is to pass message across to the intended audience. Hence, feedback is central to the achievement of effective communication. Health deals basically with body and mind wellbeing while communication is generally about human interaction and exchange of information.

There is lots of contemplation on whether communication is either spoken or written or whether it is restricted to human alone or it includes animals and machines. Theodorson and Theodorson's (1969) define communication as the transmission of information, ideas, attitudes or emotion from one person or group to another (or others), primarily through symbols. Supporting this view, Hartley (2004:32) sees communication as "interaction by means of mutually recognized

signals." The presence of 'signal' and 'symbol' in the above definitions clarify the fact that communication is both verbal and non-verbal but its credence seems to be given to the non-verbal cues over the use of verbal communication. This is in line with the arguments of some scholars that about 70 percent of human communications are through non-verbal means while the verbal means takes 30 percent. Whichever way, what is important is that the message must be efficient and effective. Obe further submits that:

> Communication is dynamic, ongoing and ever changing. Communication is made up of activities of interrelated elements which continue to function in the communication process. The fact is that the word communication is encompassing, ambiguous and pervasive. These three words capture the universal nature of communication and make everyone thinks they know something about communication (Obe, 2008:20).

Justifying the dynamic, symbolic, and ambiguous nature of communication, Wood, J.T. (2009:32-34) added that:

> It continually changes, evolves, and moves on. Because communication is a process, communicative interactions have no definite beginnings or endings. Because human communication is symbolic, we have to think about it to figure out what it means. Rather than reacting in automatic or instinctive ways to communication, we usually reflect on what was said and what it means before we respond. To be interpreted, symbols require thought. Symbols can also be ambiguous; that is, their meanings may not be clear.

Obe and Wood however express worry over the difficulties and intricacies involved in conceptualizing communication due to its 'encompassing, ambiguous and pervasive nature.' By encompassing, it means that communication has no restriction, been ambiguous could mean that it has no single definition and attribute and by being pervasive translates to the fact that communication is a general term used in different contexts at different times between humans and non-human communities. However, no matter the mode of communication, there must be feedback mechanism that will be used to determine whether the communicated messages were

rightly received and well comprehended. Feedback mechanisms are indeed inevitable factors in enhancing effective communication.

Furthermore, effective communication is recognized as a priority across the healthcare continuum because it directly affects the quality of medical outcomes and patient satisfaction. Infectious diseases have been significant components in the history of many countries and continue to have major impact worldwide (Koop, Pearson and Schwarz 2001). The origin of infectious disease dates back to the beginning of civilization, when hunter-gatherers began to settle into villages and towns. The combination of close living spaces, the introduction of agriculture and irrigation, and the domestication of animals allowed ample ways for diseases to spread (Robbins, 2006). While it is generally acknowledged that the majority of diseases are either treatable or preventable in developed countries, most developing countries lack the advanced medical training and technology prevalent in Western countries. However, it is possible for the level of awareness of preventable diseases to be increased with the health communication models and systems that have been created for developing countries (John Hopkins, 2010).

Hence, there exist a strong linkage between the domains of health and communication dating back to five decades.' Ende (2008:17). The fusion of health with communication came up in the late 70's when there was apparent setback in development sectors due to poor communication that does not give room to sharing and participation. These came to be as a result of the efforts of development communicators who seek for better ways to communicate development through participation. Communication in health can be defined in much the same way as communication has generally been defined: a transactional process. The main difference in communicating health is that the focus is specific to health information. Jackson and Duffy (1999) among others vividly establish the role of communication in all aspects of mankind, especially health-wise to

improve personal and public health. Their model rests on the belief that communication when applied well can create awareness and cause some behavioural change through persuasion.

In addition, issues in communicating health are receiving global attention because of the importance of health to the well- being and continuation of the human race. Corcoran, Nova (2007:8) postulated that "Communication in health takes place on many levels, including individual, group, organization, community or mass-media." Kreps (2003) summarizes the addition of 'health' to the definition of communication as a 'resource' that allows health messages (for example prevention, risk or awareness) to be used in the education and avoidance of ill health. This broad definition incorporates the fact that health communication can take place at many levels and embodies a *holistic* approach to health promotion. Health communication plays a vital role in public health campaigns designed to prevent infectious disease in the developing world. It encompasses the study and use of communication strategies to inform and influence individual and community decisions that enhance health. For individual, effective health communication can help raise awareness of health risks and solutions, provide the motivation and skills needed to reduce these risks, help them find support from other people in similar situations, and affect or reinforce attitudes. Health communication also can increase demand for appropriate health services and decrease demand for inappropriate health services. It can make available information to assist in making complex choices, such as selecting health plans, care providers and treatments.

Health communication can be used to influence the public agenda, advocate for policies and programs, promote positive changes in the socio-economic and physical environments, improve delivery of public health and health care services, and encourage social norms that benefit health and quality of life. The practice of health communication has contributed to health promotion and disease prevention in several areas. Indeed, in Nigeria as in other part of the world, health

communication has now attained the status of not only the steering wheel but also the pivot on which the wheel of public health programs rotate. However, the wide range of channels through which health communication messages are disseminated includes the mass media (television, radio, magazines, newspapers, and advertising); outdoor advertising; brochures, posters, and newsletters; comic books and *fotonovellas*; direct mail; interpersonal communications (such as in-person and telephone counseling); music and other videos; songs; dramatic presentations; community events; point-of-purchase materials; and the Internet (Weinreich, 1999).

From the foregoing, it is evident that health communication makes easier the dissemination of health messages as experts would be required to do a thorough analysis of the appropriate communication channels and media that will best pass such health messages across to the general public which will lead to a change in attitude and behaviour. In other words, behaviour change communication is the spine of health communication; meanwhile, the scope of health communication has been broadened to exploring the nature of health messages either preventive/proactive or curative communication and practical interactions between Caregivers (Medical personnel) and the Care receivers (patients).

2.2 Behaviour Change Communication

Behaviour Change Communication is a process that motivates people to adopt healthy behaviours and lifestyles. BCC programs have motivated people to take meaningful and healthier decision over their lives. It is cost effective when it reaches large audiences (Salem, R.M., et al 2008:2). It is a strategy, which refers to the systematic attempt to modify/influence behaviour, or practices and environmental factors related to that behaviour, which indirectly or directly promote health, prevent illness or protect individuals from harm. Similarly, Karen, et al. (2008) corroborates that:

> BCC is an evidence- and research-based process of using communication to promote behaviours that lead to improvements in health outcomes. BCC intends to foster necessary actions in the home, community, health facility or society that improve health outcomes by promoting healthy lifestyles or preventing and limiting the impact of health problems using an appropriate mix of interpersonal, group and mass-media channels.

Hence, the explicit emphasis on behaviour change as an outcome helped to highlight the need for a thorough understanding of the full range of determinants, both internal and external factors, to understand why people do what they do and how to facilitate healthy options, decisions and support.

PATH&AYA (2001) view BCC as:

> The process of using communication approaches and tools to develop the skills and capabilities of adolescents to promote and manage their own health and development; foster positive change in adolescent behaviour, as well as in their knowledge and attitudes; work in partnership with families, schools, health services and communities to influence the social norms and policy environment within which adolescents function.

This means that behaviour change communication (BCC) is an interactive process with communities (as integrated with an overall program) to develop tailored messages and approaches using a variety of communication channels to develop positive behaviours, promote and sustain individual, community and societal behaviour change; and maintain appropriate behaviours.

Health and development programs use BCC across a broad range of efforts to improve peoples' health and well-being. These efforts have addressed, for example, family planning and reproductive health, maternal and child health, prevention of infectious diseases, democracy and governance, and poverty alleviation. To address health problems fully, BCC programs must be integrated, to achieve an effective service delivery system which require a supportive political and policy environment.

However, effective BCC is vital to setting the tone for compassionate and responsible interventions. Strengthening this, John Hopkins Bloomberg School of Public Health (2008) highlighted what an effective BCC programs should incorporate which include:

> Using a proven process, Applying theory, Relying on research for programme design, monitoring, and evaluation, Involving the community, Developing relevant and creative messages and materials; Addressing both the individual and the larger society; Combination of several communication channels; scaling up through Expanding activities to reach more people; Developing and sustainingcapacity for the future: Training, education, and working partnerships build capacity. Also, with technical assistance, individuals and local organizations can learn how to carry out effective BCC program (Salem, R.M., et al, 2008).

By implication, it therefore means that BCC is a multidisciplinary approach that is encompassing and involves different professionals from different sectors to provide useful expertise in order to solve behavioural problems. It is important to note that unlike social marketing, entertainment education, and communication for behaviour change that are deployed within a short period of time, BCC is deployed for a long term intervention due to the complexities in understanding the human behaviour.

In view of this, BCC intervention is core in designing preventive and curative messages on disease prevention and control under the PHC Department. It facilitates better communication planning for risk communication during outbreak and provides reasons for local people to make healthy choices over unhealthy ones. These messages are passed through effective use of the media.

2.3 The Role of Media in Communicating Health Issues.

The role of Media in communicating health is very well established on the global scene. It has facilitated good health outcome at several interventions and occasions. In societies that relay on effective and efficient communication, the media plays a major role in informing multiple aspects of individuals' lives, including their access to health information. Traditionally,

public health organizations have used print, radio, and social marketing frameworks to disseminate important health messages to the public. In the past few decades, electronic media have stepped to the forefront of communication, and public health communication has evolved to reflect this (Newbold, & Campos, 2011:5). The conventional media specifically TV and Radio have been used to send health messages to the Nigerian audience. Daniel, (2011) stated that, "these media are employed at all levels of public health in the hope that three effects might occur: the learning of correct health information and knowledge, the changing of health attitudes and values and the establishment of new health behaviour." Mass media campaigns have long been a tool for promoting public health (Noar, 2006) being widely used to expose large populations to messages through routine uses of existing media, such as television, radio, and newspapers. Health messages are sent through the use of Entertainment Education. Although expensive to produce, Radio or TV dramas have attracted audiences in the millions (Fossard and Lande, 2008:1).

The use of entertainment education approach, through mass media to deliver intended messages, is also becoming attractive to communication experts. This approach uses drama songs and dances to drive home the salient messages (Kincaid et al., 1992, cited in Bankole, 1994: 1). Entertainment Education uses various forms of entertainment. Dramas on conventional media (Radio and TV), animated cartoons, popular songs, street theatre, and other formats can educate and motivate as they entertain (Singhal, A. & Rogers, E.M., 2004) on different health issues. In Entertainment Education, there is no clear dividing line between entertainment and education (De Fossard, E., 2004). The two should be seamlessly woven together. One of such popular series on the radio in Nigeria is *Story Story* by the Society for Family Health. The Radio drama is targeted at discussing family planning and other reproductive health issue.

Scholars remain united on the potency of messages in the mass media in engendering desired social goals. Bankole (1994) believes that "the mass media can be effective in influencing people's behaviour." Piotrow et al. (1990), cited in Bankole (1994: 1), adds that mass media can be a powerful tool not only for creating awareness about innovations but also for stimulating desires in people for more information, and for facilitating their efforts to apply the information to their own behaviour. Mass media coverage of primary health care-based issues has attracted interests from a number of scholars (Bankole, 1994; Firmansyah, Hegazi, Darwisyah & Amaliah, 2001; Adeniran, 2009; and Abubakar, Odesanya, Adewoye, & Olorede, 2013) who have found out a number of things about media coverage of such issues. One of such studies is conducted by Firmansyah et al. (2001) which opine that:

> Although the mass media are relevant in the development process to which they serve as vehicles of message dissemination, the newspaper, which is 'literacy-intensive', is more useful in urban settings, where literacy is usually higher; the radio is more popular than television among rural dwellers.

Hence, multiple approach communication system becomes a necessity for the successful implementation of Primary health care delivery that caters for all. Supporting this, the National Academy of Sciences (2002:78) believes that, 'different age, gender, ethnic, and socioeconomic categories tend to favor different media, so it is prudent when targeting by these individual characteristics to investigate which media are best for each group or use multiple media approaches.

However, the mass media has received a lot of criticism over its potency in creating awareness especially on health issues due to its inability to reach local people who do not have access to either electricity, media signal or cannot afford to buy a Television, radio or Newspaper. Empirical evidence has it that, there is a growing feeling among communication researchers that existing media systems have failed to serve the needs of development in Africa

especially at the grassroots level (Mda 1993: 1). In view of these realities, NGOs, development workers and international agencies are finding interpersonal communication channels as useful alternatives or complement to the mass media. This is reinforced by the proven potency of interpersonal and alternative channels in persuading target audiences to adopt innovations (Abah 1997; Garcia 2001; Odhiambo 2005).One of such unique and alternative communication media is Theatre for Development (TfD) which applies its participatory and popular appeal to interact with target populations using their cultural heritage and resources. The use of popular media such as drama and theatre for community education is well documented (Boal 1979, Abah 1997 and Nwadigwe, 2012:4). Theatre for Development (TfD) is a popular medium that is anchored on interpersonal communication. Research results show that 'people are inclined to have more faith in interpersonal communication than the mass media' (Nwadigwe 2001: 82). Beyond the creation of awareness, 'TfD goes to the people, integrates and achieves a rapport with them, and employs the local media, arts and culture of the people in communicating to them' (Nwadigwe 2001: 81).

Several organizations are rapidly utilizing the TfD for development intervention. The reality that TfD present us with is the use of multi-platform communication approach to engaging people in public health discourse among others.

2.4 Communication and Primary Health Care Delivery

Primary Health Care (PHC) as conceptualized by the Alma Ata declaration of 1978 is a grass-root approach towards universal and equitable health care for all (WHO-UNICEF, 1978). The strategy is meant to address the main health problems in the community providing promotive, preventive, curative and rehabilitative services (Olise, 2007).

According to Alenoghena et al (2014:1), it is the first contact level of individuals, families and communities with the national health system, bringing health care as close as possible to where people live and work, and constitutes the first element of the continuing health care process.

Nigeria is one of the signatories to the declaration but, it is interesting to note that prior to the conference, the country had set the ball rolling with the implementation of the Basic Health Services Scheme (1975-1980), which was Nigeria's first serious attempt at the implementation of PHC. This scheme concentrated on the provision of health facilities, training of health workers and paying little attention to community participation, inter-sectoral cooperation or use of local technology (Obionu 2007).

In 1988, the National health policy of Nigeria was launched and is seen as a collective will of the government and people of Nigeria to provide comprehensive health care system that is based on PHC, describing the goals, structure, strategies and policy direction of the health care delivery system in Nigeria. In 1992, PHC implementation started with the commencement of PHC programmes in the Local Government Areas (LGAs). Nigeria therefore, became one of the few countries in the developing world to have systematically decentralized the delivery of basic health services through local government administration (Obionu, 2007; Cueto, 2005).

The programme was expected to meet four basic conditions of viable health care plan of accessibility, affordability, continuity and quality of services. The emphasis was to educate the people on ways of preventing diseases with the provision of a health care system based on the spirit of self-reliance and self-determination. The main focus of PHC is to enhance empowered participation of the people to achieve good health outcome. According to WHO (2014):

> Primary healthcare centers are the closest and the nearest to the people, and serve as a first point of contact for medical consultation by members in the communities they are located. At this level, primary care providers (PCPs), who may be doctors, nurses,

> community/public health experts, attend to some basic health needs relating to high blood pressure, vaccination, immunization, hypertension, as well as maternal and child health-related services like family planning. It is part of an inclusive healthcare support plan of governments globally.

Metiboba (2009) further revealed that the objectives of the primary health care services scheme in Nigeria were to increase the proportion of the population receiving health care services from 25 to 66 percent; correct the imbalances in the location and distribution of health institutions and provide counsel on health matters to all and sundry. This idea was corroborated by Sorungbe (1989) that objectives include the provision of infrastructures for all perceptive health programmes such as control of communicable diseases, family health, environmental health and nutrition and establishes a health care system best adapted to the local conditions and to the level of health technology. It is worthwhile to mention that the principles upon which the primary healthcare is founded, is that health is a fundamental right to be enjoyed by the people in all walks of life in all communities**.**

In 1992, the federal government created the National Primary Health Care Development Agency to assist states and LGAs to develop PHC. More recently in 2000, the government In Nigeria, the establishment of primary healthcare centers is the responsibility of the local government councils. This tier of government is closest to the people, a reason it was charged with managing this aspect of health care that will provide preventive, promotive and curative services at home, villages and in communities (Onokerhoraye, 1982). For equity, primary health care centres are usually located in each political ward of a local government area. How many are located in a ward however, depends on the factors of population and physical size of the ward. Using population, the settlements in each ward are hierarchically arranged according to their population figures. Obviously, the largest populated settlement or settlements are selected for location. These settlements should have a threshold population of between 2,000 and 4,000,

which is the size for Nigeria. Where no settlements in a ward have this threshold population, the highest populated ward takes the location. The use of settlement hierarchy according to Okafor (1984) is to ensure the optimal utilization of social facilities. Primary health centres are also located in Nigeria on the basis of physical size of the ward. Where the land area of the ward is large, many primary health centers may be located. This is generally to reduce the problem of physical accessibility to healthcare services. Okafor, (1990), Ariyo and Datong, (1991), identified distance as a problem of access to health care in rural Nigeria.

Effective primary health care delivery encompasses preventive programmes, curative services and health education, as it include the transfer of health messages in order to prevent diseases and health related issues that are threats to human existence. Thus, in communicating primary healthcare delivery, the mass media also have a role to play in raising awareness about issues and calling attention to whatever threatens the human well-being. Since the mass media are purveyors of messages from sources to receivers based on its social responsibility, the mass media is responsibility for creating awareness about issues and calling attention to whatever constitutes a threat to human health in the society. Maternal health and maternal mortality are issue of general concern; deep seated within the Primary Healthcare coverage.

Equally, Oyebanjo, (1995) submits that;

> Rural dwellers need a wide range of health information access, especially in all areas of primary health care services which include the services of special centers. These special centers are designed to handle special health problems such as tuberculosis, leprosy, disabled, mental illness, mobile clinic, diagnostic services and referral services. The information received helps to enlighten the rural dwellers on the activities of the above mentioned health services centers. In Nigeria, rather than accelerating single steps in the production process, new whole process chains are being targeted for elimination or speeding up. The use of database in processing information enhances effective management of information in manufacturing, agricultural, educational and health sector.

Olaronke et al. (2013) further reiterated that "the urgent need to meaningfully exchange safe and reliable health information is a key priority to the healthcare system in Nigeria as the

qualities of patients' care depend majorly on the timely acquisition, processing and retrieval of data related to the patient." Sieving from Oyebanjo and Olaronke et al position, the availability of health information to rural dwellers is an utmost demand that is inevitable towards effective primary health care delivery.

The Nigerian primary healthcare system are implemented and maintained at various clinics and hospitals owned by the three tiers of government which include the local, state and the federal government. The need for healthcare providers in the various hospitals to interact and exchange patients' information is essential for the continuity of patients' care. Also, Primary Health Centers (PHCs) are established under the primary health care delivery which are mainly concentrated in the rural and semi urban environments or mixed population communities. Going by the policy of the national health system, the PHCs fall within the purview of the Local Government. The centers are the first level of contact by the sick and the injured. Essential health services are provided through the PHC system using community outreach programmes and facilities. The PHCs are manned by at least a medical officer of health, Community health officer, health extension workers, Public Health nurse and environmental health officer. Community-based health workers (CBHWs) are regarded as the lowest cadre within the PHC system. They are a variety of health workers who are either selected and/or volunteers, who are trained within the local community in which they are to operate (Iluyemi, 2009). In addition to delivery of essential health services, CBHWs are also agents for health promotion in the community in which they live and work, as well as advocates for socioeconomic development and community empowerment.

According to Ademiluyi and Aluko- Arowolo (2009), "the PHCs are meant to provide healthcare services for the treatment of malaria fever, cold, cholera outbreak, diarrhea, nutrition disorder, and infant, maternal and pregnancy matters, among others." They also perform

specialist functions such as providing reproductive health and family planning, nutrition education, and community rehabilitation for convalescing and disabled patients. 'The centers also undertake such functions as health education, diagnosis and treatment of common ailments, through the use of appropriate technology, infrastructure and essential drug list. Complicated cases of ill-health are usually referred from the PHCs to the higher levels of healthcare (Iluyemi, 2009).' This implies that PHC deals essentially with health issues that are preventable but constitute the larger causes of maternal and child mortality and it encourages referral to secondary or tertiary health units in case of complications.

From the foregoing, it is apparent that, for a successful prevention and control of disease under the PHC, communication has a vital role to play. Studies have shown that good healthcare outcomes have been orchestrated by effective communication between the caregivers and patient. According to Burton and Dimbleby (1995:53), caregiver-patient relationship is an avenue through which all relationships are conceived, affirmed, conducted and even broken by the use of communication. Communication is used to establish information about others to reduce uncertainty. Relationships are developed through degrees of self-disclosure, in which patients gradually reveal information, attitudes and feelings through communication to their caregivers. This kind of communication is known as caregiver-patient communication. Information, health messages, health education, training among other activities of PHC is communicated between the (health officers) caregivers and (the people) patients. To sum it up, the relationship between the primary health care officers and the community people is a determinant for effective PHC.

2.5 Caregiver-Patient Communication

Communication is boundlessly attached to the attainment of good health outcome in different parts of the world. The emergence of health communication as field of study opens

wider space for further interrogation of which caregiver-patient communication is key component. Caregivers however include: those that render services to patient. I.e. Doctors, nurses, laboratory attendant, receptionist, among others. Care receivers on the other hand constitute the general patients whose priority remains seeking good state of health from the healthcare providers. Communication between doctors (caregivers) and patients is attracting an increasing attention within health care studies. In the past two decades, descriptive and experimental research has tried to shed light on the communication process during medical consultations.

However, the insight gained from these efforts is limited. This is probably due to the fact that among inter-personal relationships, the doctor-patient relation is one of the most complex ones. It involves interaction between individuals in non-equal positions, is often non-voluntary, concerns issues of vital importance, is therefore emotionally laden, and requires close cooperation (Chaitchik S. et al 1992). In addition, Fong Ha, J. et al (2010:1) reasoned that:

> Effective doctor-patient communication is a central clinical function in building a therapeutic doctor-patient relationship, which is the heart and art of medicine. This is important in the delivery of high-quality health care. Much patient dissatisfaction and many complaints are due to breakdown in the doctor-patient relationship.

This suggests that the ultimate objective of any doctor-patient communication is to improve the patients' health and medical care. Studies on doctor-patient communication have demonstrated patient discontent even when many doctors considered the communication adequate or even excellent. Doctors tend to overestimate their abilities in communication. He further reported that 75% of the orthopedic surgeons surveyed believed that they communicated satisfactorily with their patients, but only 21% of the patients reported satisfactory communication with their doctors. Patient surveys have consistently shown that they want better communication with their doctors (Fong Ha, J. et al. 2010:1).

The above statistics revealed that there is a wide gap in terms of communication between the caregiver and their patient. This situation is what birthed the establishment of communication unit and course within the medical schools in developed countries like the United States of America, London, and Chicago among others. Developing countries are however yet to take cue from the developed countries. This stresses the fact that effective caregiver-patient communication is important to attaining effective primaryhealthcare services. Since the PHC is basically created for the provision of health care to the people especially on disease prevention and control, this form of communication could either be preventive or curative.

2.6 Preventive and Curative Communication

Preventive or proactive and curative or reactive communications are key areas in health communication especially in primary health care unit. There are lots of nomenclatures attributed to this form of communication which include health promotion, health care delivery, risk or outbreak communication among others. Going by the reasons for its existence, Primary Health care (PHC) deals with public health issues majorly disease prevention and control unit. It is the closest medical structure available to the people at the grassroots level. The concepts of health promotion and disease prevention have gained importance since the 1980 1st International Conference on Health Promotion, held in Ottawa. In wealthy countries, the focus of clinical care is changing from cure to prevention, to anticipate future diseases in currently healthy individuals. (WHO, 2008:5) puts it that:

> Effective risk communication is an essential element of outbreak management. When the public is at risk of a real or potential health threat, treatment options may be limited, direct interventions may take time to organize and resources may be few. Communicating advice and guidance, therefore, often stands as the most important public health tool in managing a risk. Pro-active communication encourages the public to adopt protective behaviours, facilitates heightened disease surveillance, reduces confusion and allows for a better use of resources - all of which are necessary for an effective response.

This means that managing an outbreak demands the use of proactive communication approach that will guide the public on how to adopt healthy behaviour and also take action against any outbreak. Communicating disease prevention and control require the use of several approaches. Among the approaches is community mobilization, house to house campaign, community participation through training of village health officers on certain preventive-curative measures for some epidemic, communicable diseases, and traditional birth attendance through health education. Central to the above mentioned approaches is listening.

The concept of "listening" is central to the process of risk communication which can help public health authorities understand perceptions, community information needs and the trusted sources of information in an affected region. It can help uncover cultural, political and communication barriers to outbreak management and as such, play a complementary role to that of the epidemiologist, as part of the outbreak management team (WHO, 2008:10). A successful communication for disease prevention and control must place priority on the people's participation. It is an important strategy to engage members of the community, especially those who are directly concerned with the outbreak, epidemic or diseases, while developing and delivering the messages. The use of creative and innovative campaigns, using multiple channels, is important to sustain the audiences' interest in issues related primary health care.

Fundamentally, preventive and curative communication as related to health communication has several stages of audience engagement. The objective of communication programmes is to move a targeted audience, or segment of an audience, from one stage to the next. Stages of audience engagement, based on the trans-theoretical model, are:

Pre-knowledgeable **stage**: at this stage, audiences are unaware of the problem or of their personal risk;
Knowledgeable **stage*:*** audiences are aware of the problem, and become knowledgeable about desired behaviours for prevention of health risk;

***Approving* stage:** audiences start viewing the desired behaviours favourably;
***Intending* Stage**: audiences intending and prepared to personally take the desired actions;
***Practicing* stage**: audiences start practicing the desired behaviours;
Maintenance* stage*: audiences have been able to sustain action (desired behaviour) for a period and are working to prevent relapse; and
Advocating* Stage*: by this stage, audiences begin advocating such behaviours to others, thus having a multiplier effect (WHO 2015).

In summary, either proactive or reactive communication for disease prevention and control as the case may be, knowledge of the audience and how to progressively engage them for the desired effect is crucial for designing effective communication strategies and plans. To this end, it is crystal clear that health communication is broader in scope. It adopts BCC as its core anchor under which other components like communication for behaviour change, health promotion, social marketing, health education, caregiver-patient relationship and preventive and curative communication exist. All this varied components of health communication are needed for a successful eradication of open defecation campaign within the Primary Healthcare unit.

2.7 The State of Primary Healthcare delivery in Africa

According to KPMG International, (2012:7) Primary healthcare whose mandate according to the WHO statement of Alma-Ata in Kazakhstan 1978, includes health education, promotion of proper nutrition, safe water and basic sanitation, maternal and child health care (including family planning), immunization against major infectious diseases, appropriate treatment of common diseases and injuries, and provision of essential drugs have not been taken care of in the African continent. The transformation of health systems and implementation of PHC has posed an extreme challenge to every government attempting health system reform.
Africa's healthcare challenges are heightened by the sheer diversity of the continent. The continent's continuing struggle with communicable diseases such as HIV/AIDS and tuberculosis (TB), parasitic diseases and poor primary and obstetric care has been a major factor in stalling

the development and the extension of healthcare services in African countries at even the most basic level. In the absence of public health coverage, the poorest Africans have little or no access to care (The Economist Intelligence Unit, 2012).

Although, Lagomarsino, Garabant, Adyas, Muga, and Otoo, (2012: 933) "Identified five African countries—Ghana, Rwanda, Nigeria, Mali and Kenya—that have made the most progress towards developing universal healthcare." Yet, in most parts of sub-Saharan Africa, variation between urban and rural areas has made progress uneven. Rural areas are hampered by long distances from services, poor road infrastructure and low population density, making it more difficult to attract healthcare workers and specialists and undermining the economic viability of services. Eliminating these inequalities remains a key step towards better care provision. As the Ebola epidemic has underscored, increasing investment in public health infrastructure is a crucial part of eliminating gaps in health coverage and creating a broader system able to identify health targets and collect and monitor data, rather than merely reacting to health crises as they arrive (Visagie, S. and Schneider, 2014:4). Over 90% of Rwandans are now enrolled in health insurance programmes, half of Ghanaians and 20% of Kenyans, but just 3% of those in Mali and Nigeria, which are at an earlier stage of reform.

Moreover, the African continent continues to suffer from a disease burden that is disproportionate to its population. For instance, despite having just 11% of the global population, Africa has 45% of the world's women dying from childbirth-related complications and 62% of the world's HIV/AIDS patients. This huge disease burden can largely be attributed to weak health systems (The Economist Intelligence Unit, 2014:12).

In North Africa, communicable diseases, have generally been the bright spot in the picture. Morocco continues to struggle with high rates of TB, with 25,000 new cases a year

despite a vaccination rate of 95% at birth. These conditions are both a result of, and a contributor to, weak and fragmented health systems throughout Africa. The WHO notes that the combined impact of these factors put the continent's average life expectancy at birth at 53 years in 2001, up only slightly from 51 years in 1990 (WHO, 2011).

In South Africa, a diverse amalgam of factors which include high rates of medical migration and severe health worker shortages; deep-seated imbalance of resources and inequities in the distribution of personnel; a complex and evolving burden of disease with emerging infectious and non-communicable epidemics; a curative-oriented health service; and deficiencies in managerial capacity and health system leadership at all levels continue to limit the achievement of PHC in South Africa today. Beyond the mal-distribution of personnel in the health system, severe shortages in the supply of trained medical practitioners (partly due to the emigration of graduates from South Africa) has undermined the development and functioning of the decentralized health system and the full implementation of PHC services. Health systems development and PHC service provision are, thus, undermined at the most critical point of care (Hugo, 2008).

The practice of Primary Healthcare in Botswana has indeed become a model for other African countries. They were able to reach all the communities, especially those in the remote areas. Their Health posts were staffed with enrolled nurses in order to increase the range of services that can be provided in these facilities on a daily basis. Family welfare educators were also trained and were responsible for mobilizing communities to participate in health activities (FGN, 2015).

In similar vein, Ethiopia is also another model in the practice of effective primary healthcare delivery. The success in improving healthcare by all available metrics is to a large extent due to the government's willingness to recognize the importance of the role that the

healthcare bureaucracy plays. So, the Health Minister Tedros Ghebreyesus, who believed that management was "the oil on which the complex organizational machinery of hospitals runs", reorganized the entire bureaucracy of his ministry, drew up new and simpler standard operating procedures, decentralized to delegate as much authority as possible to teams working within each health facility, and improved communication structures in order to minimize the delays that emerged in instances where it became necessary to obtain instructions from the next level. In the two decades since 1990, Ethiopians' life expectancy has gone up by 10 years, and infant mortality has dropped by more than half. The biggest potential gains in healthcare in Africa are to be made in primary healthcare and in improving the healthcare bureaucracies of government health departments (KPMG International, 2012).

The future for African health systems is likely to be defined increasingly by public and private investment that is linked to the improvement of healthcare quality. To this end, government budgets are likely to emphasize the development of both high-performing primary care systems and the realization of universal health coverage, which is set to become a key priority for the post-2015 development agenda. By contrast, the widespread penetration of telemedicine looks further off. On the whole, there are encouraging signs that all stakeholders are taking a broader view of Africa's healthcare challenges and focusing on how to work more closely together to get better value from their healthcare investments (The Economist Intelligence Unit, 2014: 88).

From the review of PHC in Africa, there are no records of best practices in West Africa. This shows that the state of PHC in the region is not encouraging. However, the above examples have shown that although Nigeria and South Africa recorded the low performance in terms of service delivery within Primary healthcare unit, beautiful lessons can be learnt from the success

recorded in Botswana and Ethiopia in order to revive the standard of the primary healthcare sector in Nigeria.

2.8 Empirical studies on Primary Healthcare Delivery in Nigeria

A study by D. O. Adeyemo, (2005) titled "Local Government and Healthcare Delivery in Nigeria: A Case Study" evaluated the performance of primary healthcare delivery in Ife-East Local Government of Nigeria. The study revealed the interconnectedness between local government and the sustenance of primary healthcare in Nigeria. The study traced the historical antecedent of health service delivery from the colonial era to the present day. It identified the shortage of qualified personnel and finance, inadequate transportation, inaccessibility to communities, lack of maintenance culture, political instability, and high degree of leadership turn-over as major contradictions in the management of primary health care implementation in Ife-East Local Government. The study therefore concludes that, Primary Health Care in Nigeria and especially Ife-East Local Government have come a long way and certainly still require more effort so as to achieve the goal of health for all now and beyond.

For the sustainability of health care service delivery at the grassroots, the study recommends increase financial allocation, community mobilization, improved health education, policy consistency and provision of qualified health workers.

Also, study titled "Problems of Effective Primary Healthcare Delivery in Owan East and Owan West Local Government Areas of Edo State"(Magnus, 2008), examined primary healthcare in Owan east and Owan west local government areas of Edo State, with emphasis on the impacts of personnel and equipment in the primary health centres. It was conducted using primary and secondary sources of data. The study revealed that there are 30 primary health centres, and 4 doctors in these centres with very few centres adequately equipped. The research

concluded that primary healthcare is not well dispensed in the study area, leading to widespread of different sicknesses and diseases and sometimes death. The study recommended that partnership between Federal and state government, commitment from the angle of healthcare providers and sensitization for community participation will help revive the Primary Healthcare sector in the study area

In the same vein, studies by Alenoghena, et al (2014) titled "Primary Health Care in Nigeria: Strategies and Constraints in Implementation"examined the strategic trends and constraints in the implementation of Primary Healthcare in Nigeria since the Alma Ata declaration. The study revealed that "though PHC centers were established in both rural and urban areas in Nigeria with the intention of equity and easy access, regrettably, the rural populations in Nigeria are seriously underserved when compared with their urban counterparts. The study identified factors like lack of political will; inadequate funding/misappropriation of funds; inadequate inter-sectorial collaboration; and conflicts between Local and State Governments; community and poor management of information system, heavy dependence on initiatives funded by foreign donors like UNICEF and USAID among others as the reason for the setback in the health sector. The study therefore concludes that, for the improvement and growth of the Nigerian Primary Healthcare, government should re-orientate political office holder, general public on the essence of PHC, community participation, health education, and employ skilled community health personnel and collaborate with donor agencies.

Another study conducted by Omuta (2016) titled "The Quality of Healthcare Service Delivery in Nigeria: An Assessment of the Availability of Some Basic Medical Devices/Equipment in the Primary Health Care Centres in Delta State. The paper discusses three basic medical devices/equipment that determine the quality of services delivered by PHCs, namely available and functioning general purpose equipment; most commonly used methods of

sterilization; and availability of different types of laboratory tests in nine local government areas with three LGAs each from the three senatorial districts. The study found out that the quality of services in these PHC centres were perceived as poor because the basic medical devices and equipment were either lacking or inadequate. The study concluded that government should increase resource allocation to the PHC subsector to procure the basic facilities for efficient service delivery.

An article by Asoka, T. (2016) titled "State Primary Health Care Management Boards or Agencies: micromanagement or strengthening Local Government Authority capacity?" The article describes the current tensions in Primary Health Care delivery which include failure of political leaders to invest sufficient effort and resources to improve health services; the structure and organization of health services that are not fit for purpose; and health workers and managers who lack the capacity to improve the health delivery system. The author suggests that streamlining the delivery of Primary Health Care (PHC) at State level by bringing the financing and administration of PHC services under one health authority, effective use of the available human resources, designing and implementing high impact programs not on assumptions but based on data, tracking progress and reacting to changes, handling the entire logistics spectrum for all health commodities, among others are strong determinants to achieving a successful PHC in Nigeria.

Equally, an article written by Obi, F.A., (2016) titled "Implementing frontline Primary Health Care services: local priorities versus donor-driven agenda." The article traces the bottle-necks and disputes that have thwarted the emergence of a robust primary care system. Obi discovered that factors such as instability in governance, lack of visionary leadership, low staff morale, and lack of preparedness by LGAs to shoulder the responsibilities associated with the devolution of PHC further contributed to the collapse of PHC system in Nigeria. National

immunization campaigns by donor agencies, huge incentives given to frontline health workers to participate in the campaign resulting in absence from duty post are factors that progressively weakened the PHC system across the different States in Nigeria. The study concluded that, for Nigeria to meet the health-related Sustainable Development Goal targets, there has to be a strong alignment between government priorities and interests of donors. Efforts should be made to craft a more realistic new National Strategic Health Development Plan (NSHDP II) for the implementation of the new health policy, through a strong collaboration between government and partners.

A Study conducted by Daniel, Yanfang & Hong (2016) titled "Assessment of Primary Health Care System Performance in Nigeria: Using the Primary Health Care Performance Indicator Conceptual Framework." The authors utilized the Primary Health Care Performance Indicators conceptual framework to examine Nigeria's PHC system and possible causes of underperformance. Analysis was conducted using a variety of sources including recent facility level information from the World Bank Service Delivery Indicators Survey. Results show that Nigeria has a relative abundance of PHC centers, reasonable geographic access to PHC, and relatively high health worker density. However, the performance of the PHC system is hindered by (1) segmented supply chains; (2) a lack of financial access to PHC; (3) a lack of infrastructure, drugs, equipment, and vaccines at the facility level; and (4) poor health worker performance are key root causes of the dysfunctions observed in the PHC system in Nigeria. The study concludes that policies focusing on addressing systemic governance and financial challenges have great potential to improve PHC performance as they might stimulate the PHC market and bring the country closer to a high-performing primary health care system in Nigeria.

A paper by Aregbeshola, and Khan, (2017) nomenclated as "Primary Health Care in Nigeria: 24 Years after Olikoye Ransome-Kuti's Leadership" examined the evolution of PHC in

Nigeria, the role of Professor Olikoye Ransome-Kuti in the implementation of Alma Ata Declaration, the present state of PHC, the challenges and opportunities in implementing PHC in Nigeria, as well as ways to maximize the opportunities. The study found out that only about 20% of the 30,000 PHC facilities across Nigeria are working, most of thePHC facilities in Nigeria lack the capacity to provide essential health-care services, poor staffing, inadequate equipment, poor distribution of health workers, poor quality of health-care services, poor condition of infrastructure, and lack of essential drug supply, the implementation of PHC across Nigeria by the local government administration, which is the weakest level of government. The paper recommended that Nigerian Government should learn from countries like Thailand, Cuba, China, and Mexico whose Alma Ata Declaration has been successfully implemented. The federal and state governments should take over the administration of PHC facilities from the local governments, redirect resources for health care from curative services to preventive services in order to improve PHC infrastructures, encourage the migration of health workers from urban areas to rural areas. The study concluded that political actors and policy makers could guarantee the right to health of all citizens by signing and implementing the necessary legislation so as to achieve the goal of health for all now and beyond. For the sustainability of health care service delivery at the grassroots, the study recommends increase financial allocation, community mobilization, improved health education, policy consistency and provision of qualified health workers.

Earlier studies on primary Healthcare delivery have discovered a plethora of problems and challenges facing the PH centres among which are lack of trained and adequate personnel, lack of basic medical facilities, inadequate financial capacity, lack of community participation, unstable political climate, poor service delivery, lack of preparedness by the Local Governments and lack of essential drugs, but none have attempted to study the effectiveness of communication

activities of primary healthcare centres. This shows a wide gap in the previous studies therefore it is in the interest of this study to fill that gap.

2.9 Empirical studies on Open Defecation in Nigeria

A paper by Reuben (2008) titled "Impacting Positively on Humanity through Theatre for Development: The Kuru Toilet Project Intervention" utilized the Theatre for Development research approach and discovered issues like diarrhea, typhoid and Cholera which were featured in the community drama. The community research revealed that Kuru people were not aware of the dangers associated with open defecation despite its obvious effect. The post-performance evaluation birthed the formation of a committee to oversee the construction of public toilets in the market square, encourage individuals to construct personal toilets and observe conventions of personal and environmental hygiene practices.

More so, a report by UNICEF (2014) titled "Community Led Total Sanitation in Nigeria. Case studies: UNICEF Nigeria" documented the use of Community Led Total Sanitation to eliminate open defecation in collaboration with The Water Sanitation and Hygiene (WASH) department of Kaita LGA, Katsina State. UNICEF found out that competition and peer pressure between neighbouring communities as well as information sharing across wards led to faster triggering and higher number of community's achieving Open Defecation Free (ODF) status.

The report of a round-3 WASH Brief survey conducted in Kaduna-Nigeria by Performance Monitoring & Accountability 2020 (2016) titled "Indicators for Water, Sanitation & Hygiene" the survey is led by the Centre for Research, Evaluation Resources and Development (CRERD) and Bayero University Kano (BUK). The survey was carried out in Anambra, Kaduna, Kano, Lagos, Nasarawa, Rivers, and Taraba and supported by the Federal Ministry of Health, the National Population Commission, the National Bureau of Statistics, and the State Ministries of

Health. The Kaduna data was collected between May and June 2016 using a two-stage cluster design with urban-rural as strata and 2,242 households were sampled with a total population of 13,037. The survey revealed thatthe practice of open defecation is inversely related to household wealth. Across all wealth quintiles, the percent of the household population regularly practicing open defecation is greater than the percent reporting open defecation as their main practice. Open defecation is more common in rural than urban areas. A higher percent of the household population reports open defecation as a regular rather than main practice. In summary, the report concluded that the overall prevalence of open defecation practice is higher than that implied by the main practice indicator.

The above reviews have identified factors responsible for the prevalence of open defecation and established varieties of ways through wish open defecation can be completely eliminated but none seem to have examined the role of the primary healthcare department in Local Governments across Nigeria in the campaign against open defecation practice.

It is in view of these gaps in earlier studies on primary healthcare and open defecation that this study intends to evaluate the communication strategies deployed by the primary healthcare department in Sabon-Gari Local government of Kaduna state in the campaign against open defecation.

2.10 An overview of Sabon-Gari Local Government Area of Kaduna State.

Sabon-Gari Local Government in Dogarawa, Zaria is a mixture of rural and semi-urban communities located in the North Western Nigerian, Kaduna State. It is a cosmopolitan setting occupied by many ethnic groups inNigeria. The settled populations in Sabon-Gari were predominantly Hausa and Fulani. According to the 1991 population census, the population of Zaria and Sabon Gari were 248,318 people but with the projection of 3 percent growth rate by the National Populations Commission, Sabon-Gari consist of about 372,932 as at 2016, having

51.2% male and 48.8% female. The density of population ranges from 50-200 persons per square kilometer and the heaviest population concentration was found in Sabon Gari and Samaru (NPC, 2006) which is consequent upon the commercial and learning activities within the Local Government taking place in the areas. The major occupations of the inhabitants include farming, trading, fashion, education. Sabon-Gari LGA also serves as commercial linkage to other major cities in the North Western Nigeria (Agberemi, Ofem&Saidu2009:1).

One of the common practices of the people of Sabon-Gari and Northern Nigeria is the Almajiri Islamic education system. Almajiri (singular) according to Dukku (2006) is a corrupt Hausa word which originated from the Arabic word 'Al-muhajirun' meaning 'immigrants in search of knowledge.' The Almajiri education system which is practice in northern Nigeria is to seek Islamic knowledge by children of Muslim faithful from outside their homes, and has historically been useful to children's development. However, in the recent past, poor parents have been sending their children to different states within and across Nigeria's borders to Islamic tutors without adequate provision for their up keep (food, clothing, comfort and shelter). Some of the religious tutors take more pupils than they can care for and then the children are made to beg to survive. (Nik-Umaru & Nik-Mahmood, 2015).

There are several departments and sections within Sabon-Gari Local Government but this study is interested in Primary Healthcare department of Sabon-Gari LGA, Kaduna state.

2.10.1 Overview of the Primary Healthcare Department of Sabon Gari LGA, Kaduna State

The Primary Healthcare Department of Sabon Gari Local Government Area of Kaduna state is located at Dogarawa, a ward within the LGA along Kano express way. The department is headed by the Director of Health and sub-divided into five units, headed by deputy directors. They include:

1. Deputy Director, Disease Control Unit.

2. Deputy Director, Essential Drug Unit.
3. Deputy Director, Maternal & Child Healthcare/Family Planning Unit.
4. Deputy Director, Medical Unit.
5. Deputy Director, Monitoring and Evaluation Unit.

The Disease Control unit which is the main focus of this study has 7 healthcare offices and each office is managed by the 'In-charge officer' who has the minimum of 7 to 15 staff working directly under him.

The responsibilities of Disease Prevention and Control unit include:

Environmental Sanitation, Environmental Pollution, Open Defecation and toilet inspection, House to house and Trade place inspection, Prevention and Control of Communicable Diseases, Health Education Talk, inspection of Industrial Pollution, Waste management and Collection, Refuse Evacuation, Spraying of blocked drainages to reduce mosquitoes. The Primary healthcare department also has records of public toilets within the LGA. The communication methods available at the LGA, which are used in event of an epidemic, include radio, local announcers, house to house inspection, and health talks at various health centres, town hall meetings and the use of mobile telephones.

i. House to house inspection: this is used by the health in-charge officers through visitation to designated households in order to ascertain their sanitary condition. The male health officers supervise and monitor environmental pollution issue outside the household while the female health officers go into the inner compound to ensure that there is proper sanitation. Among other issues they look out for include, garbage hips, open defecation practice, blocked drainage system, stagnant water etc.
ii. Local Announcer: the health in-charge officers usually pay a local announcer to give elaborate announcement to the community they intend to visit prior to their visitation.

It is mostly used during outbreak/epidemic situation to give safety tips to the affected communities.

iii. Town hall meetings: this is used by some of the health in-charge officers twice in three (3) months to engage the community leaders and chiefs, and youths in sanitation discourse. The gathering is mostly adopted for the purpose of discussing serious environmental challenges that is persistent in the community.

iv. Health talk: this is done at various primary healthcare centres to enlighten patients especially women about the dangers associated with unhealthy sanitation and hygiene practices.

v. Use of Mobile phone: this is deployed mainly to pass certain messages to community leaders in emergency situation. It is also used to summon individual to the court in cases of non-compliances.

vi. Radio is used occasionally to send messages across larger population within Local Government and states during rapid epidemic situation when things are getting out of control. An instance of such situation is when there is a simultaneous cholera outbreak in three local governments within the state at the same.

This is important because communication activities are important to inform and educate the community especially on open defecation. The Primary Healthcare unit usually works with the National orientation department during communication campaign and inspection.

During a baseline observation at Chikaji and Bomo ward, railways tracks, Market places were littered with Open defecation. The report from the monitoring and Evaluation department of the LGA recorded about 8,721 diarrhea cases only in 2015. Based on this figures, the researcher therefore is interested in carrying out an Evaluation study on Communication

Approaches against Open Defecation within the LGA with a view to proposing complementary approaches for effective communication against Open Defecation practice.

2.11 Theoretical Framework

Researchers and practitioners used theory to investigate answers to the questions of "why" "what" and "how" problems can be addressed. By seeking answers to questions, they also clarify the nature of targeted problem or behaviours. That is, theory can guide in this case the search for reasons why people do or do not engage in certain health behaviours. It helped the researcher to be watchful and critical in analyzing the phenomenon under study in order to tease out its strengths and weaknesses. Theoretical framework opens up ways on how to devise programmed strategies that can reach the target audiences. Three related theories such as Risk Communication Model, The Health Belief Model and Participatory Communication theory were reviewed and two were finally used to as premise upon which the data gathered were analyzed.

2.11.1 Risk Communication Theory

Covello (1992) defines risk communication as "the exchange of information among interested parties about the nature, magnitude, significance, or control of a risk" (p. 359). Risk communication according to Drottz-Sjoberg (2003) cited in Ozohu-Suleiman (2014:29) is an interactive process of exchange of information and opinion among individuals, groups and institutions. Risk communication includes discussion about risk types and levels and about methods for managing risks (US Public Health Service 1995). Ozohu Suleiman further explains that:

> Exchange of information essentially involves the use of interpersonal and mass media channels. Discussion about risk types and levels includes identifying the specific risks and examining their capability to exist and the extent of their possible effects. Methods of managing risks may include rejecting the risk sources…(2014: p29).

However, risk communication theory is premised upon four theoretical assumptions which include Risk Perception Model; Mental Noise Model; Negative Dominance Model and Trust Determination Model. These models vividly describe how risk information is processed; how risk perceptions are formed and how decisions are made (Ozohu-Suleiman, 2014).

> **Risk perception model:** this model argues that: the level of people's concerns tend to be more intense when the risk is perceived to be involuntary, inequitable, not beneficial and not under one's personal control; associated with untrustworthy individuals or organizations and associated with irreversible outcomes.
>
> **Mental dominance model:** the model argues that when people are in a state of high concern, because they perceive a significant threat to what they value, they experience a wide range of emotions ranging from anxiety to anger. Such experience creates mental noise which interferes with the people's ability to engage in rational discourse.
>
> **Negative dominance model:** this model posits that the relationship between negative and positive information is significantly unconnected in that people are in high-concern situations, they tend to give value to negative outcomes over positive outcomes.
>
> **Trust determination model:** this model emphasizes that trust must be established first before agreement can be achieved. The model is premised upon four factors which include; Caring and Empathy; Dedication and Commitment; Competence and Exposure; Honesty and Openness (Ozohu-Suleiman, 2014:30).

The theoretical assumptions underpinning risk communication seems to be relevant to this study because the study is about the risk associated with open defecation practice, the risky attitude of the people of Sabon-Gari LGA towards the practice and the information activities of the health workers towards curbing the unhealthy practice. The theory pays more attention to the aftermath of risk situation, resistance to intervention due to lack of trust from the sources and how negative and positive information is processed. On the contrary, this study is concerned with assessing the people's attitude towards open defecation practice, identifying the communication strategies deployed by the LGA against open defecation, the impact of the communication approaches deployed by the LGA towards eradicating open defecation and to identify effective communication approaches for curbing open defecation.

In view of the aforementioned consideration, more suitable theories needed to be reviewed.

2.11.2 Health Belief Model

This model was developed by Becker (1974) from the work of Rosen stock (1966), the *health belief model* (HBM) can be used as a pattern to evaluate or influence individual behavioural change. The model proposes that a person's behaviour can be predicted based on how vulnerable the individual consider themselves to be. 'Vulnerability' is expressed in the HBM through risk (perceived susceptibility) and the seriousness of consequences (severity). These two vulnerability variables need to be considered before a decision can take place. For instance a person's decision to perform the health-promoting (or damaging) behaviour will be based on the outcome of this 'weighing up' the process. Of course the opposite of this is also true. When an individual perceives a threat as not serious or themselves as unsusceptible to it, they are unlikely to adopt mitigating behaviours. Self-efficacy is also added to the HBM to enable prediction of behaviour. Self-efficacy is a person's perceived confidence of their ability to perform that behaviour. The HBM includes four factors that need to take place for a behaviour change to occur:

1. The person needs to have an 'incentive' to change their behaviour. For example: An 'incentive' for a person to stop open defecating in the open could be the desire not to make his children eats and drink contaminated food which can cause diarrhoea and cholera cases ill-health.
2. The person must feel there is a 'risk' of continuing the current behaviour. For example: by not taking preventive measures, such as stopping open defecation and constructing

toilet facilities within their households, a person would feel that they would be putting themselves and their family at 'risk' of having cholera infection and probably death.

3. The person must believe that change will have 'benefits', and these need to outweigh the 'barriers' for example: A person may believe that the benefits of avoiding open defecation by using toilet facilities means their family are less likely to have cholera and diarrhoea infection or death. They also identify the barriers to constructing household toilet; they are expensive to construct. The 'benefits' must outweigh the barriers in order for a change to be made.
4. The person must have 'confidence' (self-efficacy) to make the change to their behaviour. For example: A person must believe they have the ability to stop open defecation by building household toilet in order to help them prevent diseases and death, and are confident about their ability to do this because it isworth doing.

The HBM additionally suggest that there is a 'cue to action' to prompt the behaviour change process. This could be a conversation with a friend or a television program. Alternatively, it could be an external prompt, such as moving employment. The prompt, however, has to be appropriate to that person or, as Naidoo and Wills suggest, this cue needs to be 'salient or relevant' (2000: 225). The HBM also considers modifying factors' important to behaviour change. These include demographic variables, socio-psychological variables that influence how a person perceives the disease severity, threats and susceptibility. Factors such as age, gender, peer pressure or prior contact with the disease also impact on the decision-making process.

Since health, motivation is its central focus; the HBM is a suitable theory for addressing problem behaviours that evoke health concerns (e.g., high-risk sexual behavior, the

possibility of contracting HIV, the repercussion of open defecation). Applying these four factors that are necessary to change a person's behaviour can provide a useful framework for designing both short-term and long-term behaviour change strategies. When applying the HBM to planning health programs, practitioners should ground their efforts in an understanding of how susceptible the target population feels to the health problem, whether they believe it is serious, and whether they believe action can reduce the threat at an acceptable cost.

The reason for the selection of the HBM as a framework for this study is due to the fact that open defecation is an attitudinal problem that can cause a lot of harm to the human health. It is a common practice among people but very few may be willing to acknowledge it. Again, in any society that open defecation is prevalent; the effect includes Cholera, Diarrhea, Malaria, Malnutrition, and Typhoid which may lead to death. Many people with the habit of open defecation will hardly come out for identification due to the fact that they dislike being discriminated against. Those who are infected with cholera and diarrhea might not be willing to acknowledge or come out for treatment due to ignorance and by seeking other means of treatment which may in turn lead to their being permanent hosts for the disease, or eventual death. The HBM is one model that can enlighten the people on risks associated with, engaging in the practice of open defecation, and the vulnerability of someone who doesn't practice but silent about it. Many people at the grassroots community see this habit as part of their ancestral and cultural practice. Unhygienic practices like garbage hips and open defecation are the causes of most outbreaks. Therefore, the use of the HBM is essential in assessing the communication approaches utilized by the Disease Prevention and Control unit in Sabon-Gari local government for the campaign against open defecation in order to

determine its impact in reducing open defecation prevalence. It will also be used in assessing the people's attitude towards open defecation and their level of vulnerability.

2.11.3 Participatory Communication Theory

Participatory Communication Theory is attributed to scholars like Paulo Freire, Augusto Boal, Hornik, 1988; Wilkins, 1999; Servaes, 1989; Abah 1991 among others. It emanates from Paulo Freire's philosophy of cultural involvement in development issues through `dialogue' stresses the important of cultural identity of local communities, and of democratization and participation at all levels – international, national, local and individual. It points to a strategy, not merely inclusive of, but largely emanating from, the individual `receivers'. Paulo Freire refers to this as the right of all people to individually and collectively speak their word (Freire, 1983).

This calls for new attitude for overcoming stereotyped thinking and to promote more understanding of diversity and plurality, with full respect to the dignity and equality of people living in different conditions and acting in different ways. This model stresses reciprocal collaboration throughout all levels of participation.

Listening to what the others say, respecting the counterpart's attitude, and having mutual trust are needed. Participation supporters do not underestimate the ability of the masses to develop themselves and their environment. Development efforts should be anchored on faith in the people's capacity to discern what is best to be done. The all-embracing concept of participatory communication emphasize fair representation of the people in decision making process, putting the people at the driver's seat and handing over the stick for them to navigate through their own development. Participatory communication embraces the use of communication forms that are indigenous to the people for easier intervention.

In the application of Participatory Communication, the context and content of communication is necessary such that the elements of feedback, participation, mutual sharing and empowerment must be stressed. In recent years, poor implementation of development initiatives has been linked to overreliance on `export' knowledge and inadequate appreciation of local developmental priorities. Increased emphasis on local participation in development initiatives has generated new interest in how development researchers and practitioners can betters engage indigenous communities in which they work. Participatory Communication offers one approach (participation) to enhancing stakeholders engagement at all stages of the project cycle. Signaling a significant deviation from the status quo, advocates of Theatre for Development contend that sustainable development results not from hierarchical, top – down data extraction or transmission of knowledge but rather from horizontal processes of knowledge exchange (Abah, 1991; Ndigirigi, 1999; Ngugi, 1981).

However, a number of recent empirical studies indicate that the mass media in themselves do not help development as much as participatory media do (Hornik, 1988; Wilkins, 1999; Servaes, 1989; Jacobson and Servaes, 1999). This is what necessitates the use of Participatory Communication theory in this study. This is because one of the objectives of this study is to evaluate the effectiveness of the communication approaches deployed by the Primary Healthcare department of Sabon-Gari LGA in curtailing open defecation practice. Also, open defecation is an attitudinal issue, changing the attitudes of the people requires a more inclusive communication approach that helps the people come to a realization of their social conditions and make necessary change for healthy living. This theory will be used to find out the level of peoples' involvement in the design, packaging and implementation of their communication strategy.

To change basic attitudes, people are the makers of their own culture; change is possible if people work for it collectively (Freire, 1970). The local indigenous media of story-telling, songs and acting are major tools in this endeavour for raising culture and consciousness in a sustainable manner and to create awareness through direct participation in decision making process (Abah, 1980; Bassette,2004).However, every nation needs to define development for itself and find its own strategy (mostly through indigenous philosophies) (Servaes, 1989). This in turn, in this study means that local people can partake in the decision making in tackling the prevalence of open defecation as well as the dangers of such practices, what they feel and understand in regards to the challenges of the prevalence of open defecation and take collective decision on how to solve them through effective communication.

Participatory Communication proposes a `communitarian' view that makes deliberation and participation in public affairs, rather than information-transmission (including message design and media technology). Furthermore, Participatory Communication conceives `development' as a transformative process at both individual and social levels through which communities become empowered. In spite of a diversity of approaches and orientations, there is a consensus today on the need for grassroots participation in development and on the essential role that indigenous communities play in promoting self-development. Therefore, the use of Participatory Communication theory in this study is to 'Evaluate the Communication Strategies Deployed against Open Defecation in Sabon-Gari LGA of Kaduna State', with a view to teasing out the participatory elements in it.

It is important to state here that while the HBM is used to analyze data on peoples' attitude towards open defecation and the impact of Sabon-Gari LGA Primary Healthcare's awareness creation on the dangers associated with open defecation, bearing in mind their level of

vulnerability (obj.1 and 2). Participatory communication (PC) is used to analyze data on the communication approaches deployed by the Primary Healthcare Department of Sabon-Gari Local Government Area of Kaduna State in tackling open defecation viz-a-viz assess the effectiveness of the communication strategies. Issues like the participatory nature of the communication package, the use of indigenous forms, and the involvement of the people from conceptualization to implementation of the communication message. Participatory communication is also used to analyze data on effective communication approaches that can improve environmental sanitation and discourage open defecation practice in local communities in Nigeria especially within the study location (obj. 3, 4 and 5).

CHAPTER THREE

3.0 Research Methodology

3.1 Introduction

This study adopted both the qualitative and quantitative research approaches. Leedy (1995) defines qualitative study as an "inquiry process of understanding a social or human problem, based on building a complex, holistic picture formed with words reporting detailed views of informants, and conducted in a natural setting". Qualitative research approach was used to derive useful and comprehensive data for this study. It gives free space for respondent/informant to express themselves on certain phenomenon rather than being streamlined to direct structured questions.

Furthermore, Quantitative research approach attempts to maximize objectivity, reliability, and generalizability of findings, and is typically interested in prediction. Quantitative research collects analysis and displays data in numerical rather than narrative form (Harwell (2011). The essence of adopting this approach is because of its flexibility and interactive nature that would best assist in the collection of data on the phenomenon under study. However, the survey method was deployed using the questionnaire as instrument for data gathering from the sampled population with three research assistants who are versed in the Hausa Language. This is because Tejumaiye (2003) as cited in Ozohu-Suleiman (2014:37) stated that "survey is considered an appropriate method for asking the human populations to report on their behaviours.

3.2 Research Design and Instrument for Data Collection

Research instruments were tools used by researcher to collect valuable data. The essence of research instrument is to enable the researcher gather pertinent data that will be used to answer the research questions. This study therefore utilized the following research design and instruments for data collection:

1. Key Informant Interview

2. Focused Group Discussion

3. Questionnaire

4. Observation.

3.2.1 Key Informant Interview

The key informant interview method of collecting data involves presentation of oral-verbal stimuli and reply in terms of oral-verbal responses. This method can be used through personal interviews and, if possible, through telephone interviews. Key Informant Interview method requires the interviewer to ask questions generally in a face-to-face contact to the other person, or persons - as the case may be. (At times the interviewee may also ask certain questions and the interviewer responds to these, but usually the interviewer initiates the interview and collects the information.) This sort of interview is direct personal investigation in which the interviewer has to collect the information personally from the sources concerned. He has to be on the spot and has to meet people from whom data have to be collected. This method is particularly suitable for intensive investigations (Somekh, B. and Lewin, C. 2005). The method of collecting information through personal interviews is usually carried out in a structured way. As such we call the interviewsstructured interviews. Such interviews involve the use of a set of predetermined questions and of highly standardized techniques of recording.

Meanwhile, the researcher used this instrument to interview the Deputy Director, Disease Prevention and Control unit and seven (7) health officers that are directly in charge and managing the Primary Healthcare offices in Sabon Gari Local Government Area. This enabled the researcher to get first-hand information on the activities of the PHC especially on open defecation and disease prevention and control.

3.2.2 Focused Group Discussion

A focus group discussion (FGD) is a small group of seven to ten people led through an open discussion by a skilled moderator. The group needs to be large enough to generate rich discussion but not too large that some participants are left out. The focused group moderator nurtures disclosures in an open and spontaneous format. The moderator's goal is to gather a minimum number of different ideas and opinions from as many different people in the time allotted (Berko,Wolvin and Curtis, 1993 cited in Athena, 2005:349).

Focus group discussions are structured around a set of carefully predetermined questions which are usually not more than 10 but the discussion is free-flowing. Ideally, participants' comments will stimulate and influence the thinking and sharing of others. Some people even find themselves changing their thoughts and opinions during the group chat. A homogeneous group of strangers comprises the focus group. Homogeneity levels the playing field and reduces inhibition among people who will probably never meet after the discussions.

Going by the above, this study used the FGD method by forming three small groups of discussants of 14 persons from Bomo, 12 from Chikaji and 9 from Basawa ward respectively. The FGD is facilitated by the researcher and three research assistants. Therefore, thirty five (35) discussants participated in the FGD. The essence was to find out the community people's knowledge on open defecation and its ravaging effects. The FGD helped in teasing out the

efficacy of the communication strategies employed by the Disease Prevention and Control unit in the campaign against open defecation within the selected wards and by implication, the Local Government Area. The researcher also had the opportunity to actively participate in the entire activity to give room for first-hand information gathering.The FGD questions were further interpreted into the Hausa language for easier discussion.

3.2.3 Questionnaire

According to Marthers et al (2009) Questionnaire is very convenient way of collecting useful comparable data from a large number of individuals. Bello and Ajayi (2000) further assert that a questionnaire is a series of relevant questions sometimes statements which are usually used to elicit information from target population of a given study. The Questionnaire is one of the research instruments commonly used in the behavioural sciences, involving drawing up a set of questions on various subjects or specific aspects of a subject that a selected number of a population are requested to answer (Sobowale, 1983). The Questionnaire is a veritable way of eliciting the views of a group, people or population of the study about an event, activity or phenomenon.

Questionnaire forms part of the instrument for data collection for this study because it will provide one of the best means for collecting the varied views of the respondents on the communication approaches utilized by the Disease Prevention and Control Unit in addressing open defecation within Sabon-Gari LGA and provides a deeper insight into the views of the community people.

There are two types of questionnaire that are commonly used in research: close-ended and open-ended questionnaire format. For this study, the close-ended and open-ended

questionnaire format will be employed in order to elicit adequate information from the respondents. When properly constructed and responsibly administered, questionnaires become vital instruments by which statements can be made about specific groups or people or entire population. This will further validate the data gathered from the Key Informant Interview, and Focused Group Discussion. This validation process is what is known as triangulation. However, 400 Questionnaire was administered among respondents from Bomo, Basawa and Chikaji wards through the help of three research assistants.

3.2.4 Observation Method

Direct observation is employed to watch interactions, processes, or behaviours as they occur. It involved documenting events of open defecation and informal conversation with the community people within the wards under study in different circumstances throughout the study period. This tool of evaluation is used to collect data where and when an event or activity is occurring. It does not rely on people's willingness or ability to provide information; rather, it allows the researcher to directly see what people do rather than relying on what people say about open defecation.

3. 3 Populations for the Study

Kahn and Best (1995) define population as "any group of individuals that have one or more characteristic in common that is of interest to the researcher. The population may be all the individuals of a particular type or a more restricted part of that group". The population for the study is the sum total of all units, observation or individual that the researcher is interested in, over which generalization will be made. Population refers to the entire group of individual from which the sample sizes are made (Koul, L. 2012).

There are 11 wards in Sabon-Gari LGA which are Samaru, Hanwa, Muchia, Chikaji, Bassawa, Bomo, Dogarawa, Zabi, Jama'a, Hayin Ojo and Jushia. It has an estimated population

of 397, 095 (NPI, 2017). The LGA has 22 primary health care facilities consisting of seven family environmental health units, nine health clinics and five health posts. The disease prevention and control unit has seven health offices under its control with one in charge at each office. The target population for this study included the Deputy Director Disease and Control Unit, seven (7) environmental health in-charge officers and residents of Bomo, Chikaji and Bassawa ward.These communities were selected because they have the same characteristics with the rest of the wards and the Primary healthcare department has previously carried out open defecation campaigns in the wards. However, the researcher considered the populations from the three selected wards for the study. The said population is as thus:

S/NO	WARDS	POPULATIONS	PROPORTION IN PERCENTAGE
1.	BASSAWA	34, 268	31.6%
2.	BOMO	42, 145	38.9%
3.	CHIKAJI	31, 891	29.5%
SUM	TOTAL	108, 304	100%

3.3.1 Sample Size/ Technique

The main function of the sample size technique is to allow the researcher to conduct the study with individuals from the population sample so that the results of the study can be used to derive conclusions that will apply to the entire population. The researcher used probability sampling technique in the collection of data. This was achieved through the use of questionnaire so as to enable the researcher to better analyze the communication approaches utilized by the Disease Prevention and Control Unit of the Primary Healthcare Department under Sabon-Gari LGA in addressing open defecation. Hence, in determining the sample size of the population of

one hundred and eight thousand, three hundred and four (108,304) the statistical formula is used. According to Yamane (1967) sample size can be determined through the following formula:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

N = Total Population

E = Level of precision or error limit = 5% or 0.05

n = Sample size

Therefore:

$$n = \frac{108,304}{1+108,304(0.05)^2}$$

$$n = \frac{108,304}{270.76}$$

n = 400

Therefore, the researcher administered the sum of four hundred (400) copies of questionnaire to the respondents within Bomo, Chikaji and Bassawa wards based on their respective population, in the following distributions:

S/no	**Wards**	**Populations**	**Proportion in %**	**Sample size for each ward**
1.	BASSAWA	34, 268	31.6%	126
2.	BOMO	42, 145	38.9%	156
3.	CHIKAJI	31, 891	29.5%	118
SUM	TOTAL	108, 304	100%	400

However, quantitative data was collected through the use of Questionniare while qualitative data was collected through the use of observation, focus group discussion and key informant interview.

3.4 Guides for Data Analysis

Quantitative data was statistically analyzed using computer software program, known as Statistical Package for Social Science (SPSS) to yield some statistics for comparison and establishment of nature of relationship between variables. Descriptive analysis was used to analyze qualitative data in the study in order to upscale the respondents view on the activities of the study area. Data from Questionnaire is supported with the Focused Group Discussion, while the Key Informant Interview and Observation from the field is merged and used to achieve triangulation. The essence of triangulation is to use one tool to verify another for data quality assurance. Therefore, data and methodological triangulation were used in this study.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.0 Introduction

This study adopted both quantitative and qualitative research instruments for data collection, presentation and analysis. This chapter captures the presentation and analysis of data collected through four instruments: the Questionnaire, Focused Group Discussion (FGD), Key Informant Interview (KII) and Observation (surveillance of the respondents' attitude to their environment).

4.1 Data Presentation

The researcher conducted one Focused Group Discussion (FGD) in each of the selected wards under Sabon-Gari Local Government Area of Kaduna State. For the FGD, the researcher engaged fourteen (14) persons in Bomo ward, nine (9) discussants in Bassawa ward and twelve (12) participants in Chikaji ward making a total of thirty-five (35) discussants. The researcher also used Key Informant Interview to engage the seven environmental health officers and the Deputy Director, Disease and Control Unit in Sabon-Gari Local Government Area.

To further verify the responses from the Focus Group Discussions, the researcher distributed four hundred (400) copies of questionnaire across the wards. The total number of three hundred and forty-six (346) copies of questionnaire were filled and returned, representing the return rate of 86.5%.

More so, the Likert scaling of percentage was used to analyze the data from the Questionnaire. The analysis in this chapter is divided into seven sections. Section A consists of demographic characteristics of the respondents, while other sections (B, C, D, E and F) deals with the responses to the research questions of the study as earlier stated in chapter one of this

study (pages 10-11). The last section provides summary tables and the discussion of findings on the data analyzed. It is important to note that this research is not a comparative study therefore; data gathered from the three wards were analyzed as representing Sabon-Gari Local Government because they are similar and share the same characteristics in terms of population, settlement pattern and environmental realities. However, a comparative analysis of the three locations was done for two tables and charts to show the differences in the findings.

SECTION A: Demographic Data of the Selected Population.

Table 1: Demographic Data of Respondents from the Study Area

Variables	Frequency	Percentage
Age		
15 – 30	238	(68.8)
31 – 49	75	(21.7)
≥ 50	33	(9.5)
Sex		
Male	200	(57.8)
Female	146	(42.2)
Family Size		
1-5	51	(14.7)
6-10	115	(33.2)
11-15	57	(16.5)
16-20	36	(10.4)
> 20	39	(11.3)
No Response	48	(13.9)
Education		
Primary	17	(4.9)
Secondary	148	(42.8)
Tertiary	163	(47.1)
No Response	18	(5.2)

Source: Field data- Sabon-Gari Local Government, Kaduna State, 2016

Key: Figures in parenthesis are in percentages

The above table represents the age and sex distribution, household population and educational status of the respondents. The data generated was analyzed below.

Age Distribution of Respondents

Table 1 shows the respondents' age bracket. 238 respondents between age 15 and 30, representing 68.8% had the highest frequency followed by 75 Respondents between age 31 and 49 representing 21.7%, while 33 respondents with 50 and above representing 9.5% were the least. However, the average age of the respondents for this study is 31. This implies that the major population of respondents is youth and also suggests that they are likely to be the highest

precursor of open defecation. If these people could be properly reached, it can go a long way in curbing open defecation. Again, it connotes that any communication intervention that will effectively curb open defecation must involve the community youth.

Distribution of Respondents Based on their Sex

Table 1 above shows the sex distribution of the respondents within Sabon-Gari Local Government that were sampled through the questionnaire survey. 400 respondents were sampled while 346 respondents filled their questionnaire and 4 respondents did not attempt questions on sex. Out of the 346 respondents, 200 are male representing 57.8% while 146 were female respondents representing 42.2%. This result shows a fair representation of both male and female in the study. This implies that this study is gender-inclusive and it can further be deduced that open defecation is largely practiced among the male population.

Household Size of Respondents

The distribution of respondents by household shows that 51 respondents representing 14.7% are having 1-5 family members, 115 respondents representing 33.2% consist of 6-10 members, 57 respondents representing 16.5% has 11-15 family members, 36 respondents representing 10.4% has 16-20 members in their family, and 39 respondents with ratio 11.3% consist of 20 family members. However, majority of the respondents are within 6-10 household size representing 33.2% of the entire population. The essence of this data is to determine the population in each household because overpopulation can be a major factor aiding the practice of open defecation.

Respondents' Educational Status

Table 1 also contained the educational status of the respondents in this study. The distribution of respondents by educational background shows that 17 respondents representing 4.9% has primary education, 148 respondents representing 42.8% has secondary education, 47.1 of the respondents consisting of 163 persons has tertiary education. Inferences can therefore be drawn that majority of the respondents have tertiary education. Tertiary education could also mean possessing Diploma, IJMB, Grade II, NCE certificate and bachelors' degree. Significantly, there are several tertiary institutions within the study location and there is a high tendency that majority of the respondents may have attended one of these institutions.

Availability of Toilet Facility

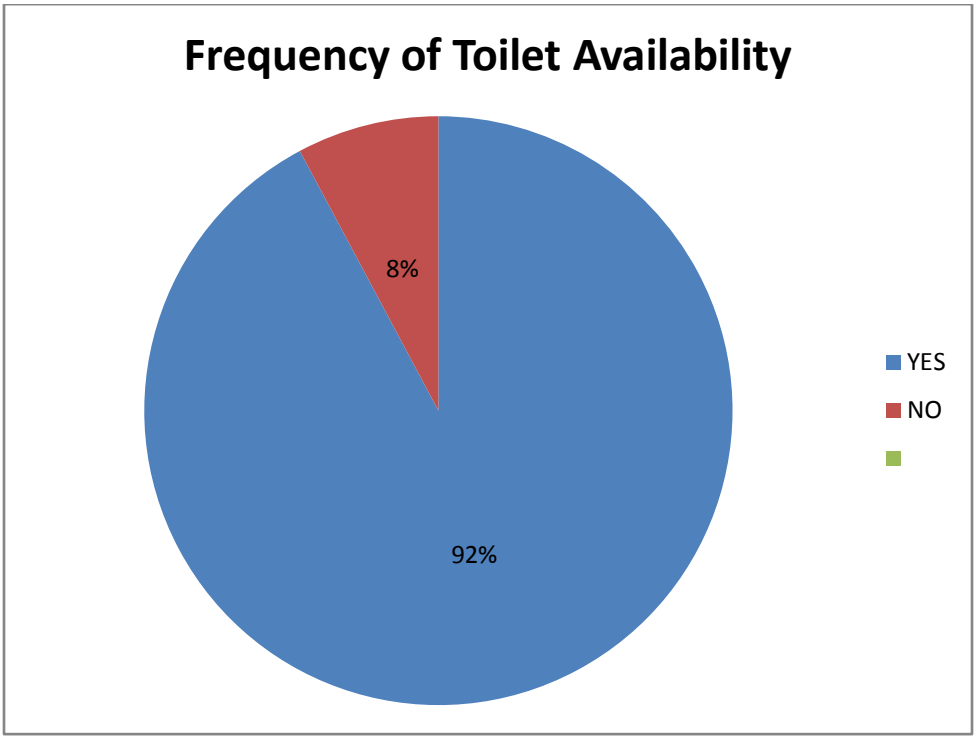


Fig 1: Response to Availability of Toilet Facility

Figure 1 above, indicates that 92% percent of the respondents representing 322 have toilet within their household while 28 respondents representing 8% do not have toilet in their household yet open defecation practice is prevalent. The result however showed that 92% of the respondents have toilet in their household. Data from FGD sessions in the three locations attest that "There are toilets within our households but are mainly used by the female and under 7 years old male members of the family and older male find alternative places to defecate" *(FGD response, Bomo, Bassawa and Chikaji, December, 2016).* Also, Abubakar Isma'il an FGD participant affirms that:

> Most household have toilet but people practice OD due to the large number of people in a family. So, if a person is in the toilet and another wants to use it instead of wasting time, the person just go to another place to defecate openly and afterwards where he has done it becomes a danger and can cause disease to him, his family and community *(FGD response Bassawa, Sabon-Gari LGA, December, 2016).*

The implication from this finding indicates that limited toilet and overpopulation in some households can be attributed as factors responsible for the prevalence of open defecation practice in Sabon-Gari LGA.

Respondents' Perception of Open Defecation Spots

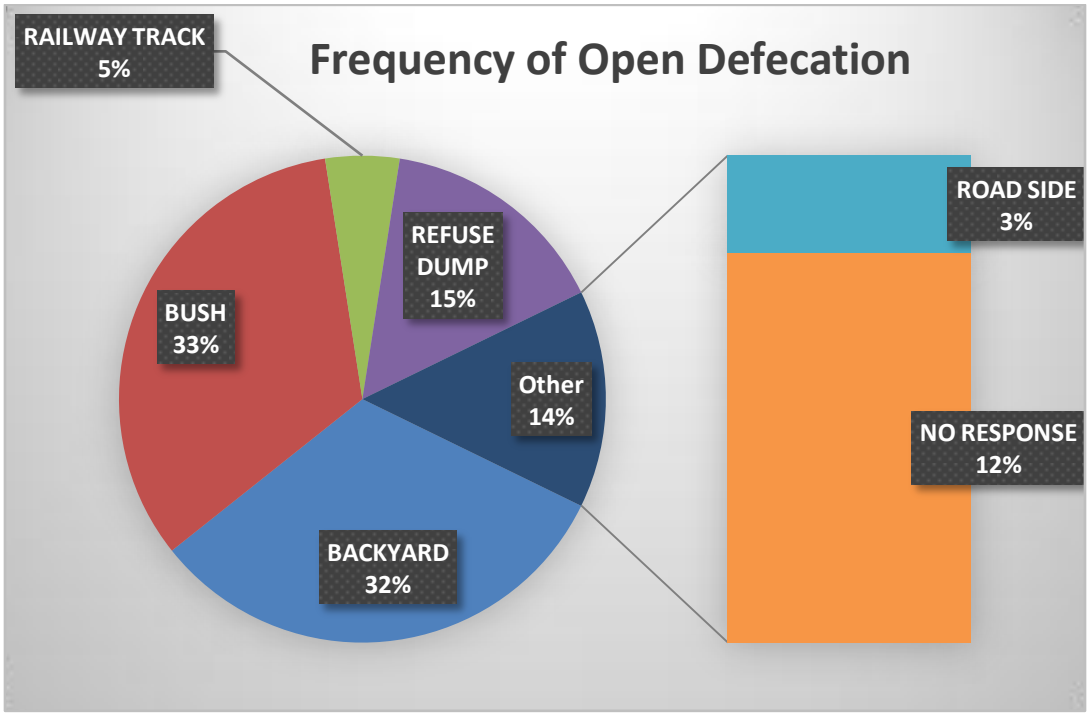


Fig 2: Various location of open defecation

As shown in Figure 2 above, the respondents identified several spots where open defecation takes place. 3% of the respondents said that open defecation is practiced by the roadside, 5% of the respondents identified railway track as a spot of open defecation, while 15% agreed that open defecation is practiced at refuse dump sites. A total of 32% and 33% respondents believed that open defecation are majorly practiced at backyard and bush path respectively while 12% of the respondents gave no response. Supporting this, Kamaludeen Musa, in an FGD session expresses that "open defecation is practiced in the bush or behind

residential areas or in hidden places. These are places where people defecate a lot."*(FGD response, Bomo, Sabon-Gari LGA, December 2016).*

This implies that open defecation is a common practice in Sabon-Gari LGA given that majority of the respondents identified bush path and backyard as the highest spots where open defecation often takes place.

SECTION B: Attitudes of People towards the Practice of Open Defecation

Table 2: Perception of Respondents about Open Defecation

INDICES	SA	A	U	D	SD
Open defecation happens around us and it is part of our daily life.	132 (38.2)	109 (31.5)	34 (9.9)	41 (1.8)	30 (8.7)
I feel ashamed about open defecation practice in my community.	170 (49.1)	100 (28.9)	42 (12.1)	21 (6.1)	13 (3.8)
I do not see anything wrong with open defecation.	45 (13.0)	41 (11.8)	61 (17.6)	57 (16.5)	145(41.0)
I feel at ease with nature when I defecate openly.	61 (17.6)	71 (20.5)	56 (15.1)	70 (20.2)	88 (25.4)
I defecate openly because my culture is not against it.	26 (7.5)	45 (13.0)	42 (12.1)	95 (27.5)	114 (32.9)
Open defecation does not affect my health in any way.	26 (7.5)	38 (11.0)	59 (17.0)	84 (24.3)	139 (40.2)
I often practice open defecation due to lack of toilet in my vicinity.	53 (15.3)	76 (22.0)	40 (11.6)	73 (21.1)	90(26.0)

Source: Field data- Sabon-Gari Local Government, Kaduna State, 2016

Key: Figures in parenthesis are in percentages

From table 2 above, 69.7% of the respondents agree that open defecation happens around them and it is part of their daily life, 10.5% disagree while 9.9% of the respondents remained

neutral. The table shows that majority of the respondents are aware of the practice of open defecation. In a KII session with Health In-charge officer Mallam Suleman Hamisu, he states that;

> Sabon-Gari central ward is the melting point of Zaria where you have people from different culture like the Yorubas, Igbos among others. Open Defecation is found along railway tracks, market's side wall and behind houses *(Researcher's Interview with Mallam Suleman Hamisu, Sabon-Gari, December, 2016).*

Supporting the above findings, the researcher observed and sighted several open defecation spots across the local government during the field work. Triangulating this, data from the questionnaire survey, KII and observation revealed that the practice of open defecation has become a habit and norm among the people of Sabon-Gari LGA. Hence, accepting that open defecation is part of their daily life implies that the practice is accepted and prevalent among the people within the study location.

Concerning the statement as to whether the respondents are ashamed of open defecation practice in their community, 78% of the respondents agreed that they felt ashamed about open defecation practice in their community, 9.9% did not feel ashamed while 12.1% of the respondents are indifferent about the practice of open defecation within their community. This data showed that majority of the respondents dislike the practice of open defecation and would not like to be identified with such habit given that it is not hygienic and does not give a good description of their environment.

Data from the above Table indicates that 24.8% of the respondents did not see anything wrong with open defecation practice, 17.6% were indifferent and 57.5% of the respondents agreed that there are many things wrong with open defecation practice. This finding is in consonance with the FGD response from the three locations. Particularly, Muhammad Lawal in

an FGD session postulates that "open defecation is not something that is good because it causes a lot of diseases to the person practising it and also pollution to the environment." *(FGD response, Bomo, Sabon-Gari LGA, December, 2016).*Hence, it can be said that majority of the respondents are weary of open defecation practice because they consider it harmful to their general health yet, this doesn't stop some people from practicing open defecation in Sabon-Gari LGA.

Distribution from table 2 project that, 38.1% respondents agreed that they feel at ease with nature when they defecate openly, 45.6% respondents disagreed and 15.1% were undecided about feeling at ease with nature when they defecate openly. The implication of this finding is that majority of the respondents (45.6%) disagreed to feeling at ease with nature during open defecation. From the findings above, it can be inferred that open defecation practice is not encouraged among the people of Sabon-Gari Local Government but it is circumstantially practiced.

Table 2 above shows the respondents' responses to the statement that 'I defecate openly because it is not against my culture'. 20.5% of the respondents agreed that they defecate openly because their culture is not against it, 60.4% of the respondents disagreed that their culture is against open defecation practise and 12.1% of the respondents were undecided. Thus, highest number of respondents disagreed that open defecation is culturally rejected. In addition, response from Muhammad Lawal in an FGD session reveals that:

> The Hausa culture does not permit the practice of OD and also the religion of Islam also prohibits the practice of OD. So, one is meant to build a toilet in his house or use a bush behind the house for defecation *(FGD response Bomo, Sabon-Gari LGA, December, 2016).*

Substantiating the above data, Mallam Ahmad Adamu, in an FGD session comments as thus:

> The reason why people practice OD is due to the large number of people in a family, and only one toilet is available which is mainly used by the female members. So if a person is in the toilet and another wants to use it instead of wasting time, the person just go to another place to defecate openly and afterwards where he has done it becomes a danger and can cause disease to him, his family and community *(FGD response Bassawa, Sabon-Gari LGA, December, 2016).*

If the people's culture and religion are against open defecation and the toilet in some of the households are meant for mainly female, the male family members will seek for solution at available places (O.D). This implies that there is habitual practice of open defecation among the male population in Sabon-Gari LGA which is culturally supported, given that the female populations are given preferential treatment over the use of the household toilets.

In a related distribution in table 2, 18.5% of respondents agreed that open defecation does not in any way affect their health, 17% were undecided while 64.5% of the respondents disagreed with the statement. This connotes that highest population of respondents recognize that open defecation can cause serious harm to their health and their general wellbeing.

With reference to the reason for respondents engagement in open defecation or not, 37.3% of the respondents said they engage in open defecation due to lack of toilet in their vicinity. 47.1% of the respondents disagreed about the unavailability of toilet in their vicinity as a reason for open defecation practice while 11.6% were undecided. The highest respondents (47.1%) however do not believe that lack of toilet can be a reason for the practice of open defecationrather; inadequate toilet facilities can be a factor. During the FGD sessions from the three wards, participants disputed the above data and maintain that:

> Everybody knows OD is wrong. The reason why some people defecate openly is lack of adequate toilets and if there are queue at the toilet, they result to OD because they can't wait any longer. OD is also practiced by people who take hard drugs and sometimes, children whose parents are careless. Some people defecate openly is because they contact toilet diseases through using public toilets present in the area. Most of the people that practise OD are the Almajiri students and visitors to the area because they do not have a

> place to defecate. We sometimes do find natives of an area practising OD but it's mostly practiced by the Almajiri students and visitors *(FGD response, Bomo, Bassawa and Chikaji, Sabon-Gari LGA, December, 2016).*

Supporting the above views, Health in charge officer Mrs. Alice states that:

> People in Hanwa ward practice OD but my unit is GRA (Government, Reserve Area) you don't expect OD anyhow but it is found along the railway track that passes through the area and it is done by strangers and traders due to inadequate public toilets *(Researcher's Interview with*Mrs. Alice, *GRA, Sabon-Gari LGA, December, 2016).*

Reinforcing the above view, Health officer Mallam Abubakar Aminu opines that "OD is seen within the government schools premise and it is perpetuated mostly by the Almajiri students" *(Researcher's Interview with Mallam Abubakar Aminu, Samaru, Sabon-Gari LGA, December, 2016).*

Although the quantitative data attested that lack of toilet is not a reason for open defecation practice, the qualitative data from the FGD and KII affirmed that, though many factors can lead to the practice of open defecation, lack of adequate toilet within households is fundamental to the prevalent practice of open defecation. Also, the influx of the Almajiri students who neither have a place to defecate nor money to use paying public toilet is a contributing factor and are likely to constitute larger percentage of the population that practise open defecation within Sabon-Gari LGA.

SECTION C: Awareness of the dangers associated with Open Defecation

Table 3: Respondents' perception of dangers associated with open defecation

Indices	Yes	No
I am aware of the dangers related to open defecation practice	309 (89.3)	37 (10.7)
Open defecation leads to contamination of food and water	285 (82.4)	61 (17.6)
Flies that perch on the excreta can contaminate uncovered food and water in public places	290 (83.8)	56 (16.2)
Open defecation can lead to outbreak of cholera and diarrhoea	300 (86.7)	46 (13.3)
Open defecation causes environmental pollution	305 (88.2)	41 (11.8)
Open defecation can lead to health complications and death	276 (79.8)	70 (20.2)

Source: Field data- Sabon-Gari Local Government, Kaduna State, 2016

Key: Figures in parentheses are in percentages

From table 3 above, in response to whether the respondents are aware of dangers related to open defecation practice, 309 respondents representing 89.3% are aware of the dangers related to open defecation practice while, 37 respondents representing 10.7% responded that they are unaware of dangers associated with open defecation. This implies that the majority of the people are aware of the dangers inherent in open defecation practice.

The above distribution shows that 285 respondents representing 82.4 %affirm that open defecation can lead to contamination of food and water whereas 17.6% equivalent to 61 respondents declared their non-awareness of the contamination of food and water through open defecation.

Equally, 83.8% of the respondents supported the claim that flies that perched on excreta can contaminate uncovered food and water in public places while, 16.2% respondents have no knowledge of such contamination. These two findings are related especially to the contamination of food items. The data shows that majority of the respondents are aware that open defecation can cause food contamination.

Table 3 shows that 300 respondents representing 86.7% believe that prevalent open defecation practice can lead to cholera and diarrhea outbreak while 13.3% do not believe that open defecation is responsible for cholera and diarrhea outbreak. This implies that majority of the respondents agree that open defecation is a major cause of deadly diseases such as cholera and diarrhea outbreak.

Responding to the statements that 'open defecation causes environmental pollution' and that 'open defecation can lead to health complications and death', 88.2% and 79.8% respectively attested to the above statements while, 11.8% and 20.2% respectively did not accept the above statement as true. Thus, majority of the respondents confirmed that open defecation causes environmental pollution, can lead to health complications and eventual death.

The distributions contained in table 3 above clearly indicate that the highest populations of the respondents are aware of the general dangers associated with open defecation and its resultant effect. Complementing the above findings, an FGD discussant Ahmad Adamu affirms that:

> OD spoils our behaviour, our food. For example if food is left uncovered and there is an OD site nearby, insects like flies, cockroaches etc. can perch on the faeces then again perch on the uncovered food or food that is on fire. Also while eating the smell can be unpleasant and cause one to vomit.*(FGD response, Bassawa, Sabon-Gari LGA, December, 2016).*

In addition to the above statements, Musa Hussaini during the FGD session argued that:

> Open defecation can contaminate food items and water through flies. We have flies a lot and they like unclean places. If flies perch on faeces it can also perch on our food. We use water from wells and if rain washes faeces into the well and people use it, it can lead to many diseases *(FGD response, Bomo, Sabon-Gari LGA, December, 2016).*

Similarly, KII from health officer Mallam Abdulaziz Isa on the dangers associated with open defecation goes thus:

> Open defecation leads to fecal oral diseases which are mostly gotten from OD because an infected person can defecate and flies will perch on it and also perch on people's food thereby spreading the infection which can cause an outbreak of diarrhea and many other diseases.*((Researcher's Interview with* Mallam Abdulaziz*, Hanwa, December, 2016).*

Substantiating the above view, during a KII session with health officer, Mallam Abubakar Aminu, he notes that "Apart from the offensive odour that pollutes the air, we usually have cases of cholera, diarrhea, typhoid and the outbreak of diseases which may lead to death *(Researcher's Interview with Mallam Abubakar Aminu, Samaru, December, 2016).*

Data from the questionnaire, KII and FGD make it evident that the respondents have adept knowledge of the dangers associated with open defecation. However, despite the fact that they are aware of the dangers associated with open defecation practice, there is a prevalence of open defecation within the local government due to negligence and inimical attitudes.

Diseases associated with open defecation

Table 4: Respondents perception of the diseases associated with open defecation

INDICES	SA	A	U	D	SD
Dysentery	146 (42.2)	108 (31.2)	52 (15.1)	26 (7.5)	14 (4.0)
Diarrhea	165 (47.7)	106 (30.6)	55 (15.9)	10 (2.9)	10 (2.9)
Cholera	184 (53.2)	93 (26.9)	45 (13.0)	16 (4.6)	8 (2.3)
Typhoid	125 (36.1)	91 (26.3)	71 (20.5)	39 (11.3)	20 (5.8)
Polio	54 (15.6)	65 (18.8)	90 (28.9)	59 (17.1)	68 (19.7)

Source: Field data- Sabon-Gari Local Government, Kaduna State, 2016

Key: Figures in parentheses are in percentages

Distribution from table 4 specifies that, 73.4% of the respondents agreed that dysentery is one of the diseases associated with open defecation, 15.1% respondents were undecided and 11.5% of the respondents totally disagreed that dysentery is an open defecation related disease.

The table above indicates that 78.3% and 80.1% of the respondents acknowledge that diarrhea and cholera respectively are diseases associated with open defecation, 15.9% and 13.0% were undecided and 5.8% and 6.9% respectively disagreed that diarrhea and cholera are not diseases associated with open defecation.

From the above table, a total population of 62.4% agreed that typhoid is a disease associated with open defecation, 20.5% were undecided, while 17.1% of the respondents disagreed that typhoid is an open defecation related disease.

Table 4 reveals that 34.4% of the respondents agreed that polio is one of the open defecation related diseases, 28.9% respondents were irresolute, while 36.8% of the respondents

disagreed that polio is an open defecation related disease. Although the margin between agreement and disagreement is 2.4%, the highest population maintained the opinion that polio is not associated with open defecation. From the above findings, we can deduce that majority of the population agreed that 'dysentery; diarrhea, cholera, and typhoid are open defecation associated diseases'.

During the FGD sessions participants from the three wards agree that:

> Dysentery; diarrhea, cholera, and typhoid are air and waterborne diseases and open defecation diseases are both air and waterborne. It is water borne because rain can carry the pathogens in the feaces into wells and it is airborne because wind can carry dry and dispersed feaces into food items and by inhaling the dust that comes with the wind. There is no doubt that OD brings a lot of dangers like Cholera, Menijitis and Malaria*(FGD response Bomo, Bassawa and Chikaji, Sabon-Gari LGA, December, 2016).*

This implies that majority of the respondents have a sound knowledge of the diseases associated with open defecation except for polio which they disagreed that it is caused by open defecation.

Contrary to the above findings, health officer Mallam Abdulaziz Isa submits that:

> The most notorious disease associated with OD even right now in Nigeria is a serious problem of polio virus and the prevalence of OD is one of the main causes of polio. Polio is gotten through refuse dump, OD etc. and that is why there are frequent cases of polio especially in the northern states. Even the odour of OD can constitute as nuisance and affect people *(Researcher's Interview with Mallam* Abdulaziz Isa*, Hanwa, Sabon-Gari LGA, December, 2016).*

Also, health officer Mallam Dayyabu Lawal supports the above view that:

> There are many dangers associated with this practice, as I told you before, there are some people with certain ailments for example, children of 15yrs and below can have the illness associated with polio virus and people don't know. In fact if only a person has it and practiced OD in that community, the polio virus can spread and affect up to 200 people through the person's dispersed faeces. Some children may contact it through rough play in such areas, uncovered food items because, not everyone is conscious to wash his child's hands before eating. *(Researcher's Interview with Mallam* Dayyabu Lawal*, Chikaji, Sabon-Gari LGA, December, 2016).*

The above data further justifies that polio is caused by open defecation because it is a feacal oral transmission which means the consumption of the human feaces through uncovered food items, meat, contaminated water, unhygienic environment among others. This implies that majority of the population in Sabon-Gari LGA are yet to realize this fact. Hence, there is a high risk of been infected with polio related diseases due to lack of knowledge.

SECTION D: Identification of Primary Healthcare Communication Approaches

Respondents Access to health information on open defecation

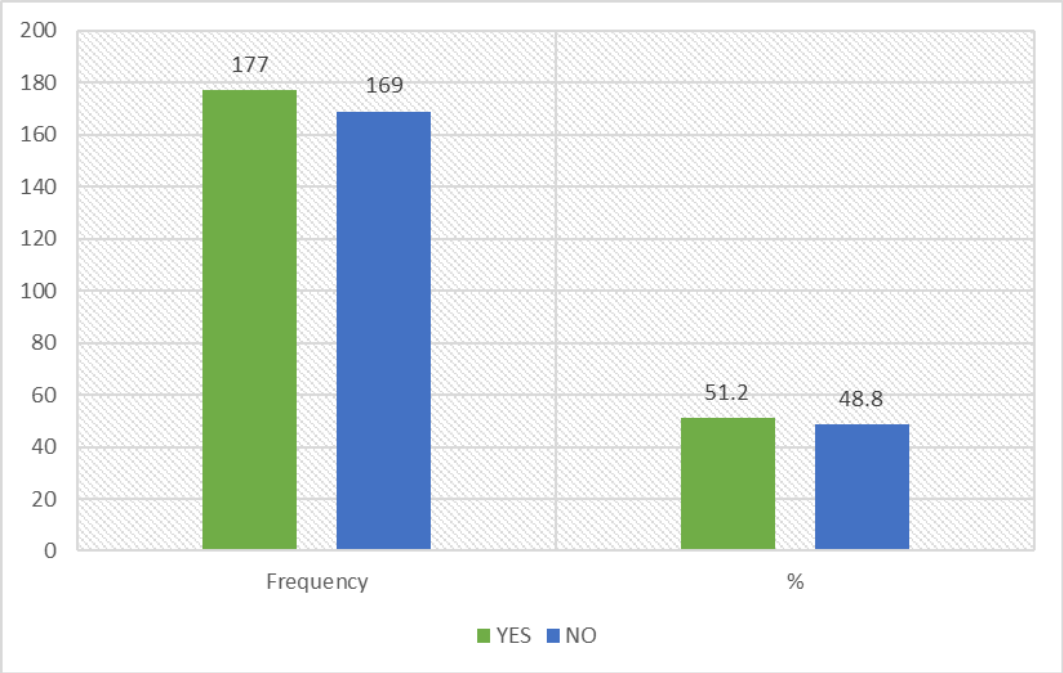


Fig 3: Bar chart showing respondents Access to health information on open defecation

Figure 3 deals with respondents' access to health information on open defecation. In figure 3, 51.2% of the respondents agreed that they have access to health information on open defecation through house to house inspection, clinic seminars and the use of local announcers while 48.8% of the respondents maintain that they do not have access to health information on open defecation. FGD from Mallam Ismail Dahiru supports the above findings that:

> We assess health information on open defecation from the health officials at the health centre and during house to house inspection. We also pass information to the health officials through a committee that was set up in our community whose leader is Dagacin Bassawa. The committee works in collaboration with the health officials, especially when there is a problem in the community *(FGD response Bassawa, Sabon-Gari LGA, December, 2016).*

This implies that the larger population of the respondents has access to health information on open defecation through the effort of health officers in Sabon-Gari LGA.

Table 5: Respondents' Response to the Communication Approaches Deployed by the Primary Healthcare Department of Sabon–Gari LGA

INDICES	FREQUENCY	PERCENTAGE
Use of local announcers	139	(40.2)
House to house inspection	87	(25)
Use of mobile phones	61	(17.8)
Health talk at various PHC centres	35	(10)
Radio	24	(7)

Source: Field data Sabon–Gari Local Government, Kaduna State, 2016

Key: Figures in parenthesis are in percentages

Table 5 contains the respondents' response to the identification of the communication approaches and channels deployed by the primary healthcare department of Sabon-Gari LGA. 139 respondents representing 40.2% identified the 'use of local announcer' as the channel through which they receive open defecation related information, 87 respondents representing 25% identified house to house inspection as the means with which they receive open defecation information, while 61 respondents (17.8%) identified 'use of mobile phones' as one of the channels used by the health workers in curtailing open defecation. Also, 35 respondents representing 10% receive open defecation information through health talks at the primary healthcare centres while 24 respondents with 7% identified 'Radio' as the medium through which they receive information on open defecation information from the primary healthcare

health workers.This implies that 'house to house inspection', 'the use of local announcer', 'the use of radio', 'health talk at various primary healthcare centres' and the 'use of mobile phones' are communication approaches through which the people of Sabon-Gari LGA of Kaduna state receive open defecation information from the health officials on open defecation. However, majority of the respondents rated 'the use of local announcer' as the most used by the health officers in curtailing open defecation.

SECTION E: Effectiveness of Channel of Communication in tackling Open Defecation

Table 6: Respondents grading of communication channels used for open defecation

INDICES	Score	Ratio	Remark
House to house inspection	902	2.65	High
Radio	719	2.11	Very Low
Use of mobile phones	883	2.60	Moderate
Health talk at various PHC centres	852	2.51	Moderate
Use of local announcers	985	2.90	Very High

Source: Field data- Sabon-Gari Local Government, Kaduna State, 2016
Note: Ratio is the inverse relationship between total score and population of the Respondents

The table 6 shows the respondents grading of the communication strategy used in tackling open defecation in Sabon-Gari LGA. The essence of this table was to determine the frequency at which the communication approaches are used in addressing open defecation. In table 6, Ratio 2.65 of the respondents graded 'house to house inspection as High and ratio 2.11 of the respondents graded 'Radio' as Very Low. Ratio 2.60 of the respondents ranked 'Use of mobile phones' as Moderate, ratio 2.51 of the respondents graded 'Health talk at various Primary Healthcare centres' as Moderate and finally, a total of 2.90 of the respondents' ratio graded 'Use of local announcers' as Very High. This indicates that majority of the respondents rated house to

house inspection and use of local announcers as mostly used communication channels for the campaign against open defecation.

In the same vein, FGD response from Ahmad Adamu Bassawa confirmed that:

> There is an adhoc committee set up in our community to work in collaboration with the Health officials by going for house to house inspection, inspection of hidden spots of open defecation in order to prevent the reoccurrence of deadly diseases."*(FGD response Bassawa, Sabon-Gari LGA, December, 2016).*

Also, Muhammad Lawal in an FGD session responds that "we receive information through social media, communication by Text message, Radio and Television" (*(FGD response Bomo, Sabon-Gari LGA, December, 2016).*

This indicates that text messaging and Radio are part of the communication outlet used for reaching the people in an attempt to curb open defecation. Supporting the Survey and FGD findings, KII response from health in charge officer Mallam Dayyabu Lawal says that:

> We have the town crier who announce to the people of new developments and also of our coming for house to house inspection and also we inspect hidden places. If we find any that is not clean, we put measures by warning the people involve or in some cases we sanction them through sanitary laws (*Researcher's Interview with Mallam Dayyabu Lawal, Chikaji, Sabon-Gari LGA, January, 2017).*

In addition, Mallam Abubakar Aminu during the KII session asserted that "in an effort to discourage open defecation practice, we communicate through regular inspection, awareness campaign, with 'active involvement of the community'" (*Researcher's Interview with Mallam Aminu Abubakar, Samaru, January, 2017).* This 'heavy involvement of the community' is further elaborated by Health In-Charge officer, Mallam Dalladi Mu'azu, when he maintains that:

> We communicate to the people through invitation; an invitation letter is written inviting them to the office to discuss with them. This is one of the ways used to create awareness. We mobilize and also educate the people by going on house to house inspection, using a group of women environmentalists to educate other women in the compound and the men educate the men outside the compound (*Researcher's Interview with Mallam Dayyabu Lawal, Bassawa, Sabon-Gari LGA, December, 2016).*

This implies that house-to-house inspection and the use of local announcers (town Crier) are the most prominent communication approaches used by the environmental health officers to give the people information towards addressing open defecation practice. The use of female to female and male to male to educate their respective gender indicated that the health officials are gender sensitive.

Perception of Respondents on the occurrence of Cholera Outbreak

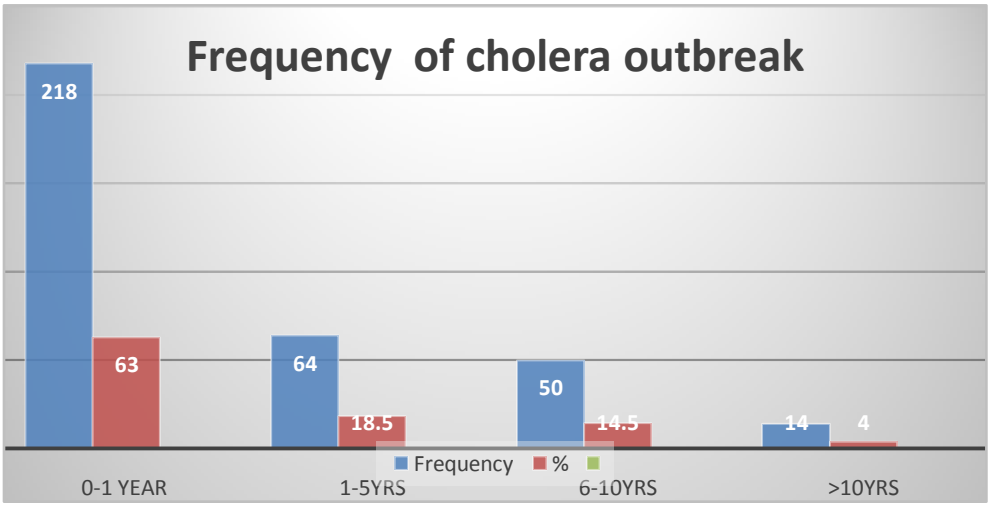


Fig 4: Respondents perception of cholera outbreak intervals

The information contained in the Bar Chart above indicates that 63% of the respondents experienced Cholera and Diarrhea outbreak between 0 to 1 year in their locality, 18.5% of the respondents experienced cholera outbreak between 1-5 years. Also, 14.5% of the respondents acknowledge that cholera outbreak occurred between the last 6 to 10 years while 4% of the respondents recalled that they witnessed an outbreak 10 years ago. Findings from fig.5 show that the majority of the respondents declared that cholera outbreak occurred between 0 and 1 year ago. This finding is in agreement with the FGD response from Ahmad Musa, who postulates thus:

> Last week, my younger brother had a cholera attack, we quickly rushed him to the hospital and by Allah's mercy and the hospital's effort he was cured. Due to lots of

diseases he had and the mosquito bites it took about 10 hours to revive him. He had typhoid, malaria and cholera *(FGD response Chikaji, Sabon-Gari LGA, December, 2016).*

The above findings are in line with the response of the Deputy Director, Disease Control in Sabon-Gari LGA, Mallam Ahmed Adamu during a KII session. He posits that "Cholera outbreak is an annual occurrence within Sabon-Gari Local Government Area. For example, it happened at Chikaji ward in 2016" *(Researcher's Interview with Mallam Ahmed Adamu, Sabon-Gari LGA, January, 2017).*

Triangulating the above findings, the KII and FGD validate the questionnaire findings that the people of Sabon-Gari LGA experience cholera outbreak on yearly basis. This experience however is consequent upon the prevalence of open defecation practice among the people. This implies that the annual cholera and diarrhea outbreak is likely to increase mortality rate and halt economic activities within the epidemic area. Therefore the entire populations of Sabon-Gari LGA are mostly at risk of losing their lives as a result of open defecation practice.

Respondents Evaluation of the Effectiveness of the Communication Approaches deployed by the Health Officers.

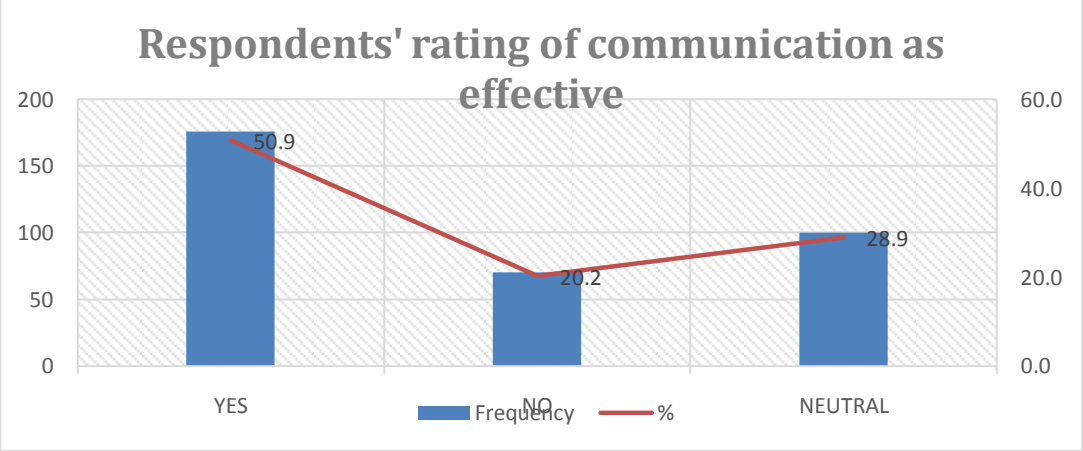


Fig 5: Bar chart showing respondents response to the effectiveness of the Communication Approaches for addressing open defecation.

The above fig. 5 shows respondents' rating of the effectiveness of the communication approaches deployed by the Primary Healthcare officers towards addressing open defecation. 50.9% (178) of the respondents rated the communication approaches as effective, 20.2% (71) rated the approaches as ineffective, while 28.9% (101) respondents remained neutral. This indicates that majority of the respondents rated the communication approaches as effective. The above view is in consonance with KII response from Mallam Dayyabu Lawal who submits that "we use both radio and house to house inspection but the house to house inspection is more effective because sometimes not everyone can get or understand the message through radio" *(Researcher's Interview with Mallam Dayyabu Lawal, Chikaji, December, 2016)).*

In addendum above view, Mallam Suleman Hamisu during the KII session declared that "the most effective of our communication channel is the use of (local announcer) town crier" (*Researcher's Interview with Mallam Suleman Hamisu, Sabon-Gari, December, 2016).*

Although there are proven evidences that the communication approaches are effective, it is worrisome that about 101 (28.9) respondents refused to take position about the effectiveness or otherwise of the communication approaches. The prevalence of open defecation within the LGA under study further questions the effectiveness of the communication approaches because effective communication is aimed at achieving desirable change.

SECTION F: Effective Communication Strategies towards Addressing Open Defecation

Significant Factors that can Address Open Defecation

Table 7: Factors that can address Open Defecation

INDICES	GRADE	RATIO	REMARK
Communicating sanitary law	732	2.15	Significant
Creating awareness on the use of public toilet	734	2.16	Significant
Sensitization campaign on dangers of open defecation.	673	1.98	Significant

Source: Field data- Sabon-Gari Local Government, Kaduna State, 2016
Note: Ratio is the inverse relationship between total score and population of the Respondent

Table 7 indicates the respondents view on the significant factors that can address open defecation. The essence of this table is to enable the researcher to suggest the likely factors that can help in curtailing open defecation practice. It is observed that a ratio of 2.15 of the respondents agreed that communicating sanitary law is a significant factor towards addressing open defecation, the ratio of 2.16 of the respondents agreed that creating awareness on the use of public toilet is another factor to be considered in addressing open defecation practice, while a ratio of 1.98 of the respondents considered sensitization campaigns on the dangers of open defecation to be helpful in curbing open defecation practice. However, creating awareness on the use of public toilets was ranked as the best means of addressing open defecation with a ratio of 2.16 among the respondents, followed by communicating sanitary law. This implies that the provision of public toilet across public places is highly significant in curbing open defecation among the people of Sabon-Gari LGA especially for the Almajiri students. Thereafter, the enforcement of sanitary law can be useful in sanctioning and prosecuting in cases of non-

compliance. This is corroborated in a FGD response from Abdussalam Idris Jibril who submits that:

> There should be provision of free public toilets especially for the Almajiri students who have no money to pay before using toilets and most importantly enlightening people on the dangers of Open Defecation through radio, drama and social media. Sanitary law should be made to compel all houses, schools and markets to construct adequate toilets. Also, the health officials should do routine sanitation of the area just in case people still defecate openly to avert epidemic situation (*Focus Group Discussion at Bomo ward, Sabon-Gari LGA on December 10, 2016).*

In addition, KII response from the Deputy Director, Disease control unit Mallam Ahmad Adamu reiterated that:

> Factors that may help to curb the Open Defecation practice include active participation/intervention of government and the enforcement of sanitary laws on defaulters. The Almajiri students' Mallam should be held accountable for Open Defecation practice so that they can build toilet for them *(Researcher's Interview with Mallam Ahmed Adamu, Sabon-Gari LGA, January, 2017).*

It can therefore be deduced that the provision of public toilets enlightenment on dangers of open defecation, communicating and enforcing sanitary laws are central to addressing open defecation practice.

Effective Communication Channels in Addressing Open Defecation

Table 8: Ratings of Effective Communication Channels in Curbing Open Defecation practice

MEDIA	SCORE	RATIO	GRADE
Community outreach/Town Hall meetings	1323	3.89	2nd
Radio	1353	3.98	1st
Mobile phone	1043	3.07	5th
Community festival	907	2.67	8th
Clinic seminars and health talk	946	2.78	7th
Music and Drama	958	2.81	6th
Social networking sites (WhatsApp, Facebook etc.)	1137	3.34	3rd
Television	1084	3.19	4th

Source: Field data- Sabon-Gari Local Government, Kaduna State, 2016

Note: Ratio is the inverse relationship between total score and population of the Respondents

Table 8 is concerned with respondents rating of the listed communication approaches with specified rating standards. These rating measures are as thus: 1= very ineffective, 2= ineffective, 3= undecided, 4=effective, 5= very effective. From the above table, Radio tops the table with the mean score of 3.98, followed by Television with the ratio of 3.89. Social Networking Sites (Facebook, WhatsApp etc.) came third on the table with the mean score of 3.34, while Clinic Seminar and Health Talk came fourth with the mean score of 3.19. The use of Mobile Phone was ranked fifth on the table with the mean score of 3.07, while Music and Drama emerged sixth with the mean score of 2.81. Community outreach/Town hall meetings was rated seventh by the respondents with the average score of 2.78 and Community Festival came last (eight) on the table with the mean score of 2.67. This implies that Radio, Television and Social

networking sites (Facebook, WhatsApp, Twitter etc.) that were rated 1st, 2nd and 3rd are effective communication strategies for mobilizing and sensitizing the people towards curtailing open defecation and adoption of healthier lifestyle.

However, none of the items on the above table 8 was rated below 2.5 as such; they are all deployable and effective communication approaches for curtailing Open defecation. Responses from the FGD supported the above statement as majority of the discussants suggested several effective communication strategies for addressing open defecation which include, Social Networking sites, Radio and Television, Community Outreach/Town Hall meetings, the use of Music and Drama, Health Talks, Mobile phone text messaging, the use of Community Based Organization, Traditional/Religious leaders, house to house inspection with the clause that 'male workers should inspect the house surrounding while female workers should inspect inside the house. Supporting the above statement is a FGD response from Ahmad Adamu Bassawa who posits that:

> In my opinion due to the globalization of the world, the social media is one of the most effective in which information can be passed across rapidly and also the committee that is in collaboration with the health workers is one of the easiest means of the people passing their massage by either writing or verbally to the committee members *(FGD response Bassawa, Sabon-Gari LGA, December, 2016).*

In addendum to the aforementioned statement are the words of Lami Musa who posits that "The use of public address system will help because some people do not have radios, Televisions, phones, so I feel this medium will reach the grass root *(FGD response Chikaji, Sabon-Gari LGA, December, 2016).*

This implies that the multiple communication approaches listed in table 7 above are all relevant in curbing the practice of open defecation. Specifically, community festival, community outreach/ town hall meetings, clinic seminars and music and drama possess the elements of

participatory communication which has been proven to be effective in eradicating open defecation practice.

4.1.1 Summary Table Showing Significant Differences from the three Wards

The essence of summary table A, B and C is to show the major differences that were discovered during this study and to establish the factors responsible for the prevalence of diarrhea cases in Bomo and Chikaji and the low diarrhea case in Bassawa as stated in the study scope.

Table A: Respondents Response to Availability of Primary Healthcare Office.

Response	**Bomo ward**	**Bassawa ward**	**Chikaji ward**
Yes	68 – 46.3%	95 – 67.9%	19 – 32.2%
No	79 – 53.7%	45 – 32.1%	40 – 67.85%

Table A is concerned with availability of Primary healthcare (PHC) centre in each ward. The result indicates that 46.3% of the respondents from Bomo said they have PHC centre in their ward, 67.9% of respondents from Bassawa said they have PHC centre in their wards and 32.2% of the respondents from Chikaji said they have a PHC centre. On the other hand, 53.7% of the respondents from Bomo said they do not have PHC centre in their ward, 32.1% said No in Bassawa and while, 67.85% said they do not have PHC centre in Chikaji.

This shows that majority of the respondents from Bomo and Chikaji said that they do not have access to PHC centre in their wards while majority of the respondents from Bassawa said they have a PHC centre in their ward. In addition, the researcher also observed that there are no PHC centres in Chikaji and Bomo but Chikaji share PHC centre with Muchia while Bomo shares a PHC centre with the people pf Chikaji ward shares PHC centre with Samaru ward.

This implies that the absence of a PHC centre in each ward can be a reason for the prevalence of open defecation practice in Sabon-Gari LGA.

Table B: Respondents Response on Access to Information on Open Defecation.

Response	Bomo ward	Bassawa ward	Chikaji ward
Yes	73 – 49.7%	82 – 58.6%	21 – 35.6%
No	74– 50.3%	58 – 41.4%	38 – 64.4%

Table B deal with respondents' access to information on open defecation from the health in- charge officers. 58.6% of the respondents from Bassawa said they have access to information on open defecation while 41.4% said they do not have access to such information. On the contrary, majority of the respondents from Bomo and Chikaji with 50.3% and 64.4% respectively said they do not have access to information on open defecation from the health officers.

This indicates that majority of respondents from Bassawa have access to information on open defecation while majority of the respondents from Bomo and Chikaji do not have access to such information. Hence, the lack of information can also be a contributing factor to the prevalence of open defecation related diseases.

Table C: Respondents view on the Frequency of Cholera Outbreak Experience.

Years	Bomo ward	Bassawa ward	Chikaji ward
0-1	93 - 63.3%	24 -17%	49 - 83.1%
1-5	33 - 22.4%	76 - 54.3%	7 - 11.9%
6-10	18 - 12.2%	30 - 21.4%	2 - 3.4%

Based on the responses in table C on when last did the respondents witnessed Cholera outbreak, majority of the respondents from Bomo (63.3%) and Chikaji (83.1%) indicate that they witnessed cholera outbreak on regular basis within a year while majority of the respondents

(54.3%) from Bassawa state that they witness cholera outbreak within one to five years ago. This connotes that cholera and diarrhea outbreak is a regular occurrence within Sabon-Gari LGA.

From Table A, B and C above, we can therefore deduce that lack of PHC centres in a Bomo and Chikaji, inadequate access to information on open defecation are strong determinants to the prevalent of open defecation practice. In view of this, the aforementioned factors are responsible for the high cases of diarrhea in Bomo and Chikaji over Bassawa who has the least.

4.2 Discussion of Findings

The data analyzed through tables, charts and descriptive methods in this study was obtained from respondents in three wards namely; Bassawa, Bomo and Chikaji in Sabon-Gari Local Government of Kaduna State. The quantitative data were validated with data from Observation, Focus Group Discussion and Key Informant Interview through triangulation for data quality assurance. Findings from the analysis are further discussed here along with the theories in relation to the research questions for the fulfillment of the study objectives.

Research Question One

What are the attitudes of people towards open defecation practice in Sabon-Gari Local Government?

Based on figure 1 presented above and response from Focus Group Discussion, it is apparent that majority of the respondents representing 92% have toilet in their household. Yet, there is a prevalent practice of open defecation among the people in Sabon-Gari LGA. This situation cannot be divorced from over population and inadequate toilets in some households among other factors. More so, majority of the household population within Sabon-Gari practice polygamy and adopt extended family system within clustered often non-properly ventilated

houses. This findings is in consonance with a study conducted by Musa (2015) which revealed that the major factors which have led to open defecation is the 'lack of toilet facilities, inadequate public toilets and the high population growth in the municipality.' Also, studies by Spears, Ghosh, & Cumming, (2013) and Sahoo et al., (2015) affirm that "an estimated 360 million people live without access to latrines in rural India, and millions more practice open defecation despite having latrines."

This implies that inadequate toilet within households, over population and migration are significant factors that contribute to the prevalence of open defecation practice in Sabon-Gari LGA.

Figure 2, with support from the FGD data shows that majority of the respondents representing 33% and 32% identified backyard and bush path as the most likely places where open defecation is practiced. This finding is relevant to the postulation of Illah (2015) which stated that "open defecation is common, widespread, and mainstreamed into local consciousness. The culture or tradition is to pop behind the house or nearby bush when pressed. He further said that the Hausa call it *Bayan Gida* (behind the house), *the* Idoma *Ipachi* (in the bush), Yorubacall it *Eyin Kule* (back yard)*."* We can therefore assert that open defecation is a common practice among the people of Sabon-Gari LGA given that they identified the spots where such practice is prevalent and the 'word' that are culturally used to signify toilet attest to this fact.

Results from table 2, KII and observation revealed that majority of the respondents (67.9%) agreed that open defecation happens around them and it is part of their daily life. This depicts that the practice of open defecation has become a habit among the people of Sabon-Gari LGA. Inferences can be made that, because virtually all Nigerian languages have no name for toilet, the names that suggest open defecation practice. This finding is corroborated by Illah

(2015) who asserted that, "this linguistic data reveal, reflect and mediate the extent to which open defecation practice is grafted into the communal psyche and they are rolled over into post-traditional society." Also, a report by WHO, (2012) on the practice of open defecation revealed that, "the practice of open defecation is much more common in rural areas of Sub-Saharan Africa- an estimated 35% of rural households, in contrast to 8% of urban households." This further establishes the fact that, open defecation is inherent in Sabon-Gari LGA because the settlements are rural and semi-urban and the people demonstrate a carefree attitude towards it.

Table 2 shows that majority of the respondents (78%) and FGD data agreed that they are weary and dissatisfied with open defecation practice because they consider it harmful to their general health yet, this doesn't stop some people from practicing open defecation. This dissatisfaction is in line with a research conducted by Sarah, S. and Graham, J (2014) on a cross-sectional study of 1000 households in five rural districts of Tanzania. Motivating factors, perceptions, and constraints surrounding open defecation and latrine adoption were assessed using behavioral change theory. The results showed that out of the 93 total households that practiced open defecation, 79 (85%) were dissatisfied with the practice. Hence, this continuous engagement in open defecation despite their dissatisfaction is an indication that the people's attitude is not encouraging. This dissatisfaction is what health belief model emphasized under perceived severity that 'for people to change they must perceive the potential seriousness of the condition (open defecation) in terms of pain, discomfort, and economic difficulties and its consequences.'

Findings from table 2 indicate that majority of the respondents representing 45.6% do not feel at ease when they defecate openly. However, 38.1% feel at ease when they practice open defecation. This is contrary to the study conducted by Coffey, D., Gupta, A and Coffey et

al.(2014) which found out that “most rural dwellers, whether they had access to a latrine or not, preferred open defecation because it was more pleasurable, comfortable, and/or convenient than using a latrine.” This shows that been convenient and comfortable at the time of defecation is one of the determinants that make people to engage in open defecation.

In table 2 above, findings from majority of the respondents (60.4%) of KII and FGD response maintained that their culture is against open defecation practice while 20.2% of the respondents defecate openly because their culture is not against it. Response from FGD and KII further emphasized that the toilets available in the household are meant for female and children while the male folk seek for suitable places when they are pressed. This indicates that the lack of adequate toilets for the male population is a major cause for open defecation among the people of Sabon-Gari LGA. This is substantiated by Centre for Legislative Research and Advocacy (2013) which observed “that when there are no adequate toilets available or when people are accustomed to the practice, then open defecation becomes a norm.” In the same vein, UNICEF (2010) declared that “Open defecation is a socially accepted traditional behaviour. Many households and communities “consider toilets unclean and the availability of open defecation fields in rural areas supports the continuation of such a belief.”

On a broader note, the preference given to women over the use of household toilets is largely culturally justified. This is because women in Muslim northern communities are expected to be within household and not engage in any public discourse especially in male dominated areas. The above statement finds support in the submission of Nwagwu and Ifeanacho (2009) that, “among the cultural practices which mainly exist among the Hausas due to their religious beliefs, are the practices of putting women in purdah. These women keep their bodies and faces covered when they are outside their homes or near non relatives.” It is however the responsibility

of the men to provide all the needs for their wives. In a bid to fulfill these obligations by protecting the dignity of their women, they abandon the household toilets for their women and seek for other places to defecate. The devastating effect of open defecation has placed their women and children at a higher risk of mortality but the men are yet to realize this fact. This is in accordance with the health belief model that if people must change their unhealthy behaviour, they must believe that recommended health action will actually do some good if adopted.

This implies that open defecation is an attitudinal and habitual problem that is deep seated in the people's culture and inimical to their health but, has become a norm among the population in Sabon-Gari LGA. Hence there is the need for the health officers to project the potential benefit of ending open defecation over its continuous practice to the people of Sabon-Gari LGA.

Regarding the statement that open defecation does not affect their health in any way, 64.5% of the respondents disagreed with the statement. This connotes that the highest population of respondents have an idea on the health risk associated with open defecation yet, they still practice it due to non-challant attitude. Foregrounding this finding in theory, the health belief model stipulated that an individual must feel susceptible and vulnerable before a new behavior can be adopted. This indicates that the attitude of most household in Sabon-Gari LGA towards open defecation is not impressive given that their knowledge and practices could not lead to the adoption of a healthy behaviour.

Inference drawn from table 2 has it that, majority of the respondents representing 47.1% of the study population do not believe that lack of toilet within their vicinity can constitute the practice of open defecation as compared to 37.3% who agreed that lack of toilet within their vicinity can facilitate the practice of open defecation. However, data from FGD and KII disputed

the above findings that open defecation is mostly practiced by strangers that do not have access to public toilets and Almajiri students who neither have toilet nor money to pay for public toilets where available. This is emphasized by UNICEF (2004) in a studies conducted in India that "due to lack of toilet facilities, majority of the people defecate in the open." It was observed that there are some community public toilets constructed for general use but people do not make maximum use of them. It can therefore be said that, inadequate toilets and the increasing population of the Almajiri students are indicators responsible for the prevalence of open defecation in Sabon-Gari LGA. This is supported by Abdulqadir, (2003), and Umaru, G. K and Nik–Mahmood, A.K (2015) state that The National Council for the Welfare of Destitute (NCWD) puts the current population of the Almajiri at about 7 million. However, hundreds of these children are seen roaming the streets, begging to survive and support their Mallams. This phenomenon represents a scar on the face of the Northern Nigeria. Islam enjoins men to work, to use his brain and hands in order to eke out a living and not engage in begging.

Hence, the Almajiri students who cater for themselves and have no place to defecate in their Mallam's compound are likely to constitute larger percentage of the population that practise open defecation within Sabon-Gari LGA.

Research Question Two

What is the level of peoples' awareness on the dangers associated with open defecation?

In table 3 above, Findings from this research revealed that, majority of the respondents are aware of the dangers associated with open defecation and agreed that it can lead to food contamination through flies perching on excreta and food and water simultaneously. This coincided with the finding of Centre for Legislative Research and Advocacy (2013) who observed that flies, rainwater, contaminated water, wind, hoofs of domestic animals, shoes, children's toys, footballs, are different agents or pathways through which faeces pathogens enter

one's home and eventually gets into the mouth. There is no doubt about the peoples' awareness of the grave consequences associated with open defecation. These consequences is further described by Illah, (2015) who asserts that the danger this harmful health behaviour(s) poses is grave, with flies shuttling between the households and the bush. This shows that the people are aware of the dangers related to open defecation.

In related distributions from table 3 above, the highest populations of the respondents having 88.2%, 86.7% and 79.8% respectively agreed that open defecation causes environmental pollution, leads to cholera and diarrhea outbreak and also lead to health complications and death. Responses from FGD and KII supported the above findings and these clearly indicate that the highest populations of the respondents are aware of the general dangers associated with open defecation and its resultant effect. This awareness is central to taking 'cue for action' as the health belief model suggests. As Osofisan, cited in Obasi, (1997:48) observed that awareness is critical to change and once people are aware of things, they will change their situation. This connotes that instead of this knowledge to be instrumental to curbing the unhealthy tradition, there is a sub-conscious persistent practice of open defecation among the people of Sabon-Gari LGA.

Table 4 above show the respondents' knowledge of the diseases associated with open defecation. The findings reveal that majority of the respondents representing 73.4%, 78.3%, 80.1% and 62.4% respectively agreed that Dysentery, Diarrhea, Cholera and Typhoid are diseases majorly associated with open defecation. The above finding is further supported by the FGD responses. Meanwhile, majority of the respondents strongly disagreed that polio is an open defecation related diseases. This is contrary to the opinion of the health officers who emphasized that one of the major disease associated with open defecation practice in Nigeria is the Polio virus. This is supported by the Centre for Disease Prevention and Control, (2012) that "Polio is

very contagious and infectious disease that only infects humans. Its mode of transmission is person-to-person by oral contact with secretions or faecal material from an infected person." In addition to this, WHO (2014), reported that 'Polio portal of entry into the body is via oral-fecal route although oral-oral route which may account for some cases. 'Transmission can also occur in areas of poor sanitation, where there are contaminated water and food.'

The scourge of Polio is mostly found in Northern Nigeria due to resistance to receiving the polio vaccine for the required number of time among other reasons. This is substantiated by UNICEF, (2014) as it observes that 'Kaduna and Katsina are among six states in northern Nigeria where polio has been endemic. Past cases of polio in these states were mostly detected in hard to reach (HTR) settlements. About one-third of the polio cases were under-immunized, meaning less than three doses of oral polio vaccine had been administered.'

Based on the above findings, we can therefore categorically assert that though, majority of the respondents identified several diseases caused by open defecation, their inability to recognize polio as an open defecation related diseases shows that their level of awareness is considerably low given that cases of paralysis resulting from polio is endemic in the Northern region. It further indicates that the health officials have been able to create a general awareness on some dangers associated with open defecation, they are yet to critically deploy adequate communication platform to interact with the people about the consequences, and 'perceived seriousness of the dangers' inherent in the practice of open defecation. This critical awareness according to health belief model 'will aid individual's judgment of the severity of diseases involved in the unhealthy behaiviour called open defecation. Hence, the prevalent practice of open defecation in Sabon-Gari LGA considers the entire population especially women and children to be at high risk of been infected with and affected by Poliomyelitis.

Research Question three

What are the communication strategies deployed by the Primary healthcare department of Sabon-Gari LGA of Kaduna State in tackling open defecation?

Inference drawn from figure 3, table 5 and responses from FGD and KII revealed that 51.2% and 40.2% of the respondents listen to health talk on open defecation through house to house inspection, the use of local announcer, clinic seminars, the use of mobile phone, and Radio. This implies that the dominant communication strategy that is deployed by the Environmental Health officers to inform the people of Sabon-Gari LGA about eradicating open defecation is interpersonal communication which involves the health officials exchanging words with the community people. Although radio is used mainly during epidemic situation, interpersonal communication is often used. This is validated by Wentworth and Amedo (1995) that 'interpersonal communication is humans' ability to turn meaningless grunts into spoken and written words through which they are able to make known their needs, wants, ideas and feelings'. Equally, Health Initiatives for the Private Sector (HIPS), (2008) noted that 'interpersonal communication is face to face verbal or non-verbal exchange of information and feelings between two or more people'. This definition captures the Primary Healthcare Environmental officers' communication strategy which is to an extent participatory and can be categorized as passive form of participation.

Furthermore, the resultant effect expected to be generated in this communication approaches is to encourage people to adopt positive health behaviour. This expectation is what health belief model emphasized that 'an individual must feel vulnerable, exposed to danger and should be able to weigh and see the benefit of the new health behavior and the risk involved in

not abandoning the unhealthy practice. This is yet to be taken into consideration by the Primary Healthcare department.

Research Question four

How effective are the communication approaches deployed by the Primary Healthcare Department of Sabon-Gari Local Government Area of Kaduna State to address open defecation?

Findings from table 6 indicate that majority of the respondents, FGD and KII responses accentuated that the Primary Healthcare environmental officers employ the use of house to house inspection, radio, mobile phone, Health talk at various health centres, and the use of local announcers in communicating with them. However, house to house inspection and the use of local announcers (town Crier) were graded as the most prominent communication approaches deployed by the environmental health officers to give the people information towards addressing open defecation practice. In addition, due to the nature of the relationship between the culture and religion of the people in Sabon-Gari LGA, The use of female to female and male to male to educate their respective gender indicated that the health officials are gender sensitive. Hence, it is apparent that gender sensitivity has not been well utilized by the Health officer due to inadequate female Environmental Health officers. This is confirmed during this study as the researcher observed that, out of the seven (7) Environmental Health In-charge officers, there is only one female health officer alongside with some female volunteers.

The respondents acknowledged that they receive information from the environmental health officials before and during outbreak. They further revealed that, there are Community-based organizations in Bomo and Bassawa ward that are responsible for working in collaboration with the health workers mainly during epidemic situation for isolation and treatment of infected

persons. This shows that the health officers engage in both preventive and curative communication otherwise known as outbreak or risk communication.

The curative communication is carried out during epidemic situation through the use of local announcers, the use of public address systems and radio to give precautionary measures against cholera infection while the preventive communication is carried out through house to house inspection of toilets condition, giving information on the dangers associated with open defecation, encouraging households to build toilets and evacuation of garbage hips among others. This is in agreement with the opinion of WHO (2008) that 'risk or outbreak communication is an essential elements of outbreak management and proactive communication encourages the public to adopt protective behaviours, facilitate heightened disease surveillance, reduce confusion and allow for a better use of resources.' However, communication activities of the Sabon-Gari health officers are yet to achieve the WHO's description because it is insufficient to tell people about dangers in a practice that is deep-seated in their existence and taken as a lifestyle without presenting related experience of the misfortune that the unhealthy practice caused them in recent time and how vulnerable they will be if they continue such habit as the health belief model suggests. Hence, the non-compliance to stop open defecation by the people of Sabon-Gari LGA could also stem from the fact that all the health officers are environmentalists by profession and none is a communication specialist.

Based on the findings from figure 4 and FGD response, the highest population of the respondents representing 63% agreed that they witness cholera on yearly basis while, the remaining respondents (37%)said they witnessed cholera outbreak 2 to 10 years. The KII response from the Deputy Director Disease Control unit Mallam Ahmad Adamu attested to this finding when he stated that "Cholera outbreak is mostly an annual occurrence within Sabon-Gari

LGA". This implies that the yearly experience of diarrhea-cholera outbreak is consequent upon the prevalent practice of open defecation and poor sanitation among the people of Sabon-Gari LGA. This is in congruence with the study conducted by Sumeet, Benjamin, Alicia, Bertha, Sandipan, John and Paul, (2014) on "The Effect of India's Total Sanitation Campaign on Defecation Behaviors and Child Health in Rural Madhya Pradesh: A Cluster Randomized Controlled Trial". The findings revealed that "poor sanitation and open defecation are thought to be the major cause of diarrhea, cholera outbreak and intestinal parasite infections among children."

Furthermore, the annual occurrence of cholera outbreak in Sabon-Gari LGA comes with several dangers as it hampers socio-economic activities and leads to several death. This is further corroborated in an article publish by Daily Trust Online Newspaper (2011) that reported several cases of cholera/diarrhea outbreak within Sabon-Gari Local Government Area, killing several and affecting over 1000 persons. Also, records from the Monitoring & Evaluation department of the Primary Healthcare department in Sabon-Gari LGA showed that there are about 8,721 diarrhea cases in 2015 (Baseline Study, 2016). Applying the health belief model,

This implies that though the health officers are working tediously towards eradicating open defecation practice among the people, their communication approaches in use are yet to produce expected results as open defecation remains prevalent in Sabon-Gari LGA. Several issues like inadequate availability of toilet, unhealthy belief, attitudes and practices of the people with regards to open defecation may have been major barriers to eradicating open defecation in the LGA.

Regarding the ratings of the Primary Healthcare communication strategy as effective or otherwise, figure 5 above indicates that majority of the respondents representing 50.9% (178)

rated the communication approaches as effective while 20.2% rated it as ineffective. Though it is impressive to note that the approaches used by the Primary Healthcare officers in Sabon-Gari LGA are indigenous forms of communication which have been said to be effective, the prevalence of open defecation and the annual occurrence of outbreak further question their efficiency. Although, the indigenousity of the primary healthcare workers' communication approaches such as house to house inspection, the use of local announcers, town hall meetings and the use of community based organizations are relevant with the tenets of participatory communication which give credence to the use of peoples' indigenous forms in communicating development issues, participatory communication connotes more than that. The health officers are occupied with educating and talking to the people on dangers of open defecation without listening to the issues around the peoples' attitude to the practice. Hence, this style of communication is against the principle of participatory communication theory which thrives in putting people at the driver's seat and handing over the stick for them to chart the course of their own development. The Primary healthcare communication approach is top down and fairly effective, as effective communication is result oriented and aimed at achieving desirable behavioural change. Hence, there is the need to improve on the Primary healthcare communication in order to bring about desirable changes.

Effective communication is seen as a two way process, where each person takes responsibility for their own part. Effective Communication is more than giving information, education and talk, rather it involve research; the ability to read others attitude, time consuming and commitment. This is emphasized by Team FME, (2013) that effective communication depends on one's ability to read the attitude of the other person or group, identify their emotion, and feelings through their behaviour. This will help in adopting a communication structure that will suit the attitudes. This attitude could either be passive or assertive. Team FME further assert

that, ‘passive attitude is measured when the recipient remain silent and go along with the speaker’s opinions even when they disagree with him (the speaker). On the contrary, Assertive attitude creates environs of honest and open communication where people are able to express their views. It encourages people to feel comfortable expressing themselves because they know their opinions will be respected (Team FME, 2013). This implies that the communication strategies deployed by the Health officers is not efficient because it does not take cognizance of the peoples’ ability to act upon this information which goes beyond communication and knowledge, in the midst of passive attitude, inadequate toilet facilities, cultural realities and social norms beyond the individual’s control as factors contributing to the prevalence of open defecation in Sabon-Gari LGA. All the aforementioned factors are what participatory communication can handle. It creates a dialogic environment of comfort, belonging, respect, cultural sensitivity, social norms,team-work and give room for community participation.

Although, the health belief model emphasizes effective message delivery in trying to change peoples’ behaviour, it does not consider the socio-cultural factors that can hinder the adoption of healthy behaviour. This criticism is in harmony with the position of Jackson (2005: 133) who posits that ‘this model (rational choice) is inadequate as a basis for understanding and intervening in human behaviours for a number of reasons. In particular it pays insufficient attention to the social norms and expectations that govern human choice and to the habitual and routine nature of much human behaviour. It also fails to recognize how consumers are locked into specific behaviour patterns through institutional factors outside their control.

Research Question five

What communication measures and approaches can be adopted for the improvement of environmental sanitation and reduction of open defecation in Sabon-Gari Local Government Area?

Findings from the distribution in table 7 sought to identify the order of the significant factors that can address open defecation. However, it was revealed that majority of the respondents graded 'creating awareness on the use of public toilet as the first step having ratio 2.16.' It was followed by 'communicating sanitary law' with ratio 2.15 and 'sensitization on dangers of open defecation with ratio1.98' as significant factors that can address open defecation in Sabon-Gari LGA. This is also in correspondence with the responses from KII respondents especially the Deputy Director Disease Control, Mallam Ahmadu Adamu who suggested that "active communication sponsorship from the Government and the enforcement of sanitary laws in cases of non-compliance on the people of Sabon-Gari LGA can help in curtailing open defecation."

The implication of these findings is that, though creating awareness on the use of public toilet, enlightenment on dangers of open defecation and communicating sanitary laws are central to addressing open defecation practice, meanwhile, other issues like cultural realities, social norms, and passive attitudes towards information on open defecation needs to be addressed.

Table 8 presents ratings from the respondents' suggestion of effective communication channels seems capable of curbing open defecation practice if it is well handled with the existing channels. Data reveals that Radio was ranked first, followed by television, social networking sites, clinic seminars and health talks, mobile phones, music and drama, community outreach/ town hall meetings and community festivals are all significant and deployable and effective

communication approaches for curtailing open defecation. The FGD data also supports the above communication channels as effective. In addition, the KII collective highlight the following communication channels as effective: The use of Radio, Television, House to house inspection, Community Based Organization, Traditional/Religious leaders, Community outreach, Drama and music, Town crier, Posters, and the establishment of regulatory bodies to sanction defaulters. The above communication channels suggested by the respondents reveal one of the tenets of participatory communication which gives people the liberty to make informed and guided decision. The findings therefore indicate that the respondents are well acquainted with the current eclecticism and amalgamation of traditional, conventional, alternative and new media in addressing behavioural issues that cut across gender and age such as open defecation. This form of communication is regarded to as multiple communication channels.

The integration of multiple communication media approach towards addressing open defecation has been proven to be effective in achieving better hygiene behaviour. The aforementioned view is in correlation with the report of a communication intervention conducted by USAID, (2010) in Egypt titled 'Communication for Healthy Living: Your Health is Your Wealth.' It is a cross-cutting communication approach for Healthy Living which utilized an integrated communication forms to unify and coordinate multiple communication channels, approaches and domains (e.g., advertising, entertainment(music & drama), public relations events, internet and mobile telephone communication, community mobilization, counseling) to reinforce and complement each other. The diversity of channels and messages were used to establish unified themes that communicated the same fundamental values of trusted, good health that would empower people to take action and achieve desired outcomes that will improve health among marginalized, vulnerable communities.

Hence, there is a perceived implication of using multiple communication media because it is highly expensive to sustain meanwhile, attitudinal problem like open defecation will require lots of time, energy and resources. It is nearly impossible to implement without huge support from the Government.

Significantly, 'drama and music, community meeting, clinic seminars and community festivals' share the attribute of participatory and alternative media. Specifically, community festivals, drama and music are alternative communication modes known as indigenous theatre aesthetics. Indigenous theatre aesthetics is people-centred communication channels which could mainstream the cultural identity and aspirations of the marginalized majority in Africa, Asia and Latin America. Unlike other channels of communication, indigenous theatre aesthetics are participatory, cheaper, and accessible to the majority of the people. Messages from these indigenous channels are also more credible and less susceptible to misinterpretations (Dandaura, 2010).

Also, Theatre for Development (TFD) and Community Led Total Sanitation (CLTS) are alternative communication modes for curbing open defecation. The use of TFD and CLTS in the campaign against open defecation in some parts of Nigeria has recorded groundbreaking success and it is well documented earlier at the literature review section of this study (see page 43).

To this end, it is evident that the use of alternative communication media in addressing unhealthy practices like open defecation are said to be cost effective, people oriented and easy to utilize. Even at the eventual adoption of multiple communication media as suggested by the respondents of this study in addressing open defecation practice in Sabon-Gari LGA, participatory and alternative communication media such as Theatre for Development and Community can be used as complementary media.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Summary

This dissertation evaluates the communication strategies against open defecation practice in Sabon-Gari local Government of Kaduna State using Bassawa, Bomo and Chikaji wards as sampled population. The study pays critical attention to the communication structure viz-a-viz the attitudes of the people towards open defecation practice as indicator for measuring its effectiveness or otherwise. Relevant literatures were reviewed and the principles of Health Belief Model and Participatory Communication Theory were used as premise and rationale for analyzing the Local Government Communication approaches. The survey research approach was employed to gather data using qualitative and quantitative methods. The instruments include Questionnaire, Key Informant Interview and Focused Group Discussion.

In this study, 400 questionnaires were distributed across the three wards selected while 346 were returned, analyzed and presented in tables, charts and percentages. Data derived from 35 FGD discussants across the wards and KII response from the 8 environmental health officers across the local Government including the Deputy Director, Disease Control of Sabon-Gari LGA primary healthcare department, were descriptively analyzed and interpreted using triangulation.

However, the study revealed that the communication strategies deployed by the primary healthcare are not adequate due to the frequent occurrence of cholera outbreak in Sabon-Gari LGA. The study also discovered that the prevalent practice of open defecation among the people is an indication of an ineffective and failed communication strategy. This is consequent upon the fact that the communication content does not include threat messages that is capable of changing the people's attitude and behavior towards open defecation. Whereas, the annual cholera

epidemic where people lost their lives is a bigger threat to be domesticated and factored into the communication approach of the primary healthcare officers in Sabon-Gari LGA.

Furthermore, any communication structure that is designed to change peoples' unhealthy attitudes and traditional behaviour like open defecation must adopt a multiple communication media, especially interpersonal and alternative media that will target all members of the society in order to yield positive outcome which in this case were not considered.

5.1 Conclusion

From the findings of this study on the evaluation of communication strategies against open defecation in Sabon-Gari LGA, it is established that the Primary Healthcare's Communication Approach was able to mere awareness creation among the people, it was incapable of changing their attitude towards open defecation. Though the LGA's communication channels are indigenous to the people, still they do not involve the people in message design and dissemination except at the level of information.

In conclusion, the study identified multiple communication media especially the use of interpersonal and alternative media like Traditional Media, Social Media, Theatre for Development and Community Led Total Sanitation as panacea to successfully curb open defecation practice. If the Local Government can incorporate this media outlet with their existing ones, it will help in reducing the prevalence of open defecation in Sabon-Gari LGA.

5.2 Key Findings

Based on the field responses on the evaluation of communication strategies against open defecation in Sabon-Gari LGA, the following findings emerged:

1. The data revealed that though 92% of the respondents have toilet facilities, those toilets in most households are meant for the female (male members find alternative means of defecating even if it means practicing open defecation).
2. The study identified 'house to house inspection', 'use of local announcer', 'health talk at various PHC centre', 'the use of mobile phones' and 'radio' as the communication approaches used by the Primary Healthcare in Sabon-Gari LGA in curbing open defecation
3. The study found out that the communication strategies deployed by the Primary Healthcare in Sabon-Gari LGA are feeble, partially participatory and incapable of directing the people towards adopting a healthier lifestyle.
4. The study discovered that the people are not involved in the planning and dissemination of health communication messages against open defecation.
5. The study indicated that majority of the respondents are aware of the dangers associated with open defecation. This is reflected in 89.3% of the respondents who said they are aware of open defecation related diseases.
6. The study revealed that there are no PHC centres in Bomo and Chikaji wards as opposed to Bassawa ward that has a PHC centre.
7. Findings from KII and FGD revealed that inadequate toilet facilities, social reality, unconscious habitual practices and unhealthy cultural practices are significant factors

leading to open defecation, especially the Almajiri students who are major stakeholders that contribute to the prevalence of open defecation.

8. It was discovered that the people are not aware of polio as an open defecation related disease; meanwhile, Kaduna is one of the six states where polio is endemic.
9. The study found out that provision of public toilet, communicating sanitary laws and media campaign on open defecation related diseases are salient factors to be considered if positive result must be achieved.

5.3 Recommendations

In view of the aforementioned findings, the study recommends that:

1. There is the need for the LGA to conduct a baseline study on the cultural and behavioural factors responsible for non-compliance that is hampering their communication efforts that is aimed at curbing open defecation.
2. The LGA should deploy the use of multiplatform communication including the use of Theatre for Development and Community Led Total Sanitation which has proven to be highly effective. This will enhance adoption of healthy behaviour and, ultimately, a drastic reduction on the rate of open defecation practice.
3. The Primary Healthcare should involve the people in the process of planning, designing and implementation of the message and create an atmosphere where individual can freely express themselves. In addition, members of the community should be trained as peer educators so that they can talk to their own people in the language they understand.
4. The LGA should collaborate with the railway corporation, market and shop owners to construct public toilets that are free for all with apt maintenance. The Mallams of the

Almajiri should be sanctioned and given ultimatum to construct toilet for their students otherwise, they the children should be returned to their various homes.

5.4 Suggestions for Further Studies

1. Further studies could expand more on the demographic characteristics of the households in Sabon-Gari LGA to do a head count of population and toilets in each house to determine if truly overpopulation could be a factor for the prevalence of open defecation.
2. An action research is recommended in collaboration with the LGA health workers for testing the suggested communication approach aimed at curtailing open defecation to determine its strengths and weaknesses.

5.5 Contribution to Knowledge

I. The study has been able to discover that non-availability of toilet is not the reason for the prevalence of open defecation in Sabon-Gari LGA, rather inadequate toilet facilities and adulterated cultural practices like the Almajiri education system are precursors for the open defecation practice.

II. Findings from the study revealed that beyond interpersonal communication, participatory communication is an effective channel in curbing the practice of open defecation in Sabon-Gari LGA.

III. There is no known literature that highlights communication as a factor responsible for the ineffectiveness of the Primary Healthcare delivery scheme, and no identified study that examine open defecation in relation to the communication activities of primary healthcare centres in Sabon-Gari LGA. This study has been able to fill these gaps.

REFERENCES

Abah, O.S.(1999). *Performing life:Case Studies in the Practice of Theatre for Development.* Zaria. Bright printing Press.

Abdulqadir, I.A (2003) "The Almajiri System of Education in Nigeria Today: A Lecture Presented during the 21st convocation lecture of Bayero University Kano, Nigeria".Retrieved on 10/04/2017 at http://www.gamji.com/article5000/NEWS5956.htm.

Abdulraheem, I. S., Olapipo, A. R. and Amodu, M. O. (2012) "Primary health care services in Nigeria: Critical issues and strategies for enhancing the use by the rural communities". *Journal of Public Health and Epidemiology* Vol. 4(1).http://www.academicjournals.org/JPHE.

Abubakar, A. A., Idris, S. H., Sabitu, K., Shehu, A. U., Sambo, M. N. (2010) Emergency Preparedness and the Capability to Identify Outbreaks: A case study of Sabon Gari Local Government Area, Kaduna state.*Annals of Nigerian Medicine/ Vol 4 | Issue 1*

Abubakar A., Odesanya, A., Adewoye, O. & Olorede, J. (2013). Selected Nigerian Magazines Patterns of Cervical Cancer Coverage.*Journalism and Society.*

Ademiluyi, I.A and Aluko-Arowolo, S.O (2009) Infrastructural Distribution of Healthcare Services in Nigeria.*An overview Journal of Geography and Regional Planning Vol. 2(5).* Available online at http://www.academicjournals.org/JGRP ISSN 2070-1845

Adeniran, R. (2009). *Media Coverage of Development Issues: Analysis of the Coverage of MDG issues.* Unpublished MSc Dissertation: Lagos State University, Ojo, Nigeria

Adeyemo, D. O. (2005) Local Government and Health Care Delivery in Nigeria: A Case Study In Kamal-Raj Eds. *Journal of Human Ecology18 (2):* 149-160

Agberemi, Z.O, Ofem, L. & Saidu, A. (2009) Nigeria Water, Sanitation and Hygiene: Sustainable Development and Multi-sectoral Approaches Mobilizing people for Improved Hygiene Practices through HandWashing Campaigns in Nigeria. *34th WEDC International Conference,* Addis Ababa, Ethiopia.

Agberemi, B. (2014) No fewer than 49 million Nigerians still defecate openly.*NAN.* http://www.opinionnigeria.com/the-dangers-of-open-defecation/#sthash.1JARdJ4w.dpbs

Alenoghena, I., Aigbiremolen, A.O., Abejegah, C., Eboreime, E. (2014) "Primary health care in Nigeria: strategies and constraints in Implementation".*International Journal of Community Research*.http://www.arpjournals.com

Aluko-Arowolo SO (2005). Equity in Health and Federal Character Policy: A Study in Rural-Urban Dichotomy, *Babcock Journal of Social Management*.

Amodeo, J. and Wentworth, K. (1995). Self-Revealing Communication: A Vital Bridge between Two Worlds. *P10*

Anatsui, T.C (2014) Communicating Health Information at Grassroots in Nigeria. Department of Mass Communication, Babcock University, Ilishan Remo. *JORIND 12 (1)* June, 2014. ISSN www.transcampus.org/journals; www.ajol.info/journals/jorind. Retrieved on 12/03/2016

Anie, S. O. (2011). Impact of Information Computer Technology on Primary Health Care Services to Rural Communities in Niger Delta Region of Nigeria.*Library Philosophy and Practice.* Available at http://unllib.unl.edu/LPP.Retrieved on 12/03/2016.

Antonovsky, A. (1979). *Health, Stress and Coping*.Jossey-Bass.

……., … (1984).The sense of coherence as a determinant of health. In: Matarazzo J, ed. Behavioural Health: *A Handbook of Health Enhancement and Disease Prevention*. John Wiley.

Aregbeshola, B.S and Khan ,S.M (2017) Primary Health Care in Nigeria: 24 Years after Olikoye Ransome-Kuti's Leadership.*Front. Public Health 5:48.* doi: 10.3389/fpubh.2017.00048

Ariyo, J.A. and Datong, M. D. (1991). Access to Healthcare Services and Quality of Life in Rural Areas.The Example of Pankshin Local Government Area. Paper presented at the 341 ' *1 Annual Conference of the Nigerian Geographical Association,* Alvan Ikoku College of Education, Owerri,/1 - 11 '"April.

Athena do pre', (2005) *Communicating about Health: current issues and perspectives* 2nd edition. New York: Mc GrawHill companies.

Asoka, T., (2016) State Primary HealthCare Management Boards or Agencies: Micromanagement or Strengthening Local Government Authority capacity?*Africa Health Nigeria* September 2016 Volume 38 Number 6

Babatunde, O.A, Aiyenigba, E., Awoyemi, O.ABabatunde, O.A, Aiyenigba, E., Awoyemi, O.A, …Salaudeen, A.G, et al (2013) Primary Health Care Consumers' Perception of Quality of Care and Its Determinants in North-Central Nigeria. *Journal of Asian Scientific Research.*

Badru FA (2003). 'Sociology of Health and IIIness Relations' in Olurode, Lai and Soyombo Omololu (eds.) *Sociology for Beginners*. John West Ikeja: pp. 336-355. Central Bank of Nigeria (2005).*Annuals Report and Statements*.

Bankole, A. (1994). *The Role of Mass Media in Family Planning Promotion. DHS National Papers*. Calverton, Maryland: Macro International Inc.

Bassette, G (2004). *Involving the Community: A Guide to Participatory Development*

*Communication.*Peneng, Malaysia: Southbound/IDRC

Becker M.H, Rosen stock I.M (1984) *Compliance with Medical Advice*. In Steptoe A and Mathew A (Eds) *Health Care Human Behaviour. London,* Academic Press.

Bello, R. and Ajayi.(2000). *Research Methods and Statistical Analyses.*Ilorin. Haytee Press and Publishing Company Limited. p 46-48.

Berlo, D. K. (1965). *The Process of Communication*. New York, New York: Holt, Rinehart, & Winston.

Boal, A. (1979) *Theatre of the Oppressed*. New York: Published By Theatre Communication Group Inc

Bodenheimer T. (2006). Primary Health Care will it survive? *New England Journal Medication*. Canada.

Burton, G. and Dimbleby, R. (1995).*Between Ourselves: An Introduction to Interpersonal Communication.* London: Arnold.

Centers for Disease Control and Prevention, (2012) "Poliomyelitis: Epidemiology and Prevention of-Vaccine-Preventable-Diseases. Accessed December 2, 2016.http://www.healthline.com/health/poliomyelitis.

Centre for Legislative Research and Advocacy (2013) Policy Brief for Parliamentarians Open Defecation: This is also your business! *Policy brief series: No. 20; 2013, August-September.*

Chaitchik et, al. (1995). Doctor-patient Communication in a Cancer Ward.*Journal of Cancer Education.* Great Britain. Elsevier Science Ltd.

CLTS (2011) CLTS: A Better Tomorrow. http://www.cltsfoundation.org/ retrieved on 20/06/2016.

Coffey,D., Gupta, A., Hathi, P., Khurana, N., Spears, D., Srivastav, N. and Vyas, S. (2014) Revealed Preference for Open Defecation Evidence from a New Survey in Rural North.*Economic & Political Weekly EPW September 20, vol* xlix no 38.

Corcoran, N.(*2007*). *Communicating Health Strategies*. University of East London: SAGE.

Covello, V. T. (1992). Risk communication: An emerging area of health communication research. In S. A. Deetz (Ed.), *Communication Yearbook 15* (pp. 359-373). Newbury Park, CA: Sage.

Cueto, M. (2005).*The Promise of Primary Health Care*.Bull World Health Organization.

Dandaura, E.S (2010) *Development Entertainment in Nigeria: From Indigenous Theatre*

Aesthetics to Endogenous Development: VDM. https://www.amazon.com/DEVELOPMENT-ENTERTAINMENT-NIGERIA-Indigenous-Development/dp/3639256891 accessed on7/31/2017

Daniel, C. M., (2011). The Role of Mass Media Communication in Public Health, Health Management Different Approaches and Solutions. Available from: http://www.intechopen.com/books/health-management-different-approaches-andsolutions/the-role-of-mass-media-communication-in-public-health

Daniel H. Kress, Yanfang Su & Hong Wang (2016) Assessment of Primary Health Care System Performance in Nigeria: Using the Primary Health Care Performance Indicator Conceptual Framework. *Health Systems & Reform*, 2:4, 302-318, 2(4):302–318, http://www.tandfonline.com/action/journalInformation?journalCode=khsr20

De Fossard, E., (2004) Writing and Producing Radio Dramas. Communication for Behaviour Change, Volume *1Thousand Oaks, CA*, Sage Publications.

Devine, J., (2016) Open Defecation: New Tactics to Nudge Habit Change for Open Defecation Behaviour: World Bank.

Dittmer, Alison, (2009) Towards Total Sanitation Socio-Cultural Barriers and Triggers to Total Sanitation in West Africa.WaterAid.

Doncho, D. (2007).*Health Promotion and Disease Prevention. Germany*: Hans Jacobs Publishing Company.

Dukku, M.G. (2006). Integration of Qur'anic Education into Universal Basic Education Programme: The journey so far. Being a Paper Presented at the one day Advocacy Meeting held at the Hamdala Hotel Kaduna on 28th June 2006

Embu, R., (2008) Impacting Positively on Humanity through Theatre for Development: The Kuru Toilet Project Experience. In A *Perspectives and Experiences from Three Decades Plus of Popular Theatre/TFD in Ahmadu Bello University, Zaria. Mukabala Journal of Performing Arts and Culture.*Zaria: ABU Press.pg 222to 228

Ende, T.S (2008) Health communication and New Media in NigeriaIn Majoye, E.M, Oyewo, O.O, M'bayo, R.,&Sobowale I.A (Eds.) *Health Communication, Gender Violence and ICTs in Nigeria.* (pp.17-25) Ibadan: Ibadan University Press.

FGN, (2015) field guide. In: Immunization NPo, editor. Abuja: Federal Government of Nigeria; p. 1-1

FGN (2015) National Nutrition and Health Survey, 2015. FGN&NBS

Firmansyah, W., Hegazi, S., Darwisyah, S. R., & Amaliah, L. (2001). *Increasing Coverage of*

Reproductive Health issues in the Indonesian print media. Retrieved from http://www.popcouncil.org/pdfs/frontiers/FR_FinalReports/Indonesia_Media.pdf on January, 22nd, 2016.

Fong, Ha, J., & Longnecker, N. (2010). Doctor-patient communication: a review. Spring,10,

Fossard, E. & Lande, R. (2008).Entertainment-education for better health. Information and Knowledge for Optimal Health [INFO], INFO Reports No. 17. Retrieved from http://www.infoforhealth.org/inforeports/E-E/E-E.pdf

Frankish, C., Moulton, J., Rootman, I., Cole, C., Gray, D., (2006) Setting a Foundation: Underlying Values and Structures of Health Promotion in Primary Healthcare Settings. Primary Health Care Research & Development, volume 7(02):172–182.

Freire, P. (1970).*Pedagogy of the Oppressed.*New delhi: Sage.

Garcia, H. R. (2001). Word of wind: building bridges between health education and culture, *Compass*, *4*, 14-16.

Gérvas, J., Starfield, B. & Heath, I. (2008).*Is Clinical Prevention Better than Cure?*: www.thelancet.com Vol 372.

Guion, A.L (2002) Triangulation: Establishing the Validity of Qualitative Studies: University of Florida.

Harwell, M. (2011*).Handbook for Research in Education*.2nd ed. London, Sage Publications.

Health Initiatives for the Private Sector, (2014) "Effective Interpersonal Communication: A Handbook for Healthcare Providers." Uganda: HIPS.

Hopkins, J. (2010). *Social and Behavior Change Communication.*The Center for Communication Programs. School of Public Health: Retrieved from http://www.jhuccp.org. on January 21st, 2016.

http://www.photius.com/countries/nigeria/society/nigeria_society_primary_health_care_~10006.html Retrieved on 21/01/2016.

Hornik, R.C. (1988). *Development Communication: Information, Agriculture, and Nutrition in the Third World.* New York: Logan

Huber, M., Knottnerus, J.A., Green, L., Leonard, B., Horst, H.,…Kromhout, D., et al (2011) How should we define health?.*BMJ* (online): *PubMed.*

Hugo, J. (2008) A Perspective on Primary Health Care in South Africa Unpublished data from Department of Family Medicine, University of Pretoria.

Idowu, I.A., (2011) Database Management and Mapping of Secondary Education Infrastructure

in Sabon-Gari and Zaria Local Governments, Kaduna State, Nigeria. Undergraduate project, Department of Geography, Ahmadu Bello University, Zaria, 80001, Nigeria: Unpublished.

Iluyemi, A. (2009). *Telehealth in the Developing World*.Edited by Wootton, R., Patil, N.G., Scott, R. E. and Ho, K. Royal Society of Medicine Press Ltd, London.

Innocent, E.O, Uche, Okala A. and Uche, Ijeoma B. (2014) Building a Solid Health Care System in Nigeria: Challenges and Prospects. Rome:Italy.*Academic Journal of Interdisciplinary Studies MCSER Publishing. Vol 3 No 6*

Jackson, L.D., and Duffy, B.K. (Eds) (1998) *Health Communication Research.*Westport, CT: Greenwood.

Jackson, T. (2005). Motivating Sustainable Consumption: A Review of Evidence on Consumer Behaviour and Behavioural Change.*Sustainable Development Research Network*.

Jacobson, T.L. &Servaes, J. (Eds.), (1999). *Theoretical Approaches to Participatory Communication.*Creskill,NJ: Hampton

John, I.L.,(2015) Encrypted Mosaic: Culture, Patriarchy and Health Behaviour in a Modernizing Nigeria.University of Jos Inaugural Lecture Series 71. Jos University Press Limited.

Kahn, JV. And Best, JW, (1995) *Research in Education* 7th Edition. India: New Delhi Prentice Hall.

Karen Glanz, et al. (2008). *Health Behavior and Health Education: Theory, Research, and Practice*.Wiley, John & Sons, Inc.

Khan, A.S. (2013) Change in Behaviour to End Open-air Defecation Stressed, International. The News (2013) http://www.thenews.com.pk/Todays-News-6-215252-Change-in-behaviour-to-end-open-air-defecation-stressed.

Kidd, R. (2013) Playing For a Shit Change. In *Theatre Unbound: Reflections on Theatre for Development and Social Change.* Kafewo, S.A, Iorapuu, T.J,& Dandaura, S.E. (Eds) Zaria: Ahmadu Bello University Press Limited.

Kincaid, D.L., Rimon, J.G., Pitrow, P.T. and Coleman, (1992). The Enter-educate: Using Entertainment to Change Health Behavior. Paper Presented at The annual Meeting of the Population Association of America, Denver. April 30-May 2nd 1992.

KMPG .(2012). *The state of healthcare in Africa*.Retrieved from <http:www.kpmgafrica.com>.

Koop, C.E., Clarence E.P., & Schwarz, M. Roy.(2001). *Critical issues in global health.*(Eds.).

San Francisco: Jossey-Bass.

Koul, L. (2012) Methodology of Educational Research. New Delhi: National Publishing House.

Kreps, G.L., Bonaguro, E.W. and Query, J.L. (1998). The history and development of the field of health communication research, in L.D. Jackson and B.K. Duffy (eds), Health Communication Research: A Guide to Developments and Directions. London: Greenwood Press.

Kreps, G. (2003) The Impact of Communication on Cancer Risk Incidence, morbidity, mortality and quality of life. *Health Communication*. (15). Pp. 161-169

Kunle. (2005]:*A.B.C of Public Relations Practitioners' Companion,* Lagos: Francis graphix Limited.

Lagomarsino, G., Garabant, A., Adyas, A., Muga, R., Otoo, N., (2012) Moving Towards Universal Health Coverage: Health Insurance Reforms in Nine Developing Countries in Africa and Asia,*The Lancet, Vol. 380, No. 9845*. pp. 933-943

Leedy and Ormond (2001) Practical Research. Upper Saddle River NJ: Merrill Prentice Hall.

Magnus, O.O (2008) Problems of Effective Primary Healthcare Delivery in Owan East and Owan West Local Government Areas of Edo State.Nigeria*Journal of. Social Science, 16(1):* 69-77

Marthers, N., Fox, N. and Hunn, A. (2009).*Surveys and Questionnaires.*Nottingham. University of Nottingham Press. pp 20.

McEwen, B.S. (2003). Interacting Mediators of Allostasis and Allostatic load: towards an Understanding of Resilience in aging.Metabolism.

Mda, Z. (1993). *When People Play People: Development Communication Through Theatre*, London: Zed Books.

Media Lab Asia Report (2006). ICT for Primary Healthcare. Media Lab Asia: New Delhi. Retrieved from www.medialabasia.in.

Mehta, Lyla (2008) Sanitation: Research Findings for Development Policymakers and Practitioners.http://www.id21.org/ retrieved on 05/10/2016.

Metiboba, S. (2009). Primary Health Care Services for effective Health Care Development in Nigeria: a study of selected rural communities. *Journal of Research in National Development*.

Musa, I. & Liman, I. (2011) Kaduna's deadly cholera 'secret' http://www.dailytrust.com.ng/ weekly/index.php/report/3574- kadunas-deadly-cholera-secret. Retrieved on 18 march, 2016.

Musa, E. (2015). *Addressing Open Defecation Sanitation Problem: The case of Dry Toilet Implementation in the WA Municipality*. Ghana.

Naidoo, J. & Wills, J. (2000) 2nd ed.Edinburgh : Baillière Tindall , Health promotion : foundations for practice / Jennie Naidoo, Jane Wills.

NAN, (2014) "UNICEF says 49 Million Nigerians Still Defecate Openly" http://www.opinionnigeria.com/the-dangers-of-open-defecation/#sthash.1JARdJ4w.dpb. Retrieved on the 20/03/2016.

National Academy of Sciences,(2002) *Speaking of Health : Assessing Health Communication Strategies for Diverse populations*. Washington, DC: National Academies Press, USA. Available at, http://www.nap.edu.

National Bureau of Statistics (2011) The Nigeria Multiple Indicator Cluster Survey. NBS: Nigeria.

NDHS (2008) Nigeria Demographic and Health Survey: North West Fact Sheet. FMOH

Network Learning, *(*2005.*)*The Principles &Practice of Primary Health Care. www.networklearning.org retrieved on the 01/02/2016.

Ndigirigi, G. (1999). Kenya Theatre after Kamirithu.*The Drama Review, 43(2),* 162, 72-93.

Negri D.B, Brown, L.D, Hernández, O., Rosenbaum, J, and Roter, D. *(1994)* Improving Interpersonal Communication Between Health Care Providers and Clients. USA: USAID

Ngugi waThiong'o. (1981). *Detained: A Writer's Prison Diary.* Nairobi: E.A.E.P. Ltd.

Nigeria National Health Conference (2009) Communique. Abuja, Nigeria. http://www.ngnhc.org.Retrieved on 21/01/2016.

Njoh, M. (2010).The Cholera Epidemic and Barriers to Healthy Hygiene and Sanitation in Cameroon.A Protocol Study.

Noar, S.M. (2006). A 10-Year Retrospective of Research in Health Mass Media Campaigns: Where Do We Go From Here? *Journal of Health Communication: InternationalPerspectives*, Vol. 11, No. 1, 2006, 21 – 42, 1087-0415.

NPHCDA & FMOH. (2004). *Operational Training Manual and Guidelines for the Development of Primary Health Care System in Nigeria*. Abuja, Nigeria.

Nwadigwe, C.E. (2012) Theatre for Development: An AlternativeProgramme for Reproductive HealthCommunication in Urban Nigeria.*African Sociological Review 16(2)*

Nwagwu, J. &Ifeanacho, M.I. (2009) Acculturation and the Socio-Economic Development of thePost Independent African Woman; The Nigerian Example.

Obasi, O. (1997) Drama as a Tool for Social Consciousness.*Journal of National Association for the Promotion of Studies in Arts and Social Sciences*, vol. 2 No. 1

Obi, F.A., (2016) Implementing frontline Primary Health Care services: local priorities versus donor-driven agenda.*Africa Health Nigeria*, September 2016 Volume 38 Number 6

Obionu.C.N. (2007).*Primary Health Care for Developing Countries.* 2nd ed. Enugu: Delta Publications.

Odhiambo, J.C. (2005), Theatre for development in Kenya: interrogating the ethics of practice I, *Research in Drama Education. 10* (2):189-199.

Okafor, F. C. (1984). Accessibility to genera! hospitals in Rural Bendel State of Nigeria. *Social Science and Medicine Journal, Vol. 1 8, No. 8,* pp. 661 -666.

…….. (1990). The Spatial Dimensions of Accessibility to General Hospitals in Rural Nigeria. *Socio-Economic Planning Science, vol. 24 No. 4,* pp. 295-306

Olaronke, et, al. (2013). *Interoperability in Nigeria Healthcare System: The Ways Forward.* Retrieved from http://www.mecs-press.org/) on February 6th, 2016.

Olise, P. (2007). *Primary Health Care for Sustainable Development.* Abuja: Ozege Publications.

Omuta,G.E.D (2014) Perspectives on Primary Health Care in Nigeria: Past, Present and Future. *CPED Monograph Series.*

……, (2016) "The Quality of Healthcare Service Delivery in Nigeria: An Assessment of the Availability of Some Basic Medical Devices/Equipment in the Primary Health Care Centres in Delta State."*Online J Health Allied Scs.* 2016;15(1):6. Available at URL: http://www.ojhas.org/issue57/2016-1-6.html

Onabajo, O. [2002] *Elements of Rural Broadcasting.*Lagos: Gabi concept Limited.

Primary Healthcare Unit (2016) "Statistics of Diarrhea Cases in 2015 at Sabon Gari Local Government Area." Baseline study.Unpublished.

Onokerhoraye, A.G. (1982). *Public Services in Nigerian Urban Areas: A Case Study of Illorin.* Ibadan:Nigerian Institute of Social and Economic Research.

Osain, Menizibeya, (2011) The Nigerian health care system: Need for integrating adequate Medical Intelligence and Surveillance systems *Journal of Pharmacy and Bioallied Sciences*http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3249694/ retrieved on the 1st Feb. 2016

Oyebanjo, O. T. (1995). *Trade Policy and the Performance of the Manufacturing Sector*. Nigeria: Nigeria Institute of Social and Economic Research (NISER)Publication.

PATH, (2001).*Behaviour Change Communication*:AYA

Performance Monitoring & Accountability 2020 (2016) "Indicators for Water, Sanitation &

Hygiene (WASH)". Retrieved from http://www.pma2020.org.on 06/07/2017.

Primary Healthcare Unit (2016) "Statistics of Diarrhea Cases in 2015 at Sabon-Gari Local Government Area."Baseline study.Unpublished.

Provincial Health Services Authority, (2011).*Towards Reducing Health Inequities: A Health SystemApproach to Chronic Disease Prevention.A DiscussionPaper*. Vancouver, BC: Population & Public Health, Provincial Health Services Authority.

Renn, O. (1992). "Risk communication: Towards a rational discourse with the public".*Journal of Hazardous Materials, 29*(3), 465-519.

Riddle, I., Romelczyk, S., & Sparling, E. (2011).*Effective Communication for Health Care Providers: A Guide to Caring for People with Disabilities*. Newark, DE. Center for Disabilities Studies, University of Delaware.

Risse Konkret T. and Gelsenkirchen, C.R. (2009) Communication and interaction in healthcare. Berlin/Dresden:1st edition Bundesanstalt für Arbeitsschutz und ArbeitsmedizinFriedrich-Henkel-Weg 1-25 44149 Dortmund Telefon.

Robbins, R.H. (2006). *Cultural Anthropology: A Problem Based Approach.* Belmont, CA: The Thomson Corporation.

Sahoo, K. et al. (2015). *Sanitation-Related Psychosocial Stress: A Grounded Theory Study of Women Across the Life Course in Odisha, India. Social Science and Medicine.* 139, 80–89. From http://dx.doi.org/10.1016/j.socscimed.

Salem, R.M., Bernstein, J., Sullivan, T.M., and Lande, R. (2008).*Communication for Better Health*.Baltimore, INFO Project, Johns Hopkins Bloomberg School of Public Health.

Sara, S. and Graham, J. (2014).*Motivating Factors, Perceptions, and Constraints Surrounding Open Defecation.* Department of Environmental and Occupational Health, School of Public Health and Health Services, George Washington University. Washington, DC.

Schramm, W. (1965). How communication works. In W. Schramm (Ed.), *The Process and Effects of Communication* (pp. 3-26). Urbana, Illinois: University of Illinois Press.

Schulkin J. (2004). *Allostasis, Homeostasis, and the Costs of Physiological Adaptation*. Cambridge University Press.

Schwartz, F., Lowe, M. and Sinclair, L. (2010)Communication in Health Care: Considerations and strategies for successful consumer and team dialogue.Hypothesis *Vol. 8, No.12010/hypothesisjournal.com.*

Servaes, J. (1989) *One World, Multiple Cultures. A New Paradigm on Communication for*

*Development.*Leuven& Amersfoort, Acco.

Singhal, A. & Rogers, E.M. (2004) The status of Entertainment-education worldwide. Singhal, A., Cody,M.J., Rogers, E.M., and Sabido, M., eds. In: Entertainment-Education and Social Change: History, Research, and Practice. Mahwah, New Jersey, Lawrence Erlbaum Associates.3-20.

Sobowale, I. (1983) Scientific Journalism Ikeja-Lagos: Wesh Publishers.

Somekh, B. and Lewin, C. (2005) Research Methods in the Social Sciences: London Sage Publications Thousand Oak: New Delhi

Sorungbe, O. O. (1989). *Strengthening Primary Health Care at Local Government Area Level*. Lagos, Academy, Press Ltd.

Spears D, Ghosh A, Cumming O (2013) Correction: Open Defecation and Childhood Stunting in India: An Ecological Analysis of New Data from 112 Districts. PLoS ONE 8(9): 10.1371/annotation/

Sumeet R. P., Benjamin F. A., Alicia L. S., Bertha B., Sandipan G., and John M. et al (2014)). *Women's Health Completed Information Campaign, Sanitation*. India. From www.srpatil@nerman.org. Retreived on the 6th of March 2017.

Team FME, (2013) Effective Communications: Communication Skills. Retrieved on 10/03/2017 fromwww.freemanagement-ebooks.com Pg23-25

The Economist Intelligence Unit, (2012) The Future of Healthcare in Africa, a Report Sponsored by Janssen, www.economistinsights.com/analysis/future-healthcareafrica Retrieved on 22/04/2017

……Unit (2014) The future of healthcare in Africa: progress, challenges and opportunitieswww.economistinsights.com/analysis/future-healthcareafrica Retrieved on 22/04/2017

Toyo, O.D. (2016) Information and Communication Technology (ICT): A Catalyst for Promoting Primary Healthcare Delivery Services in Rural Communities in Nigeria.

Tufte, T.f &Mefalopulos, P. (2009). Participatory Communication: A practical guide. *World Journal of Sustainable Development Volume 11, Issue 1.*www.africaresearchcorps.com

Umaru, G. K and Nik –Mahmood, A.K (2015) Child Trafficking and Religion: A Case Study of Almajiri Education in northern Nigeria. *International Journal of Business, Economics and Law, Vol. 8, Issue 4* (Dec.) ISSN 2289-1552 2015

UN, (2012) Trends in open defecation, 1990–2012: UN.

…, (2014) World Toilet Day Beyond Infrastructure: Building New Attitudes Also Needed to:

End Open Defecation. New York: UN.

UN-Water. (2008) Sanitation is vital for Human Health fact sheet No 1. International Year of Sanitation: UN-WATER

UNICEF (2004) India.*"Millennium Development Goals."* n.d. Retrieved on the 6th of March 2017 from<http://www.UNICEF.org/india/overview_3696.htm>.

……, (2006).*Behaviour Change Communication in Emergencies*: a Toolkit. India, Nepal.

……, (2007) "Information Sheet, Water, Sanitation and Hygiene in Nigeria". UNICEF: Nigeria.

……., (2010) "Fact sheet, Water, Sanitation and Hygiene in Nigeria".UNICEF Nigeria.

……(2010). *Study on Perception and Attitudes for Household Sanitation in Tamil Nadu*; Conducted by SRI- IMRB; 2010. India. UNICEF.

…….,(2014) Community Led Total Sanitation In Nigeria. CaseStudies: UNICEF Nigeria.

.....(2014) Annual Report: UNICEF Nigeria.

…… (2014) Eliminate Open Defecation: UNICEF, India. http://UNICEF.in/Whatwedo/11/Eliminate-Open-Defecation

……(2011) "Buturyel: A Model Open Defecation Free (ODF) Community" http://www.UNICEF.org/nigeria/media_6790.html. Retrieved on 21/08/2015.

……(2013) "Fact sheet, Water, Sanitation and Hygiene in Nigeria".UNICEF Nigeria.

UNICEF, NDHS, (2013) Country Programme Document 2014-2017: Nigeria: UNICEF.

UNICEF & WATERAID (2008) Frequently Asked Questions: Sanitation and Hygiene. UNICEF &WATERAID.

USAID/EGYPT. (2010). Final Report on Communication for Healthy Living: USAID. Accessed on 20/10/2014 at http://www.jhuccp.org/node/1258

Visagie, S. and Schneider, M., (2014) Implementation of the Principles of Primary Health Care in a Rural Area of South Africa.*African Journal of Primary Health Care & Family Medicine, Vol. 6, No. 1*

Water Aid, (2011) Sanitation framework: Water Aid. Retrieved on 20/03/2016 from www.wateraid.org/publications.

Water Aid (2015) Country Strategy 2010-2015: Water Aid Nigeria.

Watson, M. (2008).Going for gold: the health promoting general practice.*Quality Primary*

Care, 16 (3): 177 – 185

Wentworth, K. and Amodeo, J. (1995). Self-Revealing Communication: A Vital Bridge between Two Worlds. P10

WHO, (1946) International Health Conference: WHO, New York.

WHO (1974) Ottawa Charter for Health Promotion. World Health Organization: Geneva.

……, (2003).*Outbreak Communication Planning Guide*: WHO

……., (2004). The world health report 2004 – changing history: WHO

……, (2005) The World Health Report. Geneva: WHO

……. (2007) Guidelines or the Prevention of Postpartum Hemorrhage. Geneva: WHO.

…….:(2008) A Summary of the 2008 World Health Report "Primary Health Care: Now More Than Ever"**:** WHO.

……: (2008) World Health Organization outbreak communication planning guide – 2008 Edition: WHO Document Production Services, Geneva: Switzerland.

….., (2011) Health Situation Analysis in the African Region, Atlas of Health Statistics. Brazzaville: World Health Organization Regional Office for Africa.

WHO/UNICEF (2012) Water Sanitation Health: Fact Sheet: UNICEF/WHO.

……..,(2014) *Primary Healthcare*. Retrieved from www.who.int/topics/primary_health_care/en/ on January 22nd, 2016.

…… (2014) Progress on sanitation and drinking-water–2014 update: WHO&UNICEF.

……, (2015).*Regional Communication Strategy for the Prevention and Control of Birth Defects*. South-East Asia: WHO.

……., (2015) Health in 2015: from MDGs to SDGs: WHO

Wilkins, K.G. (1999). Development Discourse on Gender and Communication in Strategies for Social Change.*Journal of Communication.49 (1).* 46-68

Wise, M., Nutbeam, D., (2007) Enabling Health Systems Transformation: What Progress has been made in Re-orienting Health Services? *Promot. Educ. , 14(suppl 2):23–27.*

Wood, J.T. (2009). Gendered Lives: Communication, Gender, and Culture. Eighth Edition. USA: Wadsworth Cengage Learning. The University of North Carolina at ChapelHill.

World Bank (2010) Improving Primary Health Care Delivery in Nigeria *Evidence from Four States. : Washington D.C,* World Bank Working Paper.

Yamane, T (1967). Statistics: *An introductory Analysis*, 2nd Ed. New York: Harper and Row. pp258.

INTERVIEWS

Key Informant Interview with MallamAhmad Adamu; Deputy Director, Disease Control, Primary Healthcare unit, Sabon-Gari Local Government 4th January, 2017

Key Informant Interview with Mrs Alice Musa; GRA Health Facility, Sabon-Gari Local Government 15th December, 2016.

Key Informant Interview with MallamDalladi Mu'azu; Bassawa/Palladan Health Facility, Sabon-Gari Local Government 13th December, 2016.

Key Informant Interview with MallamDayyabuLawal; Muchia/Chikaji Health Facility, Sabon-Gari Local Government 13th December, 2016.

Key Informant Interview with MallamAbubakar Aminu; Samaru Health Facility, Sabon-Gari Local Government 20th December, 2016.

Key Informant Interview with MallamSuleman Hamisu; Sabon-Gari Health Facility, Sabon-Gari Local Government 24th December, 2016.

Key Informant Interview with MallamAbdulaziz Isa; Hanwa Health Facility, Sabon-Gari Local Government 13th December, 2016.

Key Informant Interview with MallamHussainiAdamu; Bomo Health Facility, Sabon-Gari Local Government 13th December, 2016.

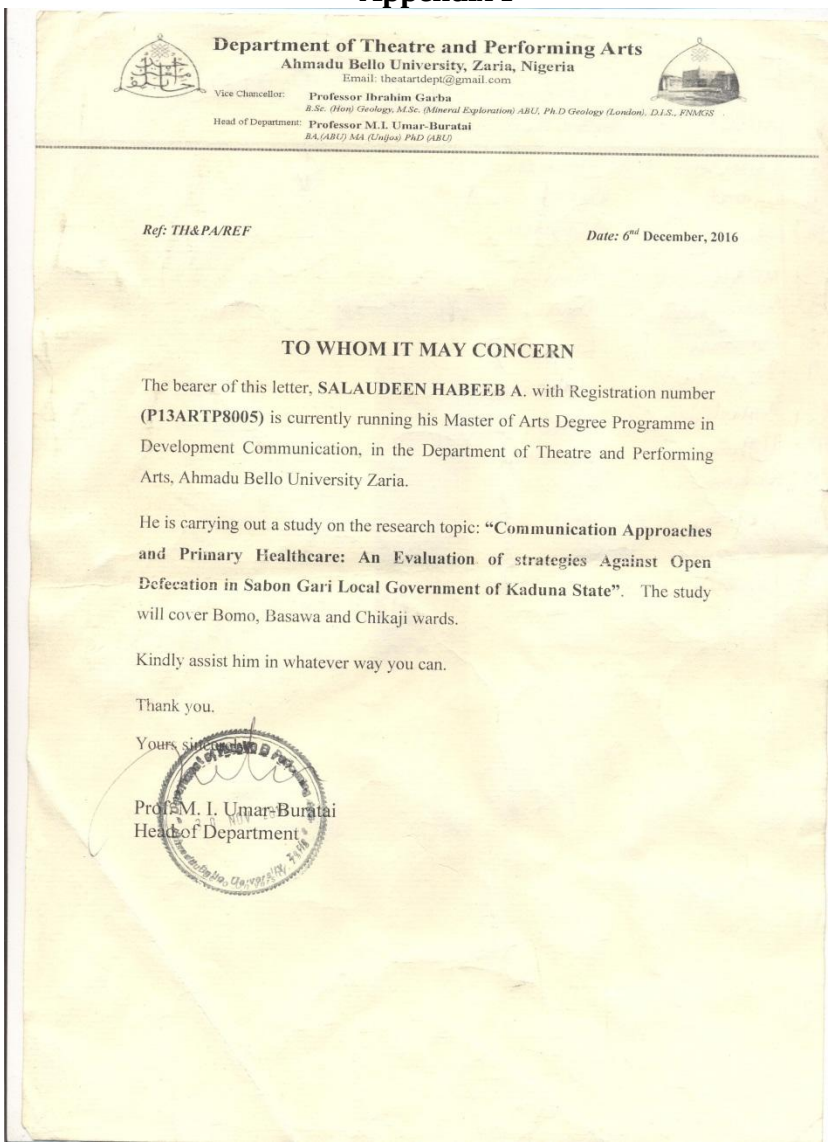
FOCUS GROUP DISCUSION

Focus Group Discussion with Participants; Bomo ward, Sabon-Gari Local Government, 10th December, 2016

Focus Group Discussion with Participants; Bassawa /Palladan ward, Sabon-Gari Local Government, 11thDecember, 2016

Focus Group Discussion with Participants; Muchia/Chikaji ward, Sabon-Gari Local Government, 12thDecember, 2016

APPENDICES
Appendix I



Department of Theatre and Performing Arts
Ahmadu Bello University, Zaria, Nigeria
Email: theatartdept@gmail.com

Vice Chancellor: **Professor Ibrahim Garba**
B.Sc. (Hon) Geology, M.Sc. (Mineral Exploration) ABU, Ph.D Geology (London), D.I.S., FNMGS

Head of Department: **Professor M.I. Umar-Buratai**
BA.(ABU) MA (Unijos) PhD (ABU)

Ref: TH&PA/REF

Date: 6nd **December, 2016**

TO WHOM IT MAY CONCERN

The bearer of this letter, **SALAUDEEN HABEEB A.** with Registration number **(P13ARTP8005)** is currently running his Master of Arts Degree Programme in Development Communication, in the Department of Theatre and Performing Arts, Ahmadu Bello University Zaria.

He is carrying out a study on the research topic: **"Communication Approaches and Primary Healthcare: An Evaluation of strategies Against Open Defecation in Sabon Gari Local Government of Kaduna State"**. The study will cover Bomo, Basawa and Chikaji wards.

Kindly assist him in whatever way you can.

Thank you.

Yours sincerely,

Prof. M. I. Umar-Buratai
Head of Department

Appendix II

CENTRE OF EXCELLENCE ON DEVELOPMENT COMMUNICATION
FACULTY OF ARTS
DEPARTMENT OF THEATRE AND PERFORMING ARTS
AHMADU BELLO UNIVERSITY, ZARIA

Dear respondent,

I am a postgraduate student of Development Communication, Department of Theatre and Performing Arts, Faculty of Arts, Ahmadi Bello University Zaria. I am conducting a research study on the topic: **Communication Approaches and Primary Healthcare: An Evaluation of Strategies against Open Defection in Sabon-Gari Local Government of Kaduna State.** Kindly respond to the set of questions below as it applies to you. All information shall be treated confidentially and strictly for academic purpose.

Thank you.

SALAUDEEN, HABEEB ADEBAYO

QUESTIONNAIRE

Instruction: Please thick **(√)** in the appropriate cells and tables below.

Demographic Data

1. Age: (a) 15-30 [ ] (b) 31 -49 [ ] (c) 50 and Above [ ]
2. Sex: Male [ ] Female [ ]
3. Occupation _____
4. Education: Primary [ ] Secondary [ ] Tertiary [ ].
5. Household population _____

SECTION A: Attitude of People towards the Practice of Open Defecation

6. Do you have toilet in your house? (a) Yes [ ] (b) No [ ].
7. If no, where do you defecate? …….
8. If yes, where is open defecation practice around you? (a) Bush [ ] (b) Backyard [ ] (c) Refuse dump [ ] (d) Railway track [ ] (e) Road side [ ].

Respond to the following statements with your preferred answer as shown below:

Key: Strongly Agree (**SA**), Agree (**A**), Undecided (**U**), Disagree (**D**), Strongly Disagree (**SD**)

S/N	INDICES	SA	A	U	D	SD
9	Open defecation happens around us and it is part of our daily life.					
10	I feel ashamed about open defecation practice around us.					
11	I do not see anything wrong with open defecation.					
12	People pass excreta at bush path, railway track, road side and backyards.					
13	People dispose excreta of infant/babies at backyards, nearby bush or refuse dump sites.					
14	I feel at ease with nature when I defecate openly.					
15	I defecate openly because my culture is not against it.					
16	Open defecation does not affect my health in any way.					
17	I often practice open defecation due to lack of toilet in my vicinity.					

SECTION B: Awareness of the dangers associated with Open Defecation.

Tick [√] Yes or No to the following statements:

S/N	Indices	Yes	No
18	I am aware of the dangers related to open defecation practice		
19	Open defecation leads to contamination of food and water		
20	Open defecation can lead to outbreak of cholera and diarrhoea		
21	Open defecation causes environmental pollution		
22	Open defecation can lead to health complications and death		
23	Flies that perch on the excreta can contaminate uncovered food and water in public places.		
24	Wind, rain and man-made materials can serve as agent in spreading contaminants from open defecation		

Respond to the following statements with your preferred answer as shown below:
Key: Strongly Agree (**SA**), Agree (**A**), Undecided (**U**), Disagree (**D**), Strongly Disagree (**SD**)
26. What are your opinions regarding the following diseases associated with open defecation?

S/N	INDICES	SA	A	U	D	SD
A	Dysentery					
B	Diarrhoea					
C	Cholera					
D	Typhoid					
E	Polio					

SECTION C: Effectiveness of Primary HealthCare communication approaches
27. Are you aware of cholera/diarrhea outbreak? (a) Yes [ ] (b) No [ ]
28. When last did you experience an outbreak within your area? (a) Yes [ ] (b) No [ ]
29. During the outbreak, did you notice the presence of the local health workers?
(a) Yes [ ] (b) No [ ].
30. What were the roles of the health officials in curbing the epidemic situation?
.....
.....
.....
31. Do you have a Primary Healthcare Centre in your ward? Yes [ ] No [ ].
32. Do the local Government Primary healthcare workers inform you about open defecation? Yes [ ] No [ ]
33. If yes, do you listen to health talk on open defecation in the Primary Healthcare Centre in your ward? (a) Yes [ ] (b) No [ ]
34. What are the medium through which you receive information on open defecation from the local government health officials?
……
……
35. Grade the following channel of communication in order of frequency as used to inform you about open defecation by the local government. High [**H**], Very High [**VH**], Moderate [**M**], Low [**L**], Very Low [**VL**]

S/N	INDICES	High	Very-High	Moderate	Low	Very Low
A	House to house inspection					
B	Radio					
C	Use of mobile phones					
D	Health talk at various PHC centres					
E	Use of local announcers					

36. Do you consider theabove communication approaches you rated **Very high** as effective? (a) Yes [ ] (b) No [ ]

SECTION D: Effective Communication Approaches to discourage Open Defecation Practice

37. Place the following in order of significance as they can help in addressing problem of open defecation.

Key: 5= Very effective, 4= effective, 3= undecided, 2= less effective, 1= ineffective.

S/N	INDICES	GRADE	REMARK
A	Enforcement of Sanitary law		
B	Provision of adequate public toilet		
C	Provision of toilet in every household		
D	Sensitisation campaign on dangers of open defecation		

38. Rate the following communication media in order of their reliability in reducing the problem of open defecation.

Key: 5= Very reliable, 4= reliable, 3= undecided, 2= not reliable, 1= very unreliable.

S/N	MEDIA	GRADE	REMARK
a	Television		
b	Radio		
c	Mobile phone		
d	Community festival		
e	Community outreach/Town Hall meetings		
f	Music and Drama		
g	Social networking sites (WhatsApp, Facebook etc.		
h	Clinic seminars and health talk		

Appendix III

DEPARTMENT OF THEATRE AND PERFORMING ARTS

FACULTY OF ARTS

AHMADU BELLO UNIVERSITY, ZARIA

Focused Group Discussion Guide

Dear Discussants,

I am Salaudeen Habib Adebayo, a postgraduate research student. This Focused Group Discussion is designed to assess your current thoughts on **"Communication Approaches and Primary Healthcare: An Evaluation of Strategies against Open Defecation in Sabon-Gari Local Government of Kaduna State."** The purpose of this discussion is to elicit your view on the awareness of open defecation practice. The focus group discussion will take no more than thirty minutes. May I tape the discussion to facilitate its recollection? (If yes, switch on the recorder). However, your responses will strictly be used only for academic purpose. I am just going to give you a couple of minutes to think about your perception on open defecation, its associated dangers and the activities of the Primary Healthcare department in communicating against open defecation practice. Is anyone happy to share his or her experience?

1. What is your position with regard to open defecation?
2. Why do people defecate openly?
3. Where is open defecation practiced around you?
4. What is the position of your culture with regards to open defecation?
5. What can open defecation lead to?
6. In what ways can the faeces from open defecation get into our food items?
7. What are the dangers associated with open defecation?
8. What are the effects of those dangers?
9. When last did you witness cholera/diahorea outbreak in your area?
10. What were the roles of the health workers during the outbreak?
11. What are your opinions on the communication approach deployed by the Primary Healthcare workers in tackling open defecation?
12. How often do you visit the Primary Healthcare Centre in your ward?
13. What are the medium through which you receive information on open defecation from the Local Government Area/Primary Health Care officials?
14. What are the ways through which open defecation can be addressed?
15. What are the effective communication channels to address open defecation?
16. Suggest different communication media that will help in reducing the practice of open defecation.

Appendix IV

DEPARTMENT OF THEATRE AND PERFORMING ARTS

FACULTY OF ARTS

AHMADU BELLO UNIVERSITY, ZARIA

Key Informant Interview Guide

Dear respondents,

I am Salaudeen, Habeeb Adebayo, a postgraduate student undertaking this research on **"Communication Approaches and Primary Healthcare: An Evaluation of Strategies against Open Defecation in Sabon-Gari Local Government of Kaduna State."** The purpose of this interview is to elicit your view on the level of awareness on open defecation practice among the people within the Local Government. The Key Informant Interview will take no more than twenty minutes. I seek your utmost indulgence to tape record the interaction to facilitate its recollection. However, your responses will strictly be used only for academic purpose.

Thank you,

Bio data

Name:

Post:

Ward:

SECTION A: Attitude of People towards the Practice of Open Defecation.

1. What are the attitudes of the people in Sabon-Gari local government towards open defecation?
2. I am aware that there are public toilets across the local government, what is the usage rate?
3. Where are the likely places that you have noticed open defecation practice?

SECTION B: Awareness of the dangers associated with Open Defecation.

4. Based on the prevalence of open defecation practice, how will you rate the people's level of awareness?
5. What are the dangers associated with open defecation?
6. What can such dangers lead to?

SECTION C: Effectiveness of Primary HealthCare communication approaches.

7a. what is your role in the communication efforts aimed at curtailing open defecation in the LGA?

7b Please mention the different ways through which you communicate to the people regarding open defecation.

8. How are the messages packaged/ designed?
9. Do you involve the community members in the planning, packaging and designing of the messages?
10. How many members of the community were present during the planning and design of the communication approaches?
11. How frequently do you give people information about the dangers associated with open defecation?
12. What is the level of the peoples' response to the information on open defecation?
13. When last did you witness cholera/diahorea outbreak within the local government?
14. What roles did you play during and after the outbreak?
15. What channel(s) of communication do you consider to be very effective in communicating open defecation?

SECTION D: Effective Communication Approaches to discourage Open Defecation Practice.

16. What are the measures that can help to reduce the prevalence of open defecation within the local government?
17. Suggest effective communication approaches that can be used to discourage open defecation?
18. What other comment do you have regarding the issue of the communication aimed at curtailing open defecation?

Appendix V

TRANSLATED FOCUS GROUP DISCUSSION BY MALLAM ALIYU SALE; CONTACT PERSON FOR BOMO WARD, SABON-GARI LGA

TAMBAYOYI

1. Meye raayinka akan yin kasha a fili?
2. Meyasa mutane suke kasha a fili?
3. A ina akeyin kasha fili a wararenku?
4. Meye matsayin alada akan yi kasha a fili?
5. Meye kasha a fili yake haifarwa?
6. Ta wane hanyane yin kasha a fili kan shafi abincinmu?
7. Wanne hadarine ke hade da yin kasha a fili?
8. Wadanne sakamakone zai haifar akan yin kasha a fili?
9. Yaushene karshe kukega barkewar cuta kamar cholera da diahorea a yankinku?
10. Wadanne irin matakaine maaikatan lafiyA suka dauka lokacin barkewar cutar?
11. Meye raayinku akan maaikatan lafiya da aka turo don kariya akan yin kasha a fili?
12. Yaushe ne kaziyarci asibitin a yankinku?
13. Ta wadanne hanya kuke samu nayani akam yin kasha a fili daga jamian lafiya na karamar hukumarku?
14. Ta wacce hanyace za'abi wajen gabartar da wannan matsa tayin kasha a fili?
15. Ta wacce hanyar sadfarwace za'a gabatar da shiri akan yin kasha a fili.
16. Wadanne hanyoyine na sadarwa zasu taimska wajen rage yin bayan gida a fili?

Appendix VI



Focus Group Discussion Session with participant in Chikaji Ward, Sabon-Gari LGA



Focus Group Discussion Session with participant in Bomo Ward, Sabon-Gari LGA

Appendix VII



Focus Group Discussion Session with participant in Bassawa Ward, Sabon-Gari LGA



Key Informant Interview with Mallam Danladi Muazu, Health In-charge officer, Bassawa Ward

Appendix VIII



Key Informant Interview with Mallam Abdulaziz Isa, Health In-charge officer, Hanwa Ward



Key Informant Interview with Mallam Dayyabu Lawal, Health In-charge officer, Chikaji Ward

Appendix IX



Key Informant Interview with Mallam Hussaini Adamu, Health In-charge officer, Bomo Ward



Key Informant Interview with Mallam Abubakar Aminu, Health In-charge officer, Samaru Ward

Appendix X



Key Informant Interview with Mrs Alice, Health In-charge officer, Samaru Ward



Key Informant Interview with Mallam Sulaiman Hamisu, Health In-charge officer, Sabon-Gari Ward

Appendix XI



Key Informant interview with Mallam Ahmad Adamu, Deputy Director, Disease Control Unit, Primary Healthcare Department, Sabon-Gari LGA



Open Defecation spots along the railway track in Sabon-Gari LGA

Appendix XII



Picture of a boy defecating at a backyard at Night in Sabon-Gari LGA



A picture of an open defecation and refuse spot behind a house in Sabon-Gari LGA.

Appendix XIII

KII WITH AHMAD ADAMU DEPUTY DIRECOR PRIMARY HEALTH CARE DISEASE AN CONTROL UNIT SABON GARI LGA ON TUESDAY 3RD JANUARY 2017

PHONE NO: 07066705833, 08028358964

Researcher:

1. What are the attitudes of the people in Sabon-Gari local government towards open defecation?

Response:

Peoples' attitude is high due to helplessness of situation; unfortunately open defecation is still prevalent.

Researcher:

2. I am aware that there are public toilets across the local government, what is the usage rate?

Response:

usage rate is low it benefits only strangers like travelers but residents hardly use it.

Researcher:

3. Where are the likely places that you have noticed open defecation practice?

Response:

along railway line, bush, farm land and century lines (backyard of houses).

Researcher:

4. Based on the prevalence of open defecation practice, how will you rate the people's level of awareness?

Response:

Their response is very low due to lack government's intervention

Researcher:

5. What are the dangers associated with open defecation?

Response:

It causes cholera, diahorea and water bore diseases.

Researcher:

6. What can such dangers lead to?

Response

Dd: it can lead to a lot of diseases which can eventually cause death

Researcher:

7. What is your role in the communication efforts aimed at curtailing open defecation in the LGA?

Response:

We mobilized the community and educated them about the danger of open defecation.

Researcher:

7b please mention the different ways through which you communicate to the people regarding open defecation

Response:

Through ward heads, corroboration with health personals, enforcement of sanitation laws.

Researcher:

8. How are the messages packaged/ designed?

Response:

We serve notice to offenders and also implore the use of court for persecution.
Researcher:

9. Do you involve the community members in the planning, packaging and designing of the messages?

Response:
Yes we do sometimes by conducting meeting with the village heads
Researcher:
10. How many members of the community were present during the planning and design of the communication approaches?
Response:
None we normally design the approaches and go into the community to give them information or tell the village heads during meetings.
Researcher:
11. How frequently do you give people information about the dangers associated with open defecation?
Response:
not frequently due to shortage of personnel and cultural barriers. We try to pass information on open defecation 3 to 4 times in a month.
Researcher:
12. What is the level of the peoples' response to the information on open defecation?
Response:
Their response level is very high due to the follow up assessment we engage in.
Researcher:
13. When last did you witness cholera/diahorea outbreak within the local government?
Response:
the outbreak is mostly an annual occurrence like in Chikaji there was an outbreak in 2016
Researcher:
14. What roles did you play during and after the outbreak?
Response:
We conducted inspection, treatment, sanitation to curb the spread. Preventive and curative methods were employed to reduce the effect by giving situational information about the epidemic.
Researcher:
15. What channel(s) of communication do you consider to be very effective in communicating open defecation?
Response:
The radio will be very effective as most programs on it are communicated in the local language and a great number of people listen to them. Also, we communicate through house to house inspection.
Researcher:
16. What are the measures that can help to reduce the prevalence of open defecation within the local government?
Response:
Availability of public toilet and formation of strong sanitary laws.
Researcher:
17. Suggest effective communication approaches that can be used to discourage open defecation?

Response:
By conducting enlightenment programmes about the dangers of open defecation;
Researcher:
18. What other comment do you have regarding the issue of the communication aimed at curtailing open defecation?
Response: factors that may help to curb the open defecation practice include active participation/intervention of government and the enforcement of sanitary laws on defaulters. The most notorious offenders are the Almajiri boys (Islamiyah students) therefore; their mallam should be held accountable for open defecation practice so that they can build toilet for them.

Appendix XIV

KII WITH DALLADI MUA'ZU ENVIRNMENTAL HEALTH INCHARGE OFFICER BASSAWA ON TUESDAY 13TH DECEMBER 2016PHONE NO: 080654330004

Researcher:

1. what are the peoples thought towards open defecation do they think it is right or not

Response:

There are many who know open defecation is wrong and there are also plenty who do not, the reason I said so is because when we have meetings with the community leaders we enlighten them on the dangers of such practices and habits, some yield while others don't.

Researcher:

2. I am aware that there are public toilets across the local government, what is the usage rate?

Response:

This district those not have public toilets, you know if there are public toilets people both residents and travelers' will use it and the practice of open defecation will be reduced. Due to lack of these facilities it has caused a lot of problem.

Researcher:

3. Where are the likely places that you have noticed open defecation practice?

Bassawa: There is no place or street or area really I can say that open defecation is practiced, you know every ward differs some wards may have a known place for open defecation others may not. This place (Bassawa) doesn't but maybe in Iyan Gari's office there are likely to have a place where open defecation is rampant. So there is no place where open defecation is practiced every house has a toilet

Researcher:

4. Based on the prevalence of open defecation practice, how will you rate the people's level of awareness?

Response:

most people are aware of the effects of open defecation according to environmentalist you have to educate the people so that they can understand that such and such thing is not good.

Researcher:

5. What are the dangers associated with open defecation?

Response:

it can cause air borne diseases which can result in an outbreak, diahorea and vomiting,

Researcher:

6. What can such dangers lead to?

Response:

the person can become ill

Researcher:

7. What is your role in the communication efforts aimed at curtailing open defecation in the LGA?

Response:

We mobilized and educated the people. We conducted meeting with the community leaders to enlighten them about Open Defecation, the community leaders in turn go back to their people enlighten them and also mobilize them, and the town crier plays a role in dissipating information

Researcher:

7b.Please mention the different ways through which you communicate to the people regarding open defecation.

Response:

An invitation letter is written inviting them to the office to discuss with them this is one of ways used to create awareness, we mobilize and also educate the people, we educate them by going house to house, using a group of women environmentalist to educate other women at home.

Researcher:

8. How are the messages packaged/ designed?
9. Do you involve the community members in the planning, packaging and designing of the messages?
10. How many members of the community were present during the planning and design of the communication approaches?

Response:

When we call the community leaders and educate them, they go back to their people and mobilize, educate them on how to curb and deal with OD.

Researcher:

11. How frequently do you give people information about the dangers associated with open defecation?

Response:

A meeting with the community leaders is conducted on the last Saturday of every month; the community leaders go back to their places and give information to the town crier which in turn mobilizes the people.

Researcher:

12. What is the level of the peoples' response to the information on open defecation?

Response:

We have seen reduction in the practice of Open Defecation; we do not see people urinating openly except inside their house

Researcher:

13. When last did you witness cholera/diahorea outbreak within the local government?

Response:

we have never witnessed any outbreak

Researcher:

14. What roles did you play during and after the outbreak?
15. What channel(s) of communication do you consider to be very effective in communicating open defecation?

Response:

We mobilize the people and educate them through mobilization the people are able to understand

Researcher:

16. What are the measures that can help to reduce the prevalence of open defecation within the local government?

Response:

Through mobilization and education, if people are educated the effect of OD will be well known.

Researcher:

17. Suggest effective communication approaches that can be used to discourage open defecation?

Response:

Using the house to house inspection approach, which we engage in, it, educates the people in the community, through meeting the community leaders and also they mobilizing the people.
Researcher:

18. What other comment do you have regarding the issue of the communication aimed at curtailing open defecation?

Response:
The habit of defecating and urinating indiscriminately should be stopped

Appendix XV

KII WITH HUSSAINI ADAMU ENVIRNMENTAL HEALTH INCHARGE OFFICER BOMO ON TUESDAY 20TH DECEMBER, 2016

PHONE NO: 07061611678

Researcher:

1. What are the attitudes of the people in Sabon-Gari local government towards open defecation?

Response:
the behaviour of open defecation is not enjoyed by anyone if not due to some problems that people face and among those people that face such problems we can say are 30 in 100. So the people do not like it and do not like the effect open defecation has.

Researcher:

2. I am aware that there are public toilets across the local government, what is the usage rate?

Response:
We have about 7 environmental offices and bomo is one of the last and also situated in a village so due to that we do not have any public toilet.

Researcher:

3. Where are the likely places that you have noticed open defecation practice?

Response:
We do have but most of the people involved in open defecation are children, the underage, who do not have mature intelligence. Adult do not practice it, mainly places you will find with open defecation are areas with refuse dump where children either forced by parents to go or on their own go to defecate there.

Researcher:

4. Based on the prevalence of open defecation practice, how will you rate the people's level of awareness?

Response:
it is due to this reason the district health asked for health offices to be opened and also asked for each office to have an officer in charge that has knowledge of the work. after I was made the in charge here I made efforts to call the entire village and ward heads to have a meeting at the office of hakimin gindiman bomo where we showed them the dangers associated with open defecation that are practiced by children and some people, so this kind of meeting i conduct once a month has enlighten people and made them understand. we also scare them by saying any person's child we find practicing open defecation we will look for his father and fine him. Due to all this laid down punishment we have scared people to the extent that they are now careful on where their children defecate and it has also pushed some to build toilets in their houses and if the toilets get filled they make sure to evacuate it before it becomes a problem

Researcher:

5. What are the dangers associated with open defecation?

Response:
Some of the dangers that are associated with open defecation are cholera and diahorea, we also have malaria and typhoid. it also distorts the look of an area and causes the area to smell which can cause some nasal problems.

Researcher:

6. What can such dangers lead to?

Response:

It can lead to cholera, diahorea and an air borne diseases. Air borne diseases spreads through the wind in a community

Researcher:

7. What is your role in the communication efforts aimed at curtailing open defecation in the LGA?

Response:

We educate the people through their leaders, political leaders, community leaders, and religious leaders, from time to time we also do house to house inspection using our male and female workers to educate the people on dangers associated with open defecation

Researcher:

7b. Please mention the different ways through which you communicate to the people regarding open defecation.

Response:

Through health education, health education is informing the people on how to take care of their health and the need to have a good health and also the effects of illnesses. We also tell them that the illness gotten from open defecation, refuse etc. Are serious and if taken to the hospital a lot of money will be spent and in some cases it is a quick death because cholera and diahorea is one of the fastest killing illnesses and we also tell them that the diseases are gotten from dirtiness, open defecation , lack of maintaining the toilets. We also scare them by saying anyone who does not heed even after this talk then the public health law has given us the power to charge to court, so all these measures has scared them into taken care of their health and the health of the community in general. We also make them understand that there is nothing that is more than open defecation health, you can't eat, worship open defecation , do business except with open defecation health, so all these has further strengthen them in understanding that open defecation and co. Is harmful, we do not have speakers so we normally gather at the sarakuna's (kings) place to discuss the topic of health education and the sarakuna's dissipate the information to their people.

Researcher:

8. How are the messages packaged/designed?

Response:

In this office we do not have female staff, but we 2 casual female workers they are not permanent so we normally use volunteers as staff combined with our own staff. We have more than 6 voluntary staff. The female go into the house to enlighten the women at home while we the men go to the sarki's or area leader's sitting room or where the men of the community normally gather to gist we go there to also enlighten them.

Researcher:

9. Do you involve the community members in the planning, packaging and designing of the messages?

Response:

Yes we do, we involve the community, youth leader, political leader,

Researcher:

10. How many members of the community were present during the planning and design of the communication approaches?

Response:

We use a lot of them, they normally surpass we the health officers in number due to the fact bomo ward is a very large area from hayin dogo to kwakwaran manu near hunkuyi

Researcher:

11. How frequently do you give people information about the dangers associated with open defecation?

Response:

We conduct health education on issues related to open defecation once on the last Friday of every month.

Researcher:

12. What is the level of the peoples' response to the information on open defecation?

Response:

We have seen changes in the people and this is due to 2 reasons; first it's because they know that now hospitals don't have drugs so they have to take care of their health and also because there is no money. Secondly, we have put fear in them that if any one practice open defecation we have the power to charge the person to court or to give punishments and the people are scared of punishments so that's why we have had a reduction in the practice.

Researcher:

13. When last did you witness cholera/diahorea outbreak within the local government

Bomo: it's been long we had an outbreak but it last happened 2 years ago in an area called na'ibi in bomo and i was called to check the place out after that i reported to our office at the secretariat and i was given drugs to use in the area. All persons that had the illness where taken to the hospital and placed on drips and given the drugs provided. Since then we have not had another outbreak.

Researcher:

14. What roles did you play during and after the outbreak?

Response:

i talked about health education with the people and also explained to them that during raining season water washes the open defecation into the houses, well's which they fetch from and use for their daily activities, which causes the disease to affect them and also spread's it. We told them to make sure their wells are properly built and to keep their water ways clean and there also places of refuse dump that we put up sign boards on to prevent people from open defecation at that time.

Researcher:

15. What channel(s) of communication do you consider to be very effective in communicating open defecation?

Response:

The most effective way is that male and female health workers and the volunteers should go for house to house inspection every day to enlighten people

Response:

16. What are the measures that can help to reduce the prevalence of open defecation within the local government?

Response:

House to house inspection, using the community/village/ward heads to pass out information and giving talks on health education

Researcher:

17. Suggest effective communication approaches that can be used to discourage open defecation?

Response:
Through media, we have radio station in ABU which people listen to a lot. We had an interview on radio and talked about the problems we face in curbing open defecation, also through house to house inspection to enlighten them on the effects of open defecation if the house is prohibited for male we send our female workers if not we go in ourselves and we place sign boards preventing people from defecating and dumping refuse in certain places, we also use posters showing the effects of people practicing open defecation. The house to house is the most effective.
Researcher:

18. What other comment do you have regarding the issue of the communication aimed at curtailing open defecation?

Responses:
Even though there is no money the government should employ more workers and provide more equipment's like hand gloves, wheel barrow etc. And other top officials should participate because the people are used to seeing us but if there are new people that are higher in authority it will further help to drive home the message in the people.

Appendix XVI

KII WITH DAYYABU LAWAL ENVIRNMENTALHEALTH INCHARGE OFFICER CHIKAJI ON TUESDAY 13TH DECEMBER 2016

PHONE NO: 08062261901

Researcher:

1. What are the attitudes of the people in Sabon-Gari local government towards open defecation?

Response:

the attitudes of our people in regards to open defecation dates back to our people of before (old people) but now after a bit of enlightenment the people look for a secret place like a deserted corner or so to practise open defecation . It is not a good thin and people here also share the same thought/opinions.

Researcher:

2. I am aware that there are public toilets across the local government, what is the usage rate?

Response:

We do not have public toilets, except for markets which have and also here at our clinic.

Researcher:

3. Where are the likely places that you have noticed open defecation practice?

Response:

Open defecation is more rampantly practiced at Chikaji than Muchia, example at dogo in Chikaji you are going to find open defecation practiced there by most people publicly, also in places like padama fadamana also in dogo of Chikaji you will see people bending to defecate openly.

Researcher:

4. Based on the prevalence of open defecation practice, how will you rate the people's level of awareness?

Response:

People are aware because if we have meeting with our community leaders, we inform them on the dangers associated with open defecation and the various ways it gets into our food. we create awareness in our people through mosques we tell them that a person no matter how he is should strive and build a toilet instead of practicing open defecation , and now open defecation is slowing becoming a shameful act among the people and also the religion (of Islam) forbids the act of open defecation

Researcher:

5. What are the dangers associated with open defecation?

Response:

There are many dangers associated with this practice, as i told you before, there some people with certain problems (ailment) for example children of 15yrs and below can have the illness associated with polio virus and people don't know. In fact if only a person has it and practiced open defecation in that community, the polio virus can spread and affect up to 200 people through the person's dried faeces in which some may contact it through play in such areas and not everyone is conscious to wash his child hands before eating

Researcher:

6. What can such dangers lead to?

Response:

It leads to cholera,

Researcher:

7. What is your role in the communication efforts aimed at curtailing open defecation in the LGA?

Response:

Anybody in the community that has seen another practicing open defecation can either address the person himself or can come to this office and tell us. We in turn will go and talk to the person or prevent the person. Like there are some people who bring the faeces out from their houses to dispose of it outside we try to put a stop to such habits and if it gets out of hand we also charge offenders to court to curtail the person and other people

Researcher:

7b. Please mention the different ways through which you communicate to the people regarding open defecation.

Response:
we have the town crier who announce to the people of new developments and also of our coming for house to house inspection and also we inspect deserted hidden places and if we find any that is not clean, we put measures there (sanction through sanitary laws) etc. if we find anyone without toilets, we tell them to try and use the public toilets available in the market like Muchia market has public toilets. That is what we mostly tell them

Researcher:

8. How are the messages packaged/ designed?

Response:

We use about 7 days to go round Muchia and Chikaji, we can take a community and educate them about sanitation, we gather the youth leaders and educate them and if there is a wedding or naming ceremony gathering we go there to inform them.

Researcher:

9. Do you involve the community members in the planning, packaging and designing of the messages?

Response:

We involve youth and community leaders in the planning like we tell them we will go to so-so place so that we can have their backing when talking to their people in other for us to achieve our aim.

Researcher:

10. How many members of the community were present during the planning and design of the communication approaches?

Response:

We have about 7 youth or community leaders in Chikaji and also Muchia

Researcher:

11. How frequently do you give people information about the dangers associated with open defecation?

Response:

We conduct meetings 4times in a month, every Saturday

Researcher:

12. What is the level of the peoples' response to the information on open defecation?

Response:

We do see a lot of changes. We use men to do community enlightenment and we use women to enlighten other women that are at home

Researcher:

13. When last did you witness cholera/diahorea outbreak within the local government?

Response:

It is up to 2 years since we last experienced it in Chikaji (2014-2015)

Researcher:

14. What roles did you play during and after the outbreak?

Response:

When i was told of the outbreak i went to see the places for may self and also the extent of the outbreak. Then i went to report to the LGA to provide us with the equipment's we need. First we were given chlorine which we put in wells to reduce the spread, we passed their gutters to do some sanitation since most times it is left un-sanitized and any one infected we immediately transfer them to this hospital from treatment and to reduce the spread of the disease.

Researcher:

15. What channel(s) of communication do you consider to be very effective in communicating open defecation?

Response:

As i told you earlier even the religion of Islam forbids it, so many dangers are associated with it like one can have jinn (devil) attack through that, so if we try and reduce the practice of open defecation we will have a reduction in so many diseases and dangers. We use both radio and house to house inspection but the house to house inspection is more effective cause sometimes not everyone can get or understand the message through radio.

Researcher:

16. What are the measures that can help to reduce the prevalence of open defecation within the local government?

Response:

We use the community or youth leaders to put eye on known open defecation sites to catch offenders and also we institute rules in which if you are caught breaking any you will be made to serve punishments.

Researcher:

17. Suggest effective communication approaches that can be used to discourage open defecation?

Response:

We use the community leaders and also if offenders refuse to desist or break a rule we charge to court or use the police all these are put in place cause of the dangers associated with open defecation.

Researcher:

18. What other comment do you have regarding the issue of the communication aimed at curtailing open defecation?

Response:

The only thing i have left to say is that we are trying to see how we can prevent open defecation and related practices and also by, mobilizing people to educate them in which they too will educate and create awareness in others on the dangers in open defecation

Appendix XVII

KII WITH ALICE MUSA ENVIRNMENTAL HEALTH INCHARGE OFFICER HANWA GRA (GOVERNMENT RESERVED AREA) ON THURSDAY 15TH DECEMBER 2016PHONE NO: 07039710472

Researcher:

7. What are the attitudes of the people in Sabon-Gari local government towards open defecation?

Response: people in hanwa ward practice open defecation but my unit is G.R.A (govt, reserve area) you don't expect open defecation to be practiced anyhow but is found along the rail line that pass through the area which is done by strangers and traders.

Researcher:

8. I am aware that there are public toilets across the local government, what is the usage rate?

Response:

We have one public toilet in this ward located within the motor park. Is in high use and well maintained as users pay for usage.

Researcher:

9. Where are the likely places that you have noticed open defecation practice?

Response:

It is usually found along the railway line that passes through the ward.

Researcher:

10. Based on the prevalence of open defecation practice, how will you rate the people's level of awareness?

Response:

There is high level of awareness within the area people know open defecation but once sometimes when one is press you can cheat nature they will just find anywhere to relieve.

Researcher:

11. What are the dangers associated with open defecation?

Response:

It is associated with many health hazard diseases like fecal oral, gastro intestinal, cholera, typhoid etc.

Researcher:

12. What can such dangers lead to?

Response:

It can lead to outbreak and death if not properly managed.

Researcher:

13. What is your role in the communication efforts aimed at curtailing open defecation in the LGA?

    7b Please mention the different ways through which you communicate to the people regarding open defecation.

Response:

To reduce open defecation practice to the barest minimum by educating the masses through jingle with govt. Participation.

Researcher:

7b Please mention the different ways through which you communicate to the people regarding open defecation.

Response:

By designing programs, doing campaign's and house to house inspection.

Researcher:

14. How are the messages packaged/ designed?

Response:

We inform the town crier on the date of any activity and we emphasize (to the traditional ruler) the need for the mai angwa (district head) to be part of our entourage to attract the people attention and to reach every corner.

Researcher:

15. Do you involve the community members in the planning, packaging and designing of the messages?

Response:

Yes we do.

Researcher:

16. How many members of the community were present during the planning and design of the communication approaches?

Response:

We involve the district heads, traditional rulers, town criers.

Researcher:

17. How frequently do you give people information about the dangers associated with open defecation?

Response:

Weekly and at any time we receive complain/information about any open defecation practice due to low staff strength.

Researcher:

12. What is the level of the peoples' response to the information on open defecation?

Response:

Response level is high. We usually make sure offenders immediately start cleaning up before we leave.

Researcher:

13. When last did you witness cholera/diahorea outbreak within the local government?

Response:

That was 2014 in Dogara ward.

Researcher:

14. What roles did you play during and after the outbreak?

Response:

We conducted investigation to get the number affected, the age range etc. before treatment started then enlightenment about the outbreak to curb spreading. We do house to house inspection too.

Researcher:

15. What channel(s) of communication do you consider to be very effective in communicating open defecation?

Response:

We do so verbally i.e. Oral communication using the language they understand like Hausa.

Researcher:

16. What are the measures that can help to reduce the prevalence of open defecation within the local government?

Response:

By Conducting health education about the dangers of open defecation and its preventive ways will help reduce the practice to the barest minimum if people are aware of the dangers involve will impact more than drugs.

Researcher:

17. Suggest effective communication approaches that can be used to discourage open defecation?

Response:

Through the use of posters, radio, television jingles.

Researcher:

18. What other comment do you have regarding the issue of the communication aimed at curtailing open defecation?

Response:

Government involvement for campaign to be effective.

Appendix XVIII

KII WITH ABDULAZIZ ISA ENVIRNMENTAL HEALTH INCHARGE OFFICER HANWA ON TUESDAY 13TH DECEMBER 2016PHONE NO: 07034225722

Researcher:

1. What are the attitudes of the people in Sabon-Gari local government towards open defecation?

Response:
Here in hanwa most people are civilized they have western education we do not have problem in educating them or in open defecation except for little children that still practise it but such behaviour is rarely found in adults except on high ways were some drivers may practice open defecation in nearby bushes but apart from that we do not have such problem cause they are civilized they make efforts to use toilets instead of open defecation

Researcher:

2. I am aware that there are public toilets across the local government, what is the usage rate?

Response:
There are no public toilets except at the motor park; most houses have toilets so people make use of that.

Researcher:

3. Where are the likely places that you have noticed open defecation practice?

Response:
In my 2 years of stay in hanwa, open defecation is most rampant at flyover that is where we can see open defecation etc.

Researcher:

4. Based on the prevalence of open defecation practice, how will you rate the people's level of awareness?

Response:
we normally go to the union people and encourage them to prevent people from defecating openly that it can cause a lot of diseases if open defecation is not curbed and we have seen them yield by placing sign post and also assigning people who will clear refuse or dirt.

Researcher:

5. What are the dangers associated with open defecation?

Response:
Themost important disease associated with open defecation even right now in Nigeria is a serious problem of polio virus and the prevalence of open defecation is one of the main causes of polio. Polio is gotten through refuse dump, open defecation etc. And that is why there are frequent cases of polio especially in the northern states. Even the open defecation our of open defecation can constitute as nuisance and affect people.

Researcher:

6. What can such dangers lead to?

Response**:**
Open defecation leads to faecal oral diseases which are mostly gotten from open defecation because an infected person can defecate and flies will perch on it and also perch on people's food thereby spreading the infection which can cause an outbreak of diarrhea and many other diseases.

Researcher:
7. What is your role in the communication efforts aimed at curtailing open defecation in the LGA?
Response:
The efforts we make are to enlighten, to health educate, dialogue with the people. At this hospital we have a committee that if we want to carry out anything like environmental sanitation, house to house inspection, we inform them that we will be coming for inspection so announce it at the mosques for people to be aware and if we find places with problems we enlighten, educate and give them good advice. We mainly engage in house to house inspection and our committee is made up of village volunteers
Researcher:
7b Please mention the different ways through which you communicate to the people regarding open defecation.
Response:
We go out and health educate/inform the people about the effects of living with open defecation, refuse etc. And also we assign people especially natives because some of us including myself are not natives of this place, so we give those people advice; we educate them and enlighten them on the effects of open defecation etc. And they in turn will create meeting of the same age groups and will further pass down the information
Researcher:
8. How are the messages packaged/ designed?
Response:
from here i gather my workers and inform them that we will be visiting so-so place, so from here we plan everything we are to do for example we may plan to visit 10 houses but normally our kind of houses here are locked (restricted for males) so mainly it's the female workers that enter and bring back reports while we wait outside and any house we find fault in the male of the house is normally invited to the office because we deal with the males while our female workers deal with the females.
Researcher:
9. Do you involve the community members in the planning, packaging and designing of the messages?
Response:
no, like if me and my staff will be going out for any work it is within us we conduct the meeting but sometimes weekly or monthly if we have any information to pass out we do call on our committee members and we inform them on what we want to talk about from there they will inform the people. So we are the ones who do the planning etc. Them we just give them to pass across.
Researcher:
10. How many members of the community were present during the planning and design of the communication approaches?
Response:
We do not use many people; we normally just use the chairman, secretary, the Sarki, youth leader, the women leader.
Researcher:
11. How frequently do you give people information about the dangers associated with open defecation?
Response:

We normally have meetings monthly, but it's mostly done if there is a problem or if there is news of any problem. We call them and explain to them the situation but when we go on routine inspection we usually inform them to tell the people. If perchance on one of our trips we see on the way practise of open defecation we look for the leader of the community and tell them of our finding in the community and also advise them on the effects of open defecation and if we come back to still meet such practices we will now take necessary measures in the community. Like if we go to fly over we normally meet the chairman of the union to give him information and he will now pass the information down to his subordinate's and they are trying a lot in preventing the practice of open defecation .

Researcher:

12. What is the level of the peoples' response to the information on open defecation?

Response:

Through the health education that we give them they have been able to construct 3 public toilets in comparison to the one public toilet they had before. The changes were as a result of the enlightenment we have given them and we also have their backing in anything.

Researcher:

13. When last did you witness cholera/diahorea outbreak within the local government?

Response:

It's been long we have witnessed such cases of outbreaks but when it's an epidemic we do record some cases and during raining season.

Researcher:

14. What roles did you play during and after the outbreak?

Response:

We normally inform people on the danger of such outbreaks and cleanliness is good, if we have such cases and there are brought to the hospital and if the work load is much i can assist the clinical technical staff with the fixing of drips and etc.

Researcher:

15. What channel(s) of communication do you consider to be very effective in communicating open defecation?

Response:

to keep on informing the people on the dangers associated with it and also by preventing it and also show them the consequences of dirtiness and even in Islam it is prevented.

Researcher:

16. What are the measures that can help to reduce the prevalence of open defecation within the local government?

Response:

we as workers should keep on giving advice to people on the effect of open defecation and if necessary we may use the back to public health law but we face difficulty in implementing the law.

Researcher:

17. Suggest effective communication approaches that can be used to discourage open defecation?

Response:

they are many of them laid down even before i was born and in some cases are used but i have never charged anyone to court.

Researcher:

18. What other comment do you have regarding the issue of the communication aimed at curtailing open defecation?

Response:

the way the government imposes monthly sanitation, it is good and it should be encouraged and it should involve many people not just health workers, the sarki's (kings) should be used to mobilize the people in the monthly sanitation. Then more health workers should be employed especially females like in the whole of hanwa we only have 7 workers in which only 2 of them are females so the work can be overburdening. The government should use new means of communication approaches like karosa for Kano, Kaduna has something like that but I don't know the name, so if the ones that studied environmental are attached with us it will create a bit of fear and seriousness in the people especially the females ones.

Appendix XIX

KII WITH SULEMAN HAMISU ENVIRONMENTAL HEALTH INCHARGE OFFICER SABON GARI ON SATURDAY 24TH DECEMBER 2016PHONE NO: 08130878504

Researcher:

1. What are the attitudes of the people in Sabon-Gari local government towards open defecation?

Response:

Open Defecation practice is very high in Sabon Gari ward due to the cultural norms prevalent.

Researcher:

2. I am aware that there are public toilets across the local government, what is the usage rate?

Response:

We have many public toilets built by government and individual all over the ward and the usage rate is high among the people.

Researcher:

3. Where are the likely places that you have noticed open defecation practice?

Response:

SG: Sabon-Gari central ward is the melting point of Zaria where you have people from different culture like the Yorubas, Igbos among others. Open Defecation is found along railway tracks, market's side wall and century line behind houses.

Researcher:

4. Based on the prevalence of open defecation practice, how will you rate the people's level of awareness?

Response:

The Awareness level is high among the people but due to cultural believe and ignorance about the use of public toilet, Open Defecation practice is still prevalent.

Researcher:

5. What are the dangers associated with open defecation?

Response:

There are many dangers associated with open defecation but the most common now is gastroenteritis.

Researcher:

6. What can such dangers lead to?

Response:

It can lead to a lot of dangers one of those dangers being death.

Researcher:

7. What is your role in the communication efforts aimed at curtailing open defecation in the LGA?

Response:

By giving weekly talks about Open Defecation and also through the law enforcement officers arresting offenders especially in market place where Open Defecation is most prevalent.

Researcher:

7b. Please mention the different ways through which you communicate to the people regarding open defecation.

Response:

We give weakly talks on the dangers of open defecation, we also use the district heads to communicate to the people.

Researcher:

8. How are the messages packaged/ designed?

Response:

We mostly use posters to pass massages across to the people.

Researcher:

9. Do you involve the community members in the planning, packaging and designing of the messages?

Response:

Yes we involve them.

Researcher:

10. How many members of the community were present during the planning and design of the communication approaches?

Response:

We involve both the health officers, the various community leaders which are taken from the village development committee.

Researcher:

11. How frequently do you give people information about the dangers associated with open defecation?

Response:

We conduct health education on issues related to Open Defecation once on the last Saturday of every month.

Researcher:

12. What is the level of the peoples' response to the information on open defecation?

Response:

The response is low due to presence of strangers who come frequently for business.

Researcher:

13. When last did you witness cholera/diarrhea outbreak within the local government?

Response:

It was in 2014 and we had gastroenteritis outbreak not cholera

Researcher:

14. What roles did you play during and after the outbreak?

Response:

With the collaborative efforts of all staff, we discharged curative and preventive methods to curb the outbreak.

Researcher:

15. What channel(s) of communication do you consider to be very effective in communicating open defecation?

Response:

The most effective of our communication channel is the use of (local announcer) town crier

Researcher:

16. What are the measures that can help to reduce the prevalence of open defecation within the local government?

Response:

By the provision of adequate public toilets and maintenance of the toilets.

Researcher:

17. Suggest effective communication approaches that can be used to discourage open defecation?

Response:

A Mass campaign approach which will involve every facets of the community.

Researcher:

18. What other comment do you have regarding the issue of the communication aimed at curtailing open defecation?

Response:

Government should give the kind of attention given to polio eradication to Open Defecation.

Appendix XX

KII WITH ABUBAKAR AMINU ENVIRNMENTAL HEALTH INCHARGE OFFICER SAMARU ON SATURDAY24TH DECEMBER 2016

PHONE NO: 08132174816

Researcher:

1. What are the attitudes of the people in Sabon-Gari local government towards open defecation?

Response:
Open defecation practice in Samaru depends on the area. The high bro area has literate residence so open defecation is very low while the villages especially the inner settlements have a high attitude towards open defecation.
Researcher:

2. I am aware that there are public toilets across the local government, what is the usage rate?

Response:
There is only one public toilet in Samaru ward situated in the market very much in use by the people with a fine attached for its usage.
Researcher:
3. Where are the likely places that you have noticed open defecation practice?
Response:
Open defecation is rampantly seen within the government schools premise perpetuated mostly by the Almajiri boys but is not found inside the market.
Researcher:
4. Based on the prevalence of open defecation practice, how will you rate the people's level of awareness?
Response:
The people's awareness level of open defecation in Samaru is about 75%.
Researcher:
5. What are the dangers associated with open defecation?
6. What can such dangers lead to?
Response:
Apart from the offensive odour that pollutes the air, we usually have cases of cholera, diarrhea, typhoid and the outbreak of diseases which may lead to death.
Researcher:

7. What is your role in the communication efforts aimed at curtailing open defecation in the LGA?

Response:
We mobilized the community and educated them about the danger of open defecation.
Researcher:
7b. Please mention the different ways through which you communicate to the people regarding open defecation
Response:
By conducting regular inspection, awareness campaign with heavy involvement of the community.
Researcher:

8. How are the messages packaged/designed?

Response:

By serving notice to offenders (abate notice) and the use of court for persecution.

Researcher:

9. Do you involve the community members in the planning, packaging and designing of the messages?

Response:

Yes, in consultation with the area district head, traditional ruler, youth leaders, who sensitize the public on our work.

Researcher:

10. How many members of the community were present during the planning and design of the communication approaches?

Response:

We do have 15-20 community members involved in the design.

Researcher:

11. How frequently do you give people information about the dangers associated with open defecation?

Response:

We give information to the people biannually

Researcher:

12. What is the level of the peoples' response to the information on open defecation?

Response:

Response is very due to ignorance and poverty.

Researcher:

13. When last did you witness cholera/diarrhea outbreak within the local government?

Response:

Last outbreak was 2014 in the outskirt of Samaru town.

Researcher:

14. What roles did you play during and after the outbreak?

Response:

We had enlightenment programs, sanitation and treatment of infected persons.

Researcher:

15. What channel(s) of communication do you consider to be very effective in communicating open defecation?

Response:

House to house inspection and conducting awareness campaign.

Researcher:

16. What are the measures that can help to reduce the prevalence of open defecation within the local government?

Response:

The most effective means is the provision of pit latrine in each household.

Researcher:

17. Suggest effective communication approaches that can be used to discourage open defecation?

Response:

Awareness through aggressive campaign of open defecation danger.

Researcher:

18. What other comment do you have regarding the issue of the communication aimed at curtailing open defecation?
Response
: The use of posters will help in curtailing open defecation.

Appendix XXI

TRANSCRIPTION OF BOMOFOCUS GROUP DISCUSION

PARTICIPANTS:

1. Aliyu Salisu (contact person)
2. Musa Hussain
3. Ismail Salisu
4. Lawal Ibrahim
5. Lukman Sanunsi
6. Adamu Hamza
7. Muhammad Adam
8. Muhammad Lawal
9. Muhammad Ahmed
10. Ibrahim Muhammad
11. Kamaludeen Musa
12. Usman Ibrahim
13. Abdussalam Idris
14. Usman Isah

Researcher:

1. What is your position with regard to open defecation?

Responses:

Muhammad Lawal: open defecation is not something that is good because it causes a lot of diseases to the person practising it and also pollution to the environment

Adamu Hamza: my position on Open defecation is that both our culture and Islam doesn't permit such behaviour because of the effects like it causes diseases and also pollution

Musa Hussaini: the practice of OD is not good because of the many dangers it causes to the community, for a person to defecate where people are passing possess a lot of dangers.

Researcher:

2. Where is open defecation practiced around you?

Responses:

Isma'il Salisu: people defecate openly due to lack of toilets and some others due to being in a hurry they cannot wait for their turn to use the toilet while some it's due to stubbornness or maybe he is just used to it.

Muhammad Ahmad: Everybody knows OD is wrong. The reason why people defecate openly is because, some do it with a reason like maybe there are no toilets or the toilets are not enough or due to the fact there is queue at the toilet and they can't wait and some like does people on drugs they do not just care where they defecate and sometimes it is children whose parents are careless that practice OD

Adamu Hamza: why people defecate openly is because some may have fear of toilets or the toilets may be dirty and also people who take hard drugs and smoke do so in secluded places and thereby they can also defecate in such places.

Muhammad Adamu: Why people defecate openly is because some people get diseases through using public toilets present in the area. So, instead of getting diseases, they prefer to defecate openly thereby passing diseases to others

Researcher:

3. Where is open defecation practiced around you?

Responses:

Kamaludeen Musa: open defecation is practiced in the bush or behind residential area or in a hidden place. These are places where people defecate a lot.

Ibrahim Lawal: behind residential area or in a hidden place these are places where people defecate a lot.

Isma'il Salisu: people defecate in uncompleted building or abandoned buildings or demolished houses.

HamzaAdamu: some people defecate in classrooms once the school is on break

Researcher:

4. What is the position of your culture with regards to open defecation?

Responses:

Muhammad Lawal: The Hausa culture does not permit the practice of OD and also the religion of Islam also prohibits the practice of OD. So, one is meant to build a toilet in his house or use a bush behind the house for defecation.

Luqman Sanusi: In the Hausa culture the practice of Open Defecation is not right because cleanliness in Islam completes faith and practicing Open defecation will cause a lot of problems to the people.so people should use the toiles and not practice Open Defecation because it is prohibited both in the Hausa culture and Islam.

Researcher:

5. What can open defecation lead to?

Responses:

Muhammad Ahmad: it leads to a lot of things especially cholera, land pollution, water pollution air pollution and air borne diseases etc.

Hamza Adamu: it leads to people swearing and cursing because if a person defecates on the road people will definitely curse him.

Ibrahim Muhammad: OD leads to many diseases like cholera, also makes the air to be filled with pungent oduor.

Researcher:

6. In what ways can the faeces from open defecation get into our food items?

Responses:

Muhammad Lawal: there are many ways like when flies perch on faeces it can also perch on our food, water, plates and also wind blows the odour into cooking food or water.

Hamza Adamu: through water, some drainage c passes through the water supply that people use for day to day activities.

Musa Hussain: Open defecation can contaminate food items and water through flies. We have flies a lot and they like unclean places. If flies perch on faeces it can also perch on our food. We use water from wells and if rain washes faeces into the well and people use it, it can lead to many diseases

Usman Jafaru: most times we don't have a specific place called kitchen and even if there is it is not kept clean. So most times the women cook outside so during the process lots of things can enter the food through air, flies since it is prepared outside.

Isma'il Salisu: wind blows dry faeces into the homes which can get into our food

Researcher:

7. What are the dangers associated with open defecation?
8. What are the effects of those dangers?

Responses:

Hamza Adamu: it has a lot of problems and causes a lot of diseases, like cholera etc.

Muhammad Ahmad: it brings lots of problems like pollution and causes a lot of diseases, like cholera.

Muhammad Lawal: it brings lots of problems like pollution and causes a lot of diseases like malaria, cholera for both adults and children and the community as a whole.

Abdussalam Idris Jibril: it causes lots of problems like pollution and causes a lot of diseases, like cholera, malaria

: It causes lots of problems like pollution and causes a lot of diseases, like cholera

Kamaludeen: it causes a lot of diseases.

Researcher:

9. When last did you witness cholera/diarrhea outbreak in your area?

Response:

Hamza Adamu: it's been long we have witness the outbreak of cholera like in the 90's but it happens once in a while in some household's

Muhammad Lawal: it's been long we have witness the outbreak

Researcher:

10. What were the roles of the health workers during the outbreak?

Responses:

Hamza Adamu: during the outbreak the health officer's tried to the best of their capability to give public enlightenment to the people, using drama, exhibition, sharing of pamphlet to people in order for them to see the dangers of Open Defecation.

Muhammad Lawal: they use our traditional leaders to educate the people on the dangers of Open Defecation and also they use the radio to educate the people on the dangers of Open Defecation and also how to avoid another outbreak.

Luqman Sanusi: they enlighten the people on keeping their surroundings clean.

: handbills was share for the literate ones, they went for house to house enlightenment on cleanliness of self, kids, toilet and also advising them to build more toilets

: they used the Sarki who through the town crier passed information across to the people especially in places/villages that do not have access to radio, TV etc. and also by drama to enlighten the people on the effects of OD and how it can be avoided.

Researcher:

11. What are your opinions on the communication approach deployed by the Primary Healthcare workers in tackling open defecation?

Responses:

: We are happy with the communication approaches of the health officers because they gave suggestions on how to prevent its occurrence again. They educated the people

Abdussalam Idris Jibril: they educated the people well and also made sure that the people's health were in order and they also found new ways to pass across their message to the people, they made use of radio, social media, town crier, TV etc.

: They showed the people effect of OD and advised them to change and also put measures which forcefully made people change.

Muhammad Lawal: they gather people in an area to enlighten them, in schools, Islamiyah, on the effects of Open Defecation, in our side here they do not come for house to house inspection or enlighten people at home, it is only when people go to the hospital that the health officers enlighten and advise the person

Muhammad Ahmad: they are trying especially on enlightening people but the government should further support the health officers and the health officers should strengthen in conducting community dialogue which will aid in passing the information directly to the people.

Researcher:

12. How often do you visit the Primary Healthcare Centre in your ward?

Responses:

Ismail Salisu: It's was 3 days ago that I went to the PHC and things are going on fine there

Usman Isah : It's was seven days ago that I went to the PHC and things are going on fine there, the place is also very clean, there are working equipment's, and people are being taken care of properly.

Usman Ibrahim: It's was 3 days ago that I went to the PHC and things are going on fine there, I did not see anyone with the disease that Open Defecation cause e.g. cholera ,mostly people had malaria and some other kind of disease.

Hamza Adamu: I went there 2 months ago,

Abdussalam Idris Jibril: I went there last a month ago but after my findings in the hospital I got to know that the main disease prevalent where not caused by Open Defecation everyone had his own disease e.g. malaria, typhoid etc.

Musa Hussaini: I went last within the week and the main disease prevalent was malaria.

Kamaludeen Musa: I went last 2 weeks ago; the main disease prevalent was malaria typhoid, fever.

Researcher:

13. What are the medium through which you receive information on open defecation from the Local Government Area/Primary Health Care officials?

Responses:

Muhammad Lawal: Through social media, communication by text message, through radio, through TV they pass their message and if a person uses one amongst the following he will definitely receive the message. MULTIPLE COMM APPROACH

Researcher:

14. What are the ways through which open defecation can be addressed?

Responses:

By building public toilets in the area and health officers should be on patrol in the morning and night since these are the times people practice OD so that they can direct those people to the toilets and caution them.

Muhammad Ahmad: By building and maintain public toilets and most importantly enlightening people on the dangers and effects of OD through radio, drama

HamzaAdamu: by establishing laws and punishment should be dole out for anyone caught

Usman Isa: By building public toilets and teaching the people in villages or Almajirai to dig the ground after defecating to cover it that way wind will not blow it and water won't pack it.

Abdussalam Idris Jibril: There should be provision of public toilets and most importantly enlightening people on the dangers and effects of Open Defecation through radio, drama, social media and it should be made a law that all houses, schools, markets should have a

toilet in it and also the health officials should do routine sanitation of the area just in case even when there are toilets people still defecate it won't affect the community.

Researcher:

15. What are the effective communication channels to address open defecation?
16. Suggest different communication media that will help in reducing the practice of open defecation.

Responses:

Muhammad Lawal: the best is through the use of radio and the use of religious/traditional leaders, the social media. The health department is meant to introduce new ways of passing across the message.

: using the mobile networks Mtn, Glo to send free messages on health tips to the people.

Appendix XXII

TRANSCRIPTION OF BASSAWA FOCUS GROUP DISCUSSION

PARTICIPANTS:

1. Ismail Dahiru Bassawa (contact person)
2. Umar Ismail
3. Ismail Muhammad
4. Abubakar Ismail
5. Musa Idris
6. Umar Ismail
7. Umar Abdul Hamid
8. Ahmad Adamu
9. Ismail Dahiru

Researcher:

1. What is your position with regard to open defecation?

Responses:

Isma'il DahiruBassawa: Open Defecation has effect on our wellbeing and also causes a lot of dangers and diseases, like purging, stomach ache, also the air we inhale will be filled with its unpleasant smell. So to be truthful I think we should be cautious of all these things, we should throw our refuse at the right place and also we should stop Open Defecation and other harmful habits.

Musa Idris: I think the reasons that people engage in Open Defecation and dumping refuse indiscriminately is because they do not know the dangers associated with such practice and also due to lack of rules. Any person found engaged in such habits is meant to be cautioned and told the effects. If there are no laid rules and punishments are not associated with breaking the rules it will be very hard for the people to leave the habit.

Umar Ismail: Open defecation and refuse disposal is mostly practiced in places where people sit, the air in such places is filled with its pungent smell which can cause breathing difficulties to the people around. We normally caution each other on the fact that Open Defecation and disposing refuse anywhere brings a lot of problems, so it is better to be careful and cautious in other to have good health.

Researcher:

2. Why do people defecate openly?
3. Where is open defecation practiced around you?

Responses:

Isma'il Muhammad: the reason why people practice Open Defecation or dispose refuse indiscriminately can arise from lack of space due to the way our houses are, most household are large in number and the most homes are not built to cater for such large numbers, that's why the practice of Open Defecation is rampant.

Abu-Bakr Isma'il**:**

Most household have toilet but, people practice OD due to the large number of people in a family. So, if a person is in the toilet and another wants to use it instead of wasting time, the person just go to another place to defecate openly and afterwards where he has done it becomes a danger and can cause disease to him, his family and community

Ahmad Adamu: The reason why people practice OD is due to the large number of people in a family, and only one toilet is available which is mainly used by the female members. So if a person is in the toilet and another wants to use it instead of wasting time, the person just go to another place to defecate openly and afterwards where he has done it becomes a danger and can cause disease to him, his family and community

Researcher:

4. What is the position of your culture with regards to open defecation?

Responses:

Isma'il DahiruBassawa: Our culture, Hausa culture does not permit the habit of OD or dumping of refuse anywhere. The Hausa culture stresses the importance of shyness while defecating, other people are not supposed to see the person. It is due to large number of people in household that brought about this problem of OD, so OD is not a practice the Hausa culture condones

Researcher:

5. What can open defecation lead to?

6. In what ways can the faeces from open defecation get into our food items?

Responses:

Ahmad Adamu**:** OD spoils our behaviour, our food. For example if food left uncovered and there is an OD site nearby, insects like flies, cockroaches etc. can perch on the faeces then again perch on the uncovered food or food that is on fire. Also while eating the smell can be unpleasant and cause one to vomit

Researcher:

7. What are the dangers associated with open defecation?
8. What are the effects of those dangers?

Responses:

Isma'il Muhammad: There is no doubt that OD brings a lot of dangers like Cholera, Menijitis and Malaria

Researcher:

9. When last did you witness cholera/diarrhea outbreak in your area?

Responses:

Ahmad Adamu: it last happened during the government of Namadi Sambo. That was around 2011 since then we haven't had any outbreak.

Researcher:

10. What were the roles of the health workers during the outbreak?

Responses:

Ahmad Adamu: a committee was set up to go for house to house inspection, inspection of hidden places in order to prevent the reoccurrence of these dangers

Researcher:

11. What are your opinions on the communication approach deployed by the Primary Healthcare workers in tackling open defecation?

12. How often do you visit the Primary Healthcare Centre in your ward?
13. What are the medium through which you receive information on open defecation from the Local Government Area/Primary Health Care officials?

Responses:

Isma'il Muhammad: information is written from the health office to the political leaders who verbally communicate it to the people.

Abubakar Ismail: we normally communicate with the health officers about the effect of Open Defecation on us, we show them the site and also the hazard's that it causes. We also implore them to tell the government to look for alternative site where the Open Defecation & refuse can be disposed off or a vast land where it can be kept but we haven't had a response. None the less we have not relented we have also told the political, community and ward leaders on the same issue but still there hasn't been any head way on the issue.

Ahmad Adamu: There is an Adhoc committee set up in the community to work in collaboration with the Health officials through going for house to house inspection, inspection of hidden places in order to prevent the reoccurrence of deadly diseases, social media is also used to pass message across.

Ismail Dahiru Bassawa: We listen to health talk on open defecation from the health officials at the health centre and during house to house inspection. We also pass information to the health officials through a committee that was set up in our community whose leader is Dakachan Bassawa . The committee work in collaboration with the health officials, especially when there is a problem in the community

Researcher:

14. What are the ways through which open defecation can be addressed?
15. What are the effective communication channels to address open defecation?

Responses:

Ahmad Adamu: In my opinion due to the globalization of the world the social media is one the most effective in which information can be passed across rapidly and also the committee that is in collaboration with the health workers is one of the easiest means of the people passing their massage by either writing or verbally to the committee members. These are the easiest way for the people of Bassawa**.**

Researcher:

16. Suggest different communication media that will help in reducing the practice of open defecation

Responses:

Umar Abdul Hamid: In my opinion the best way to curb the practice of Open Defecation is for the government to designate a place as the dumping site for refuse and Open Defecation, since public toilets are not available so that one can defecate in the place far away from the people's dwelling.

Ahmad Adamu: firstly, the imams should advise his congregation on cleanliness, the same thing applies to the church, the pastors should draw the attention of their congregation on cleanliness. Secondly the government should create awareness and also teach health education in schools, teachers should be made to inform the pupils on the dangers of Open Defecation especially in the primary schools.

Appendix XXIII

TRANSCRIPTION OF CHIKAJI FOCUS GROUP DISCUSSION

PARTICIPANTS:

1. Balarabe Abdullahi (contact person)
2. Adam Ibrahim Yerima
3. Hamza Salisu
4. Muzzammil Muhammad
5. Musa Muhammad
6. Umar Abubakar
7. Muhammad Bashir
8. Jibril Umar
9. Ahmed Abdullahi
10. Fatima Musa
11. Lami Musa
12. Sa'adatu Musa

Researcher:

1. What is your position with regard to open defecation?

Responses:

Adam Ibrahim: I have seen someone defecating behind a house and I was very shocked because I would never have thought he will behave in such way. Such a person is prone to lots of dangers and diseases by him engaging in such act and he can also pass diseases on to others.

Ahmad Abdullahi: this discussion is very good, because there are many people engaged in it even me if I go to a place that I don't have access to toilet I normally go to a corner to defecate even though I know the dangers associated with it because I may not be the only person who uses the place for defecation. I have seen people who defecate in refuse dump, refuse dumps is a place which harbour all kinds of things and many diseases, this is not right because one is meant to safe guard his health. People are supposed to be cautious on the practice of Open Defecation.

Muzzamil Muhammad: Open Defecation practice doesn't just happen in residential areas, it also happens in school premises where you find children defecating openly in places where other children sit to play, despite the fact that there are toilets in the school. which is not supposed to be, the teachers in schools should further educate the children on the dangers of those practices and also in collaboration with the class prefects the problem should be addressed so the kids do not have diseases because school is a place where kids go to acquire knowledge and become better persons in the future, I feel by God's mercy if this is done it will curb a lot of things.

Fatima Musa: I have seen these practice happening especially in our area hayinojo in Sabon-Gari LGA, you will see people both children and adult male from their houses even new houses engaged in the practice of open defecation on refuse dump, behind other people houses, even in front of our houses. which is not right and I do not see this problem as something serious which cannot be tackled, the government are supposed to take action and use the town officers to check places within the town, also we are supposed to be cautions because this behaviour is what give rise to lots of dangers like cholera, diarrhea, typhoid, and cause mosquitoes to thrive and be rampant in areas.

Lami Musa: these things happen a lot in our houses, the town officers are meant to come and inspect our houses and our children. There are some women who take care of their children in respect to what they eat, drink and if they go to the toilet and come back they make sure the children wash their hands, also there are others who do not. So we urge the government to have the town officers do a routine inspection of our areas and homes.

Researcher:

2. Why do people defecate openly?

Responses:

Adam Ibrahim: some people practice Open Defecation due to stubbornness/headstrong not because there do not have toilets, a person will leave his home which has toilets and defecate openly because he is used to it and even when there warning or sign post of no practice of open defecation being put up some people due to stubbornness will still go there and defecate.

Muhammad Bashir Most people that practice OD are the Almajiri and visitors to the area; mostly the reason why they do it is because they do not have a place to defecate. We sometimes do find natives of an area practicing OD but it's mostly practiced by Almajiri and visitors. The PHC is meant to take care of problems like this, the community leaders, the owners of houses should take care of it and also be alert on who defecates near their house premises because I am used to seeing visibly ill children especially Almajiri's defecating openly.

Researcher:

3. Where is open defecation practiced around you?

Responses:

Muhammad Bashir: in Muchia primary school, there is a large field from the gate to the class rooms, Open Defecation is practiced rampantly in the field and this primary school is located within the residential area.

Umar Abubakar: we see it happening around us a lot especially at bakin dogo where different people, kids, adults, bike men go to defecate and if one tries to advise the person, the person will insult you and say the field is for the government and government field is for everybody. So we urge the government to intervene and correct this.

Researcher:

4. What is the position of your culture with regards to open defecation?

Responses:

Muzzamil Muhammad: in the Hausa culture, it is not good for someone to defecate where people sit. In our society we rear animals a lot and the animal can bring faeces into the house through their hoofs etc. and give us diseases. In the Hausa culture, we are used to defecating inside a place built outside the house where if we finish we close the place. Such that the smell does not come out talk more of us having communicable diseases.

Researcher:

5. What can open defecation lead to?

Responses:

Muhammad Bashir: OD practice leads to lots of diseases that their cures are unknown among the people and we see people just dying.

Lami Musa: it could be found within houses that are lack hygiene especially if the toilet in the house is left dirty, it will lead to lots of problems that are associated with open defecation. If the toilets are cleaned we and our families will be in good health

Researcher:

6. In what ways can the faeces from open defecation get into our food items?

Responses:

Muzzamil Muhammad: Flies perch on faeces and also come perch on our foods that we eat thereby causing us to have the cholera diseases. If we stop this habit by God's grace this won't happen.

Lami Musa: there are many ways it gets to our foods, most times the practice of Open Defecation is done in farms, where if the faeces is still fresh flies can perch on it touch and also perch on our maize combs which we just plug, roast and eat. Also animals will be given grasses already contaminated with faeces and those same animals will be slaughtered for us to eat thereby we contact so many disease's; the wind also spreads the awful smell around causing breathing problems.

Researcher:

7. What are the dangers associated with open defecation?
8. What are the effects of those dangers?

Responses:

Lami Musa: there is a great danger in it, because water can wash the faeces into streams which are a great danger cause many people will drink from there without knowing and wind can also spread it.

Ahmad Abdullahi: wind can blow the faeces into people's houses and also spread the diseases.

Researcher:

9. When last did you witness cholera/diarrhea outbreak in your area?

Responses:

Umar Abubakar: it was in 2011 that is last witness it.

Ahmad Abdullahi: it was my wife I saw that experienced it last after a trip she had to the village. I took her to the hospital and she was given drugs

Ahmad Musa: The week that just passed my younger brother had a cholera attack, we quickly rushed him to the hospital and by Allah's mercy and the hospital's effort he was cured. Due to lots of diseases he had and the mosquito bites it took about 10 hours to revive him. He had typhoid, malaria and cholera

Researcher:

10. What were the roles of the health workers during the outbreak?

Responses:

Lami Musa: truthfully I did not see any effort the health officials made except if one has the disease you go to the hospital and they will treat you.

Ahmad Abdullahi: the health officers are not doing any work, inspection etc. because the people are just being affected by different kinds of diseases; hospitals are just filled with ill people.

Jibril Umar: truthfully the health officials do not conduct any inspection be it house to house or otherwise, they do not give any enlightenment, they do not try to make corrections on bad practices that can affect people's health.

Muhammad Bashir: 20 years ago and back they used to give advice and enlightenment but from 20 years ago to now no health official comes to give advice except he comes to extort people and sometimes cure them.

Umar Abubakar: actually it was during the outbreak in 2011 that the health officers went for house to house inspection and did enlightenment etc. took people to hospital's some people died while others where cured. it is true that the health officials do not come to give enlightenment except when the outbreak is becoming much they will go to where open meat is sold either raw,

roasted, cooked and tell them to cover it, they are supposed to go for house to house inspection etc., but they do not.

Musa Muhammad Musa: health officers do not do the job they are expected to do; they do not do anything for us.

Muzzamil Muhammad: truthfully the health officers do not work for the past 18 years. Before they normally come for house to house inspection, give advice. Give enlightenment in order to see changes and also for the people's health but now nothing of such. That's why we have prevalence of many diseases. So they do not do any work most times people use their personal money for treatment at hospitals.

Hamza Salisu: it is before that the health officers work but now they don't they have turned it into business. Before they go for house to house inspection, inspect hidden places etc. but now they do not except to go to big shops whose owners have money and threaten them of reporting them to the security that they do not maintain their shops and there after the shops owners bribe them and that is all.

Adam Ibrahim: health officers do not work now because now if they come to your house and see Open Defecation being practiced or refuse not being disposed of properly they do not care all they want it to be given money(bribed) the minute they are given they go.

Researcher:

11. What are your opinions on the communication approach deployed by the Primary Healthcare workers in tackling open defecation?

Ahmad Abdullahi: they do not communicate anything to us because there was a time a neighbour of mine pack faeces from his house and dumped it in the water ways (gutter). He disturbed the community with bad smell and the primary health care was very close to us but none of them came to correct or enlighten him/us.

Umar Abubakar: during the outbreak they did not do any type of communication except after the outbreak is gone that's when one will hear that they are coming to give drugs.

Muhammad Bashir: it is true, I myself have gone to the PHC office to report people and houses that dump their refuse and practice Open Defecation on roads up to three times but they have never responded.

Jibril Umar: this thing happens a lot and they do not communicate, some people only dispose their dirt outside when it's raining, in front or behind other people's house and they send children who will use their hands to pack it from there the child can get diseases.

Lami Musa: they do not communicate, the local dustbin parkers and people normally dispose off their refuse in the gutter behind our house and because our house is in the middle of gutters we are affected a lot, we try to clean the gutters every 8 days

Researcher:

12. How often do you visit the Primary Healthcare Centre in your ward?

Responses:

Muzammil Muhammad: I went to the PHC hospital a week ago, we went and saw that the workers, nurses there are not doing anything and some are not well qualified, they do not even know what they are doing because you see an ill person there left unattended to, because they themselves do not know their job talk more of checking an ill person.

Researcher:

13. What are the medium through which you receive information on open defecation from the Local Government Area/Primary Health Care officials?

Responses:

Muzzamil Muhammad: truthfully the health officers do not do any work because 18 years ago they normally come for house to house inspection, give advice, give enlightenment in order to see changes and also for the people's health but now nothing of such. That's why we have prevalence of many diseases. So they do not do any work most times people use their personal money for treatment at hospitals.

All of them said: they do not use any medium of communicating or of receiving information

Researcher:

14. What are the ways through which open defecation can be addressed?

Responses:

Muhammad Bashir: there is only one way through the government because individuals cannot on their own create laws or take actions without the approval of the government.

Lami Musa: the way is the through the government to enforce laws through the health officers and the health officers can report offenders to the law and it is compulsory for the person to respond to that, reporting offenders is not to humiliate but to correct and make better the their health and the health of the community as a whole.

Researcher:

15. What are the effective communication channels to address open defecation?

Responses:

Muzzamil Muhammad: radio is a good way but one major way that can be used are the imam's in mosques when people pray they should use the medium to communicate to the people on the harmful effects of these practices. The messages that are sent through phones are not that effective but if the imams are used people will listen.

Sa'adatu Yusuf: the government is supposed to employ people to do a routine check on an area.

Lami Musa: loud speakers can be used to pass information to the people, through that people would be informed. Also through house to house inspection using male and female officers.

Researcher:

16. Suggest different communication media that will help in reducing the practice of open defecation.

Responses:

Muzzamil Muhammad: radio is one of the best ways of communicating since Hausa Is used as the language of communication on radio stations and also because most of the people are not literate enough to read text messages, there are many health programmmes on the radio.

Hamza Salisu: I think radio is one of the most effective ways to communicate

Adam Ibrahim: to use the imams and community leaders to pass information to the people because everyone goes to the mosque and also using the health officers to do house to house inspection often.

Lami Musa: to use public address systems because some people do not have radio, TV, phones, so I feel this medium will reach the grass root.

Sa'adatu Yusuf: to use health officers to do house to house inspection, males workers should inspect the house surrounding while female workers should inspect inside the house.