ASSESSMENT OF THE IMPACT OF RAPID AWARENESS RAISING (RAR) PROGRAMME FOR COMMUNITY BASED MATERNAL HEALTH IMPROVEMENTS OF WOMEN IN SELECTED COMMUNITIES OF KANO STATE, NIGERIA

MUHAMMAD SHEHU HUSSAIN
SPS/12/PAD/00005

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DECLARATION

I hereby declare that this work is the product of my research efforts undertaken under the supervision of Professor Muhammad Bello Shitu and has not been presented anywhere for the award of a degree or certificate. All sources have been duly acknowledged.

Sign …….

Date……

Muhammad Shehu Hussain
SPS/12/PAD/00005

CERTIFICATION

"This is to certify that the research work for this thesis and the subsequent write-up Muhammad Shehu Hussain (SPS/12/PAD/00005) were carried out under my supervision".

…… ……..

Prof. M.B. Shitu
Supervisor Date

APPROVAL

"This thesis has been examined and approved as meeting the requirement for the award of Ph. D Adult Education (Community Development) of Bayero University, Kano"

……. ……
Prof. Anthony Ayodele Fajonyomi
External Examiner Date

…… ……
Dr. Idris Wada Aujara
Internal Examiner Date

…… ……..
Prof. M.B. Shitu
Supervisor Date

…… … ….……
Dr. Yau Haruna Usman
SPS Board Representative Date

……. …….
Dr. I. W. Aujara Date
Head of Department and Chief Examiner

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I dedicate this work to my parents Alhaji Shehu Hussain and late Hajiya Amina Shehu Hussain

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ABSTRACT

This study was on Rapid Awareness Raising and Community Based Maternal Health Improvement in selected communities of Kano State, Nigeria. The study raised five objectives amongst others: to examine the difference on knowledge of maternal danger signs in targeted communities before and after Rapid Awareness Raising programme implementation in Kano State, to determine the difference on access to maternal health facilities in targeted communities before and after Rapid Awareness Raising programme implementation in Kano State, and tested five research hypotheses which includes there is no significant difference on knowledge of maternal danger signs in targeted communities before and after RAR programme implementation in Kano State, there is no significant difference on access to maternal health facilities in targeted communities before and after RAR programme implementation in Kano State. The study adopted survey design and the population of the study was 2,556 women of child bearing age between 15-49 years. Samples of 600 respondents were drawn from four selected communities' in four Local government areas. A 41 Community Based Health Improvement Questionnaire (CBMHIQ) and a Focus Group Discussion Guide on Community Based Maternal Health Improvement (CBMHIFGD) were used to collect data for the study. The reliability of CBMHIQ was determined through test-re-test method and reliability index was .75 using PPMC. T–test was used to test the hypotheses formulated at 0.05 level of significance with the help of SPSS 20.0. The findings of the study revealed that there was significant difference in knowledge of maternal danger signs after the RAR programme implementation in the area of study and also revealed that there is significant difference in access to maternal health facilities after RAR programme implementation in area of study. Based on the findings it was recommended that the programme should be sustained because the women became more enlightened about the danger signs and be extended to other communities and local government areas of the state, More Health facilities should be provided so as to provide access that should cover other communities and local government areas of the state.

CHAPTER ONE
INTRODUCTION

1.1 Background to the study

The right to health essentially means governments must create conditions in which all people (men, women, and children) in their country are able to enjoy a healthy life as much as possible. The right to health has been published in numerous international human rights declarations and treaties. Perhaps the most notable one is the Universal Declaration of Human Rights (UDHR), which has been endorsed by member states of the United Nations. Maternal health services aim at reducing maternal mortality and morbidity by ensuring that pregnant women remain healthy throughout pregnancy, deliver safely to healthy babies and recover fully from the physiological changes that occur during pregnancy (Nnebue, Ebenebe, Nwabueze, Obi-Okaro, & Ubajaka, 2014)

The global maternal death is put at 529,000 per 100,000 live births while the maternal mortality ratio for sub-Saharan Africa was estimated at nearly 70, 000 maternal deaths per 100,000 live births, almost twice that of South Asia, four times as high as in Latin America and the Caribbean, and nearly 50 times higher than in industrialized countries Annually, an estimated 52,900 Nigerian women die from pregnancy related complications, out of a total of 529,000 global maternal deaths (Olusegun, Thomas & Michael, 2012). Nigeria is ranked second after India's 117,000 maternal deaths, in terms of global hierarchy of the burden of maternal mortality. However, India with a population of over one billion people reduced its maternal mortality from 136,000 to 117,000 between 2000 and 2015. The North-East zone of Nigeria has the highest maternal mortality rate (MMR) of 1,549/100,000 live birth, compared to 165/ 100,000 live births in the South-West zone, an almost tenfold difference. There is also a marked urban-rural

variation in maternal mortality rate (MMR): 351/100,000 (urban) to 828/100,000 (rural) (Galadanci, Idris, Sadauki, & Yakasai, 2013). Part of the leading complications responsible for nearly 75% of all maternal deaths include; severe bleeding and high blood pressure (pre-eclampsia and eclampsia) (Say, Gemmill, Tunçalp, Moller, & Daniels, 2014). However, while many developed countries have made considerable progress in addressing maternal mortality, it appears that countries with high maternal mortality burdens, like Nigeria, have made little progress in improving maternal health outcomes through the Millennium Development Goals (WHO, 2015a). Despite this progress, more than half a million women, 99% of whom live in the developing world continue to die every year in pregnancy and childbirth due to entirely preventable reasons (WHO, 2015b). A Nigerian woman risk of dying from pregnancy or childbirth is 1 in 39 compared to the Sub- Saharan average of 1 in 39 and the global average of 1 in 180. In developed region of the world, a woman's risk of maternal death is 1 in 3,800 (WHO, 2012).

According to the UN and World Bank statistics, an estimated 144 women die each day in Nigeria from pregnancy-related complications, making her one of the worst countries for women to deliver babies in the world. Indeed, the maternal mortality ratio recorded in some states located in northern Nigeria is as much as ten times higher than those of their counterparts in the southwestern part of the same country (Idowu, 2013). The reasons advanced for this terrible situation include: incomplete characterization and comprehension of the responsible factors, inadequate human and infrastructural capacity to effect necessary change, and a dearth of political will (Idowu, 2013).

Kano State in particular, has an estimated population of 9,401,288 according to the 2006 census (NPC, 2006) spread across 44 LGAs and with a total land mass of 20,131 sq kms. Kano State recorded maternal mortality rates of over 1,000 deaths per 100,000 live births, high total fertility rates of over 7 births per woman and most female teenagers (<20 years) pregnancy (Ekechi, Aradeon, & Yisa, 2016). The Maternal Mortality in Kano has remained high with difference between urban and rural areas despite the wide range of health services available. The culture of people is Hausa-Islamic culture, in that ethnicity and religion are so interwoven that a distinction is hardly discernable. The practice of polygamy is very common, so are large families and majority of women prefer home delivery. The metropolis is where majority of people with western education resides also where most of the tertiary hospitals are located. It is a centre of commerce and also the seat of government (Yar Zever, 2014). This figure highlights the need to address these high maternal mortality rates in the State. In fact, maternal health has emerged as the most important issue that determines global and national wellbeing. This is because every individual, family and community is at some point intimately involved in pregnancy and the success of child birth (WHO, 2007)

Rapid Awareness Raising (RAR) is a community based communication approach to reach people in the urban and semi urban areas with information and the opportunity to discuss together new behaviours in response to the Basic Obstetric Emergency Care (BEOC) in terms of danger signs of pregnancy, benefit of Anti- Natal Care (ANC), safe pregnancy plan and importance of facility delivery. Partnership for Transforming Health Systems 2 (PATHS 2) is a Department for International Development (DfID) project in Nigeria initiated Rapid Awareness Raising (RAR) to focus on the urbanites that are not

effectively reached and involves social approval from family and neighbours. Rapid Awareness Raising (RAR) is facilitated by Local facilitators to address the factors responsible for delays in seeking and obtaining care during obstetric emergencies including the lack of knowledge of maternal danger signs; the fairly widespread cultural and attitudinal requirement that husbands or their representatives refuse/avoid not to grant permission for women to seek health care, attend ANC, Facility delivery (leading to delays in the event that their husbands are out or unwilling to give their consent); and, financial barriers to obtaining transport or medical care. In addition, advocacy, scoping and field work for RAR is seen as one of the approaches to increase knowledge of urban population to promote safe motherhood at a community level**.** As a community based approach members of the community are expected to share the knowledge of the best practices to other members through say and do method and discussions for at least 4 round of interaction (PATHS2, 2013).

1.2 Statement of the problem

In view of the ugly trend of maternal mortality in Kano state despite the wide range of maternal health services available, Rapid Awareness Raising programme (RAR) was introduced to ensure improvement in maternal health. The programme focused on providing knowledge of maternal danger signs, facilitating access to maternal health facilities and facility for delivery and encouraging husbands to grant their wives access to health facility. It was a programme of Partnership for Transforming Health Systems Phase Two (PATHS2), a six-year development initiative that aims to ensure that Nigeria achieves important health-related Millennium Development Goals, Funded by UK aid

from the Department for International Development (DFID), the programme was implemented in the five states of Enugu, Jigawa, Kano, Kaduna and Lagos. However, in Kano state the programme was implemented in Tudunwada, Garko, Kofar Fada and Kofar Kudu communities of Nassarawa, Garko, Dawakin Kudu and Wudil Local Governments Areas for 5 years from 2008 to 2013.

Kano State is one of the States in the country with the highest number of maternal mortality rate of over 1,000 deaths per 100,000 live births which could be attributed to poor knowledge of maternal danger signs, inadequate number of maternal health facilities, inadequate mode of facility delivery, refusal of the husbands to grant permission to women to access health facility (Galadanci, Idris,Sadauki, & Yakasai, 2013). Eighty nine percent (89%) of all doctors and 73% of nurses in the employment of State Government are located in the metropolis. In 2016, there were 970 Primary Health Care facilities in the State, 704 of which were providing routine Immunization services, with a varying schedule and frequency per week. The state has somewhere between one secondary health facility to 120,000 and 200,000 population per hospital facility, putting it in the middle of the league. For primary care however, Kano actually comes at the bottom of the national league table. Out of a national range of states where primary health care coverage offers one facility to just over 2,000 persons up to others where coverage offers only one facility to around 13,500 persons, Kano comes in the bottom category with only one facility for somewhere between 9,000 and 13,500 persons.

In view of the fact that Rapid Awareness Raising is a community based initiative focusing on safe motherhood, in the sense that members of the community are the driving force of the issues that affect the lives of their women in terms of educating one another

on the maternal danger signs, identifying the health facility that are providing for such services, assisting women to deliver in the health facility through transportation and enlightening the husbands on the importance giving permission to women to go to the health facility anytime if there is the need. Issues where raised during the implementation like some health facilities are not providing the needful services while in some communities women still prefer to give birth in hands of Traditional Birth Attendants than going to the health facility. It is quite imperative to understand how its implementation had brought difference in maternal health. The Rapid Awareness Raising programme in Kano State had been completed; the study therefore sought to find out how (RAR) had brought or otherwise Community Based Maternal Health Improvements for women in the targeted communities.

1.3 Objectives of the Study

The objectives of the study are to:

1. Examine the difference on knowledge of maternal danger signs of women in targeted communities before and after Rapid Awareness Raising programme implementation in Kano State.
2. Determine the difference on access to maternal health facilities of women in the targeted communities before and after Rapid Awareness Raising programme implementation in Kano state.
3. Determine the difference on the number of facility delivery of women in targeted communities before and after Rapid Awareness Raising programme implementation in Kano State.

4. Examine the difference on husbands' permission for women to seek health care services in targeted communities before and after Rapid Awareness Raising programme implementation in Kano State.
5. Determine the difference on maternal mortality of women in targeted communities before and after Rapid Awareness Raising programme implementation in Kano State

1.4 Research Hypotheses

The following hypotheses were tested at 0.05 in the study:

1. There is no significant difference on knowledge of maternal danger signs of women among the targeted communities before and after Rapid Awareness Raising programme implementation in Kano State.
2. There is no significant difference on access to maternal health facilities of women among targeted communities before and after Rapid Awareness Raising programme implementation in Kano State.
3. There is no significant difference on mode of facility delivery of women among targeted communities before and after Rapid Awareness Raising programme implementation in Kano States.
4. There is no significant difference on Husbands permission for women to seek health care among targeted communities before and after Rapid Awareness Raising programme implementation in Kano State.

5. There is no significant difference on maternal mortality of women among the targeted communities before and after Rapid Awareness Raising programme implementation in Kano state.

1.5 Significance of the Study

The significance of this study is obvious considering the way community will benefit through the training of its members who were involved as major stakeholders in maternal health improvements and how they made impact on the lives of women in the community. The communities will be of great help because all the members of the community will be enlightened about maternal health and will be ready to support towards ensuring the absolute reduction of maternal mortality in the community. It is believed that the findings of this study is of enormous importance on the part of policy makers who will the need to develop a system of involving community members in enacting policies on maternal health and recognize that members of the community have a role to play in maternal health improvement that will ensure voice and accountability of health facility within their domain. Equally the study will stimulate the policy makers to come up with a community based maternal health policy that will ensure the involvement of the community members in maternal health issues and management of health facility

The findings also provide empirical evidences to the academics that will make further researches on the involvement of the members of the community in maternal health improvements as well as to come up with similar interventions like Rapid Awareness Raising to other communities and local government Much as it will also serve as good resource materials for students and researchers in Community and Health

development, community development, adult and non-formal education, social work amongst others.

The findings will also be of enormous importance the medical practitioners who will also benefit from the involvement of communities as partners in progress and ensure the effective management of human and equipment and also ensure harmonious relationship between the community and health facility.

Above all, the findings provide empirical evidence to the practitioners on the importance of involving community members in maternal health and serves as avenue to further research on Community Based maternal Health improvement besides the drug or health aspects.

1.6 Scope and Delimitation of the Study

This study assessed Rapid Awareness Raising programme for Community Based Maternal Health Improvements in Kano State. It therefore covers maternal health improvements issues of knowledge of maternal danger signs, access, facility delivery, and husbands giving permissions to their wives to access health care. The study was therefore delimited to four urban communities in four Local Government Areas where the Rapid Awareness Raising (RAR) programme was implemented. These include: Nassarawa, Wudil, Dawakin Kudu and Garko. However, the study was carried out only in the selected Local Government Areas. The choice of these areas were based on the fact that the RAR programme was only implemented in those specific Local Government Areas.

1.7 Operational Definitions of Terms: For the purpose of clarity, the key words of this study have been operationally defined as follows:

Community Based Maternal Health: is an approach or strategy in which community members through interaction and consensus agree on what and how to do in the implementation of maternal health of their members.

Maternal Health Improvements: is the process of enhancing the wellbeing of pregnant women during pregnancy, delivery and within forty days after delivery.

Maternal Mortality: is defined as the death of a woman while pregnant or within 42 days of a termination of a pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental and incidental causes.

Maternal Morbidity: is pregnancy and childbirth related illness and injury.

Rapid Awareness Raising: is a community based strategy whereby people are educated on how to support pregnant women through various activities of ensuring safe motherhood and covers awareness raising programme implemented from 2007 to 2013 in Kano State.

Maternal danger signs: are any of the nine signs that portrays a danger when a woman is either pregnant, during delivery or within fourty days of delivery such as; severe headache, swollen of feet, hands and or face, fitting, severe bleeding, high fever, prolong labour lasting for more than 12hours, Hands, foot, buttocks or cord comes first, placenta didn't come out after 30 minutes of delivery, severe abdominal pain.

Facility delivery: is any delivery that was done in a health facility under the guidance of trained health personnel.

CHAPTER TWO
REVIEW OF RELATED LITERATURE

This chapter presents the review of literature related to the study under the following headings: Theoretical framework, Maternal health, community maternal health improvement issues: access to health facility, Knowledge of maternal danger signs, community emergency transport scheme, facility delivery, traditional birth attendant and delivery, Midwives Service Scheme, Challenges of maternal health improvements in Nigeria; Awareness raising as a framework for maternal health improvements; awareness raising, maternal health and community development; Nigeria health institutional set up and reproductive health policy; Summary and Uniqueness of the study.

2.1. Theoretical Framework.

The study is based on Health seeking Behaviour Theory developed by Ronald Andersen. Determinants for use of maternal health care is therefore analysed by applying the behavioral model proposed by Anderson which seeks to account for and predict the use of health services by individuals. According to the model, health services utilization is dependent on the interaction between individual traits, population characteristics, and the surrounding environment. Andersen proposed that the relevant factors can be grouped into three main categories: individual's predisposition to use medical services; enabling or impeding circumstances (such as infrastructure); and the need for health care. Thus predisposing characteristics are related to demographic elements and social structure, including age, gender, residence, occupation, education, ethnicity, and attitudes toward health. Enabling elements consist of community factors that affect the availability and accessibility of health care, and personal factors such as knowing how to take advantage

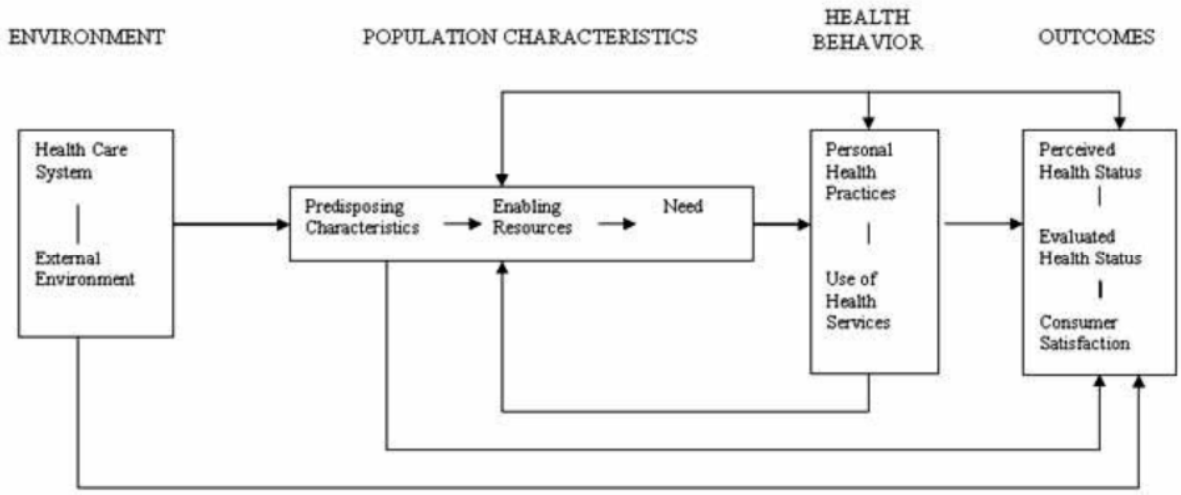
of what is offered. Finally, characteristics associated with need include types of illness, perceived health status, and expected outcome of treatment. In the context of this research, "need" refers to an informant's perceived need of maternal health care. Most theoretical models view health care-seeking behavior as a result of rational individual choice. As such, they have been criticized for giving inadequate attention to the social context within which actions are taken by individuals (Zadoroznyj, 1999). The purpose of this framework is to discover conditions that either facilitate or impede utilization of the strategy. The goal being, to develop a behavioral model that provides measures of access to medical care. The framework was first developed in 1960s and has since gone through four phases. Developed in the 1990s, the framework below represents the fourth phase. An individual's access to and use of health services is considered to be a function of three characteristics:

1) Predisposing Factors: The socio-cultural characteristics of individuals that exist prior to their illness. Social Structure: Education, occupation, ethnicity, social networks, social interactions, and culture. Health Beliefs: Attitudes, values, and knowledge that people have concerning and towards the health care system, Demographic: Age and Gender (Andersen, 1995)

2) Enabling Factors: The logistical aspects of obtaining care. Personal/Family: The means and know how to access health services, income, health insurance, a regular source of care, travel, extent and quality of social relationships Community: Available health personnel and facilities, and waiting time, possible additions: Genetic factors and psychological characteristics(Andersen, 1995)

3) Need Factors: The most immediate cause of health service use, from functional and health problems that generate the need for health care services. Perceived need will better help to understand care-seeking and adherence to a medical regimen, while evaluated need will be more closely related to the kind and amount of treatment that will be provided after a patient has presented to a medical care provider. (Andersen, 1995)

Perceived: "How people view their own general health and functional state, as well as how they experience symptoms of illness, pain, and worries about their health and whether or not they judge their problems to be of sufficient importance and magnitude to seek professional help."(Andersen,1995)



Andersen, 1995

The relevance of this theoretical framework to the study is the fact that an individual's access to and use of health services is considered to be a function of three characteristics: predisposing factors, enabling factors and need factors and this study is centred on community as the rallying point for maternal health improvements which shows if members of the community are empowered or educated with the best practices on maternal health then every member of the community will be an ambassador of

maternal health and it shows how members of the community can own and sustain maternal health issues even after the project or programmes. All the three factors that the theoretical framework focused on are community based which shows that when communities are empowered they can give and assist one another in accessing health facility and towards behavior modification or change.

2.2 The Concept of Health

In an attempt to operationalize health with universal appeal, the World Health Organization (WHO) has defined health as a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity (Jegede, 2010). Although this definition has been widely adopted, a number of scholars still identify some limitations with it. For example, Badru (2003) has noted that there is a problem of identifying and actually observing such abstract notion as mental and social wellbeing, even though the physical dimension can be subjected to some measurement. In other words, can anyone fulfill all the conditions of health? Similarly, Asakitikpi (2007) also pointed out the neglect of the spiritual dimension of health especially as it pertains to African societies.

It has been observed that most health issues and death in the African society are attributed to spiritual causes (Mensah, 2008). An increasing number of researches have been published within the last 20 years and reviews have examined the connections between spirituality-religiosity, health and quality of life and its potential to prevent, heal, or cope with diseases (Koenig, Larson and Larson 2001). Religion and spiritualism are very much alive in Africa, and their influence on health and illness cannot be overlooked

in contemporary African societies, since notions of illness causation and healing span the physical and spiritual domains (Mensha, 2008).

Therefore, as noted by Idowu and Asakitikpi (2008), the pervasiveness of spirituality in the lives of an average Nigerian and the belief that the supernatural world has profound influence on the physical being, definition of health may not be complete without recourse to it. In a slightly different view in, Nwabuaze (2003) refers to a healthy condition as being sound in body, mind or spirit. Health is a situation of being free from physical disease or pain or mental disorder or freedom from emotional or spiritual drudgery this definition has therefore gone further to include spirituality as an important element in defining concept of health. According to Badru (2003), patterns of health and disease vary from one society to the other. Besides, peoples' perception and definition of ill health and disease vary according to their cultural practices, educational attainment and religious experiences, among others. For instance, as observed by Akintunde (2006), among the Yoruba in Western Nigeria, it is true that "*alafia lo ju, ileraloro, eniti o nialaafia lo niohungbogbo"* (health is paramount, health is wealth, whoever is in good health has everything).

The absence of good health is illness and illness is understood in three particular ways. First, it is natural or physical, such as poisoning, pain and so on. Second, it is supernatural or spiritual, including attacks by witches or wizards. Third, it is mystical, which attributed to spirits, divinities, or ancestors for punishment of offences against them. Therefore, to better understand the concept of health, Jegede (2010) claimed that for the WHO definition to be comprehensive and acceptable there must be maintenance of body balance, physical and emotional balance, cultural and political balance, and

spiritual and ideological balance. In this sense, disease is a threat to harmonious functioning of the body system (Akande & Owoyemi, 2009).

2.3 Maternal Health

Maternal health is defined by WHO as the "physical wellbeing of a mother during pregnancy, childbirth and postpartum" (WHO, 2010). Maternal health includes prenatal care and postnatal care of the mother and of the child up to the age of five years (Fadeyi, 2007). Many biological, economic, social, and cultural factors such as poverty, malnutrition, working condition, child marriage and gender inequities may compromise the health of pregnant women (Graczyk, 2007). Scholars such as Ufford and Menkiti (2001) and Lanre-Abass (2008), have identified early childbearing, cultural, logistical, and poverty, as a multifaceted condition that has many dimensions. Among the dimensions are poor access to public services and infrastructure, unsanitary environmental surrounding, illiteracy and ignorance, poor health, insecurity, viocelessness and social exclusion, as well as household income and food insecurity are life-shortening which can also increase a woman's risk of dying in the process of reproduction. Lule, *et al* (2005) have also noted that a woman's age, her ability to use reproductive health care services effectively, and general health status, including nutrition contribute to poor maternal health. The World Health Organization (WHO) has noted that there is an urgent need for programmes that address the health and safety of pregnant adolescents and the need to teach young women the skills to build a successful future.

The United States Agency for International Development (USAID) has also identified critical factors for improving adolescent maternal health: encouraging young women to use prenatal care to identify and treat malaria, anemia, and other health issues;

providing obstetric care to ensure safe delivery for young mothers and their infants; and postnatal care to identify post-partum health issues, provide newborn care and offer contraception to accomplish birth spacing (Graczyk, 2007). These factors are also applicable to all women during pregnancy. Providing quality reproductive health services enables women to balance safe childbearing with other aspects of their lives and, it also helps protect them from health risks, facilitates their social participation, including employment, and allows girls to continue and complete their schooling (UNFPA, 2000).

Ensuring reproductive health does not only involve provision of modern quality health services and attendance to the same, but also personal health consciousness during pregnancy. While some scholars and writers have advocated for the availability of basic comprehensive and formal obstetric and gynecological care in order to substantially reduce the incidence of maternal mortality, other researchers have found out that even when formal skilled care is available, women may not seek or receive it. This is especially so in countries such as Nigeria where informal and formal healthcare services coexist and are viewed as veritable options for reproductive healthcare (Izugbara & Ukwayi, 2004). Also, Orubuloye and Oni (1996) identified patent medicine stores where personal relationships between the customers and owners of the medical stores, free consultancy and flexible pricing, serve as the alternative source of care for many.

The importance of starting prenatal care as early as possible, even before pregnancy was emphasized by Ben-joseph (2007), even though this may not always be possible or practicable. The sooner healthy lifestyles begin in pregnancy, the better the chances of ensuring the mother's health and that of the baby. The ideal requirement is that, prenatal care should start before the pregnancy. It is necessary for a woman to get

ready for pregnancy, to consult a health care provider for a complete checkup to make sure she is in good health. Healthy lifestyles contribute both to the general health of pregnant women and to that of their babies. For the baby's sake and that of the mother, it is important for a woman to take good care of herself during pregnancy. For example, as noted by Ben-joseph (2007), because abnormal level of glucose increases the risk of birth defects and other complications, it is advisable that women with diabetes must always be conscious of keeping their blood glucose level under control, both before and after conception. Additionally women should strive to maintain a nourishing and varied diet not only from the earliest days of their pregnancy, but before they are pregnant. A balanced, nutritious diet is an important aspect of a healthy pregnancy. If the woman is healthy, balancing carbohydrate, fat, and proteins, and eating a variety of fruits and vegetables will usually ensure good nutrition. Now that a pregnant woman is eating for two (or more), this is not the time to cut calories or go on diet. In fact, it is just the opposite; a pregnant woman needs about 300 extra calories a day, especially later in pregnancy when the baby grows quickly. If the woman is very thin or carrying twins, she needs even more. But if she is overweight, the health care provider may advise that she consumes fewer extra calories (Gavin 2005, Ben-joseeph, 2007, Henry, 2007).

Achieving maternal health is multifaceted and all efforts must be geared towards the reduction of the alarming rate of maternal health complications in Africa. Ninety nine percent (99%) of the estimated figure for maternal deaths worldwide occurs in developing countries (WHO, 2008), with an estimated 265,000 maternal deaths occurring in sub-Saharan Africa, and 840/100,000 live births in Nigeria (World Bank, 2011; UNICEF, 2015). In view of the above maternal health issues should be the responsibility

of all and all hands must be on deck towards ensuring maternal health improvements in our communities. Members of the community should be enlightened on all what constitutes problems to the pregnant women as such there will be vanguards for maternal health in our communities.

2.4 Nigeria Health Institutional Setup and Reproductive Health Policy

The health sector in Nigeria has witnessed several policy and institutional reforms, aimed at improving the health care delivery system, particularly since the enunciation of the National Health Policy and Strategy to achieve health for all Nigerians (NHP) in 1988 (Aregbeyen, 2001). Many of the health care programmes aimed at reducing morbidity and mortality, conceived during the eighties under the influence of the "trickle down" development philosophy and even recent years, appear to have made little or no impact in reducing mortality levels (HERFON, 2006). Importantly, the issue of women's health did not attract much attention (both in health polices and in health research) until in the recent time (Aina, 2012). Efforts had been largely fragmented and had not taken into good account the interdependency of the different stages of life. For a long time, health research (especially in the area of maternal and child health) in Nigeria focused more on child health at the neglect of the woman's health. Even when the health of the woman is targeted, it remained at the level of reproductive health with particular emphasis on family planning. At the level of policy, the Nigeria's health policies since 1946 showed that the focus was largely on the provision of capital intensive facilities (e.g. hospital infrastructures), and physical-oriented curative services (Aina, 2012).

Hence, the country recognized the need for reforms to address the interrelated health problems. The goal of the revised National Health Policy (NHP) is to establish a

comprehensive health care system, based on primary health care that is protective, preventive, restorative and rehabilitative to every citizen of the country, within the available resources (Federal Ministry of Health, 2004). The response of the Nigeria government to gender issues in the health sector culminated into a plethora of policies. Notably, to meet the goals and the targets of the MDG goals. The NHP places emphasis, as part of its implementation on the provision of comprehensive maternal and child health (MCH) services with the objective of reducing maternal morbidity due to pregnancy and childbirth by 50% (Soyibo, 2005; FMH, 2004). Some of the policies include, the provisions of the National Reproductive Health Policy and Strategy of 2001, the National Policy on HIV/AIDS, 2003, the National Health Policy and Strategy, 1998 and 2004. Also, National Policy on Women, 2000 and 2004, National Policy on the Elimination of Female Genital Mutilation, 1998 and 2002, the National Adolescent Health Policy, 1995, National Policy on Maternal and Child Health, 1994, and the National Policy on Population for Development, Unity, Progress and Self-reliance, 1988 and 2004, constitute the key policy frameworks that seek to achieve quality reproductive and sexual health for all Nigerians (Ladan, 2006).

These efforts, according to Aregbeyan 2001, have in essence been a vindication of government's readiness to demonstrate its real commitment to the attainment of the desired goals of a level of health that would enable all Nigerians to achieve socially and economically productive lives. Despite the efforts listed above, maternal health statistics still appear shocking. In all the states, several challenges in policy evolution with respect to maternal health remain (Okonofua, 2010). As emphasized by Osungade and Ige (2011), there are deficient policy guidelines and implementation at macro-and micro

health system level. These include the lack of purposefully designed strategic plans for implementing maternal health care, inadequate budgetary allocation to health and to maternal health, inadequate financial allocation for the implementation of free maternal health care, lack of appropriate monitoring and evaluation mechanisms, and the absence of data collection procedures for maternal health indicators (Okonofua, 2010). In addition, health policy development is usually not evidence based. This is because policy makers are often poorly informed of, and insufficiently involved in the use of research in policy development (Osungade & Ige, 2011).

Findings by Cockerham and Scamber (2010), have established the importance of social environment as a health determinant, shifting the focus away from the medical, individualistic, and problem-oriented approach to a population-level view of health. At such a level of analysis, individual differences in health do not appear to be random, but rather to be patterned by socio-economic status. According to the World Bank as cited by Aregbeyen (2001), the essential elements for creating an enabling environment 34 for better health, especially in developing countries such as Nigeria, include among others the following human basic needs input: safe water and sanitation, food, security and nutrition, health care, especially primary health care, education especially that of women, purchasing power, decent housing, family planning and cultural considerations. Scholars have therefore come to recommend that, to truly address health inequalities, policy agendas will have to tackle not only the social determinants of health, but also the determinants of social inequality that shape the myriad ways in which social advantage cumulates over the life course and across generation (Cockerham & Scamber, 2010).

Nnamuchi (2007) opined that one of the major criticisms against health system governance in Nigeria is a lack of coordinated response to critical health sector needs.

For instance, according to Koblinsky, Campbell and Heichelheim (1999) the medical interventions for specific maternal complications that are needed to address maternal mortality are well understood; however, less clear is how to create the enabling health systems and policy environments to implement these interventions. Needless duplication of efforts in the past has led to redundancy and waste of resources that could have yielded greater dividend had they been employed elsewhere (Nnamuchi, 2007). Lule*et al*, (2005) affirmed that even when technical interventions are available and in place, maternal mortality levels may not fall proportionately, indicating the influence of the broader environment of health systems and policy on the delivery of health services. "Perhaps the enormity of the challenges was the impetus for the surge in the number of health-related agencies and programmes but rather than quality output, the result was overlapping functions and stagnation" (Nnamuchi, 2007).

According to the United Nations (1996), population policies and legislation have a major role to play in the creation of a supportive environment for reproductive health and maternal health. Many countries with high maternal mortality lack appropriate policies to improve education, health, transport, and energy sectors (Lule*et al*, 2005). The reproductive health and family planning programmes are usually a major component of national population policies and strategies. Strengthening their links will make them mutually supportive and thus enable national programmes to better satisfy 35 unmet demands through the delivery of high quality reproductive health and family planning services (United Nations, 1996). Countries face a pressing need for national-level policies

that improve the functioning of health systems as a whole and that foster multi-sectoral linkages among the ministries of health, education, social protection, and transport (Lule*et al*, 2005).

Health policy must be focused on the determinants of health. Ministries and government agencies must be involved in the implementation as an integral to creating equity in health. As such, government policy that is not only focused on reduction of maternal mortality, but on the equity of health care for all, will translate not only into the presence of frontline providers close to women's home, where most births occurred, but also into support infrastructure for these providers that include the capability to manage and refer complications. Another setback that is noticeable to Nigeria health system is what is observed in Kickbusch (2006) the majority of policy makers continue to frame health in terms of expenditure and consumption of healthcare services. Very few institutions and funding programmes clearly differentiate between programmes that focus on health and its determinants and those that focus on healthcare.

Much more attention should be given to the individual situation of a pregnant woman and her family. Banerji in Kowalewski, Jahn, and Kimatta (2000) emphasized the identification of overlapping areas between professional and community perception of health needs as most important, because interventions in the overlapping area are much more likely to be accepted and to succeed. In this context, the identification of community perceived dangers in pregnancy and childbirth gains importance and provides the starting point for the development of appropriate individual delivery plans as suggested in the mother-baby package of WHO (Kowalewski, Jahn, & Kimatta 2000).

According to the findings by Izugbara and Ukwayi (2004), women and girls are aware of the need for good reproductive health. They seem able to recognize illness signs and seek cures from providers viewed as capable of managing their conditions. Women's ability to recognize signs and symptoms of illness conditions is a useful resource to be harnessed for the effective integration of these segments of populations into current health-schemes and in efforts to foster positive health orientation. However, political will is needed to ensure the sustainable and proper blending together of these components, their delivery in culturally-acceptable doses, and the development of frameworks for delivery that meet constantly evolving needs. Policies should be oriented to meet the specific needs of individuals particularly those belonging to the vulnerable social groups.

2.5 Community Maternal Health Improvements Issues

2.5.1 Access to Health Facility

Geographical distance and considerable travel times to health facilities are influential factors affecting women's delivery locations (Afsana, 2004).In contrast to the perceived inaccessibility of facilities, the accessibility of traditional practitioners may validate a woman's decision to deliver at home. Likewise, limited availability of transportation options played a crucial role in whether or not a facility could be reached in a timely manner (Story, Burgard, Lori, Taleb, Ali, & Hoque, 2011).

In the absence of a reliable private car or ambulance, women used arduous modes of transportation including bicycle, rickshaw, or public transportation. In some areas, local public transportation was the only means available, but services were often Long distances to health facilities, difficult terrain and the absence of affordable transport options are major challenges for remote, rural communities in the north of Nigeria.

Efforts to transfer pregnant women with complications commonly fail where transport is not available, where money cannot be found to pay for it, or where seasonal factors make the terrain impassable. Lack of security in general or at night adds a further challenging dimension. All these factors can result in long delays in women reaching vital health care. Getting timely help when a maternal emergency occurs is vital.

The estimated average interval between onset of an obstetric complication and death in the absence of medical intervention is just two hours in the case of a post-partum haemorrhage (bleeding after delivery), 12 hours for an antepartum haemorrhage (bleeding after 24 weeks of pregnancy and before delivery), and one day for a ruptured uterus. Hence, some modes of transport, such as oxen and carts or bicycles, may be too slow to use in addition to being uncomfortable. In too many cases, the lack of suitable transport options for women suffering a maternal complication has tragic consequences intermittent in rural areas and the cost of transportation was prohibitively expensive. Travel at night or on weekends is especially difficult as there are fewer options and higher costs.

Furthermore, health facilities may be closed or lack appropriate personnel to manage a delivery or complications at night (Titaley, Hunter, Dibley, & Heywood, 2010). Lack of access to transportation, good roads, adequate funds, and communication systems also make organizing referrals for obstetric complications a time-consuming process. Darmstadt (2005) is of the opinion that accessibility of health services has been shown to be an important determinant of utilization of health services in developing countries. In most rural areas in Africa, one in three women lives more than five kilometers from the nearest health facility (World Bank, 2002). The scarcity of vehicles, especially in remote

areas, and poor road conditions can make it extremely difficult for women to reach even relatively nearby facilities. Walking is the primary mode of transportation, even for women in labor (World Bank, 2002). Addai (2000) stated that women in higher socioeconomic groups tend to exhibit patterns of more frequent use of maternal health services than women in the lower socioeconomic groups. Factors such as education appear to be important mediator.

Another important factor in the utilization of maternity care services, especially in Africa, is the cultural background of the woman. The cultural perspective on the use of maternal health services suggests that medical need is determined not only by the presence of physical disease but also by cultural perception of illness (Addai, 2000). In most African rural communities, maternal health services co-exist with indigenous health care services; therefore, women must choose between the options (Addai, 2000). The use of modern health services in such a context is often influenced by individual perceptions of the efficacy of modern health services and the religious beliefs of individual women (World Bank, 2002).

World Health Organization (WHO) contends that the immediate cause of maternal deaths is the absence, inadequacy or underutilization of the healthcare system (WHO, 2004, 2007). Maternal health care services are underutilized particularly among those who are in the greatest need despite the fact that they are available in most of the hospitals in Nigeria, though each hospital operates according to its own rules, regulations, policy and conditions of services depending on the available resources. Mothers are expected to seek maternal health care before, during and after delivery in the hospital, but it was observed that a low number of women came to the hospital to fully utilize these

services in the study setting despite the beneficial impact. The study was planned to explore awareness and barriers to utilization of these services among reproductive women in Nigeria. Quality of care is an important consideration in the decision to seek care. The study found that where potential patients have access to more than one facility, their perception of the quality of care offered at these facilities often takes precedence over concerns about distance.

This is also illustrated in a study in Guatemala highlands where it was found that government health posts seemed to be conveniently located, yet that proximity did not guarantee utilization, probably because the facilities were understaffed and underequipped and thus, unable to provide quality care. Distance here, may not necessarily be restricted to mean physical separation, but may as well be seen as cost or in terms of social relations perhaps with the health workers. The findings of this study are not in conformity with that assertion since the respondents are not concerned with the quality of care but distance to health facility, lack of money and cultural influence hindering utilization (Yar'zever & Said, 2013).

Okeibunor, Onyeneho and Okonofua (2010) highlighted Policy and Programs for Reducing Maternal Mortality in Enugu State, Nigeria Using in-depth and key informant interviews, and review of literature on maternal health in Enugu State, this study focused on describing and analyzing the extent to which the State government is committed to reducing maternal mortality ratio (MMR) in the State. The results revealed that the reported MMR of about 1,400/100,000 live-births in the State is attributable to preventable medical causes, and is fueled by socio-cultural factors, including poor access to skilled medical personnel. In response to the challenges of high MMR in the State, the

Enugu State government initiated a policy on free maternal and child health (FMCH) care in 2007, as a flagship of its maternal health programmes. The FMCH provides free medical, antenatal, delivery and post-natal care for poor women and children in primary and secondary hospitals, and those referred to tertiary hospitals in the State. However, the ratio of doctors to pregnant women in the State (1:1,581) remains abysmally low. Funding of the FMCH also remains inadequate as Local Government Councils (LGCs) demonstrate weak commitment to making contributions to the FMCH programme. My position is that access to maternal health constitutes a serious threat and distance and inadequate and qualified staff poses such threats and if government can sensitize the community to understand the issues there will be serious improvements in maternal health.

2.5.2 Knowledge of Maternal danger signs

Okereke, Aradeon, Akerele, Tanko, Yisa and Obonyo (2013) examined the Knowledge of safe motherhood among women in rural communities in northern Nigeria: implications for maternal mortality reduction. This study found generally poor knowledge about safe motherhood practices among female respondents within selected rural communities in northern Nigeria. Knowledge of safe pregnancy practices among some women in rural communities is strongly associated with attendance at ANC visits, being employed or acquiring some level of education. Increasing knowledge about safe motherhood practices should translate into safer pregnancy outcomes and subsequently lead to lower maternal mortality across the developing world. Over 90% of respondents in both states showed poor knowledge of the benefits of health facility delivery by a skilled birth attendant. More than 80% of respondents in both states displayed poor

knowledge of the benefits of ANC visits. More than half of the respondents across both states had poor knowledge of maternal danger signs. According to multivariate regression analysis, ever attending school by a respondent increased the likelihood of knowing maternal danger signs by threefold (OR 2.63, 95% CI: 1.2-5.8) among respondents in Kaduna State.

While attendance at ANC visits during most recent pregnancy increased the likelihood of knowing maternal danger signs by twofold among respondents in Kano State (OR 2.05, 95% CI: 1.1-3.9) and threefold among respondents in Kaduna State (OR 3.33, 95% CI: 1.6-7.2) This was a cross-sectional study carried out in two states (Kaduna and Kano States) within northern Nigeria. Pretested, interviewer-administered questionnaires were applied by female data collectors to 540 randomly selected women who had recently delivered within the study site. Chi-square tests were used to determine possible association between variables during bivariate analysis. Variables significant in the bivariate analysis were subsequently entered into a multivariate logistic regression analysis. The degree of association was estimated by odds ratio (OR) and 95% confidence interval (CI) between knowledge of maternal danger signs and independent socio-demographic as well as obstetric history variables which indicated significance at $p< 0.05$.

Age at marriage plays a significant role in knowledge of maternal health services and the age in which girls are given out in marriage is an important determinant of their future lives and health. In rural Kano, early marriage is a rule rather than exception. The respondents were asked about age at first marriage. 3.4% and75% of urban and rural respondents married at less than 18years of age while the remaining 96.7% of urban

respondents married 18 years and above as against 25% of rural respondents. It shows that ages 12 – 17years are the prime age of marriage for girls in rural areas in the study area while urban areas 18 years and above is the ideal age. This implies that under normal circumstances, all girls could be married, between the ages of 12 to 17 years in the rural areas. This is in agreement with other studies that show young pregnant women are eager to attend maternal health services in fear of obstetric complications as compared with older women that might be used to procedure of child delivery (Chiwuzie & Okolocha, 2001; Audu & Ekele, 2002). For women aged 15 to 19 years in Africa, delivery is the leading cause of death through Obstructed and Prolonged Labor making a woman unable to give birth vaginally due to malpresentation of the fetus, cephalopelvic disproportion, or other reasons and mostly affects the poor (Maternal health Brief, 2010).

Most women in Nigeria generally have no option of a cesarean section birth to avoid potential injury or death for themselves and the fetus. Yet throughout much of the developing world, women do not have free access to physicians, especially physicians trained to deal with obstructed labor. Obstructed labor can lead to uterine rupture, vaginal tears, the formation of an obstetric fistula, and fetal asphyxia.

The incontinence of urine (and sometimes feces) caused by a fistula can produce a foul odor and lead to feelings of shame or humiliation. Other injuries that can be caused by prolonged obstructed labor include renal failure, pelvic inflammatory disease, infertility, and neurological injuries, including a condition called foot drop caused by nerve damage to the lower spine (Maternal health Brief, 2010). Parity at one to two children shows the respondents with 16.2% of urban and 14.6% of rural. It shows 84.0% of urban respondents had six children and below compared to 71.8% of rural respondents,

the remaining 16% of urban and 28.2% of rural had seven and above children. Due to early marriage respondents are exposed to early sexual life and prolong fertility causing high parity and exposure to obstetric complications. There is no match difference in terms of number of children between urban and rural area in the study area, this has proved the relevance of child birth and children in the study area in agreement with previous studies in Northern Nigeria which shows preference for large family for different reasons (Adamu, 2003; Galadanci, 2011). There was a statistically significant association between age at marriage, parity and husband's income score ($p = 0.005$) for both urban and rural with knowledge and utilization of maternal health services: showing increasing utilization of maternal health services among younger women, low parity women and women with high income husbands.

It is important here to note that observation by Abayomi (2013) that change in attitude is peculiar to all individuals that desired it and members in a group setting respond to treatment and goals as one. A study by Olayinka, Amos and Chiedu (2013) have found out that that level of education is a significant predictor to utilization of maternal health care services. This is in line with Wong et al. (2004) that the higher the educational level and experience, the more likely the utilization of health care. In other words educated women are more likely to use maternal health care services than women with no formal education (Addai, 2000; Mekonnen & Asnaketch, 2002). Studies have shown that younger mothers are more likely to deliver in health facilities than their older counterparts. Furthermore, the study also revealed a significant negative association between parity and utilization of maternal health care services. This corroborates the

finding of Kebebe et al. (2012) that women in a larger household are less likely to deliver at health facilities.

Yar'zever and Said (2013), study examined Knowledge and Barriers In Utilization of Maternal Health Care Services In Kano State, Northern Nigeria This study found a high percentage of urban and rural having good knowledge of maternal health services. Findings also revealed that both urban and rural respondents have a good knowledge of the range of services offered in health facilities in Kano state. The purpose of the study was to explore knowledge and utilization of maternal health care services among married women in Kano state. Specifically, we investigated the link between knowledge of maternal health services and utilization of maternal health care services. Antenatal care is considered a key entry point for pregnant women to receive a broad range of health promotion and disease preventive services (Becker et al, 1993; Adamu et al, 2003). In this era of HIV/AIDS, it provides an opportunity for prevention of mother to child infection and promotes use of skilled assistance at delivery. Despite the benefits of ANC visit, majority of pregnant women in Kano do not seek antenatal care. This could be due to their low social status and the fact that many of them are influenced by cultural and religion misconceptions (Sunil et al, 2006; Advocacy Brief, 2007).

Urban areas are usually characterized by better use of maternal health services, given their infrastructural advantages compared to rural areas. Results from this study confirm this advantage, but with no statistical significance. Antenatal care is free in Kano and Nigeria in general (Abuser, 2006), therefore rural and urban women have an almost equal opportunity of getting the services thus explaining the observed weak relationship. Women from rich households seek antenatal care more than those from poor households.

The study shows social status and distance are barriers to seeking antenatal care especially among poor women who cannot access free government health facilities or transportation fee to health facilities; rich women have other advantages such as access to information. This association has been confirmed elsewhere where low socioeconomic status and under-utilization of maternal health services were found to be interlinked (Hounton etal, 2008; Igberase & Ebeigbe, 2006). Women with formal education were seen to receive antenatal care services more than those without education. The first possible explanation is the fact that the proportion of women with no education is low compared to that of women with formal education. Less education is associated with increased chances of early marriage, which is likely to provide access to health care services geared towards married women.

In their study, Ujah et al, (2004) found that women with less education have a reduced risk of neonatal mortality due to benefits associated with family formations. The effect of residence was evident with urban women receiving ANC more compared to women from rural areas. This residence advantage could be due to traditional beliefs and cultural practices specific to the different groups making urban women assumed that they benefit from the flow of information on the benefits of ANC (Ejembi et al, 2004; Galadanci et al, 2011).

The study also confirms findings in other studies that higher parity women are less likely to attend antenatalcare (Glei et al, 2003; Lambo, 2003). Women aged 20-24 were shown to receive antenatal care more than older groups although this difference was not statistically significant. This could be due to the fact that there are no major differences between women aged 14-17 and 20-24. Women with 1 to 3 children receive

antenatal care more than those with high parity 4 – 7 children. This advantage could be due to the support married women receive from husbands, and the health delivery system that tends to favor younger married women over older married women (Simkhada et al, 2008). Findings reveal that 44.2% of the young women use skilled professional assistance at hospital during delivery as against 32.1% of older women. This finding supports those of several studies which confirmed that younger women beginning child bearing tend to fear home deliveries as they consider themselves ahigh risk group. As a result, such young women seek professional assistance from skilled professionals in hospitals (Filippi et al, 2009; Rööst et al, 2004). Considering the higher risks young women face during pregnancy and childbirth, the results of this study cannot be interpreted to mean that young women are better users of skilled professional assistance.

It is estimated that maternal deaths during birth are 2-4 times higher among young women, and babies born to them have a higher risk of death during the neonatal period due to low birth weight, compared to older women (Adetoro et al, 2007; Adamu & Salihu, 2002). One of the reasons that have often been advanced for the lower coverage of skilled and institutional delivery compared to antenatal care coverage is the unpredictable nature of the onset of labour in the face of difficulty in accessing health facilities in resource-poor environments especially rural areas(AbouZahr & Wardlaw, 2001; Ladipo, 2006). Many rural communities in sub-Saharan Africa are examples of such environments, with the characteristic poor road networks, limited transportation means and underserved population in terms of health facilities.

Maternal mortality in resource poor nations has been attributed to three delays: delay in deciding to seek care, delay in reaching to seek care on time, and delay in

receiving adequate treatment. Among all, the major cause of first delay is lack of awareness about obstetric danger signs to decide to seek care among mothers and community (Mbizvo &. Say, 2012).These danger signs are not the actual obstetric complications but symptoms that are easily identified by the mother herself and nonclinical personnel. They are danger signs like severe vaginal bleeding, severe headache, preterm labour, rupture of membrane before onset of labour epigastric pain, severe abdominal pain, prolonged labour (>12 hours), convulsions and retained placenta, foul-smelling vaginal discharge, and fever which probably occur during phases of pregnancy. Women's knowledge about danger signs of obstetric complications is profoundly important to enhance utilization of skilled care during delivery and to seek emergency obstetric services. Lack of information on the warning signs of complications during pregnancy, parturition, and postpartum period hampers women's ability to partake fully in safe motherhood initiatives. As awareness of danger signs of obstetric complications is the essential first step in accepting appropriate and timely referral to obstetric care, it is very important that women and their families should have knowledge regarding danger signs of obstetric complications to enable them to respond appropriately (Niki´ema, Beninguisse, & Haggerty, 2009).

Danger signs of pregnancies are warning signs that women encounter during pregnancy, child birth and postpartum. It is important, to know this warning signs for women and health care providers to rule out serious complications and initiate treatment immediately. The most common danger signs during pregnancy that can increase the risk of maternal deaths are: vaginal bleeding, convulsions/fits, high fever, abdominal pain, severe headaches, blurred vision, absence of fetal movements, gush of fluid from vagina,

foul smelling vaginal discharge (Kabakyeng, Ostergre, Turyakira &, Pettersson, 2011) Insufficient knowledge about danger signs of pregnancy among women, families, and birth attendants in developing world is one of the major contributing factors for maternal deaths (Wajid , Rashid, & Mohammad, 2010).

Amenu, Mulaw, Seyoum, and Bayu (2014) assessed knowledge about danger signs of obstetric complications and associated factors among postnatal mothers found out that 55.1% participants were knowledgeable about danger signs of obstetric complications. Maternal and husband educational level ((AOR = 1.977, 95% CI: 1.052, 3.716) and (AOR = 3.163, 95% CI: 1.860, 5.3770), resp.), family monthly income ≥ 1500 (AOR = 2.954, 95% CI: 1.289, 6.770), being multipara (AOR = 7.463, 95% CI: 1.301, 12.800), ANC follow-up during last pregnancy (AOR = 2.184, 95% CI: 1.137, 4.196), and place of last delivery (AOR = 1.955, 95% CI: 1.214, 3.150) were variables found to be significantly associated with women's knowledge on danger signs of obstetric complications. The research concluded that Significant proportion of respondents were not knowledgeable about obstetric danger signs and factors like educational status, place of last delivery, and antenatal follow-up were found to be associated.

2.5.3 Community Emergency Transport Scheme

Long distances to health facilities, difficult terrain and the absence of affordable transport options are major challenges for remote, rural communities in the north of Nigeria. Efforts to transfer pregnant women with complications commonly fail where transport is not available, where money cannot be found to pay for it, or where seasonal factors make the terrain impossible (PATHS,2013). Lack of security in general or at night adds a further challenging dimension. All these factors can result in long delays in

women reaching vital health care. Getting timely help when a maternal emergency occurs is vital. The estimated average interval between onset of an obstetric complication and death in the absence of medical intervention is just two hours in the case of a post-partum haemorrhage (bleeding after delivery), 12 hours for an antepartum haemorrhage (bleeding after 24 weeks of pregnancy and before delivery), and one day for a ruptured uterus. Hence, some modes of transport, such as oxen and carts or bicycles, may be too slow to use in addition to being uncomfortable. In too many cases, the lack of suitable transport options for women suffering a maternal complication has tragic consequences (PATHS, 2013).

Transportation facilitates the timely and affordable delivery of basic health, education, water and sanitation services, it connects communities to markets and information, and can empower vulnerable groups. Nonetheless, developing countries are yet to fully acknowledge and understand the role of transport and mobility in improving poor people's health and maternal health. Although transportation plays a critical role in the effective and efficient delivery of maternal health services, it also enables people to access services and health workers to reach communities, especially in sparsely populated rural areas. The study area is of interest because of how sparsely populated the area is and there is the need for link between transportation and maternal health. It is of this view however that the World Health Organisation in their quest to support government undertook a research which estimated that 75 per cent of maternal deaths can be prevented through timely access to child-birth related care (WHO, 2001). And also timely access to care also helps reduce other long term maternal health problems and this research is intended to examine how transport can play a role in accessing maternal

health and to reduce maternal mortality by 75% as projected by the government and the transport ministry in achieving the millennium development goal by 2015. The study looks at transport infrastructure and services and how transport services help to improve the livelihoods of poor people living in rural areas and to access transport affordability to timely attainability of the basic necessities related to maternal health care in the area of study and the country as whole. The inclusion of both maternal and child mortality reduction as the Fourth and Fifth Millennium Development Goals (MDGs) have stimulated increased attention to multi-sectorial nature of these challenges. The transport sector has a critical role to play in achieving this MDGs. Reducing maternal mortality by three-quarters from its 1990 level is the fifth MDG. The maternal mortality ratio and the proportion of deliveries with a skilled attendant are used to monitor progress towards this goal. Death from pregnancy-related cases represents one of the most preventable categories of female death worldwide. Currently, the level of risk for a woman to die of pregnancy-related cause shows the widest disparity between developed and developing countries of all human development indicators.

The literature shows that in low income countries, particularly in rural areas, considerable time is spent by women and their families in waiting for transportation and travelling to health facilities. In addition, poor roads, few vehicles and high transportation costs are major causes of delay in decisions to seek and reach emergency obstetric and postnatal care. Babinard and Roberts, (2006) focuses on the role of transport and road infrastructure in the delivery of and access to maternal and child health services, and in the effectiveness of the health referral process in developing countries.

It finds that many households do not have reliable, suitable, and affordable transport services essential for access to care during critical per natal and neonatal periods. They point out that emergency access to care is particularly vital for women and children because many childbirth-related complications are unpredictable and the majority of births in developing countries take place at home. A number of initiatives have been set up to provide alternative transport for women needing emergency obstetric care when health sector resources are limited. In Malawi, Mali, Nigeria and other African countries motorcycle ambulances take women from remote villages to health facilities, transport passengers between health centres and district hospitals, and supply medical equipment and essential drugs. For example, in the Southern region of Malawi, eRanger project delivered three +motorcycles, ambulances for the safe transportation of pregnant women to clinics or hospitals. The ambulances have transportation times comparable to four wheeled ambulances, but with considerable savings in terms of initial purchase cost and on-going maintenance. Working with existing transport networks is another way of improving access to transport.

A safe motherhood network in Kebbi, Nigeria, enlisted the support of a local bus drivers' union whose members agreed to provide transportation for women with obstetrical emergencies. Drivers received training in how to transport emergency cases and reimbursement for fuel costs from a fund created by community members.

2.5.4 Facility Delivery

In Nigeria, just like most developing countries, a number of women still prefer to deliver at home than to deliver in the health facilities (UNICEF, 2004). The findings in a study conducted by Envuladu, Agbo, Lassa, Kigbu, & Zoakah (2013) showed that 40%

of the pregnant women had their last delivery at home which is similar although a bit lower than what was found in the rural area of Zambia where home delivery was about 57%. Higher figures than ours was found in rural Kenya agreeing with the fact that a number of women in the developing countries prefer to deliver at home instead of the hospital.(Cotter, Hawken, & Temmerman, 2006). In Ilesha, Nigeria, a study that was conducted discovered that delivery took place at home among 23 (8.8%) and 92 (35.4%) in the church which put together is about 44.2% of non-institutional delivery, (Ogunlesi, 2005) a finding that is similar to the one in this study. Despite the high number of pregnant women who attended ANC in this study, a lot still preferred home delivery, 74% were attending ANC and yet up to 39% chose home delivery in the index pregnancy. This finding is not different from that of other studies where home delivery was the preferred choice of delivery for most pregnant women (Idris, Gwarzo, & Shehu, 2006).

A study in Zaria, Nigeria also found that adequate ANC attendance during pregnancy did not significantly influence hospital delivery. Some of the reasons given by women who chose home as a preferred place of delivery included cost of hospital bill, unfriendly attitude of health care workers and unexpected labor, others mentioned distance to the health facilities, failure to book for ANC and 2(3.6%) of them had no particular reason for choosing home as a place to deliver. These reasons given by these women are the reasons given by other women in some studies (Adeyemi, 2006). WHO explained that one of the problems affecting the health sector is the lopsided distribution of health professionals in favour of urban centres. Also, some categories of health workers are in short supply in the rural areas. It has also been confirmed that wealth

status influence the use of medical facilities, the positive relationship between the use of the facilities and wealth index is an indication that poverty is also the leading cause of maternal and infant mortality.

All women need access to antenatal care in pregnancy, skilled care during childbirth, and care and support in the weeks after childbirth. It is particularly important that all births are attended by skilled health professionals, as timely management and treatment can make the difference between life and death (WHO 2006). There is therefore no way home delivery in Nigeria will be able to achieve all of these which are the reason for high morbidity and mortality following home or non-institutional delivery. While in some developed countries, it is possible for women to decide to give birth safely at home, in developing countries, conditions are not safe enough to encourage women especially those living in rural and remote areas to deliver at home. Some significant factors that were found from this study to be associated with home delivery were not different from what was found in other studies and they were factors like age, the older women in this study chose home delivery more than the younger women probably because they felt they have gathered some experience and not really afraid of the danger. In addition to these, lower educational status, marital status and low income were factors found to be strongly associated with option of home delivery as against hospital delivery. Some studies in developing countries have shown that the decision to deliver at home is related to socio-demographic and economic factors such as income, educational status and marital status. The result of the study that was conducted in Enugu, Nigeria also found factors like maternal educational level among other socio-demographic characteristics to be highly associated with home delivery.

2.5.5 Traditional Birth Attendant and delivery

Nigerian women have two maternal health care systems available to them. These are the orthodox or “modern” system of care (usually attended by doctors nurses and in modern hospitals and clinics), and the traditional system, which comprised of healers and traditional birth attendant. Many women, especially in rural areas patronized traditional birth attendants. Even where doctors / midwives are available, some women prefer TBAs because they are more familiar and often less expensive than modern practitioners. According to summer (2006), TBAs under traditional medicine performed a number of tasks. Some of which include; delivering of babies at home, burry the placenta, provide extended after - care, help the sick and promote overall wellness through spiritual and herbal treatment. In Nigeria moreover, only 43 percent of the population is urbanized (UNICEF, 2015). This means about 57 percent live in rural areas with access of these rural dwellers to orthodox health facilities very scanty and are left to the mercy of the TBAs. Moreover, only 31 percent of deliveries in Nigeria occur in health facilities. The remaining 69% are usually attended by TBAs (WHO 1997). Also the percentage of births attended by skilled and trained health personal is only 33% (UNICEF, 2015) and even lower in rural health facilities.

Traditional Birth Attendants (TBAs) deliver upon two-third of babies in developing countries because of their proximity to the people, lower charges for service, the confidence people have in them and the cultural relevance of their practices. In Nigeria they may conduct up to 80 percent rural births and about 45 percent urban births. They therefore provide useful material and child care services to the people (Brennan, 1989) and extend the coverage of maternity health. Despite this huge contributions

however, the TBAs are mostly illiterate and scantily trained women who have acquired their maternity skills through “parental legacy” or “divine revelation” and therefore lacks scientific or orthodox principles thereby resulting into serious problem.

The proportion of births attended by skilled health personnel is a correlate of maternal mortality ratio. Maternal and under-five children’s health outcomes are better when the number of deliveries attended by skilled personnel is high. The improvement in MMR correlates positively with the increase in the proportion of births attended by skilled health personnel in Nigeria. The sustained increase in the proportion of pregnant women who have a skilled birth attendant at the time of delivery from a low of 36.30% in 2004 to 53.6.0 and 58.6% in 2012 and 2014, respectively, has led to reduction in morbidity and consequently saving a greater number of lives. The gap between the actual end-point status of 58.6%and the desired 100% to achieve universal access is however large and needs to be bridged as the global community commences the implementation of the Sustainable Development Goals in January 2016.

The burden to improve maternal health is greatest in the North East and North West zones. This is consistent with the finding that antenatal care coverage, use of skilled birth attendants at delivery and contraceptive prevalence rates are low in these two regions. In 2014, the number of antenatal visits in the urban areas was 75.9% of pregnant women attending at least four visits. In the rural areas, 51.6% of pregnant women had four antenatal visits. Geo-political variation was also observed in a similar vein with fewer pregnant women in the North West and the North East attending antenatal care (UNICEF, 2015).

A zonal disaggregation of use of skilled birth attendants at delivery shows that of the children born within the period of reference, the South East had the highest record of delivery assisted by skilled birth attendants (89.1%). Eighty three percent was recorded in the South West. The North Central and South South zones, respectively, had a record of 67.2% and 64.4%. The use of skilled birth attendants was lowest in the North East (30.8%) and North West (24.8%). Unmet need for family planning was more in the rural areas (22.4%) than the urban (21.8%). Across the zones, there were higher occurrences of unmet need in the North West (27.4) and North East (25.8) than the rest of the zones. The experience was low in the South East (11.4%) (FGN / UNDP, 2015).

2.5.6 Midwives Service Scheme

The Midwives Service Scheme (MSS) remains a strategic intervention and a key success driver. The Scheme recognizes that improving the skills of birth attendants in areas with the greatest needs is achievable within a short period. The strategic distribution of these health workers potentially serves as a model of an effective, realistic and efficient response and was adapted to suit the local situation to ensure successful implementation. To build on the successes achieved, the MSS has been scaled up under the SURE-P maternal and child health programme to include training of community health extension workers in basic, essential, maternal, new-born and child healthcare and the supply of essential maternal health commodities nationwide.

The implementation of the United Nations MDGs Acceleration Framework (MAF) to accelerate progress on MDG 5 has also played a major role in enhancing success. The Conditional Grants Scheme (CGS) of the Office of the Senior Special Assistant to the President on MDGs deployed MAF to prioritize interventions to

accelerate progress on Goal 5 at the sub-national level. States and Local Governments have to prioritize interventions in their proposals to target the reduction of maternal mortality in order to access funding from the Debt Relief Gains (DRGs) in a 50-50 counterpart funding arrangement. In a recent review of CGS interventions in some selected Local Governments to improve maternal health, among others, by the United Kingdom Department for International Development's State Partnership for Accountability, Responsiveness and Capability Programme (DfID-SPARC), there was demonstrable evidence of impact of CGS interventions.

In addition, the implementation of the National Strategic Health Development Plan (NSHDP), the UN Commission on Life Saving Commodities and the United Nations Commodities' Commission Country Implementation Plan at national and sub-national levels have also played discernible roles. The development and deployment of the Harmonized Country Plan of Priority Interventions for 2014 – 2015 to prioritize key interventions to accelerate progress on the health MDGs have contributed significantly to addressing conditions that are responsible for more than 90% of maternal and child deaths. The priority interventions were drawn from existing strategies found in the National Essential Medicines Scale-up Plan, National Malaria Strategy, and National Human Resources for Health Strategic Plan, National Monitoring and Evaluation Framework as well as the National Strategic Plan of Action for Health Sector Component of National Food and Nutrition Policy.

2.5.7 Women's autonomy in health care decision making in Nigeria

Women's ability to attend to their health and utilize health care facilities appropriately may partly depend on their decision-making autonomy. In many societies,

especially in developing or low-income countries, the status of women often limits their autonomy and ability to make decisions about many aspects of their own lives. Many such societies still have strong social structures that rigidly define the roles of men and women, usually encoded in religious, tribal, and social traditions. These constraints often define the circumstances under which women have or do not have autonomy to make decisions regarding their own health. In literature of maternal health, women's decision-making ability regarding use of health services is often discussed using the concept of autonomy (Woldemicael & Tenkorang, 2010). Despite significant philosophical literature devoted to the concept of autonomy, no univocal meaning of the concept exits. Similarly, although women's autonomy is widely referred to in many studies, especially about reproductive issues, there is no single widely accepted definition that represents the multiple dimensions of autonomy, Woldemicael and Tenkorang, (2010) define autonomy as the technical, social, and psychological ability to obtain information and to use it as the basis for making decisions about one's private concerns and those of one's intimates. Osamor and Grady (2016) defined women's autonomy as the capacity and freedom to act independently, for example, the ability to go places, such as health facilities or the market, or to make decisions regarding contraceptive use or household purchases alone and without asking anyone's permission.

Mason also defined autonomy as women's ability to make and execute independent decisions pertaining to personal matters of importance to their lives and their families. Some studies show that women with greater autonomy are more likely to seek health care for themselves and use different forms of health care services available to them. To further examine the relationship between women's autonomy in developing

countries and their ability to make health care decisions, as well as the influence of socio-cultural and other characteristics on women's autonomy, we reviewed published empirical literature about health care decision-making among women in developing countries, with special interest in the description and measurement of autonomy (Anderson & Eswaran, 2009).

Anderson and Eswaran (2009) in a study using nationally representative household surveys found that 13.4% of ever-married women in the reproductive age group in Nepal, 17.6% in Bangladesh, and 28.1% in India made decisions alone regarding care for their own health, including 11.5% of current users of contraceptives who reported that they alone made decisions to use contraception. At the same time, however, health care decisions were made without women's participation in the majority of Nepalese households (72.7%) and approximately half of Bangladesh (54.3%) and Indian (48.5%) households. This was consistent with the study findings among Bangladeshi women that more than one-third (37.3%) were not involved in decision-making about their own health care, and among women in rural India, more than half (55.6%) were not involved in decision-making about their own health care. reported that about half of the women in their Ethiopian study had the autonomy to take their child to a health facility, while 43.9% of women were free to go to a health facility for their own health care service needs. They also reported that of the 65.2% women who had access to money, 38.1% of them were autonomous to use the money for health services utilizations without consulting others.

Most of the reviewed studies examined autonomy in the context of decisions about reproductive health reported that greater autonomy in decision-making increased

the likelihood of women receiving prenatal, delivery, and postnatal care in rural India and stressed that low levels of autonomy adversely affect women's likelihood of using pregnancy care services, especially prenatal and postnatal checkups. Rahman, Mostofa, and Hoque (2014) reaffirmed the association between women's autonomy and contraceptive use in Bangladesh. However, it was reported that a higher degree of women's autonomy in household decision-making greatly increased the use of contraception.

Anderson and Eswaran (2009) reported that in households in which female members make decisions on financial matters, women have a greater chance of receiving antenatal and delivery care. However it was also showed that financial autonomy of women was associated with the use of delivery care and postnatal checkups. Similarly, Saleem and Bobak (2005) reported a significant association between decision-making autonomy and contraceptive use, even after controlling for socio-demographic variables. In contrast, Fotso, Ezeh and Essendi (2009) did not find any relationship between utilization of maternal health services for delivery and high levels of women's overall autonomy, freedom of movement, or decision-making in Kenya. Three studies found that the level of autonomy affects women's health care seeking generally, not limited to reproductive health.

Some of the reviewed studies examined factors such as age, education, and other socioeconomic and cultural factors to describe their influence on women's decision-making autonomy. One of the studies from South Asia reported that women's autonomy and decision to seek health care were determined by social and cultural factors and, in some cases, legal constructs and practices and perceived beliefs about the severity of the

illness. Haque et al (2014) found that mothers with greater autonomy are more likely to be older, have more education, live in urban areas, and be among the richest bands of wealth. Similarly, Acharya, Bell, Simkhada, Van Teijilingen and Regmi (2010) found that increased age, paid employment, more education, and having a greater number of living children were all positively associated with women's autonomy in decision-making.

It was also reported that women in Ethiopia who have primary, secondary, and postsecondary education are about two to four times more likely to have higher autonomy compared to women with no formal education. Kamiya (2011) reported no statistically significant relationship in Tajikistan between women's autonomy and their educational attainment, but a favourable association with the husbands' education, implying that educated husbands are more likely to include female family members in decision-making processes. The latter finding was corroborated by Nigatu, Gebremariam, Abera, Setegn, and Deribe (2009) where along with household income, women's age, and husbands' employment, husbands' secondary educational status was significantly associated with women's autonomy in seeking health care services for themselves. In Bangladesh, Haque, Rahman, Mostofa, and Zahan (2012) expressed the notion that because women are governed by social norms of female seclusion, even in instances where women wish to make decisions regarding their health care, they may need help and agreement from other family members, particularly their husbands or mothers-in-law.

Female autonomy has been widely acknowledged as a multidimensional entity that refers to different aspects of women's lives. In addition to its significant intrinsic value, autonomy is considered instrumentally essential for decision-making in a range of

health care situations, from health care seeking and utilization to choosing among treatment options. This review synthesized the published empirical research on women's autonomy in health care decision-making in developing countries and included studies using diverse methodologies, from different geographical and cultural settings, and within different health care systems. Several themes emerged: 1) despite the observation that there is no one widely accepted operational definition for autonomy, there are common elements to most definitions utilized in these studies and these elements lend themselves to measuring the level of women's autonomy; 2) autonomy that supports health care decision-making is associated with better health outcomes, although these studies predominantly examined reproductive health, and very few other areas of women's health care; and 3) several socio-cultural factors, such as education, age, and income, positively affect women's autonomy, independent of the country or culture in which they live.

Most of the studies on women's autonomy are related to health care decision-making used definitions of autonomy that encompassed similar dimensions – the ability to obtain information and make decisions about one's own concerns, have some control over finances and have some freedom of movement. Stemming from these definitions, a number of dimensions of women's autonomy are recognized, including household and health care decision-making autonomy, movement autonomy, and economic autonomy. Most studies measure three or more of these dimensions, while some attempt to measure all (Thapa & Nehof, 2013). Although previous discussions about how to measure autonomy exist, a set of questions included in the national demographic and health surveys has led to a standard measure of women's autonomy. A big advantage of the

Demographic and Health Survey (DHS) system is that the same questions are asked across many women in many countries. Nonetheless, just four or five items measure autonomy in DHS (depending on the phase of the DHS), and these may not adequately capture the complexity of women's autonomy. Also, it remains uncertain how well validated the DHS autonomy questions are, both internally and when compared with more detailed measures of autonomy. Indeed, it has been shown that dimensions of autonomy used in surveys are not always internally consistent. One study examined internal consistency for autonomy measures in four dimensions each of which was measured with multiple items and showed Cronbach's α ranging from 0.61 for domestic autonomy to 0.96 for economic autonomy (Thapa & Nehof, 2013). Cronbach's α is a measure of internal consistency for items on a scale (ranging in value from 0 for no internal consistency to 1 for the highest possible internal consistency). The wide variation observed (0.61–0.96) indicates that the items on autonomy measures often show different degrees of internal consistency for different dimensions of autonomy. Furthermore, different dimensions may show varying association with outcomes such as child nutrition and husband's involvement in maternal health care.(Thapa & Nehof, 2013) Alternative methods to the DHS method of measuring women's autonomy are also employed in the identified literature. Several of the studies in this review included additional measures of financial control and freedom of movement to measure autonomy supplementing questions about health care and household decision-making (Bloom, Wypij, & Das Gupta, 2001).

This observation raises questions, however, about the extent to which autonomy in decision-making over financial matters is measuring the same underlying concept as

autonomy in making daily decisions for the household. Furthermore, survey item responses have limited ability to capture nuance and complexity, and the interpretation of the findings may not be so straightforward. In one study, for example, of 23 communities in five Asian countries, it was shown that wives and husbands differ in their assessment of the level of the wife's autonomy. Although this may be a reflection of the different perspectives of who is answering the questions, it may also point to geographical or contextual differences in sex roles and perceptions of women's autonomy. For example, in societies where pregnancy or minor household issues are considered a "woman's domain", women may seem to have more autonomy than in societies where these are not considered women's domain. Therefore, because of specific cultural characteristics of a society and differences in interpretation (among other reasons), the standard questions used in measuring autonomy may not be equally valid across different cultural contexts.

For such a complex and multifaceted concept, only one study used qualitative research methods to study autonomy (Thapa & Niehof, 2013). Qualitative methods have the advantage of being able to contextualize findings and capture nuance. For example, the qualitative component of study brought up issues such as women's dependence on men's consent for the use of specific medical services, husbands' feeling of a sense of responsibility for maternal health care decisions, women valuing their husbands' support and presence during pregnancy care (traditionally considered a woman's domain), sociocultural norms that may stigmatize men for being too supportive during their wives' maternity period, and changing social norms about the expected role of husbands in maternal health. Qualitative studies could help clarify, for example, which dimensions of women's autonomy are relevant to their health care decisions and how to measure them.

Qualitative studies could also further the understanding of how to distinguish women's autonomy from social support in our measured constructs. For example, when a decision is made jointly with a husband/partner or others, it is often interpreted as indicating lower autonomy for the woman. Yet, making a decision alone may represent more autonomy or simply lack of support from a husband/partner who would rather not be involved. Indeed, some studies have shown that a higher level of women's autonomy, as measured by her sole final decision-making power, was associated with significantly lower male involvement in pregnancy health. However, as these findings were from survey responses, the reasons remain speculative. An important philosophical issue is what it means for individuals to be autonomous within any culture or society. Given that people are always imbedded in their social context, their decisions often take into account consideration for others in their households and communities, and decisions may not be, or appear not to be fully autonomous. Indeed, questions about autonomous decision-making are especially pertinent in the context of health care and medical services in which the individual rarely "stands alone" in decision-making without consideration for and influence of family, loved ones, and caregivers. The concept of individual in contemporary Western cultures is often understood as independence, self-sufficiency, and self-directedness.

However, autonomy as an individualistic ideal has been called into question for several reasons including the fact that it overlooks or even devalues relationships of interdependence (such as friendships, loyalty, caring, and responsibility) and also ignores the fact that people are socially embedded, with part of their identity being constituted by their social relations. Authors writing from developing countries have found notions of

individualistic autonomy to be particularly ill-suited to their environment. Individuals may be ill-equipped to deal with these kinds of decisions in an individualistic, autonomous manner. Relational autonomy explicitly acknowledges the supportive and interdependent roles played by other household members, caregivers, and others within the social context of the individual.

Despite the wide spectrum of women's health care needs and health care utilization, most studies of women's autonomy in developing countries focused on reproductive health. Many factors were shown to affect women's autonomy in the reviewed studies, including age, employment status, and wealth (or household income). Notably, these factors are highly correlated and, in general, show the expected relationship with women's autonomy, ie, older women who are employed and in a certain income bracket have higher levels of decision-making autonomy. Education was also a factor influencing women's autonomy in various studies. Highly educated women are more likely to be knowledgeable about their own health, have more self-confidence, and be more assertive than those with less or no education.

There could be relevant scientific studies from countries in which the primary language is French, Spanish, Portuguese, or Arabic, which our review did not cover. Nonetheless, the review provides a synthesis of a wide range of studies examining women's autonomy with regard to health care decision-making in developing or low-income country settings. Both enabling autonomous decision-making and respecting women's autonomy are valuable and laudable goals. Educating and empowering women will promote their autonomy and contribute to addressing the sustainable development goals of good health, quality education, and sex equality. Autonomy is considered

essential for decision-making in a range of situations, from health care seeking and utilization to choosing among treatment options. This review of published empirical research on women's autonomy and decision-making in developing countries found that studies use operational definitions of autonomy that have common elements and use a small range of methods in measuring the level of women's autonomy. Studies show that autonomy is positively associated with health care decision-making and better health outcomes, although the literature has predominantly examined reproductive health, and very few other health decisions affecting women. Age, education, and income level are factors that affect women's autonomy, independent of the specifics of the country or culture in which they live.

This review identified important gaps in the literature, including lack of data on other health care decisions beyond reproductive/maternal health (such as surgical procedures, hospital admissions, or blood transfusions) and lack of qualitative studies to provide nuance and explain the relationship between developing country, women's autonomy, and their ability to make health care decisions, including clarifying the role of social support, sex roles, and cultural norms in relation to women's autonomy.

2.6 Socio-Cultural Context of Maternal Health

2.6.1 Stress of women

The concept of stress has become much of common culture that it does not seem to need definition. There is now ample evidence that psychosocial stress results in health impairment, the experience also causes negative changes in health behaviour that contributes to the stress-illness relationship (Stroebe, 2000). There are three types of stressors: physical, psychological and social. Physical stressors are external factors such

as drug, pollutant, bacteria, radiation, trauma, noise and exercise. Psychological stressors are intense emotions include: anxiety, fear, frustration, guilt, worry, anger, hate, jealousy, sadness, self-pity, and inferiority feelings. Social stressors are externally induced and result from interaction of a person with the environment (Morse, 1982).

Stress can affect health directly through changes in the body's physiology. Stroebe (2000) describes the function of physiological reaction to stress, which to him appears to prepare the organism for action. If one assumes that bodily injuries frequently occur in a context in which an animal has to fight or flee, it makes sense that the stress responses consist mainly of catabolic processes, that is, processes involved in the expenditure of energy from reserves stored in the body. It is therefore not surprising that the *sympathetic-adrenal-medullary system* and the *pituitary-adrenocortical system* are the two major neuroendocrine systems that are responsible for many of the physical changes associated with stress. Endocrine refers to the internal secretion of biologically active substances or hormones.

One study assessed married pregnant women of similar age and social status that had deliveries in the same hospital. The result showed that those women who had the most social stressors had about three times the frequency of complications of pregnancy and delivery (Morse, 1982). A few studies suggest that women with stressful jobs may be slightly more likely than women with low-stress jobs to develop preeclampsia (a pregnancy-related disorder that includes high blood pressure and can result in poor fetal growth and other problems) (Walker, 2001). Also, pathological vomiting (*hyperemesis*) occurred in pregnant women who had repeated severe life-stress events (social stressors)

as contrasted to non-vomiting pregnant women who did not have many stressful episodes.

2.6.2 Educational Status

Education is a factor which offers the possibility of affecting the magnitude of maternal mortality in a number of different ways (Oxaal & Baden, 1996). The influence of education on health is derived from various dimensions of the educational experience; schooling imparts literacy skills, which enables pupils to process a wide range of information and stimulate cognitive development (Idowu, Osinaike & Ajayi, 2011). The knowledge acquired as part of the school curriculum is clearly instrumental for informed decision-making and it largely shapes individual's interaction with the surrounding world. Schools are also important agents of socialization, with a crucial role in shaping attitudes, opinions and values, which serve as a medication against fatalism.

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Fatalism can take the form of a belief, that health problems are a punishment for an individual's lack of adherence to a set of behavioural rules, related to spiritual well-being (Family Care International, 1991). Exposure to new ideas and alternative lifestyles might lead to questioning of traditional norms and motivate greater willingness to adopt innovative behavioural models (Idowu *et al*, 2011). Attitude creation and attitude change are not only linked to the explicit content of the school curriculum but also to the informal, implicit processes connected to the organization of instruction (Holsinger, 1973). Educated women may have more understanding of the physiology of reproduction and be less disposed to accept the complications and risks of pregnancy as inevitable, than illiterate or uneducated women (Oxaal & Baden, 1996). As Graczyk (2007) puts it, lack of education can also affect health when it limits young women's knowledge about nutrition, birth spacing and contraception. For instance, as at 2004, 41.6 million Nigerian women had no formal education while 21.4 million had primary education. 31.1million had secondary education while only 5.9 million had higher education [National Population Commission Nigeria and ORC Macro, 2004). Before a woman decides to seek care, she must be able to recognize the signs and symptoms that indicate the need for care (AbouZahr 1994; Manderson 1994; in Kitts & Roberts, 1996). However, a lack of educational opportunities might lead to poor understanding of health-related matters; therefore, many women may not be familiar with different diseases and their presentation (Idowu *et al*, 2011).

According to Jegede (1998), education is a catalyst in terms of acceptance of modern health care services. Through change in women's social status, self-image and decision making powers which may be key in reducing their risk of maternal death,

resulting from early marriage and pregnancy or lack of information about health services (Oxaal & Baden, 1996). Findings from numerous studies (Kitts and Roberts, 1996; Gupta, 1997; Falkingham, 2003; Ogujuyigbe & Liasu, 2007) on maternal health care and mortality conducted in developing countries over the last decade show a positive association between maternal education and maternal health care (Idowu *et al*, 2011). A study in Shanghai, China found that a majority of women didn't know first care-seeking should be done within the first trimester of pregnancy. A large number of women subjects did not know how to handle possible urgent problem at home, almost 40 percent of them didn't know correct actions after amniotic fluid breaks. Nearly half of the participants did not know the effects of iron-rich food on preventing anemia (Zhao, Kulame, Gao & Xu, 2009).

Men, who are more likely than women to be literate and to have better access to information, and in a better position than women to inform themselves about reproductive health, do not show interest because reproductive health, including everything that has to do with pregnancy, childbirth and others, is considered to be a women's concern. Husbands ignore women's health care during pregnancy except for appreciating the need for a nutritious diet. While they advised women to reduce their workload, they generally do nothing to help, except in some cases where they assist with household chores. Childbirth was seen as women's concern, and men were generally unaware of any problem (UNFPA, 2000).

2.6.3 Economic status

A large number of studies have shown that a woman's position in the household largely determines her range of acceptable reproductive options (Orubuloye & Ajakaiye,

2002; Das Gupta, 1997; Falkingham, 2003; Ogujuyigbe & Liasu, 2007). A Women's status is a broad concept that encompasses multiple facets of women's lives. It has been defined as the degree of women's access to (and control over) material resources (including food, income, land and other forms of wealth) and to social resources (including knowledge, power and prestige) within the family, in the community and in society at large.

Opportunity cost and financial problems related to the situation of being far from home (extra money for food, shelter and clothes) are the main causes of the maternal health (Kowalewski, *et.al*. 2000). Given the limitations on women's earnings in both formal and informal employment, and their complete exclusion from the cash economy in some cases, the extent to which poor women, particularly those who head households, can afford expenditures (associated with health care) such as taking enough rest, and eating balanced diet is questionable. Because of their economic status women overwork themselves to support the family, and this has adverse effect on their health. Azim and Lotfi (2011) found that, association between SES and health stems, in part, from experiencing greater stress, either perceiving that demands exceed abilities to cope, or by exposure to life events that require adaptation.

According to the United Nations (1991), women who become pregnant in developing regions face a risk of death due to pregnancy. Among the reasons is the fact that malnutrition is endemic among pregnant women. Poverty is a major cause of maternal mortality, as it prevents many women from just not seeking antenatal care, but also taking time to rest and eating balanced diet which are essential to safe pregnancy are absent (Lanre-Abass, 2008). When a woman is malnourished, it results in anemia which

increases the woman's susceptibility to illness, pregnancy complications and maternal death and ultimately leads to high death rates. For this reason, women in their reproductive years require three times as much iron a day as do adult men. Because anaemia starves the body of oxygen, it makes women tired and restless. It also increases the danger of hemorrhaging and other complications in childbirth. The correlation with maternal mortality is clear. A woman stunted from poor eating and weakened by anaemia starts pregnancy in poor condition. Malnourished women are sick more; have smaller babies and die earlier. And where infant and child mortality is high, birth rates are also high, increasing the stress on women's bodies and trapping them and their children in a cycle of poor health and nutrition (United Nations, 1991). Also, in a research by Joseph *et al*. (2007) it was reported that lower family income is associated with increased rates of gestational diabetes, and post-neonatal death despite health care services being widely available at no expense.

2.6.4 Culture and Health

Culture influences health behaviour in so many dimensions. For instance, culture influences the way in which illness is acted upon in Nigeria (Dawitt, as cited by Kitts, and Roberts, 1996; Erinosho, 2005). Cultural factors include gender norms, child marriage and early pregnancy, nutritional taboos, particularly during pregnancy, certain birthing practices, female genital mutilation, and widow inheritance. The result for individual women and girls is mitigation of their health or their quality of life. What all these practices have in common is that they evolve from, or are in reaction to, the preference for male children (Dawitt, as cited by Kitts & Roberts, 1996). These factors condition women's reproductive intentions; that is, the number of children they want and

how they want their births spaced. Women do not always get the support they need to fulfill their reproductive intentions. In some settings fearing reprisal from disapproving husbands or others, many resort to clandestine treatment, especially in the use of family planning (UNFPA, 2000). Therefore, cultural restrictions limit choice. Belief about appropriate behaviour can reduce access to health information and care and impair its quality. Direct taboos and indirect restrictions deter women from discussing their health needs and risks, while women who cannot read or readily associate with others have difficulty finding health information and taking healthy steps toward safety in pregnancy. "Women are controlled with those local customs, whereby a woman can make no decision by herself, until the husband has decided" (Kowalewski *et.al*, 2000).

These restrictions mean that women are dependent on the decisions of others about medical attention; whether to delay or prevent pregnancy; have antenatal examinations during pregnancy or arrange for skill delivery attendant. It can be difficult for women to raise reproductive health concerns; topics such as menstrual bleeding irregularities are especially hard to discuss. Women may be unable to get their problems addressed until their conditions are serious and treatment options are more restricted and costly (UNFPA, 2000).

2.6.5 Belief System

As Nwabuaze (2003) has explained, the social perspective on health has it that though the presence of disease may be a biological phenomenon, the culture of the people may sometimes contain anti-health social habits. For instance, most of the time they rely on home remedies to solve minor problems. Jegede cited in Idowu (2011) has observed that "it is not all the time you go to the hospital. In those days our grandparents used to

single-handedly handle their wards‟ medical problems without much recourse to any external help." The common problems that can greatly increase women's risk in child birth are: delays in recognizing a developing problem; delay in deciding to act; and delay in reaching services because of erroneous belief about pregnancy. In a study by Idowu (2011), majority of women believed that maternal health challenges are normal during pregnancy and as such are not so disposed to proper and adequate antenatal care.

2.6.6 Role Conflict

Over the last two decades, researchers have drawn attention to the intersection of work and family, arguing that there is a reciprocal relationship between the two spheres of social life that often results in conflict and tension (Runte & Mills, 2004). Women are often expected to occupy a number of roles at the same time: wife, mother, homemaker, employee, or caregiver to an elderly parent. Meeting the demands of so many roles simultaneously leads to stressful situations in which choices must be prioritized. Women are exposed to conflicting expectations that arise from the fact that they occupy two positions simultaneously (Mordi & Ojo, 2011; Fadayomi, 1991).

Women are often forced to choose whether to pursue or further a career versus whether to devote more time to home and family. On the surface the modern workplace and home-life appear to stand in sharp distinction to one another. The workplace seems to epitomize the modern concern with bounded time and the necessity of effective use of time (e.g., efficiency, effort, organizational commitment, and speed-up) (Runte and Mills, 2004). Home-life, on the other hand, is characterized by idealized images of the affective domain and relief from the pressures of work. Yet the reported experiences of working people seem to belie this supposed duality (Doyal, 1995; Runte & Mills, 2004).

Omideyi (1990) revealed the existence of conflicts which individuals in monogamous marriages experienced in coping with competing claims of their own kin, of spouses and of children on their loyalties and support in the quotation below:

> *Psychological stressor that may be induced is frustration. Frustration results when a person is blocked from achieving a goal and feels annoyed, confused or angry. It has been stated that married women find their position in society to be more frustrating and less rewarding than that of married men. A man typically has two possible sources of gratification, his family and his work. Women usually have only one, the family. Even when a married woman works, she often has a less satisfactory job and generally has to take care of the housework. Aside from the marriage situation, women have frustration of an even more intense nature when they have to choose between two important goals. The choosing of either alternative results in frustration in regard to the other* (Morse, 1982: 24-25)

When women do choose or are required to work outside the home, they continue to perform the bulk of household duties as well (Encyclopedia of Mind Disorder, 2009). Rosenfield reported that compared to men, women perform 66% more of the domestic work, sleep one-half hour less per night, and perform an extra month of work each year. Needless to say, increased workloads and decreased attention to rest and relaxation are stressful and pose obstacles to women's health (Mordi & Ojo, 2011; Rosenfield, 1999). Runte and Mills (2004) have observed that the relationship between hours worked and perception of work-family conflict also reflects women's subject position within the dominant discourse of family and the stress inherent in violating the role of the „good mother". Women work right up to the time of labour. Many married women find that they have little free time. When they get home, they generally still have to do many of the household chores. Unless they get adequate help, they have little time left over for leisure-time activities. What often happens is that half of the weekend is devoted to house chores with only Sunday left for leisure (Morse & Furst, 1982; Stroebe, 2000). To

maintain the myth of the „good mother", the female must satisfy either her work commitment or her family commitment in fewer hours, or sacrifice sleep. The tolls paid by women to maintain this illusory balance is their health (Runte & Mills, 2004).

However, its negative impact on women's health is greater in the developing world (Idowu *et al*, 2011), and it also connotes a cultural value of male dominant role in patriarchal societies (Jegede, 1998). This reduces the promptness with which medical assistance is obtained anytime an illness is suspected during pregnancy (Idowu *et al*, 2011). Therefore, because of their heavy household duties, women cannot afford to be sick themselves; "It would be useful to discover how many ailments exist among women but never receive attention from the medical profession" (Idowu *et a*l, 2011; Kitts & Roberts, 1996). Women's workload may affect the intermediate factor of health status increasing risk of maternal death. Many women have a workload that consists of hard manual labour, responsibilities for housekeeping and childcare and cooking, collecting firewood and fetching water which may result in chronic fatigue and other health problems (Oxaal & Baden, 1996). This burdens women with a mixture of reproductive, productive and service functions for which she gets little support or recognition and from which she gets either scarce or no economic benefit. Moreover, other family or community members rarely assume women's essential tasks when they are ill. Women therefore continue to perform necessary activities that are difficult to defer (Kitts & Roberts, 1996).

Even if a woman notices symptoms of illness, she may completely ignore these signs because of other competing demands. Women may believe that they cannot afford the "luxury" to take time out to visit a health centre or to have a period of incapacity

because this would represent time and effort lost to other essential, and possibly more important, activities such as child care, food production, and paid employment (AbouZahr, 1994; Bhattacharyya & Hati, 1995, as cited in Kitts & Roberts, 1996). “A woman’s everyday routine is full of small waivers of herself that are acts of giving herself up to others” (Constanza Collazos V., Centro de Investigaciones Multidisciplinarias en Desarrollo, Cali, Colombia, cited in Kitt, & Roberts, 1996).

Although attitudes toward gender roles are now much more flexible, different cultures retain varying degrees of expectations regarding male and female behaviour. An individual may personally disregard gender expectations, but society may disapprove of his or her behaviour and impose external social consequences. On the other hand, an individual may feel internal shame if he or she experiences emotions or desires characteristic of the opposite sex (Encyclopedia of Mind Disorder, 2009). Gender role conflict, or gender role stress, results when there is a discrepancy between how one believes he or she should act based on gender role expectations learned in childhood and how one actually thinks, feels or behaves. If these discrepancies are unresolved, gender role conflict contributes to poor health (Encyclopedia, 2007). Doyal (1995) has suggested that patterns of womens health and sickness may be explained in relation to main areas of activities which constitute women’s lives. Therefore, any analysis of women’s health should consider the interaction between social, psychological and biological influences.

2.7 Challenges of Maternal Health Improvement in Nigeria

The challenges facing maternal health improvement according to Nigeria's M.D.G. end of year report 2015 are:

i. The ownership issue: the lack of programme ownership by states and local governments, itself a key issue for sustainability and implies the need to address the sustainability issue that hamper the effective monitoring of the activities of midwives; the replenishment of consumables in the facilities as well as the provision of accommodation for health workers;

ii. Deployment of Midwives to other levels of care: most states that retain the midwives deploy them to other levels of care and thereby defeating the purpose of the scheme;

iii. The security challenge: it is noted that insecurity has also adversely affected the retention of midwives, particularly in the North Eastern part of Nigeria;

iv. Socio-cultural and religious barriers: these too pose a significant challenge to the use of maternal health services;

v. Inadequately trained health personnel: this and their uneven distribution across the country (especially of skilled birth attendants) presents drawbacks that need to be tackled; and

vi. Inadequate health facilities and equipment: the problem of inadequate health facilities and equipment as well as the inefficient referral system further compounds the problems.

In his research Ajeabu (2013) pointed out the challenges of maternal health improvements in Nigeria as

2.8.1 Awareness Raising as a Framework for Maternal Health Improvements

Some women may believe that attending Anti-Natal-Care will diminish the likelihood of a complicated delivery, and use ANC in a preventative manner as a means to ensure a normal pregnancy and home-birth (Magoma, Requejo, Campbell, Cousens, & Filipp, 2010). This may explain why in some contexts ANC coverage is near universal while facility delivery rates remain low (Izugbara, Kabiru, & Zulu, 2009). In settings where ANC attendance was nearly universal, those few women who did not seek ANC felt uncomfortable seeking facility-based delivery due to their unfamiliarity with the health system and fear of mistreatment for not possessing an ANC attendance card (Otis & Bret, 2009). ANC providers may not be adequately advising women of the importance of facility-based delivery (Griffiths & Stephenson, 2001) due to a heavy workload and limited time to discuss complex issues with their patients (Magoma, Requejo, Campbell, Cousens & Filippi, 2010). Some providers hesitate to encourage all women to deliver at a facility because of the scarcity of space or equipment (Seljeskog, Sundby, & Chimango. 2006).

Women determine their level of risk for complicated deliveries in part based on their prior delivery experiences and birth outcomes, which informs their future delivery location. A woman may be more likely to deliver at a facility during her first birth or if

she had a previous obstetric complication (Parkhurst & Rahman, 2006). However, if a woman delivered her first child without complications, utilizing a facility for subsequent births is often viewed as unnecessary(Seljeskog, Sundby, & Chimango. 2006).A parturient woman may not be in control of the decision to seek facility-based delivery, instead relying on decisions made by elder women, husbands, other family members, and neighbors (Pembe, Urassa, Darj, Carlstedt & Olsson, 2008). While the influence of some actors may facilitate accessing skilled care, the involvement of too many actors often results in the delay or prevention of facility-based births (Seljeskog, Sundby & Chimango. 2006). Elder women hold the greatest influence and decision making power regarding delivery location across Asia and sub-Saharan Africa (Pembe, Urassa, Darj, Carlstedt & Olsson, 2008).

Some women believed that they should choose the same delivery location as their mothers and grandmothers to maintain intergenerational continuity, and older women may pressure younger women to deliver at home. Husbands play various roles in facilitating or preventing their wives from accessing facility-based deliveries, ranging from: (a) persuading their wives to visit a facility and mobilizing the necessary transportation and funds (Sorensen, Nielsen, Rasch & Elsass, 2011); to (b) prohibiting a facility visit, to (c) playing a more neutral role. Husbands do not always hold intergenerational continuity, and elder women may pressure younger women to deliver at home. Husbands play various roles in facilitating or preventing their wives from accessing facility-based deliveries, ranging from: (a) persuading their wives to visit a facility and mobilizing the necessary transportation and funds; to (b) prohibiting a facility visit; to (c) playing a more neutral role. Husbands do not always hold the final authority

the husband's decision-making power ranked below elder females across multiple contexts (Otis & Brett, 2008).Families with social connections to skilled providers maybe more accepting of the biomedical approach to maternity care and thus more willing to seek a facility-based delivery.

2.8.2 Challenges of Awareness Raising for Maternal Health and Community Development

The community participatory model places emphasis on the community's involvement in their needs/assets assessments. It should be an integrative system that engages community members in the collection of meaningful and reliable qualitative and quantitative data through community forums, observations, interviews, town hall meetings, focus groups, and video/photo voice methodologies for community groups, community health workers as well as the CHCs of all health centres. Above all this informed community participatory model of data collection and use, should engage women, men, the youth (within schools and out of school) and ensures their full participation in the health decision making processes at both the family and community levels. These community engagements should be responsive in addressing in a holistic manner the concerns and expectations of the community, depending on the particular issue being addressed for a particular priority population.

For the reduction of high maternal mortality rates, the proposed community participatory model engages women (women of child bearing age, mothers, grandmothers and mother-in-laws) in the health decision making at the grassroots level, addressing their concerns and expectations, for the protection of their physical, mental, psychosocial wellbeing and above all securing their health outcomes before, during and after

pregnancy and childbirth, thereby reducing maternal mortality in Nigeria and achieving the MDG 5. With less than two years to get to the deadline for achieving the MDGs, the urgency of planning, developing, implementing and evaluating this new model of healthcare cannot be overemphasized.

Some women viewed facilities as the safest and most respectable location for a delivery, believing that facilities were able to ensure positive outcomes (Bedford, Gandhi, Admassu, & Girma, 2012). Furthermore, women who respected the competence of formal health workers and viewed them as "well-trained, competent, and compassionate" "experts" who provided "effective management of emergencies" were likely to overcome various barriers to deliver in facilities. However, women reporting negative interactions at facilities and lacking confidence in the health workers' abilities, who they considered undertrained, incompetent, and inexperienced were less inclined to desire facility deliveries (Oyerinde, Harding, Philip, Garbrah-Aidoo, Kanu, Oulare, Shoo &,Daoh, 2012).

Women described providers as verbally and physically abusive, rude, bossy, disrespectful, insulting, and easily angered, having poor attitudes, and lacking compassion. Physical abuse included slapping, hitting, or forcefully holding women down. Negative interactions with providers were exacerbated for women of low socioeconomic status (Pitchforth, Teijlingen, Graham, Dixon-Woods, & Chowdhury, 2006).Women also experienced neglect and long delays in receiving facility-based care. Health workers were slow to respond to patients' needs and women reported feeling alone during delivery as health workers had poor communication skills and did not provide updates on labor progression. Inadequate facility infrastructure and staffing

contributed to an overall perception of low quality of care and many women complained of overcrowded wards without dedicated labor and delivery areas (Titaley, Hunter, Dibley, & Heywood, 2010). The lack of adequate staff also led to overburdened lower-level providers. Women feared compulsory HIV-testing or HIV-testing without consent during facility-based delivery due to the fear of discrimination associated with a positive test. Some felt the only way to avoid HIV-testing was to deliver at home. The fear of unwanted HIV-status disclosure may prevent women from accessing facility delivery, as the lack of privacy in maternity wards impedes confidentiality (Turan, Miller, Bukus, Sande, & Cohen, 2008).

Lastly, many communities view pregnancy and childbirth as the outcome of a marital relationship, thereby potentially stigmatizing and disempowering unwed women seeking facility delivery. Delivering at home was a desirable choice for unwed women or adolescents to avoid embarrassment or discrimination at a facility, particularly because these women were often lacking emotional and financial support from their partner or parents (Mrisho, Schellenberg, Mushi, Obrist, Mshinda, Tanner & Schellenberg, 2007).

2.9 Summary of Literature Review and Uniqueness of the study

The chapter has reviewed relevant literature on Rapid Awareness Raising on Community Based Maternal Health Improvements in Kano State, Nigeria. From the reviewed works, a theory based on health behaviour developed by Andersen (1995) is relevant to the study. The theory seeks to account for and predict the use of health services by individuals. According to the theory such utilization is dependent on the interaction between individual traits, population characteristics and the surrounding environment.

The literature also revealed that access to health facility is a function of the geographical distance and considerable travel times to health facilities. The inaccessibility of facilities, the accessibility of Traditional Birth Attendants may also validate a woman's decision to deliver at home. Likewise the limited availability of transport options played a crucial role in whether or not a facility could be reached in a timely manner (Story, Burgard, Lori, Taleb, Ali & Hoque, 2011). The literature revealed that socio cultural factors, including poor access to skilled medical personnel results to increase in MMR in Enugu State.

Reviewed works on knowledge of Safe motherhood among rural communities in northern Nigeria revealed that poor knowledge about safe motherhood practices among female respondents is strongly associated with non- attendance of ANC visits, being employed or acquiring some level of education (Okereke, Aradeon, Akerele, tanko, Yisa &Obonyo, 2013). The reviewed work recognizes attending ANC visit during most pregnancy increased the likelihood of knowing maternal danger signs. The reviewed

work also indicate that age at marriage plays a significant role in knowledge of maternal health services and age in which girls are given out in marriage is an important determinant of their future lives and health.

The reviewed work revealed that in Nigeria, like most other developing countries, a number of women still prefer to deliver at home than in health facility and this study also revealed that ANC attendance during pregnancy did not significantly influence hospital delivery. Some of the reasons given are cost of hospital bills, attitude of health workers and unexpected labour. The reviewed literature also indicates that many women especially in rural areas patronizes Traditional Birth Attendants even where doctors and midwives are available reasons because they are more familiar and often less expensive than the modern practitioners.

Interestingly, the reviewed literature pointed out that the introduction of Midwives Services Scheme (MSS) which is an intervention programme introduced by the Federal Government had helped in improving the skills of Traditional Birth Attendants in areas within the shortest possible time. To build on the successes achieved, the MSS has been scaled up under the SURE-P maternal and child health programme to include the training of community health extension workers in basic, essential maternal, newborn and child health care and the supply of essential maternal health commodities nationwide.

The challenges of maternal health improvements indicated that the issue of ownership by most states governments in sustaining programmes and projects, also the deployment of Midwives to other levels, the issue of security challenges where health workers and facilities became targets of attacks by insurgents amongst others. The reviewed literature acknowledged community participatory model that involves the

community in needs /assets assessments. It should be an integrative system that engages community members in collection of meaningful and reliable qualitative and quantitative data thorough community forums, observations, interviews, town hall meetings amongst others.

The uniqueness of this study is premised on the choice of Rapid Awareness Raising on Community Based Maternal Health Improvements in Kano State, Nigeria. The approach is a community based on improving maternal issues. This made the study unique because most other studies focused on the policy and programmes for reducing maternal mortality while Okereke, Aradeon, Akerele, Tanko, Yisa and Obonyo (2013) focused on the knowledge of safe motherhood among women in rural communities in northern Nigeria while Yar' Zever and Said (2013) in their study examined knowledge and barriers in utilization of maternal health care services in Kano State, northern Nigeria have their focused on the health aspects. So the uniqueness in this respect is that the study focused on how community members were empowered with skills, knowledge and attitudes in improving maternal health and it gave the community members ownership of the maternal health issues. This study of community based maternal health improvement in Kano State deviated from other empirical studies which were purely on Programs and policies for reducing maternal mortality in Kano State (Galadanci, Idris, Sadauki & Yakasai, (2013) and temporal analysis of maternal mortality in Kano State , Nigeria: a six year review (Yar'zever, 2014) while this study focused on the people as agent of change in maternal health improvements and how community can empower themselves towards ensuring good maternal health outcomes.

CHAPTER THREE

METHODOLOGY

This chapter presents research methodology for the study and consists of the research design, research population, sample and sampling technique, the instruments for collecting the data, validity and reliability of the instruments, methods of the data collection and the procedure for data analysis.

3.1 Research Design

This study used descriptive survey research design to conduct the impact assessment of Rapid Awareness Raising Programme for Community Based Maternal Health Improvements for women in selected communities of Kano State. Descriptive survey research design was used to obtain information concerning the opinions of the respondents before and after Rapid Awareness Raising programme on key maternal health variables. Descriptive survey according to University of Southern California (2012) helps provide answers to the question of who, what, when where, and how associated with a particular research problem. Descriptive research was used to obtain information concerning before and after Rapid Awareness Raising Programme with respect to the variables. This design was adopted because the researcher used step by step approach to generate information about knowledge of maternal danger signs, access to maternal health facilities, facility delivery, granting of permission by husbands for women to access health facility and maternal mortality to assess whether the programme had impacted or otherwise in Kano State

3.2 Population and Sample of the Study

3.2.1 Population of the study

The population of this study covered the entire women of child bearing age of 15-49 in the selected communities who were the beneficiaries of the programme in Kano State. Accordingly, the population was put at two thousand five hundred and fifty six (2,556) (Kano Strategic Health Development Plan, 2015). The Local Governments areas were Nassarawa, Wudil, Garki and Dawakin Kudu of Kano State.

3.2.2 Sample and Sampling Techniques

The sample size for this study was 524 based on Research Advisors required sample size table. The sample size table was based on 99% confidence level at margin of 0.05 degree of accuracy /margin error. The sample was rounded to 600 to ensure generalization.

The sampling technique was mixed method procedure. Stage one: availability sampling was used to identify the local governments and communities where Rapid Awareness Raising was done, in Kano State it was only in four Local Governments and four communities that the programme was implemented; therefore the selection was limited to only those Local Governments and communities. Stage two systematic random sampling was used to select houses from the list of the houses in each community. The houses were assigned numbers from 1 to 150 and the selection falls within the odd numbers. All the houses that were in the odd numbers like 1, 3, 5, 7 and so on were selected and stage three simple random sampling was used to select the female respondents from the selected houses. However, in any household where there is more than one eligible woman for selection, a simple random sampling was used to select a respondent. Hart and draw

method was used for the selection Yes and No was written and a respondent was asked to pick from it and whatever is the response then the respondent was either used or not for the research but this applied only in houses where there are more than one more eligible respondents. Inclusion criteria was such that all the females who are in their reproductive ages and are either pregnant or have at least one to three children. Exclusion criteria any woman on the other hand who exceeds her reproductive period or that has serious health complications.

Table 3.1 Sample for the study

S/N0	Local Government	Community	Population	Proportionate Sample
1.	Nassarawa	Tudunwada	933	198
2.	Wudil	Kofar Fada	554	135
3.	Garko	Garko	423	114
4.	Dawakin Kudu	Kofar Kudu	646	152
5.		Total	2556	600

3.3 Instrument for Data Collection

The following instruments were used for data collection:

1. Community Based Maternal Health Improvement Questionnaire (CBMHIQ)
2. Community Based Maternal Health Improvement Focus Group Discussion Guide (CBMHIFG)

3.3.1 Community Based Maternal Health Improvement Questionnaire (CBMHIQ)

The instrument for data collection was researchers self-developed questionnaire named Community Based Maternal Health Improvement Questionnaire (CBMHIQ). It is an

open ended questionnaire with six sections. Section A sought information about the demographic characteristics of the respondent. Section B sought knowledge of respondents about maternal danger signs; section C sought information on access among the respondents. Section D sought information on facility delivery, section E was on husbands giving standing permission and section F was on reduction of maternal mortality. It is a 42 item questionnaire and was structured in such a way that it captured all the variables and the scoring scale is yes or no from 1 to 2 and in places where it asked the respondents to mention some things correct mentioning or listing is equals to one.

3.3.2 Community Based Maternal Health Improvement Focus Group Discussion (CBMHIFGD)

The Focus Group Discussion was used to complement Community Based Maternal Health Questionnaire. Specifically it was used to probe further on the community based maternal health improvements among the community members. The instrument was used to create avenue for the participants and discussed how Rapid Awareness Raising has improved on community based maternal health with the researcher. Focus Group Discussions were held with groups of people ranging from five to eight and issues were discussed that gave insights on their opinions and perceptions of maternal health improvements. The discussions were held in four communities with some female members of the communities who are also in the reproductive ages that are from 15-29 years and lasted for thirty minutes. It provided an opportunity where members interacted with each other and expressed their opinions concerning what affects their lives. The focus Group Discussion centred on the knowledge about maternal danger signs, access of health facility, amongst others example before RAR how often did you

go to the health facility?, What are the maternal danger signs? Before RAR did you ever give birth in the health facility? If yes, how many times? After RAR how many times did you give birth in the health facility? Before RAR were you giving permission to go to the health? Who is responsible to grant permission to women to go to the health facility?

. **3.4 Validation**

The validation of the instrument was through validity and reliability check.

3.4.1 Validity of the instruments

Community Based Maternal Health Improvement Questionnaire (CBMHIQ) and the Focus Discussion Guide were given to experts in Health Promotion; Development Communication; Community Extension Education and Community Development in Usmanu Danfodiyo University, Sokoto and Bayero University, Kano for their construct and content validity. The instruments were later given to the researchers supervisor where he made observations and gave final approval, major modifications were done to the items, initially all the items were in a statement forms and were later modified to questions forms requiring yes or no. There were however, instances where the questions required some probing to generate more responses and after which it was subjected to reliability test.

3.4.2 Reliability of the instruments

A pilot study was conducted to determine the reliability of the instrument using 30 females of ages between 15-49 outside the study area Dambu Community in Zaria Local Government area of Kaduna State. The reason for the choice of the community was because similar programme (RAR) was implemented in the area and the community has

similar characteristics with the study area. Therefore the community was used to test the reliability of the instrument. Five (5) Community Health Volunteers were identified who assisted the researcher in the course of the study. The design used was survey and the sampling technique was also simple random sampling used to identify the houses that were used for the pilot study while women who were on their reproductive ages between 15-49 were selected for the study. There after a test-re-test method was used with the same set of people. A test –re-test method involved the administration of the instrument on a two weeks intervals, the two sets of results were correlated using Pearson Product Moment Correlation (PPMC) test. The reliability test scores showed a coefficient of 0.75.

3.5 Administration of the Instruments

The researcher paid pre-administration visit with the help of the research assistants to establish relationship with the members of the communities on the mission of the research. The researcher first of all met with the traditional heads of the communities and informed them of the reason of the research, who later introduced the researcher to the members of the communities and solicited their support in the right directions.

The Community Based Maternal Health Improvement Questionnaire (CBMHIQ) was administered to women community members by the researcher and with the assistance of 3 females' research assistants, who were trained on the administration and retrieval of questionnaires. Focus Group Discussions were conducted with the community members to solicit for more information. The researcher provided a

supportive environment asking open ended questions that provoked discussions and expression of different opinions and points of view.

3.6 Method of Data analysis

The demographic information of the respondents was organized by using frequency counts and percentages. T–test was used to test the hypotheses formulated at 0.05 level of significance with the help of SPSS 20.0. Data from the focus Group Discussion was reported verbatim, analyzed thematically presented.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSSION

This chapter presents results which include interpretation of findings of the study. It contained statistical tests that were from inferential and descriptive methods and the results obtained were presented in tabular form. A mortality of two was recorded as a result of the inability to retrieve the questionnaire from the respondents.

4.1 Data analysis

The analysis of the primary data was made by using descriptive statistics of frequency employed to test the hypothesis. The findings of the study were presented in tables 4.1.1.

School Attendance		
Response	Frequency	Percent
Yes	598	100
No	0	0.0
Total	**598**	**100.0**
Level of Schooling	Frequency	Percent
Qur'anic Education Only	290	48.5
Western Education	308	51.5
Total	**598**	**100.0**
Marital Status	Frequency	Percent
Married (Monogamous)	1	0.2
Married (Polygamous)	597	99.8
Total	**598**	**100.0**

Source: Researcher's Field Work, 2016.

Table 4.1.1 presents the data based on whether the respondents have attended school? It reveals that all the participants involved in the study have attended school as indicated by a hundred percent (100%) response of yes. Also the data based on the school type attended by the respondents. It indicated that out of 598 respondents, two hundred and ninety (290) representing 48.5 per cent attended Qur'anic education only while three hundred and eight (308) representing 51.5 per cent completed western education. This shows that all the respondents attended one form of school or the other and also shows that there is some level of literacy amongst the respondents.

4.1.2 Hypotheses Testing

$H0_1$: There is no significant difference on knowledge of maternal danger signs of women among targeted communities before and after Rapid Awareness Raising programme implementation in Kano state.

This hypothesis was tested by subjecting the knowledge of maternal danger signs scores of before and after the Rapid Awareness Raising programmes implementation to a t-test analysis as shown in table 4.1.2.

Table 4.1.2: Difference in the Knowledge of Maternal Danger Signs.

Variables	N	Mean	Std. Deviation	t-Cal	*t*-Crit	df	p	Decision
Before Awareness	598	12.28	3.63	81.97	1.96	597	0.05	Rejected
After Awareness	598	19.20	5.67					

Researcher's Field Work, 2016

The result of table 4.1.2 indicated that the value of the calculated *t* of 81.97 was higher than the value of the table *t* of 1.96 at 597 degree of freedom. This indicates a significant difference in the knowledge thus, a difference after the programme. Therefore, H_{01} which states that there is no significant difference on knowledge of maternal danger

signs among targeted communities between before and after Rapid Awareness Raising programme implementation in Kano state was rejected.

$H0_2$: There is no significant difference on access to maternal health facilities of women among targeted communities before and after Rapid Awareness Raising programme implementation in Kano state.

This hypothesis was tested by subjecting the access to maternal health facilities scores of before and after the Rapid Awareness Raising programmes implementation to a t-test analysis as shown in table 4.1.3.

Table 4.1.3: Difference in the Access to Maternal Health Facilities.

Variables	N	Mean	Std. Deviation	t-Cal	*t*-Crit	df	P	Decision
Before Awareness	598	6.51	.50	74.14	1.96	597	0.05	Rejected
After Awareness	598	11.00	.98					

Source: Researcher's Field Work, 2016

The result of table 4.1.3 indicated that the value of the calculated *t* of 74.14 was higher than the value of the table *t* of 1.96 at 597 degree of freedom. This indicates a significant difference in the access to maternal health facilities thus, a difference after the programme. Therefore, H_{02} which states that there is no significant difference of Rapid Awareness Raising programme on access to maternal health facilities among targeted communities in Kano state was rejected.

$H0_3$: There is no significant difference on mode of facility delivery of women among targeted community members before and after Rapid Awareness Raising programme implementation in Kano state.

This hypothesis was tested by subjecting the mode of facility delivery scores of before and after the Rapid Awareness Raising programmes implementation to a t-test analysis as shown in table 4.1.4.

Table 4.1.4: Difference in the Mode of Facility Delivery.

Variables	N	Mean	Std. Deviation	t-Cal	*t*-Crit	df	P	Decision
Before Awareness	598	6.49	1.48	24.12	1.96	597	0.05	Rejected
After Awareness	598	7.96	.213					

Source: Researcher's Field Work, 2016

The result of table 4.1.3 indicated that the value of the calculated *t* of 19.78 was higher than the value of the table *t* of 1.96 at 597 degree of freedom. This indicates a significant difference in the mode of facility delivery thus, a difference after the programme. Therefore, H_{03} which states that there is no significant difference on mode of facility delivery among targeted community members between before and after Rapid Awareness Raising programme implementation in Kano state was rejected.

$H0_4$: There is no significant difference on husband's permission for women to seek health care among targeted communities before and after Rapid Awareness Raising programme implementation in Kano state.

This hypothesis was tested by subjecting the husband's permission to seek health care scores of before and after the Rapid Awareness Raising programme to a t-test analysis as shown in table 4.1.5.

Table 4.1.5: Difference in the Husband's Permission to Seek Health Care.

Variables	N	Mean	Std. Deviation	t-Cal	*t*-Crit	df	p	Decision
Before Awareness	598	6.49	1.48	24.12	1.96	597	0.05	Rejected
After Awareness	598	7.96	.213					

Source: Researcher's Field Work, 2016

The result of table 4.1.5 indicated that the value of the calculated *t* of 24.12 was higher than the value of the table *t* of 1.96 at 597 degree of freedom. This indicates a significant difference in the husband's permission to seek health care thus, a difference after the programme. Therefore, H_{04} which states that there is no significant difference on husband's permission to seek health care among targeted communities between before and after Rapid Awareness Raising programme implementation in Kano state was rejected.

$H0_5$: There is no significant difference on maternal mortality of women among targeted communities before and after Rapid Awareness Raising programme in Kano state.

This hypothesis was tested by subjecting the maternal mortality scores of before and after the Rapid Awareness Raising programme to a t-test analysis as shown in table 4.1.6.

Table 4.1.6: Difference in the Maternal Mortality.

Variables	N	Mean	Std. Deviation	t-Cal	*t*-Crit	df	P	Decision
Before Awareness	598	4.52	.500	47.92	1.96	597	0.05	Rejected
After Awareness	598	6.48	.503					

Source: Researcher's Field Work, 2016

The result of table 4.1.6 indicated that the value of the calculated *t* of 47.92 was higher than the value of the table *t* of 1.96 at 597 degree of freedom. This indicates a significant increase in the reduction of maternal mortality thus, a difference after the programme. Therefore, H_{05} which states that there is no significant difference on the reduction of maternal mortality among targeted communities between before and after Rapid Awareness Raising programme in Kano state was rejected.

4.2 Summary of Findings

The following are the findings of the study:

1. There is significant difference on knowledge of maternal danger signs after the RAR programme implementation in the area of study.
2. There is significant difference on access to maternal health facilities after RAR programme implementation in the area of study.
3. There is significant difference on mode of facility delivery after the RAR programme implementation in the area of study.
4. There is significant difference on husband's permission for women to seek health care after RAR programme implementation in the area of study.
5. There is significant difference on maternal mortality after the RAR programme implementation in the area of study.

4.3 Discussion of Findings

Findings of table 4.1.2 corresponding to hypothesis one revealed that there was significant difference in knowledge of maternal danger signs after the RAR programme in the area of study. Specifically the participants were able to mention at least five out of the nine maternal danger signs. The finding confirmed what an earlier research conducted by Okereke, Aradeon, Akerele, Tanko, Yisa and Obonyo (2013) that more than half of the respondents across both states had poor knowledge of maternal danger signs before the introduction of the Rapid Awareness Raising programme implementation. This shows a clear difference that after the programme majority of the women in the study area were able to mention at least five out nine the maternal danger signs. Therefore, it could be simply argued that Education appears as an important factor that precipitates the medical proximate and maternal health. Women without formal education appear to ignore antenatal

and as level of education increases the probability of attending antenatal equally increases. Although, attendance of antenatal is high among women, low income was associated with delayed antenatal. The finding of the present study buttressed what it had earlier observed by Oxaal and Baden, (1996) who reported that educated women have more understanding of the physiology of reproduction and are less disposed to accept the complications and risks of pregnancy as inevitable, than illiterate or uneducated women. Graczyk (2007) equally opined that lack of education affects health because it limits young women's knowledge about nutrition, birth spacing, and contraception. These results highlight variation in the association of socioeconomic status with attendance of antenatal. Most of the respondents with low level of education seem to have positive attitude to maternal health care utilization in terms of attending ante natal care. Education is a key determinant of maternal health. In fact not only does education lead to higher income and greater awareness of important maternal health indicators (Fadeyi, 2007), it also enhances the value for a healthy life style. Studies have shown that educated women are more likely to take measures to protect themselves, accept change and be more receptive to prevention messages. Another benefit of education according to UNFPA (2005) is the increased ability to think critically and analyze situations before acting, however, the odds of a woman with higher educational qualification in the multivariate analysis is 2.177 higher. The participants of FGD eluded the fact that before the RAR majority of them did not know most of the maternal danger signs as such even when they are experiencing it, they took it very lightly. However one of the participants said they "*thought that before RAR the maternal danger signs are just an exaggeration of people working in the hospital so that they can mobilize them to patronize their health facility"*. The finding was also consistent with that of Ossai and Uzochukwu (2015) good delivery of health education during antenatal care, use of electronic media to disseminate

health information and community enlightenment of women groups increased knowledge of women on danger signs of pregnancy. A participant reported that *she had to report her husband to his parents to allow her to access health facility when she experienced severe head ache and after some times the volunteers in the community also met with the husband and enlighten him on what are the maternal danger signs. The participants memorized all the maternal danger signs through song which made it easier for memorization. They also further confirmed that such awareness really helped in creating awareness on issues that affect their lives. The participants are of the opinion that if such training can be extended to other places it can reduce the effects of maternal mortality they gave an instance where by they had to educate some other women from other communities where the programme was not done on what are the maternal danger signs.* Even children in the communities were the programme was done were able to memorize the maternal danger signs through songs which is very effective in memorization.

The benefits of antenatal care in influencing outcomes of pregnancy depend to a large extent on the timing of the antenatal care as well as the content and quality of service provided (Phoya & Kamg‟oma, 2005). Therefore, women are advised to have a minimum of four antenatal visits spread throughout the pregnancy, with the first visit in the first trimester.A participant during the FGD session had this to say "*awareness of the danger signs of pregnancy by the women and their families will enable them to seek care promptly with effect that maternal morbidity and mortality could be reduced the bearest minimum level"*. From the community perspective, both awareness of the danger signs of an obstetric complication and knowledge about their severity are important. Community members, especially women should therefore know when to take applicable lifesaving

action for each of the complications. About 90% of the respondents had utilized ANC at least once, a figure higher than the 69% (Lincetto et al., 2006).

Furthermore, antenatal period clearly presents opportunities for reaching pregnant women with a number of interventions that may be vital to their health and well-being and that of their infants. It is a window of opportunity to inform women and families about danger signs and symptoms and about the risks of labour and delivery. It also provides the route for ensuring that pregnant women do in practice, deliver with the assistance of a skilled health care provider (AbouZahr & Wardlaw, 2003). Factors that could be responsible for not seeing ANC as important might be related to previous experiences of respondents themselves, or of relatives and friends. These factors may include services provided at ANC, the environment where the health facility is located, difficulty in accessing the health facility, health staff unfriendly attitude, competing Traditional Birth Attendants and stock-outs of essential medicine. In addition, there have been reports that cost, in the form of transportation to and fro, as well as out-of-pocket spending may mitigate against appropriate utilization of ANC.

Similar to results from studies on women in Nigeria and in other parts of the world, respondents in this study demonstrated low perception of ODSs (Bogale and Markos, 2015; Kabakyenga et al., 2011; Hasan and Nisar, 2002; Nambala and Ngoma, 2013). For example, only 48.4% of respondents recognized vaginal bleeding as a danger sign in pregnancy, compared to 90.5% reported from India (Sangal et al., 2013). Multiple factors may contribute to this finding. First, this danger sign is relatively easy to recognize. Second, bleeding is common in women in reproductive age regardless of whether they are pregnant or not. Additionally, bleeding in pregnancy may be provoked

and not directly linked to the pregnancy itself such as post-coital bleeding of cervical origin which may be due to infection or malignancy. Finally, bleeding with tissues, especially in early pregnancy, may be as a result of spontaneous (or illegally induced) abortion (Jager, 2015). Vaginal bleeding after mid-pregnancy is associated with maternal and fetal risks. Bleeding at this time often results from placenta previa, abruptio placenta and vasa previa (Sakornbut et al., 2015). Moreover, these findings supported the same findings by Workineh, Hailu, Teklemariam, Nega, Minale, Melese, Melkamu etal (2014) that knowledge of women about the obstetric danger signs as the first essential step in order to accept appropriate and timely referral and suggested that educating the people as very important in knowing the maternal danger signs. Maternal education was also found as to have strong relationship with utilization of maternal healthcare services in both the Northern and Southern part of Nigeria. This is consistent with the findings of other studies in Nigeria (Babalola & Fatusi, 2009).Women who are educated are more likely to shun traditional practices and use modern healthcare services to enhance their lives.

Lack of education was seen as a major socio-cultural factor that contributes to maternal mortality in a study in Edo State Nigeria. Formal education affects the health behavior of women and that in turns affects their health status. Studies have shown that the higher the level of education of a woman the more the chances of survival by the mother and child during delivery. Education is the key to mother's survival and enables a woman to know what to do in determining illness and health condition. Educated women tend to marry and bear children later than their less privileged peers and not likely to have large families, there education of women make child bearing safer, (Marchie, 2013) Perceived quality of service is also another factor that influences people's decision to use

a maternal healthcare facility in Nigeria. The main reason given in the studies for the non-utilization of government services for delivery by those who use other facilities were linked to quality of care.

Similarly finding from table 4.1.3 and corresponding to research hypothesis two showed that there is significant increase in access to maternal facilities in the area of study. This finding was supported by the finding of Nnebue, Ebenebe, Nwabueze, Ubajaka and Ilika (2014) on the increase of access to maternal health facilities. The researcher can infer from the FGD sessions were a participant said before RAR they are not aware of the numerous services provided in the hospitals what they know was only for delivery, another participant said she had given birth three times before RAR and all her births were never in the hospital and never attended antenatal services, but as a result of the awareness, she attended antenatal carefully and also the last baby was delivered in the hospital and fully aware of the services rendered in the hospitals. Another participant said she never know what are the recommended times for antenatal visits and also for immunizations but as a result of the awareness she is now fully informed on the recommended times for ANC and immunizations. This finding also agreed with Abdulraheem, Olapip, and Amodu (2012) which reported capacity building and empowerment of communities through orientation, mobilization and community organization as regards training, information sharing and continuous dialogue, could further enhance the access of Primary Health Care services by people.

The study also revealed that level of education is a significant predictor to utilization of maternal health care services. This is in line with Wong et al. (2004) that the higher the educational level and experience, the more likely the utilization of health care.

In other words educated women are more likely to use maternal health care services than women with no formal education (Addai, 2000; Mekonnen & Asnaketch, 2002). The finding of this study agreed with Ladipo (2008) and WHO (2010) that affordability and accessibility are also important determinant of utilization of health services in developing countries. Distance to the healthcare facilities was seen as a major factor hindering mothers from having access to maternal healthcare services, this is a problem especially because of the poor road network and lack of transportation. Some pregnant mothers will prefer to visit a nearby traditional birth attendant rather than walking many miles to a healthcare facility which she does not have trust on. Also most rural areas in Nigeria lack health care facilities and because of these women have to go long distance through bad roads to the city in order to access maternal healthcare. For those women who live in the rural areas who do not want to go through this stress of going to long distance through dilapidated road to the city to seek maternal healthcare, they resort to use of local remedies.

Finding from table 4.1.4 corresponding to research hypothesis three revealed that there was significant difference in the mode of facility delivery after the RAR among community members in the area of study. This finding was supported by the finding of Bohren, Hunter, Munte-Kaas, Souza, Vogel, and Gulmezoglu (2014) that influence of sociocultural context and care experiences affects facility delivery. A participant in FGD session narrated that before RAR she viewed facility delivery as only for weaker women and in their family they don't go to hospital for delivery they believed on Traditional Birth Attendant who was very close to their house. Distance to the health facility also contributed to poor facility delivery but as a result of RAR many people in the

community volunteered their vehicles for emergencies and have been cooperating whenever the need arises. Another participant said the attitude of the health workers also made them not to go to the health facility because the health workers (*Malaman Asibitin)* were very harsh to them and narrated that despite the health facility is not far from her house, but due to RAR where by members of the community were involved in the health promotion and various health committees were established and community members were brought into the health activities which resulted in a good working relationship between the health workers and the people of the committee and she lamented that she used to go to houses to mobilize women for ANC and also to educate them on the benefits of facility delivery.

The attitude of the health care provider and previous experience of the mothers about the care received, also influence utilization of maternal health services. This is not surprising since negative attitudes by health care providers elicit negative outcome in the utilization of maternal health care services and on the other hand, positive behaviours of health care providers to women will bring about positive outcome. Various studies have shown that there is a relationship between attitude of health care providers and mother's choice of where to receive antenatal, delivery and postnatal care (D'Ambruoso, 2005; Natukunda, 2007; Onasoga, Opiah, Osaji and Iwolisi, (2012). The attitude of health care providers towards women is a major influence on women's decision whether to use or not to use a particular type of maternal health care service. In Nigeria, just like most developing countries, a number of women still prefer to deliver at home than to deliver in the health facilities (UNICEF,2004). The findings according to Envuladu, Agbo, Lassa, Kigbu and Zoakah (2013) showed that 40% of the pregnant women had their last

delivery at home which is similar although a bit lower than what was found in the rural area of Zambia where home delivery was about 57%. Despite the high number of pregnant women who attended ANC in this study, a lot still preferred home delivery, 74% were attending ANC and yet up to 39% chose home delivery in the index pregnancy. This finding is not different from that of other studies where home delivery was the preferred choice of delivery for most pregnant women (Idris, Gwarzo, & Shehu, 2006)

Finding from table 4.1.5 corresponding to research hypotheses four showed that there is difference in the husbands standing permission for women to seek health care in the study area. This finding was supported by a study conducted by Osamor and Grady (2016) which discussed on the women's autonomy in health care decision making in developing countries. Chukuezi (2010) talked about women's low status in the society, lack of access to and control over resources, limited education opportunities, poor nutrition as impacting on women's health. Afsana and Rashid (2000) found that women in rural areas often experience lower literacy rates, lower social status, poorer economic conditions, oppressive social customs, and poor quality health care services. The connection between social factors and maternal health may not be direct. But, these factors affect not only utilization of maternal health services, but also exert pressure on the body thereby causing women to become susceptible to complications. Utilization of maternal health services is associated with improved maternal and neonatal health outcomes. A participant in one of the FGD session lamented that before RAR women were not aware of anything like standing permission but as a result of the RAR a lot of husbands in their areas were given permission to women to go to the health facility whenever the need arises, they even informed their wives that they should not wait for them. In another session one lady

said she lost a sister as a result of her husband who was not around when the wife had emergency. Also the influence of either the mother of the husband or his brothers had been reduced drastically when it comes to the issue of permission of the wives to go to the health facility.

All of the participants (598) were of the belief that RAR had created an enabling atmosphere where by women were allowed to access health facility without hindrances especially from their husbands. Another women lamented that one time before RAR her elder sister was on emergency but the mother of the husband couldn't allow them to go to the health facility, they had to seek the intervention of the traditional ruler of the community before she allowed them to go but since the introduction of RAR in the community such problems had winded up and another women said sometimes ago marriages broke as a result of permission to access health care which was a serious problem but with the introduction of RAR men were adequately informed about the importance of permission for women to go to the health facility and majority of the men obliged and supported their wives by ensuring that they go to the health facility whenever there is the need and for those who were not supportive the intervention of the members of the community convinced them to allow their wives to access health facility. The husband's acceptance of the maternal healthcare services is also one of the main factor identified and according to WHO (2004), women's decision making power is extremely limited in many parts of Africa, particularly in matters of reproduction and sexuality. In this regard, decisions about maternal care are often made by husbands or other family members. Data from the studies further emphasized the need for male involvement in women reproductive health issues. Most married women usually seek spousal approval of

their choice of ANC and delivery facilities. Majority of the women who used the TBA facilities indicated that it was to satisfy their husbands. The low status of women is manifested on who decides where the household including the pregnant mother should go for treatment especially in African Countries where culturally, male dominance and women subjugation are normal ways of life. Some social cultural beliefs and practices in Nigeria limit the ability of the women to take independent decisions about their lives and when to seek appropriate maternity care. It is their husbands or other male relatives that determine when they should seek medical/maternal care. Therefore for a society like Nigeria, effort to decrease maternal mortality should target men with necessary information about appropriate obstetric services.

Finding from table 4.1.6 corresponding to research hypothesis five revealed that there was significant increase in the reduction of maternal mortality after the RAR in the study area. The finding is supported by a study conducted by Galadanchi, Idris, Sadauki and Yakasai (2010) which revealed that the introduction of programmes or policies had helped significantly in reducing maternal mortality. A participant during one of the FGD sessions lamented that before RAR despite the fact that she had given birth thrice but she didn't know that any labour that exceeds 12 hours is a serious danger signs and also a participant said she thought that there was no way a woman can deliver without problems because she said they were told that for a woman to suffer during labour is a blessing as such even the child that will be given birth will be strong and healthy. Another participant said that before RAR it was very common for a pregnant woman to lose her life because they do not know what is expected of them and can be at home throughout her labour period but now because of the awareness created among the people the

moment she starts she will be taking to the health facility for delivery and if there is a challenge she can be referred to the next health facility.

Also another woman said during one of the FGD sessions *that before RAR there was no any committee that takes responsibility of transportation and blood donations but since the introduction of the RAR, it is no longer a problem because a lot of people had volunteered to use their vehicles to transport a pregnant woman and also the youths had also volunteered to give out blood to pregnant woman and most of them mentioned one individual who has been very prompt in blood donations to various women as a result of that gesture they voted him as a counselor representing their ward in the local government.*

There are a lot of social and economic consequences that are associated with high mortality rates and pregnancy related disabilities in Nigeria. It has left children without mothers and because these children lack the necessary care this has made them to suffer from illness , malnutrition and has also increased their risk of dying early in life. This is also why the infant mortality rate in Nigeria is high. Also as a result of severe complication from pregnancy and childbearing, women loose productivity due to ill health and this poses a lot of economic and social consequences to the family and the society at large. Problems like obstetric fistula, anemia and uterine prolapsed can have some limitation a mother's mobility and her ability to contribute to the family. These often lead to poverty, malnutrition and illness on the side of the children and marital problems. All these manifest as loss of productivity leading the affected families into poverty and thereby affecting the nation's economic growth adversely.

Urgent steps need to be taken to educate the risk population on appropriate birth practices and contraceptive use. There should be adequate and serious improvement to access especially for those who have no physical and monetary means to receive care. The quality of obstetric care must also be improved by improving the facilities and training more skilled attendants.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter presented a summary, conclusion and recommendations based on the findings of the study.

5.1 Summary

The study was on Rapid Awareness Raising programme and Community Based Maternal Health Improvements in selected communities in Kano State, Nigeria. Specifically the study examined the difference of Rapid Awareness Raising programme and community based maternal health improvements. The study was guided by five objectives amongst which were to examine the difference on knowledge of maternal danger signs of women in targeted communities before and after Rapid Awareness Raising programme implementation in Kano State; determine the difference on access to maternal health facilities of women in the targeted communities before and after Rapid Awareness Raising programme implementation in Kano state; determine the difference on the number of facility delivery of women in targeted communities before and after Rapid Awareness Raising programme implementation in Kano State. Similarly the research tested five hypotheses amongst others; there is no significant difference on knowledge of maternal danger signs of women in targeted communities before and after RAR programme implementation in Kano state; there is no significant difference on access to health facility of women in targeted communities before and after RAR programme implementation in Kano State; there is no significant difference on mode of facility among women in targeted communities before and after RAR programme implementation in Kano state; there is no significant difference on husbands permission to

women to seek health care in targeted communities before and after RAR programme implementation in Kano State

The study reviewed literature based on the research objectives and hypotheses within the major variables. These variables were on health behavior theory. The concepts of health were discussed and maternal health and community based maternal health improvement issues were extensively discussed; Nigeria health institutional set and reproductive health policy was highlighted; awareness raising as a framework for maternal health improvements; awareness raising and community development were also discussed; survey was used as research design. The population of the study was 2,556 women of child bearing age between 15 -49 years in four selected communities in Kano state. The sample size was 600 and the sampling technique was mixed method procedure. Availability sampling was used to select the local government and the communities while systematic random sampling was used to select the houses from the list of the houses in each community and simple random sampling was also used to select the female respondents from the list of the selected houses.

The findings of the study revealed that there was significant difference on knowledge of maternal danger signs after RAR programme implementation in the study area. Similarly the finding also revealed that there was significant difference on access to maternal health facilities after RAR programme implementation in the study area. It also revealed that there was significant difference on the mode of facility delivery after the RAR programme implementation in the study area. However, the findings equally revealed there was significant difference in husbands' permission to women to seek health

care after RAR programme implementation in the study area amongst others. Finally, conclusions and recommendations were made based on the findings of the study.

5.2 Conclusion

Considering the findings of the study, it was concluded that there was significant difference in the knowledge of maternal danger signs after the RAR awareness programme in the area of study. There was also significant difference in access to maternal health facilities after the implementation of RAR in the area of study. There was significant difference in the mode of facility delivery after the RAR awareness programme among community members in the area of study. There was significant difference in husband's permission to seek health care after the implementation of RAR in the area of study. Additionally other findings were that there was significant difference on the reduction of maternal mortality after the RAR awareness programme among community members in the area of study.

5.3 Recommendations

5.3.1 Recommendations from the Study

In view of the findings of this study the following recommendations were made:

1. The programme should be sustained because the women became more enlightened about the danger signs and be extended to other communities and local government areas of the state.
2. More Health facilities should be provided so as to provide access that should cover other communities and local government areas of the state.
3. Communities should be sensitized and encourage to establish community volunteers that would be assisting women towards educating them on the benefits of facility

delivery and ensure that needed services are provided and also serves a community / health facility forum.

4. Government should train Community Based Organizations and Faith Organizations on how to organize sessions where members of the community and heads of household would be enlightened on the need for husbands to give permission to their wives to go to the hospitals whenever the need arises. Religious leaders should use every opportunity they get to educate the people on the dangers of maternal mortality and also how husbands can allow permission to their wives to go to the hospitals anytime if there is need.
5. Government should come up with policies that will encourages women to birth in the health facility by giving incentives to them and communities should be assisted in the formation of voluntary groups that will assist women in their communities on maternal health through training and retraining.

5.3.2 Suggestions for Further Studies

The following areas are suggested for future studies

1. There is the need to extend further study on the community based maternal health improvements especially on the impact of males (Husbands).
2. Similar studies should be carried out in relation to the impact of community based traditional birth attendants.
3. It is also suggested that this kind of research be conducted with women in other local governments areas.
4. It is also suggested that research should be conducted on community ownership of maternal health facilities.

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Appendix I

Dear respondent

I am a student of the Department of Adult Education and Community Services, Bayero University, Kano undergoing a Ph.D. research on Rapid Awareness Raising programme and Community Based Maternal Health Improvements in some selected communities in Kano State, Nigeria.

Your cooperation is highly needed and all your responses will be highly confidential and for research purposes only.

Respondent

Signature_____

Date _____

Community Based Maternal Health Improvement Questionnaire (CBMHIQ) SCHEDULE

a. Socio-demographic characteristics

S/No	Items	Responses	
		Before	**After**
1.	How old are you		
2.	Have you ever attended any school?	Yes……..1 No ……2	
3.	What is the highest level of school you completed?	Quranic Education only …..1 Primary school …….2 Adult Literacy only……3 Secondary school ……..4 Tertiary school……..5 None ……...6	Quranic Education only …..1 Primary school …….2 Adult Literacy only……3 Secondary school ……..4 Tertiary school……..5 None ……...6
4.	What is your marital status?	Married (monogamous)…….1 Married (polygamous)……2 Widowed /divorced……3	Married nogamous)…….1 Married (polygamous)……2 Widowed /divorced……3
B	**Access of health facility**		
5.	Did you have any health facility close to you?	Yes……1 No ……2	Yes……1 No ……2
6.	Did you go to the facility for pregnancy related issues	Yes ……1 No ……..2	Yes ……1 No ……..2
7.	How often did you go to the health facility for pregnancy related issues	Whenever am sick ……1 If am pregnant ……..2 If my husband allows me ….3 I don't go at all ……..4	Whenever am sick ……1 If am pregnant ……..2 If my husband allows me ….3 I don't go at all ……..4
8.	How did you go to the health facility?	Car ……..1 Motor cycle …2 Donkey or Horse …….3 Trekking……..4	Car ……..1 Motor cycle …2 Donkey or Horse …….3 Trekking……..4
9.	Are there vehicle for transporting pregnant women on emergency	Yes …….1 No ……..2	Yes …….1 No ……..2
10.	Did you have Emergency Transport drivers in this community	Yes ……1 No ……..2	Yes ……1 No ……..2
11.	Did you have community health Volunteers	Yes ……1 No ……..2	Yes ……1 No ……..2
12.	What was your opinion on the health workers	Good …….1 Bad ……2 Fair ……3	Good …….1 Bad ……2 Fair ……3
13.	Are you satisfied with the services provided by the health workers	Yes ……1 No ……2	Yes ……1 No ……2
C	**Knowledge of safe motherhood**		
14.	How many antenatal care(ANC) visits are recommended for pregnant women?		
15.	Do you know the benefits of antenatal care visits to a pregnant woman?	Health Education……1 Prevent anemia…….2	Health Education……1 Prevent anemia…….2

	Politely keep asking (probing) the respondent until there are no further answer	Prevent malaria in pregnancy……3 Get medicine to prevent diseases ……4 Receive injection to prevent tetanus……..5 To check and ensure that the baby is growing well …….6 For early detection and management of complications of pregnancy……..7 I don't know……..8	Prevent malaria in pregnancy……3 Get medicine to prevent diseases ……4 Receive injection to prevent tetanus……..5 To check and ensure that the baby is growing well …….6 For early detection and management of complications of pregnancy……..7 I don't know……..8
16.	Name four maternal danger signs during pregnancy, delivery and few days after delivery.	Severe headache…..1 Swelling of the feet, hands and face…….2 Convulsion /fitting…..3 Fever/chills……..4 Severe bleeding ……..5 Prolonged labour (>12hrs)……6 Hand/foot/buttocks/cord came out first…….7 Placenta took greater than 30 minutes to come out…..8 Severe abdominal pain …..9 Pale eyes, tongue or palms of the hand…….10 Don't know…….11	Severe headache…..1 Swelling of the feet, hands and face…….2 Convulsion /fitting…..3 Fever/chills……..4 Severe bleeding ……..5 Prolonged labour (>12hrs)……6 Hand/foot/buttocks/cord came out first…….7 Placenta took greater than 30 minutes to come out…..8 Severe abdominal pain …..9 Pale eyes, tongue or palms of the hand…….10 Don't know…….11
17.	What are the necessary actions that a pregnant woman and their husbands need to prepare for possible maternal emergency	Know the danger signs…..1 Save the money within the family ……2 Contribute to community savings……3 Give her standing permission ……4 Get a helper for her…….5 Have a transport plan……..…6 Arrange for blood donors……7 I don't know ……..8	Know the danger signs…..1 Save the money within the family ……2 Contribute to community savings……3 Give her standing permission ……4 Get a helper for her…….5 Have a transport plan……..…6 Arrange for blood donors……7 I don't know ……8
18.	What are the necessary clean practices that are required?	Use of a clean surface…….1 Use of clean hand gloves….2 Use of a new razor blades…3 Use of a new thread……..4 Clean cloth/wrapper for the mother……..5 Clean place for delivery…..6 I don't know……..7	Use of a clean surface…….1 Use of clean hand gloves….2 Use of a new razor blades…3 Use of a new thread……..4 Clean cloth/wrapper for the mother……..5 Clean place for delivery…..6 I don't know……..7
19.	Did you experience any maternal complications related to pregnancy, delivery or after delivery in your last pregnancy	Yes……1 No…….2	Yes……1 No…….2

20.	If yes did you go to the health facility?		
21.	Did you experience any maternal complications related to pregnancy, delivery or after delivery in your last pregnancy?	Yes……1 No…….2	Yes……1 No…….2
D	**Facility delivery**		
22.	Did you ever give birth in the health facility?	Yes ……1 No……2	Yes ……1 No……2
23.	How many times?	Once ……1 Twice…….3 Thrice ……4 More than thrice …5	Once ……1 Twice…….3 Thrice ……4 More than thrice …5
24.	How many times did you give birth in the health facility?	Once ……1 Twice…….3 Thrice ……4 More than thrice …5	Once ……1 Twice…….3 Thrice ……4 More than thrice …5
25.	What are the benefits of health facility delivery with a Skilled Birth Attendants?	Likely to identify early signs of danger……..1 Likely to prevent dangers that may occur during the delivery……2 Proper assistance for the safe delivery of the baby……..3 Proper assistance for the delivery of the placenta…….4 Medicine will be given to prevent severe bleeding after delivery……5 Medicine will be given to avoid fitting ……6 If the case is severe there will be referral to another big hospital ……7 I don't know ……8	Likely to identify early signs of danger……..1 Likely to prevent dangers that may occur during the delivery……2 Proper assistance for the safe delivery of the baby……..3 Proper assistance for the delivery of the placenta…….4 Medicine will be given to prevent severe bleeding after delivery……5 Medicine will be given to avoid fitting ……6 If the case is severe there will be referral to another big hospital ……7 I don't know ……8
26.	Are you comfortable with the services you are getting at the health facility?	Yes ……1 No …….2	Yes ……1 No …….2
27.	What is the attitude of the health workers towards you?	Very aggressive……..1 Very caring ……2 I don't care attitude….3 Don't know……..4	Very aggressive……..1 Very caring ……2 I don't care attitude….3 Don't know……..4
28.	Are there qualified health personnel in the health facility?	Yes ……..1 No ……2	Yes ……..1 No ……2
29.	Where you giving standing permission?	Yes …..1 No…….2	Yes …..1 No…….2
30.	Who is responsible for given permission for you to go to the health facility?	My mother in-law……1 My husband ……2 My husband's elder brother….3 My mother……4 Our community leader….5 Don't know……6	My mother in-law……1 My husband ……2 My husband's elder brother….3 My mother……4 Our community leader….5 Don't know……6

31.	Did you have standing permission in your household for maternal emergencies?	Yes ……1 No……2 I don't need any permission….3	Yes ……1 No……2 I don't need any permission….3
32.	After RAR did you save any money in case of emergency?	Yes ……..1 No …….2	Yes ……..1 No …….2
33.	Did you or your household arrange for blood donors in preparation for maternal emergencies?	Yes …….1 No ……...2	Yes …….1 No ……...2
34.	Did you or your household arrange for a driver for maternal emergencies?	Yes……1 No……..2	Yes……1 No……..2
	Reduction of Maternal Mortality		
35.	Is there maternal mortality in this community?	Yes ……..1 No…….2	Yes ……..1 No…….2
36.	How can you rate the mortality in the community?	Very high …..1 High ……2 Very low……..3 Low ……4	Very high …..1 High ……2 Very low……..3 Low ……4
37.	What are the strategies employed?	Constructing more health facility……1 Employing more health workers…..2 Training and retraining of health workers……..3 Procurement of drugs and other facilities …….4 Establishing health committees……5 Public enlightenment……..6 I don't know ……7	Constructing more health facility……1 Employing more health workers…..2 Training and retraining of health workers……..3 Procurement of drugs and other facilities …….4 Establishing health committees……5 Public enlightenment……..6 I don't know ……7
38.	Are there community groups that are educating people on issues of maternal mortality?	Yes ...1 No ….2	Yes …1 No ….2
39.	What do you think can be done to reduce maternal mortality in your area?	Build more hospitals…..1 Construct more roads…..2 Provide free maternal care …3 Create more awareness on the people …….4 Ensuring community involvement in the affairs of hospitals…….5 Train the TBAs on supporting pregnant women……6 I don't know……..7	Build more hospitals…..1 Construct more roads…..2 Provide free maternal care …3 Create more awareness on the people …….4 Ensuring community involvement in the affairs of hospitals…….5 Train the TBAs on supporting pregnant women……6 I don't know……..7
40.	Are your community members doing enough towards reduction of maternal mortality?	Yes …..1 No …….2 I don't know …..3	Yes …..1 No …….2 I don't know …..3
41.	What do you think can they do?	Provide assistance ….1 Save money ……2	Provide assistance ….1 Save money ……2

		Form groups ……...3 Enlightened others ……4 Provide blood donors ….5 Createvibrantwomen groups…6 I don't know ……..7	Form groups ……...3 Enlightened others ……4 Provide blood donors ….5 Createvibrantwomengroups…6 I don't know ……..7

APPENDIX II

FOCUS GROUP DISCUSSION GUIDE

The researcher introduces the purpose of the research for the focus group discussion and set the ground rules.

INTRODUCTION

Good morning /afternoon /evening. My name is **Muhammad Shehu Hussain** and I am a post-graduate student of Bayero University, Kano Conducting a research on Rapid Awareness Raising (RAR) programme and Community Based Maternal Health Improvements in selected communities of Kano state, Nigeria.

Our discussion is going to last for one hour thirty minutes; I will guide the discussion and make sure everybody has a chance to speak. I will be taking notes during the discussion so that we do not forget any of the points discussed; whatever you said is confidential and is for research purposes. You should be re- assured to know that anything you said will be kept in absolute confidentiality. We do this because we think that we can get a better and more accurate picture of what you say than just by taking notes

Now that we have introduced ourselves, let me explain the ground rules. They are very simple.

- Please do not interrupt anyone and try to give everyone a chance to speak.
- If you disagree with another person then you can respond to them when they have finished speaking.
- Are there other rules we would like to add?

QUESTIONS

1. How often did you go to the health facility, Probe further before and after RAR?
2. What are the maternal danger signs?
3. Before RAR did you ever give birth in the health facility? If yes, how many times?
4. After RAR how many times did you give birth in the health facility?
5. Before RAR were you giving permission to go to the health? If yes, what are the reasons?
6. Who is responsible for permission to women to go to the health facility?
7. Before RAR are there cases of maternal mortality in this community? If yes, what can you say its level?
8. After RAR what is the level of maternal mortality?
9. What do you think can be done to improve on the situation?

WRAP UP

Do you have any questions or suggestions that you would like to make about the issues we have so far discussed?

This is the end of our discussion.

Thank you for your contributions.

APPENDIX III

RESULT OUTPUT

```
GET
FILE='C: \Users\mshussain\Documents\OTHER PEOPLE WORKS\M. S. Hussain
Data.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
FREQUENCIES VARIABLES=Age SA SC MS EMP OCC
/STATISTICS=MEAN
/ORDER=ANALYSIS.
```

Frequencies

```
 [DataSet1] C:\Users\mshussain\Documents\OTHER PEOPLE WORKS\M. S.
HussainData.sav
```

Statistics

		Age	School Attendance	School Completed	Marital Status	Employed?	Occupation
N	Valid	598	598	598	598	598	598
	Missing	0	0	0	0	0	0
Mean		27.23	1.00	1.52	2.00	2.06	3.90

Frequency Table

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	14	2	.3	.3	.3
	15	10	1.7	1.7	2.0
	16	4	.7	.7	2.7
	17	15	2.5	2.5	5.2
	18	13	2.2	2.2	7.4
	19	25	4.2	4.2	11.5
	20	32	5.4	5.4	16.9
	21	28	4.7	4.7	21.6
	22	59	9.9	9.9	31.4
	23	10	1.7	1.7	33.1
	24	23	3.8	3.8	37.0
	25	32	5.4	5.4	42.3
	26	35	5.9	5.9	48.2
	27	52	8.7	8.7	56.9
	28	29	4.8	4.8	61.7
	29	17	2.8	2.8	64.5
	30	15	2.5	2.5	67.1
	31	24	4.0	4.0	71.1
	32	29	4.8	4.8	75.9
	33	33	5.5	5.5	81.4
	34	17	2.8	2.8	84.3
	35	8	1.3	1.3	85.6

	36	33	5.5	5.5	91.1
	37	10	1.7	1.7	92.8
	38	4	.7	.7	93.5
	39	12	2.0	2.0	95.5
	40	10	1.7	1.7	97.2
	41	9	1.5	1.5	98.7
	42	8	1.3	1.3	100.0
	Total	598	100.0	100.0	

School Attendance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	598	100.0	100.0	100.0

School Completed

		Frequency	Percent	Valid Percent	Cumulative Percent
	Qur'anic Education Only	290	48.5	48.5	48.5
Valid	Primary School	308	51.5	51.5	100.0
	Total	598	100.0	100.0	

Marital Status

		Frequency	Percent	Valid Percent	Cumulative Percent
	Married (Monogamous)	1	.2	.2	.2
Valid	Married (Polygamous)	597	99.8	99.8	100.0
	Total	598	100.0	100.0	

```
T-TEST PAIRS=AHFB KSMB FDB HGSMB RMMA WITH AHFA KSMA FDA HGSMA RMMB
(PAIRED)
  /CRITERIA=CI(.9500)
  /MISSING=ANALYSIS.
```

T-Test

```
 [DataSet1] C:\Users\mshussain\Documents\OTHER PEOPLE WORKS\M. S.
HussainData.sav
```

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	AHFB	11.0000	598	.98396	.04024
	AHFA	6.5134	598	.50358	.02059
Pair 2	KSMB	19.2040	598	5.66501	.23166
	KSMA	12.2860	598	3.63219	.14853
Pair 3	FDB	4.9666	598	.17995	.00736
	FDA	4.5151	598	.50019	.02045
Pair 4	HGSMB	7.9632	598	.21341	.00873

	HGSMA	6.4883	598	1.48212	.06061
Pair 5	RMMA	6.4833	598	.50014	.02045
	RMMB	4.5184	598	.50342	.02059

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	AHFB & AHFA	598	-.977	.000
Pair 2	KSMB & KSMA	598	.997	.000
Pair 3	FDB & FDA	598	-.162	.000
Pair 4	HGSMB & HGSMA	598	.009	.822
Pair 5	RMMA & RMMB	598	-.997	.000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	AHFB - AHFA	4.48662	1.47984	.06052	4.36777	4.60547	74.140	597	.000
Pair 2	KSMB - KSMA	6.91806	2.06388	.08440	6.75231	7.08381	81.969	597	.000
Pair 3	FDB - FDA	.45151	.55831	.02283	.40667	.49634	19.776	597	.000
Pair 4	HGSMB - HGSMA	1.47492	1.49546	.06115	1.35481	1.59502	24.118	597	.000
Pair 5	RMMA - RMMB	1.96488	1.00273	.04100	1.88435	2.04541	47.919	597	.000

APPENDIX IV

LIST OF TABLES