ASSESSMENT OF THE FACTORS AFFECTING ACCESS AND UTILISATION OF SELECTED MATERNAL HEALTH CARE SERVICES IN KADUNA STATE, NIGERIA

BY

Simiat Bidemi ABDULKAREEM
PhD/SOC.SCI./16003/2011-2012

JULY, 2018

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PhD/SOC.SCI./16003/2011-2012

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DEPARTMENT OF SOCIOLOGY,
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JULY, 2018

DECLARATION

I declare that the work in this dissertation entitled Factors Affecting Access and Utilisation of Selected Maternal Health Care Services in Kaduna State has been carried out by me in the Department of Sociology. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this dissertation was previously presented for another degree or diploma at this or any other Institution.

_____ _____

Simiat Bidemi ABDULKAREEM Date

CERTIFICATION

This dissertation entitled; "ASSESSMENT OF THE FACTORS AFFECTING ACCESS AND UTILISATION OF SELECTED MATERNAL HEALTH CARE SERVICES IN KADUNA STATE by Simiat Bidemi ABDULKAREEM meets the regulations governing the award of Doctor of Philosophy (Ph.D) degree in Sociology of Ahmadu Bello University, Zaria, and is approved for the contribution to knowledge and literary presentation.

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DEDICATION

This work is dedicated to the memory of my late father, Alhaji S.B. Alashonla and my late sister Mrs. Rafiat Funke Otitoju, both of whom would have wished to witness this day in my life but could not live to. We all love you, but Almighty Allah loves you most. Adieu

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ABSTRACT

The official policy which exempts women and their babies from out-of-pocket payment for their health care in Kaduna State is only in written paper because the study found that women are usually asked to pay some token whenever they go to hospital to utilise health care services. The study examined the challenges of maternal health among women of reproductive age (15-49 years) in Kaduna State. The main aim of the study is to assess the factors affecting access and utilisation of selected maternal health care services in Kaduna Sate. The specific objectives are: to assess women's awareness of selected maternal health care services in the study area, to determine the extent of utilisation of selected maternal health care services among women in the study area, to identify factors affecting access to the selected maternal health care services among women in the study area, to determine strategies put in place by women to over-come barriers to utilisation of the selected maternal health care services in the study area. Literature was reviewed in line with the study objectives. The study utilised Anderson health behavioural model as the theoretical framework. The study was carried out in the three senatorial zones in Kaduna State. A total of three hundred and seventy-nine questionnaires were administered to women of reproductive age in selected Local Government Areas of Kaduna State using multi-stage sampling technique. In-depth interviews were also conducted among nineteen (19) key informants comprising orthodox health practitioners and traditional birth attendants. Twelve (12) Focus Group Discussions were conducted on both women and men in the study areas. Hospital records were also collected using documentary review. The mean age of the respondents was 32 years; they had an average of 5 children. Majority of the respondents were married and had formal education. The level of awareness of the selected maternal health care services was very high, utilisation of the services was however lower than awareness. For family planning 26.5% gave a history of ever using modern contraceptives while only 16.7% are currently using. Similarly 99.7% use antenatal care only very few deliver in health facility. While injectable method of family planning is the most preferred by the respondents husband not agreeing to it and love for many children were reasons for not using family planning. Also, ability to pay for maternal health care services significantly influenced utilisation of the services as women who earn above ₦30,000 monthly utilised delivery services than women who earn less. The findings revealed that there is a significant relationship between religion and use of family planning as majority of the Muslims has never used family planning whereas; some of the Christians have ever used family planning. The result shows that while about average of the respondents delivered their babies in government hospital, below average had home delivery. Majority of the women that delivered in private clinics have tertiary education. While majority of the respondents that earn ₦30,000 above delivered in private clinics, some of respondents that earn between ₦11,000 - ₦20,000 had home delivery. Majority of the respondents agreed that the staff reception at the maternal health care centers is either friendly or somewhat friendly. Documentary records from the hospitals shows that majority of the women do come for antenatal care across the zones but women from Kaduna north do not come for delivery in the hospital. The documentary also shows that antenatal is the most used maternal health care services while

family planning is the least used across the zones. Regression results show that place of delivery is significant with educational level and age and has positive relationship with educational level, monthly income and age. Also ever used family planning is significant with religion, marital status, monthly income and age whereas it has positive relationship with only marital status. Access to antenatal care has no significant relationship with any of the socio-economic variable but has positive association with age, religion and monthly income. Also utilisation of antenatal care is significant with marital status, monthly income and age and has positive relationship with religion, marital status, educational level and age. The regression results also shows that utilisation of delivery service is significant with age and educational level and has positive association with marital status and monthly income. Utilisation of postnatal care is significant with religion, marital status, and monthly income and has positive association with marital status and monthly income. Factors found to be associated with use of maternal health care services were financial capability, education and male dominance. It is therefore recommended that there should be sensitization programmes to increase the awareness of all other services rendered in maternal health care centers. There should be adequate information about utilisation of family planning methods in other to dispel any misconceptions about family planning. Also, public enlightenment programme on maternal health service utilisation and male responsibilities should be effectively carried out in all communities especially among women in Kaduna North who hardly utilise delivery care, and family planning services. Government should make accessibility to maternal health care centers easy so as to encourage women to utilise the services.

LIST OF ABBREVIATIONS/ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
AHRQ	Agency for Health Care Research & Quality
ABUTH	Ahmadu Bello University Teaching Hospital
EOC	Emergency Obstetric Care
FIGO	Federation International of Gynecology and Obstetrics
FP	Family Planning
HMO	Health Management Organisation
HF	Health Facility
MMR	Maternal Mortality Ratio
MH	Maternal Health
MDGs	Millennium Development Goals
MM	Maternal Mortality
MHCS	Maternal Health Care Services
MCH	Maternal and Child Health
NDHS	Nigeria Demographic Health Survey
NIPORT	National Institute of Population Research and Training
NHIS	National Health Insurance Scheme
NPC	National Population Commission

PNC	Postnatal Care
PHC	Primary Health Care
PPH	Postpartum Heamorhage
SSA	Sub-Saharan Africa
SHC	Secondary Health Care
SOGON	Society of Gynaecologist and Obstetricians of Nigeria
SURE-P	Subsidy Reinvestment and Empowerment Program
TBA	Traditional Birth Attendants
UNICEF	United Nation Children's Educational Fund
UNDP	United Nations Development Programme
UNFPA	United Nations Funds for Population Activities
USAID	United State Agency for International Development
VHW	Village Health Workers
WHO	World Health Organisation

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CHAPTER ONE

INTRODUCTION

1.1 Background to the study

This study assesses factors affecting access and utilisation of selected maternal health care services in Kaduna State, Nigeria. The World Health Organisation [WHO] (2014) defined maternal health as the health of women during pregnancy, childbirth, and the postpartum period. Maternal health care services (MHCS) are essentially promotive and preventive and provide avenues for the early detection of mothers at high risk of illness and mortality during pregnancy, labour and postnatal periods (Olugbenga-Bello; Abodunrin and Adeomi, 2011; WHO and UNICEF, 2010b). Majority of women who utilise maternal health care services are not ill, and as pregnancy is a frequently and uneventful physiological process, it is logical to imagine that, given the slightest constraints, maternal health services would be underused. The main objective of maternal health care is to ensure that expectant and nursing mothers have normal delivery, bear healthy children and maintain good health.

In England, research shows that having a baby is the most common reason for admission to hospital. In 2012, there were 694,241 live births. Maternal health care is a unique area of the NHS as the services support predominantly healthy people through a natural, but very important, life event that does not always require doctor-led intervention (National Audit Office, 2013). Pregnant women receive care from a range of health professionals. All are cared for by midwives, who act as the coordinating professional for every birth. For women at higher risk or undergoing medical procedures, care is also provided by doctors led by consultant obstetricians (National Audit Office, 2013). The structures for commissioning healthcare, including maternal services, changed from 1 April 2013 as part of the reforms introduced under the Health and

Social Care Act 2012. Until 31 March 2013, 151 primary care trusts were responsible for commissioning maternal services, overseen by ten strategic health authorities on behalf of the Department (National Audit Office, 2013).

In 2010, 84 per cent of women reported that the care they received during labour and birth was excellent or very good, compared with 76 per cent for the care received during pregnancy and 67 per cent for the care received after the birth. Between 2007 and 2010 there was similar improvement across all three parts of the care pathway (National Audit Office, 2013). There were, however, significant inequalities in reported satisfaction between white women and black and minority ethnic women.

Women's experiences relating to continuity of care are mixed. In 2010, 92 per cent of women reported having a named midwife they could contact during pregnancy. However, 22 per cent stated that they had been left alone, during or shortly after birth, at a time when it worried them. In 2013, 78 per cent of maternity units reported that they provided one-to-one care for at least 90 per cent of women (National Audit Office, 2013).

Maternal care in Australia is among the safest in the world, with low maternal and perinatal mortality rates compared with other nations in the Organisation for Economic Co-operation and Development (OECD) (Australian Health Ministers Advisory Council, 2014-2015). However, some sectors of the population, including Aboriginal and Torres Strait Islander people and rural and remote communities, experience considerable health inequalities and social disadvantage, which are compounded by limited provision of quality maternity care and can lead to less favourable outcomes for these mothers and babies. Many Australian women also experience restricted birthing choices, despite the wide range of maternity care models practiced

in Australia. There is increase in access to local maternity care by expanding the range of models of care available to Australian women and their families (Australian Health Ministers Advisory Council, 2014-2015). This includes increasing access to midwifery managed and continuity of career programs. It also involves investigating options for providing publicly funded homebirth and considering the implementation of publicly funded homebirth models. Midwifery managed and continuity of career programs. Most States and Territories (NSW, VIC, SA, WA, and NT) now offer publicly funded homebirth as an option for low risk women (Australian Health Ministers Advisory Council, 2014-2015).

In May 2009, the Conference of Africa Union (AU) Ministers of Health launched CARMMA (Campaign on Accelerated Reduction of Maternal, New Born and Child Mortality in Africa) under the theme of "Universal Access to Quality Services: Improve Maternal, Neonatal and Child Health." The continental launch of CARMMA has been followed with national and subnational launches and follow-up implementation of maternal health actions. To date, 37 Member States have launched CARMMA. These campaigns have increased high level political commitment, country ownership and social mobilization, and given more visibility to maternal, newborn and child health issues in Africa (Ezekiel, Iwelumor, Grigsby, 2017).

As the Millennium Development Goals came to an end in 2015 with the introduction of Sustainable Development Goals (SGDs) for 2016-2030, there remains unfinished business of maternal and child health in Sub- Sahara-Africa (Global Development, 2014). The statistics with reference to sub-Saharan Africa are startling. Recent statistics from the United Nations Inter-Agency Estimates indicate that from 1990 to 2015, the global maternal mortality ratio declined by 44% from 385 deaths to 216 deaths per 100,000 live births (UNICEF 2016). Although this is commendable, it is less than half the 5.5% annual rate needed to achieve the three-quarters

reduction in maternal mortality that was targeted for 2015 in Millennium Development Goal 5 (UNICEF, 2016). While every region in the world experienced declines in levels of maternal mortality between 1990 and 2015, levels in sub-Saharan Africa remain unacceptably high. According to the World Health Organization in 2013, there were an estimated 289,000 maternal deaths globally, of which 62% occurred in sub-Saharan Africa (WHO, UNICEF, UNFPA, World Bank, and UN Population Division, 2014c). The region also has the highest maternal mortality ratio of 510 deaths per 100,000 births (WHO et al., 2014c) it has been noted that a 15-year-old girl living in sub-Saharan Africa faces about a 1 in 40 risk of dying during pregnancy and childbirth during her lifetime. A girl of the same age living in Europe has a lifetime risk of 1 in 3,300 (WHO et al, 2014c) underscoring how uneven progress has been around the world in trying to achieve Millennium Development Goal 5 (Global Development, 2014; Lorenzo, Wang, Foreman, Rajaratnam, Naghavi, Marcus, Murray, 2011). The majority of these deaths are from preventable causes and treatable diseases (Alvarez, Gil, Hernández, & Gil, 2009) all of which highlight the need for maternal and child health to remain important priorities for SDGs beyond 2015. For sub-Saharan Africa, there is a great need to accelerate the pace of progress in order to achieve the SDG target on maternal and child survival. To achieve the SDG target of maternal mortality rate of 25 or fewer deaths per 1000 live births by 2030, a total of 47 countries need to increase their pace of progress by at least doubling or even tripling their current rate of reduction (UNICEF, WHO, World Bank and UN Population Division 2015).

As the Sustainable Development Goals (SDGs) begin to guide the global development agenda, maternal health remains an area for urgent policy and programmatic attention in Nigeria. Nearly one in every four women in sub-Saharan Africa (SSA) is Nigerian. The plight of women in Nigeria will vastly impinge on the achievement of the SDGs in the region. Investing

intentionally and purposefully in safeguarding maternal health in the country is a sure strategy for improving on the current levels of progress and guaranteeing the future potential for growth and advancement in Africa as a whole (Adebayo 2014, Izugbara and Krassen-Coven 2014). While the key to ensuring the quality of maternal care is a systems perspective on the provision of care and the conscious and continuous improvement of service delivery and health care systems (WHO, 2006a), persistent socio-economic crises have resulted in misplaced priorities, inefficiencies, and a moribund health sector in Nigeria. The dismal national maternal health indicators (Cooke and Tahir, 2013) are the clearest expression of the health crisis in Nigeria. Currently, Nigeria ranks among the bottom five out of 191 countries with the poorest-performing health service delivery systems globally. Further, while sub-Saharan Africa's maternal mortality ratio of 510 per 100,000 live births is more than twice the global average, the ratio in Nigeria is 560 per 100,000 live births (NPC, 2014), which makes the country the second largest contributor to maternal mortality worldwide. Each day, about 109 Nigerian women die in childbirth approximately one death every 13 minutes. The country's estimated annual 40,000 pregnancy-related deaths account for about 14% of the global total (Oyibocha, 2104), placing it among the top 10 most dangerous countries in the world for a woman to give birth (Global One, 2015).

Kaduna State with a population of 8216037 can boast of functional primary health facilities in every wards of the state. In Kaduna State, maternal and child health is of paramount importance. The recent survey shows that Immunization coverage is 25% and antenatal visits attendance has improved from 30% in 2008 to 43% in 2017. Also contraceptive prevalence rate is 24.10% while unmet need for family planning is 22% (Maternal and Child Health2 Monthly Flasher, 2017). Despite all these Kaduna State maternal mortality rate stands at 576 per 100,000 live births (Kaduna State Government, 2016-2020).

Although all the wards have their PHCs but most of these PHCs are poorly situated, constructed, structured, financed, and equipped (NPHCDA, 2013). Women paid for immunization and family planning services. They were charged to access ANC services. These services especially the immunization and family planning were supposed to be rendered to the clients free of charge. However, the patients paid for these services due to various reasons such as logistic, scarcity of the commodities, maintaining the revolving funds, and illegal charges by the health-care workers. The inability to pay user fee for family planning might have contributed severely to the poor utility rate and the poor contraceptive prevalent rate in Kaduna State (Adegboyega and Abioye, 2017). This study therefore is set to find out those factors affecting access and utilisation of selected maternal health care services in Kaduna State, Nigeria.

The average cost for ANC services is about N300 and about 1500 for a delivery service in a PHC, though lesser than user fees at the secondary, and tertiary facilities in Nigeria, but still very much unaffordable for most of these poor women. This might also be a major contributor to high prevalence of home deliveries reported in several studies in the Northern Nigeria. The high cost of the post abortion care may prevent women from seeking this service (Adegboyega and Abioye, 2017).

1.2 Policies and Programs for Maternal Health Care in Nigeria

Many policies and programmes have been formulated aimed at increasing utilisation of maternal health care services with the sole aim of reducing maternal mortality especially in developing countries. First among these policies in Nigeria which was aimed at tackling health issues in women and children is the Bamako initiative sponsored by UNICEF and WHO and adopted by African ministers of health in 1987. The Bamako initiative was aimed at promoting government commitment to universal accessibility of primary, maternal and child health care, as

well as equity of access and provision and exemption of the poorest from charges for health care (Abiodun, 2010).

In 1975, the Basic Health Services Scheme came into being as an integral part of Nigeria's Third National Development Plan (Agency for Healthcare Research and Quality (AHRQ), 2014) and was structured along "basic health units", which consisted of 20 health clinics spread across each LGA, which were backed-up by four (4) primary health care centers and supported by mobile clinics serving an approximate population of 150,000 each (Babatunde, Aiyenigba, Awoyemi, Akande, Musa, Salaudeen, Babatunde and Atoyebi, 2013). The non-involvement of local communities who were the beneficiaries of the services was a major drawback of this attempt. This led to the inability to sustain the scheme at the close of the third national development plan period (National Primary Health Care Agency (NPHCDA), 2012). In Nigeria, primary healthcare was introduced in the National Health Policy of 1988 as the cornerstone of the Nigerian health system as part of efforts to improve equity in access and utilisation of basic health services. The goal of primary health care (PHC) was to provide accessible health for all by the year 2000 and beyond (Aigbiromolen et al., 2014). Since then, primary health care in Nigeria has evolved through various stages of development (Olise, 2012). In 2005, primary health care facilities were found to make up over 85% of health care facilities in Nigeria (FMOH, 2010).

Late Professor Olukoye Ransome-Kuti as a Minister and expert led the second attempt which occurred between 1986 and 1992 (FMOH, 2013). This period was characterised by the development of model primary health care in fifty two (52) pilot local government areas all of which were implementing all eight components of primary health care. In 1992, the National Primary Healthcare Development Agency (NPHCDA) was established and heralded the third

attempt to make basic healthcare accessible to the grassroots (NPHCDA, 2011). The Ward Minimum Health Care Package (WMHCP) which outlines a set of cost effective health interventions with significant impact on morbidity and mortality was also developed within context of the Ward Health System and aligned with the millennium development goal (MDG) targets of Nigeria. To drive this new policy over five hundred model health centers were established across the nation by the federal government (NPHCDA, 2012).

At the beginning of the new millennium, world leaders gathered at the United Nations to shape a broad vision to fight poverty in its many dimensions. That vision, which later translated into eight Millennium Development Goals (MDGs), has remained the overarching development framework for the past fifteen years (The MDGs Report, 2015). In 2001, 147 heads of states collectively endorsed the Millennium Development Goals (MDGs) four and five. Goal four and five are set to reduce by two-third and by three quarter the under-five and maternal mortality between 1990 and 2015, respectively (MDG Report, 2015). Recently, the federal government of Nigeria created a program to improve maternal and child health care through the Subsidy Reinvestment and Empowerment Program (SURE-P). The aim of the SURE-P intervention in Maternal and Child Health Care is to reduce Maternal, and Newborn Morbidity and Mortality through the utilisation of cost effective demand and supply interventions. The SURE-P is also meant to increase access to maternal and child health care so as to ensure the achievement of the targeted MDG goals 4 and 5 (Romo, 2014). The SURE-P program identified and selected 500 primary health centers PHCs and 125 general hospitals across the 36 states of the federation and the federal capital Territory (FCT). More health facilities and drugs were supplied to the selected 500 PHCs and general hospitals. The hospital maternal sections are upgraded to provide a comprehensive intervention for complicated maternal and child health cases. In addition,

pregnant women are encouraged to utilise maternal health care especially antenatal and skilled delivery by providing free services and cash transfer to address the problem of accessibility. To solve the problem of insufficient skilled health workers, the SURE-P program employed more skilled health workers, midwives and community health workers to meet the increasing demand for health workers (Cooke and Tahir, 2013)

Nigerian government on October 16, 2012 launched the Saving One Million Lives initiative to scale up access to essential primary health services and commodities for Nigeria's women and children. The Nigeria's government through the initiative pledged to save one million lives by 2015 as saving one million lives will enhance Nigeria's chances to grow and become part of the 20 biggest economies in the world. The aim of the save one million lives is to: improve maternal, newborn and child health (MNCH), improve routine immunization coverage and achieving polio eradication, elimination of mother to child transmission of HIV (eMTCT), scale up childhood essential medicines and commodities, improve malaria control, improve childhood nutrition. As part of the intervention aimed at improving the health of women and children, Nigeria, described as one of the largest public health sector led Human Resource for Health (HRH) intervention schemes in Africa, deployed 4,000 midwives to 1,000 PHC in most needy areas, additional 1,000 community health workers were deployed to close persisting gaps in under-served areas without midwives, builds on the Midwives Service Schemes (MSS) programme by expanding the intervention, introduce demand side interventions e.g. Conditional Cash Transfer (CCT), ensure pilots of financing mechanisms for referrals and EmOC, high impact, low-cost interventions targeted at newborns, U5 children, breast feeding mothers and women of reproductive age in conformity with continuum of care approach, Nigeria government to show his commitment increase allocation of additional $8.35 p.a. for procurement

of Rural Health (RH) commodities over the next four years through UNFPA on the platform of an existing agreement (Federal Republic of Nigeria, 2012; Ohiri, 2012).

By 2002, the National Reproductive Health Strategy framework developed by ministry of health was formulated, while the national guideline for women's health sector reform in 2003 was developed. In 2004, the National Family Planning and Reproductive Health Policy were developed (Ogunbekun, 2010). Also, in 2007 the Integrated New Born and Health Strategy designed to ensure continuum of care for pregnant women in antenatal care was formulated. The Integrated Maternal, Newborn and Child Health Strategy (IMNCH) formulated in 2007 has antenatal Care, post natal care, prevention of malaria and immunization of children as its priority areas (WHO, 2008c).

Although this long list of health policies and programmes suggests that the government recognise the need to improve maternal health in Nigeria, however, the political will to transform these policies into action is largely absent. Evidence suggests that the lack of much improvement in this outcome despite these policies is due to inadequate implementation. Feyisetan and Bankole, (2002) in a study cited the lack of concrete and targeted support by the government for family planning as possibly a major reason why the National Health Policy released in 1988 failed to meet most of its targets. A recent study noted that the Nigerian health system as a whole suffers from multiple problems, such as poor service quality, including unfriendly staff attitudes toward patients, inadequate skills, decaying infrastructure and chronic shortages of essential drugs and supplies (the well-known "out-of-stock syndrome") (Lanre-Abass, 2008).

Despite much lofty policy formulation, the serious lack of commitment to implementing these proposals can be seen in the gross under- budgeting of the health sector over the years. It is

thanks only to the efforts and funding of NGOs and international donors that maternal mortality in Nigeria has not deteriorated even further. It is only through their efforts that awareness of the magnitude of the problem has been maintained and kept in constant focus.

Government policies can play a major role in alleviating (or worsening) the problem of low accessibility to and utilisation of maternal health services, as such, investment in health services with due consideration of the general populace is an important means of empowering the individuals (health-wise). There have always been constant cuts in health and social services spending in Nigeria. These policies have been identified as major causes of worsened health condition among women that cannot adequately access and utilise health facilities. The multiple increases in the prices of goods, utilities and services like health and education and the depreciation of naira are as a result of continuous introduction of in-effective policies. Such conditions continue to increase the level of poverty and produce negative impact on maternal health and survival. For instance a study conducted by Adamu and Salihu (2002) reveals that economic crises have compelled most Hausa women to deliver their babies at home with the assistance of traditional birth attendants.

Based upon the premise above, this study maintained that women educational level impacts upon access to use of health care services. Women with lower education have higher risk of ill health and lower capacity to access existing health care facilities resulting in lower probability of utilisation of health services leading to poorer health outcomes (Adamu, Yusuf, Salihu, and Satthiakumar 2003). Poor access to information, limited capacity in decision making, poor health care seeking behaviour and higher rates of economic dependence are some reasons for lower use of health care services. There is also a strong correlation between education and life expectancy at birth (UNDP, 2006). In Nigeria, the education of a mother affects the use of

antenatal care and delivery services and the type of care provider used for these services (NPC, 2014). This study tends to investigate the use of maternal health care services by women in Kaduna State.

1.3 Statement of the Research Problem

There are vast discrepancies in access to and utilisation of maternal health services in both the developed and the developing countries. These discrepancies occur between the rich and poor women, between the urban and rural women, between the young and the old women, and between the literate and non-literate women (Adewoye et al., 2013). Despite the fact that effective utilisation of heath care services by women is essential for further improvement of maternal and child health, women have less access to and inadequate use of health care services in Nigeria. Some of the reasons for the differentials include high poverty and low literacy rate, thus necessitating for more people depending on government facilities especially in the provision of health care services. Studies in other parts of the world have shown clearly, marked variations in determinants of women's access and use of health care services.

Current health care policy context in Nigeria (Kaduna State in particular) is one in which maternal and child health care is "free" and therefore women and their babies are not supposed to pay for their health care services. Free medical services as a means of improving utilisation through the elimination of financial barriers has formed major issue of political activism. Success in this direction has been limited due to inappropriate structure that result from not turning planning and management activities towards utilisation, a situation compounded by other existing problems. This is only in theory and not in practice as women are being charged some token whenever they go to the hospital to access their health care. Thus, problem of affordability becomes a major constraint to access health care for low-income group.

There are also other problems of access to health care including availability and quality of care provided by the health facilities. Availability of health care concerns the distribution of health facilities in relation to the target community. Issues of urban versus rural distribution of the various types of health care facilities as well as regional distribution of health care facilities are considered within the framework of availability of health care. Distributions of health facilities are imbalanced in Kaduna State. Where there are health facilities, there are not enough medical providers to attend to people. Lack of enough medical providers to attend to women discouraged many women from using health care facilities whenever they are in need of it.

In Kaduna State and indeed Northern Nigeria, there is an increasing diversity of population which poses new challenges to the general health systems. Also, there is lack of current data on women's access and utilisation of health care services, appropriateness of the care services, and problems experienced when confronting the health care system. This limits the knowledge about the multiple determinants of the utilisation of health care services. It is important to understand how to ensure access and use of health care services and to deliver appropriate care with special consideration to women in Kaduna State, so as to increase awareness, use and undertake healthcare prevention programmes. Barriers must be identified and approaches to remove them developed.

In various communities in Kaduna State, women are facing social and physical barriers to accessing health care services, especially due to disproportionate need for reproductive health care. More broadly speaking, illiteracy increases ignorance in decision-making in health seeking behaviour especially on reliance in traditional birth attendants (TBA), harmful cultural practices among others. However, Kaduna State women's relatively low status and the risk associated with reproduction exacerbate what is already an unfavourable overall health situation (Sambo,

Abdulrasaq, Shamang, and Ibrahim, 2013). Statistics from the Kaduna State Ministry of Health (2015) revealed that the state has 1,692 health care services 40.2% of these health facilities belong to the private sector. 96.5% of all the health facilities are primary health care, 3.2% secondary health care and 0.3% tertiary healthcare facilities (Kaduna State Ministry of Health, 2015). Hospital based study by Yar'zever (2014) shows an average maternal mortality ratio of 1,625 per 100,000 deliveries. This figure, considering all the maternal health care facilities in the state both public and private, is very high.

Despite the efforts of the government to deliver health care facilities to rural people through innovative approaches, the utilisation of health care services in some parts of Nigeria, especially Northern Nigeria is still far below expected standard (FMoH, 2005). Accessing vulnerable groups who needed the preventive and curative health services is one of the challenges of the public health in Nigeria (especially Kaduna State). Most women in Nigeria resides in rural areas especially those in the Northern parts of the country where literacy level among women is very low and do not have access to reproductive health education needed (Ejembi et. al 2004). Thus, complications of pregnancy and childbirth at the level of preconception and prenatal care are the leading causes of death among women of reproductive age in many developing countries (Babalola and Fatusi, 2009). Reducing maternal mortality therefore requires coordinated, long-term efforts at the household and community levels as well as at national level where legislation and policy formulation in the health sector is being made.

Despite the fact that many studies have been carried out on women's access to and utilisation of maternal health care services in different urban and rural areas in Nigeria, maternal mortality is still on the increase while access and utilisation of health care services remain low especially in Kaduna State. For instance, Nuhu (2010) in Kaduna found that women had

extremely poor knowledge of maternal health care services. Butawa, Tukur, Idris, Adiri, Taylor (2010) also found that socio-cultural factors influenced women's knowledge and access to maternal health care services in Kaduna State. Ejembi and Prata (2010) found that 95.4% of women in Zaria, Kaduna State delivered their babies at home. Of all the studies carried out relating to access and utilisation of maternal health care services in Kaduna State, few focused on financial capability as a factor influencing use of maternal health care services. This study therefore wants to fill that gap.

From the above statement of research problem, the following research questions are examined:

1. What is the level of awareness of antenatal care, family planning and delivery care services among women in the study area?
2. What is the extent of utilisation of antenatal care, family planning and delivery care services in the study area?
3. What are the factors affecting access and utilisation of antenatal care, family planning and delivery care services among women in the study area?
4. What are the strategies put in place by women to overcome barriers to access and utilisation of these services in the study area?

1.4 Aim and Objectives of the Study

The aim of this study is to examine the factors affecting access and utilisation of maternal health care services in Kaduna State, Nigeria. However, the specific objectives of this study are:

1. To assess women's level of awareness of antenatal care, family planning and delivery care services in the study area

2. To determine the factors affecting utilisation of antenatal care, family planning and delivery care services among women in the study area

3. To identify factors (distance, transport, affordability, quality of care) affecting access to these services among women in the study area

4. To determine strategies put in place by women to over-come barriers to access and utilisation of these maternal health care services in the study area

1.5 Significance of the Study

The poor state of maternal health care in Nigeria especially Kaduna State calls for concern. Despite government efforts to improve maternal health care in the country by providing health care services through PHC, access and utilisation remain very low in the study area. Although analyses of recent trends show that the country is making progress in reducing maternal mortality, the rate of reduction still remains too slow thus makes the MDG goals unachievable. Thus, a sociological study of maternal health is expedient to gain more insight into those salient socio-cultural barriers to wellbeing and what can be done to improve the situation.

Since access to quality reproductive health care services is very crucial to improve maternal health, the identification of factors that may facilitate or impede the effective use of health care services by individual or group for preventing and treating maternal health may help the government and the people of Kaduna State as well as the health care providers to identify the women who may be particularly vulnerable to maternal mortality and morbidity in the state, and also to provide quality information that the policy makers can use to get services to those in dare need of it. This will help in reducing maternal morbidity and mortality in the State in general, and the Local Government Areas in particular. Findings from this study can also serve

as a base for improved maternal health services and subsequent reduction in maternal morbidity and mortality. Findings from this study will also have policy implication as policy maker and the other stakeholders will find the study useful reference material for assessing the goal of providing quality and accessible health care with view to improving on such services.

1.6 Scope of the Study

The study covered the three Senatorial Zones in Kaduna State. The study investigated access and utilisation of maternal health care services in the study areas. The study specifically identified the factors that affect access and utilisation of maternal health care among women of child bearing age in the study areas that is women between 14 and 49 years. The factors examined are poverty, education, employment, gender, place of residence, health financing, socio-cultural factors and information. Younger and older women were excluded. Access and utililisation of maternal health care services in Kaduna State is focusing on age, education, religion and other factors.

The major variables in this study were divided into dependent and independent ones. The Dependent variable is one whose occurrence is contingent on the occurrence of another variable. For the purpose of this study, the dependent variables include: use of antenatal care, family planning, delivery care, place of delivery, and postnatal care. The independent variables therefore include: mother's age, level of education, level of income, number of children and religion.

1.7 Operational Definition of Terms

For the purpose of clarity, the key words of this study have been given operational definitions as follows:

Maternal Health: This is defined as the physical wellbeing of a mother in relation to her pregnancy. Maternal health includes prenatal care and postnatal care of the mother and of the child up to the age of five years.

Maternal Health Care Services: These are maternal care services rendered to women such as the provision of antenatal care, family planning, postnatal care, delivery services and other reproductive health services such as infertility care,

Maternal Mortality: The World Health Organization (WHO, 2007) in the international statistical classification of diseases and related health problems, tenth revision (ICD-10), has defined maternal mortality 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". This is the context in which maternal mortality is used in this study.

Antenatal Care – This is the health care women receive throughout the period of pregnancy in order to ensure that the women and their newborns survive pregnancy and childbirth.

Postnatal Care- Health care given to the mother and the newborn baby immediately after childbirth through the first 42 days after childbirth (Park, 2006).

Family planning- It ensures full recovery of the women from previous childbirth and improves the child's chance of survival.

Delivery care: This is strengthening of service delivery which is crucial to the achievement of the health-related Sustainable Development Goals (SDGs), which include the delivery of

interventions to reduce child mortality, maternal mortality and the burden of HIV/AIDS, tuberculosis and malaria.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Conceptual Review

2.1.1 Maternal Health Care

Maternal health is defined by the World Health Organisation as being comprised of women's health during pregnancy, childbirth and the postpartum period (WHO, 2014a). Complications in pregnancy and childbirth, such as hemorrhage, infections, high blood pressure, ectopic pregnancy, preterm birth, unsafe abortion and obstructed labor, are recognised as threats to maternal health while factors such as access to family planning services, counseling, and appropriate antenatal, obstetric, and postpartum care are identified as being positive contributing factors to maternal health (WHO, 2014b).

Maternal health care (MHC) is the health service provided to mothers (women in their child bearing age). The targets for MHC are all women in their reproductive age groups, i.e., 15 - 49 years of age (WHO, 2010). Lack of access to modern health care services has great impact on increasing maternal death. Most pregnant women do not receive antenatal care; deliver without the assistance of trained health workers etc. Maternal health care services are comprehensive health care services concerned with the entire maternity circle. It is concerned with the care of women during antenatal, intranatal, inter-conception periods and the postnatal period (Park, 2006; Assfaw, 2010). Maternal health care services are essentially promotive and preventive avenues for early detection of mothers at high risk of illness and mortality (Olugbenga-Bello; Abodunrin and Adeomi, 2011). WHO (2010b) posit that the state of maternal health reflects the level of social justice and the degree of respect for women's rights in a society. Women's right to

receive good-quality health care services is guaranteed when their basic human rights to education, nutrition, safe environment, economic resources and to participate in decision making are met.

Maternal health is an issue that not only affects the woman, but also has direct bearing on the health of the newborn because many complications and subsequent poor outcomes for women and newborn can be prevented or minimized with early recognition of problems and appropriate interventions during the maternity cycle (Lubbock and Stephenson, 2008). Ram and Singh (2011) argued that since all pregnant women are at risk of developing complications and many of these complications are unpredictable, it is important to ensure that all pregnant women have access to preventive interventions, early diagnosis and treatment for problems, and emergency care when needed especially at the primary health care centers. These services should include provisions for basic obstetric care, emergency obstetric care, post abortion care and care of the newborn. The key components of maternal health care services include antenatal care, postnatal care, delivery care and family planning (Alakija, 2002).

The major determinants of maternal morbidity and mortality include pregnancy, the development of pregnancy-related complications, including complications from abortion and, the management of pregnancy, delivery, and the postpartum period. However, a lot of factors contribute to the low health status of women in the developing countries including Nigeria.

2.1.2 Access to Health Care Services

Access to health care services directly translates to use of these services – meaning that, if people cannot access life-saving health care services, then use of such services will be limited. Distance (or travelling time) to health care facilities is one of the major barriers to health care

use, more especially in rural Africa, where health care centers are often located further away from a large number of residents (Silas, Pen-Kekana, Harris, Birch, McIntrye, 2012). In order to receive adequate health care, rural residents and some few urban residents, have to travel long distances, and they also have to wait in long queues before being assisted by health care personnel who are often disrespectful and show a non-caring attitude (Gage, 2007). Accessibility of maternal health care facilities and general health facilities is important in ensuring that lives are saved through the provision of essential maternal (or medical) services. Increasing access to maternal health care requires both supply- and demand-side interventions. Supply-side interventions focus on improving the quality and quantity of services provided through health system strengthening. Demand-side interventions focus on increasing service utilization by influencing the health behaviours of individuals and communities (Mangham-Jefferies, Pitt, Cousens, Mills and Schellenberg, 2014; Alfonso, Bishai and Bua, 2015). Access in this study means ease of getting to the health care centers to utilise the services rendered at the centers.

2.1.3 Utilisation of Maternal Health Care

The utilisation of maternal healthcare is a complex phenomenon influenced by several factors. Several studies from developing countries have recognised socioeconomic factors and service delivery environment as important determinants of healthcare utilisation. Quality of care, distance to health facility, lack of transport, women's low social status, age, caste, religion, educational level, economic status of the household, lack of autonomy and decision-making power and cultural norms are some of the factors that have been found to be associated with the utilisation of maternal care services in different settings (Edmond and Sibley 2012; Joshi, Torvaldsen, Hodgson, Hayen 2014; Masters, Burstein, Amofah, Abaogye, Kumar, Hanlon 2013). Babalola and Fatusi (2009) reported that several studies in India, Pakistan, Bangladesh, Kenya,

Ethiopia, Nigeria and Sudan have assessed the individual and household determinants of utilization of maternal services although, the studies did not yield a consistent pattern of relationships between service utilization, individual and household predictors. In some cases, even when a strong association was reported, such as in the case of the positive relationship between education and the use of skilled attendants at delivery, the extent and nature of the relationships are not uniform across social settings. For example, whereas some studies in Peru and Guatemala showed that women with primary level education were more likely to utilize maternal health services than those without any formal education (Falkingham, 2003), some studies in Thailand and Bangladesh did not record any significant difference between the two educational groups (Osubor, Fatisi and Chiwuzie, 2006). They therefore argued that availability, access, cultural and economic factors are likely to influence utilization more than level of education of the women. Utilisation means ability to be able to afford the services rendered at the maternal health care centers.

2.2 Awareness of Maternal Health Care Services Among Women

2.2.1 Level of Awareness of Maternal Health Care Services among Women

In developed countries, there seems to be awareness of maternal health care services as services are widely available and utilised. A study conducted by Keleha (2006) in Australia shows good understanding and knowledge of services rendered in maternal health facilities. Another study in Canada (Kolahdooz, Launier, Nader, June Yi, Baker, McHugh, Vallianatos, Sharma, 2016) shows that 92% of the women are aware of services rendered in maternal health care facilities. In Italy, Lauria, Bonciani, Spinelli and Grandolfo (2013) found that 89% of women of reproductive age have knowledge of services rendered in maternal health care centers.

The high awareness of maternal health care services could be as a result of their level of education and access to information about the health care services. With high level of education their bound to have quality information about importance of maternal health care services hence, they make use of it.

In Uganda (Ssengooba, Neena, Mbouye, and Sentubwe & Onama 2003) reports that knowledge about maternal health care services rendered at maternal health centers was 78% among respondents. A study conducted in Tunisia to investigate mothers' knowledge about services rendered in maternal health centers indicated that 85% of women knew all the services rendered at the maternal health care centers. In South Africa Phillips (2003) found that women of lower socioeconomic status have poor knowledge of maternal health care services. In Cameroon McTavish and Moore (2015) found that women with higher social capital had a greater knowledge of maternal health care services. This simply means that women with economic wherewithal have full knowledge of the services rendered at maternal health care centers. This may not be true as economic wherewithal is not the only factor considered for knowledge of services rendered at maternal health care centers. Many women are not economically buoyant and they are aware of the services rendered at maternal health care centers because they are well informed about the services in the maternal health care centers.

Report from Nigeria Demographic and Health Survey [NDHS] NPC (2014) found that the knowledge of services rendered in the maternal health care center is higher in the Southern parts of the country than it is in the Northern parts of the country. According to the survey, while majority of women from the Southern part of the country mentioned all the services rendered in the maternal health care centers, most of the women from the Northern part of the country were able to mention antenatal care, postnatal care, family planning and delivery services. Majority of

them are not aware of management of infertility and prevention of STI. Fagbamigbe, Idemudia (2016) also found that knowledge of services rendered in maternal health care centers is lower in Nigeria than the African average. Also, Musa O.I, Salaudeen A.G, Babatunde O.O, Atoyebi O.A (2013) reports that three quarter of women of reproductive age interviewed in Nigeria has fair knowledge of services rendered in maternal health care centers. A study carried out by Onasoga (2014), in Shagamu-Nigeria shows that the majority of the respondents (94.8%) have knowledge of maternal health care services. The major differences found between the Southern and Northern women about knowledge of maternal health services rendered by maternal health care centers in Nigeria can be argued from the point of education and access to information. It can be argued that women in southern part of the country are well educated compare to women in Northern part of the country hence, they have better knowledge of services rendered by maternal health care centers and hence, they make use of it.

In Kaduna State, Nuhu (2010) found that men and women had extremely poor knowledge of maternal health care services. It may be that this study was carried out in rural areas of Kaduna State as majority of women in Kaduna State have high knowledge of some maternal health services like antenatal care, postnatal care, family planning and delivery services. In addition, Butawa, Tukur, Idris, Adiri, & Taylor (2010) in Kaduna State found socio-cultural factor to play a key role in influencing women's knowledge and practices related to maternal health services as the women will need the permission of their husbands who is the primary decision maker before they can use maternal health care services. The low value placed on girls "education leads to a low rate of girl" primary school enrollment in Northern Nigeria. Even though knowledge about maternal health is not taught in school, the very fact of having attended school seems to increase overall awareness and ability to obtain new knowledge, as has been

seen in Nepal, Venezuela, and Southwestern Nigeria (Hyacinth, Laurence, Ikeako & IIoabochie 2006 and Kane 2004). On the issue of needing the permission of their husband, it is not peculiar to the North alone but rather it has do to with women's level of education. Women who are well educated in the Northern part of the country do not wait for their husband before seeking health care when necessary as they have the wherewithal to do so. Also women in the Southern part of the country who are not well education will wait for their husbands before they use health services as they will need financial support from their spouses.

Health knowledge is considered to be one of the key factors that enable women to be aware of their right, and also factor influencing health status in women to seek appropriate health services (Zhao, Kulana, Gao & Biao, 2009). Nanlwanga (2004); Levine et al, (2001) found that knowledge of maternal health care is higher among women of reproductive age with a higher level of education. There is an association between level of education, employment, knowledge and use of maternal health care services. Studies have documented that in Uganda, women with high levels of knowledge tended to use health services more (Nanlwanga, 2004; Levine, Robert, Sarah, LeVine & Beatrice 2001). It can be argued here that why level of awareness is high in developed countries and low in the developing countries is because of their level of education. Education is the major determinant of knowledge of maternal health care services. In developing countries, where there is high or somewhat high level of education the rate of awareness is equally on the high side. Education plays an important role in both knowledge and awareness of maternal health care services.

2.3 Components of Maternal Health Care Services and there Awareness by Women of Reproductive Age Group

2.3.1 Antenatal Care

The World Health Organisation (2000a) defines antenatal care (ANC) as "care before birth", and includes education, counseling, screening and treatment to monitor and to promote the well-being of the mother and baby. The Reproductive and Child Health (2007), defines ANC as "the health care and education given during pregnancy". The major objective of antenatal care is to ensure optimal health outcomes for the mother and her baby.

To benefit optimally from ANC, women are encouraged to book within the first trimester of the pregnancy. The previous recommendations with focused ANC was that they should have at least 4 visits; WHO has revised this recommendation to 8 visits (WHO, 2016).WHO recommended antenatal care booking with a minimum of eight contacts to reduce perinatal mortality and improve women's experience of care. It recommends pregnant women to have their first contact in the first 12 weeks gestation, with subsequent contacts taking place at 20, 26, 30, 34, 36, 38 and 40 weeks gestation (WHO, 2016). The component of antenatal care includes:

1. Counselling about healthy eating and keeping physically active during pregnancy. It is recommended for pregnant women to stay healthy and to prevent excessive weight gain during pregnancy.
2. Daily oral iron and folic acid supplementation with 30 mg to 60 mg of elemental iron and 400 g (0.4 mg) of folic acid for pregnant women to prevent maternal anaemia, puerperal sepsis, low birth weight, and preterm birth.

3. For pregnant women with high daily caffeine intake (more than 300 mg per day) lowering daily caffeine intake during pregnancy is recommended to reduce the risk of pregnancy loss and low-birth-weight neonates.
4. Full blood count testing is the recommended method for diagnosing anaemia in pregnancy. In settings where full blood count testing is not available, on-site haemoglobin testing with a haemoglobinometer is recommended over the use of the haemoglobin colour scale as the method for diagnosing anaemia in pregnancy.
5. Midstream urine culture is the recommended method for diagnosing asymptomatic bacteriuria (ASB) in pregnancy. In settings where urine culture is not available, on-site midstream urine Gram-staining is recommended over the use of dipstick tests as the method for diagnosing ASB in pregnancy.
6. Healthcare providers should ask all pregnant women about their tobacco use (past and present) and exposure to second-hand smoke as early as possible in the pregnancy and at every antenatal care visit.
7. In high-prevalence settings, provider-initiated testing and counselling (PITC) for HIV should be considered a routine component of the package of care for pregnant women in all antenatal care settings. In low-prevalence settings, PITC can be considered for pregnant women in antenatal care settings as a key component of the effort to eliminate mother-to-child transmission of HIV, and to integrate HIV testing with syphilis, viral or other key tests, as relevant to the setting, and to strengthen the underlying maternal and child health systems.
8. One ultrasound scans before 24 weeks of gestation (early ultrasound) is recommended for pregnant women to estimate gestational age, improve detection of fetal anomalies and

multiple pregnancies, reduce induction of labour for post-term pregnancy, and improve a woman's pregnancy experience.

9. Tetanus toxoid vaccination is recommended for all pregnant women, depending on previous tetanus vaccination exposure, to prevent neonatal mortality from tetanus.
10. In malaria-endemic areas in Africa, intermittent preventive treatment with sulfadoxine-pyrimethamine (IPTp-SP) is recommended for all pregnant women. Dosing should start in the second trimester, and doses should be given at least one month apart, with the objective of ensuring that at least three doses are received. WHO (2016)

Antenatal care from a trained provider is important to monitor the pregnancy and reduce morbidity risks for the mother and child during pregnancy and delivery. Antenatal care provided by a skilled health worker enables early detection of complications and prompt treatment (e.g., detection and treatment of sexually transmitted infections), prevention of diseases through immunization and micronutrient supplementation, birth preparedness and complication readiness, and health promotion and disease prevention through health messages and counselling for pregnant women (NPC, 2014). Antenatal care is an important determinant of maternal mortality rate and one of the basic components of maternal care, on which the lives of mothers and babies depend. Antenatal care (ANC) is an important determinant of safe delivery that can afford opportunities to encourage women to deliver with a skilled attendant in a health facility (Mrisho, Obrist, Schellenberg, Haws, Mushi and Shinda, 2009). Magadi, Madise, and Rodrigues (2000a) posits that the failure to receive appropriate ANC during pregnancy can lead to undesirable pregnancy outcomes such as maternal morbidity, low birth weight for the baby or even maternal and perinatal mortality.

Globally, it is estimated that more than 95% of pregnant women at least attend one ANC visit during pregnancy (UNICEF, 2015). Despite universal access to health care in most industrialized Western countries, the general trend is that non-Western migrant women are less likely to initiate ANC timely, and totally they have fewer visits during pregnancy compared with non-migrant women (Heaman, Bayrampour, Kingstone (2013); Almeida, Caldas, Ayr-de-Campos (2013); Chote, Koopmas, Redekop (2011); Korinek, Smith (2011)). In Canada, Mexico, Australia, Guatemala and the United State of America, Kolahdooz, Launier, Nader, June, Baker, McHugh, Vallianatos and Sharma (2016) found that indigenous women attend ANC more than the non-indigenous women. The non-Western migrant and non-indigenous women who are not attending antenatal are doing so because they have lackadaisical attitude towards health care facility or they are may be illegal immigrant who does not have full papers hence, cannot use health facilities for fear of not being caught and deported back to their Country. In rural Hebei, China, Chen, Dai, Zhang, Wu, Rudan, Saftic, van Velthoven, Su, Scherpber (2014) reported that 80% of pregnant women attend at least 4 ANC visits and 54% attend at least 5 ANC visits while about half of the women (46%) visited the ANC facility within their first trimester.

In Dejen and Aneded Districts, Northwest Ethiopia, Getachew, Abajobir and Aychiluhim (2014) found that majority of the pregnant women (88.0%) did not attend focused antenatal care during their last pregnancy. Marital status, travel time to health facility, history of abortion and illness, plan of pregnancy and sources of information were identified as factors affecting focused antenatal care service utilisation. In Uganda, Kawungezi, AkiiBua, Aleni, Chitayi, Niwaha, Kazibue, Sunya, Mumbere, Mutesi, Tukei, Kasangaki and Nakulblwa (2015) found that Women in rural areas of Uganda are two times less likely to attend ANC than the urban women. Most women in Uganda have registered late ANC attendance, averagely at 5.5 months of pregnancy

and do not complete the required four visits. The inadequate utilisation of the ANC is greatly contributing to persisting high rates of maternal and neonatal mortality in Uganda. In a study carried out in Kombolcha district, Eastern Ethiopia, Ayele, Beayihun, Teji, Admassu (2014) found that about 86.1% of pregnant women had at least one ANC visit during their last pregnancy, while about 61.7% had less than four visits which is less than the recommended and 46.2% started it in the second trimester. The reason for not attending focused antenatal care could be that the health care facility centers are far from them and the women may have to travel long distance to get health care services. This can discourage many women from using health facilities.

According to NPC (2014), 61.0% of Nigeria women received antenatal care from a skilled provider as compared to 56.0% in 2008. Of those that received antenatal care, only 51.0% made at least four visits and only 18.0% of the women had their first antenatal visit in the first trimester of pregnancy which is not in line with the WHO recommendation. The survey results show that 67.0% received skilled antenatal care from North Central, 49.3% from the North East, 41.0% from the North West, 90.6% from the South East, 73.0% from the South-South and 90.4% from the South West. It was found that women at higher educational levels were more likely than their counterparts to use iron tablets or syrup and intestinal parasite drugs; more likely to have their blood pressure measured and to provide urine and blood samples. The increase in the use of antenatal in Nigeria could be as a result of enlightment. The women are more enlightened about the importance of antenatal care. The variation in the use of antenatal care across Nigeria regions could be argued to be level of education and information. The Southern Nigeria women are more educated and well informed compare to the women from the North. The result shows that 43% of women with no education used iron tablets or syrup compared with 74% of women

with primary education, 86% with secondary education and 92% with more than secondary education (NPC, 2014). Based on this finding we can conclude that female education is of great importance to health outcomes as education help women to know the importance of maternal health care services hence, use them.

In a survey conducted by Omer, Nshadi, Mohammed, Adamu, Abubakar-Mallam, Oyo-Ita, Cockroft, Anderson (2014) shows that 40% of 7870 women in Bauchi had at least four governments ANC visits. Factors for women in Bauchi were presence of government ANC services within their community and more than two previous pregnancies. Focus groups cited costs, poor quality, and inaccessible government services, and uncooperative partners as reasons for not attending ANC. Another study conducted by Sambo, Abdulrazaq, Shamang and Ibrahim (2013) at Falaka area of Giwa Local Government Area of Kaduna State shows that ANC attendance was high among respondents (80.7%). Average ANC attendance was four times. However, the majority of the respondents (56%), who attended ANC or are attending it, have no formal education. Also, the majority of the respondents (78%), who did not attend or do not attend ANC, had no formal education. Olugbenga, Ladipo, Mohammed, Umar (2010) in a study conducted in three communities (Dakace, Shika dam and Tsibiri) in Kaduna State found that even though ANC attendance rates were high with 76.2% women reporting at least one visit and 63.3% reporting four or more visits, median gestational age of the first visit was four months and only 9.3% received all the components of the ANC.

In Uganda, Edward (2011) found that the utilisation of the content of the ANC was significantly associated with the education of the mother and her partner, wealth status, location disparities, timing and frequency of antenatal visits, nature of facility visited, access to media, family planning, and utilisation of professional care. Agus and Horuchi (2012) in rural Sumatra

in Indonesia found that higher traditional belief, preference for TBAs were the factors influencing the utilisation of the ANC.

Antenatal care (ANC) from a trained provider is important in order to monitor the pregnancy and reduce morbidity and mortality risks for the mother and child during pregnancy and delivery. In Nigeria, about three-fifths of mothers (61 percent) reported consulting a skilled health provider a doctor, nurse, midwife, or auxiliary midwife at least once for antenatal care for the most recent birth in the five-year period before the survey (NPC, 2014). The differentials in antenatal care coverage are large. Coverage is highest for births to women 20-34 years old (63 percent), and much higher in urban areas (86 percent) than rural areas (47 percent). This may be because the younger women have education and they want to follow the new trend of maternal health services unlike the older women who still believes in the old tradition of giving birth at home. Also, for the women in urban areas, it may be because there are more than enough health care facilities in the urban centers than we have in rural areas as health care facilities are usually concentrated in urban areas leaving the rural areas to suffer long distance travelling before they can access their health. Across geopolitical zones, the proportion of mothers reporting that they received antenatal care from a skilled provider is markedly lower in the North West (41 percent) followed by the North East (49 percent). Women in the South East (91 percent) and South West (90 percent) are most likely to have received antenatal care from a skilled provider. Among the states, the percentage of mothers who received antenatal care from a skilled provider ranges from a high of 98 percent in Osun to a low of 17 percent in Sokoto. Percentages of women receiving antenatal care from a skilled provider are also relatively low in Zamfara (22 percent), Katsina (23 percent), and Kebbi (24 percent) (NPC, 2014).

As the mother's educational level rises, so does the likelihood that she has seen a skilled provider for care during pregnancy. Antenatal care utilisation is highest among women with more than secondary education (97 percent) and lowest among women with no education (36 percent). The proportion of mothers receiving antenatal care from a skilled health provider increased from 58 percent in 2003 to 61 percent in 2013 (NPC, 2014).

In Nigeria, Suleiman (2011) found that there are differentials and commonalities in the predictors of ANC utilisation in the regions. Education, family wealth index and place of residence are strong predictors of service utilisation in all the regions. However, some factors are significant predictors in one region but not in the other. These include employment in the northern region; and mothers age and religion in the south. With the above assertions about antenatal care one will strongly believe that women who visit antenatal clinic constantly have hitch free delivery compare to women who do not go for antenatal or did not complete their antenatal visits. But argued that education is not a yard stick to use antenatal care as many women who are not literate uses antenatal care regularly.

2.3.2 Delivery Services

Strengthening service delivery is crucial to the achievement of the health-related Millennium Development Goals (MDGs), which include the delivery of interventions to reduce child mortality, maternal mortality and the burden of HIV/AIDS, tuberculosis and malaria (WHO, 2008). In the United States of America, data for 2000–2006 showed that there was 100% delivery service coverage with a skilled birth attendant during delivery (WHO, 2008). In the general maternity population in England, approximately 93% of women give birth in consultant obstetric units, 3% in alongside midwifery units, 2% in freestanding midwifery units and 2% give birth at home. There were 33 (0.7%) home births; of these, 13 women (39.4%) were

reported to have intended to deliver in an obstetric unit at the onset of labour, suggesting that these were unplanned home births (CDC, 2014).

A study conducted by Teferra, Alemu and Woldeyohannes (2012) in Ethiopia indicated that 12.1% of the mothers delivered in health facilities. Out of 87.9% mothers who gave birth at home, 80.0% of them were assisted by family members and relatives. The common reasons for home delivery were closer attention from family members and relatives (60.9%) home delivery is usual practice (57.7%), unexpected labour (33.4%), not being sick or no problem at the time of delivery (21.6%) and family influence (14.4%). Being urban resident, ANC visit during last pregnancy, maternal education level and knowledge of mothers on pregnancy and delivery had significant associations with institutional delivery service utilisation. In Ghana, Buor (2010) found that age of the mother, occupational status, educational status, distance from the nearby health center, residence, media of communication, monthly income, number of ANC visits at last pregnancy, parity, knowledge and attitude of the mother, husband's educational status, husband's occupational status and obtaining information about delivery place during ANC visit were the factors found to be significantly associated with institutional delivery service utilisation. Mothers who were urban residents were about 5 times more likely to give birth in health facilities than rural mothers.

Bangladesh Maternal Mortality and Health Care Survey 2010 reveal that almost 2.4 million births take place at home annually, especially in rural areas. Of this, only 4.3% of women use an SBA to attend deliveries (Streatfield, Arifeen, Al-Sabir and Jamil 2010). The survey also reveals that approximately 26% of women in the country receive assistance from SBAs at delivery either at home or at a health facility. However, the percentage is 32% according to the preliminary report of the Bangladesh Demographic and Health Survey (BDHS) conducted in

2011 (National Institute of Population Research and Training [NIPORT], 2011). In a study carried out in Ghana Buor (2010) found that issues of decision making for seeking skilled delivery were however quite favourable since 44.1% took a collective decision by both respondent and partner with a few having a collective decision taken by the family. In finding out who took the decision on place of delivery, 35% said it was a collective decision by respondent and partner with 28.2% citing partner only and 20.1% taking a personal decision. Less than a quarter 16.7% had a collective decision by the family. Studies by Seljeskog, Sundby and Chimango (2006) however showed that many women in many communities in Africa lack decision making capacity and the final decision as to where to deliver rests on the household head especially if cost will be incurred. Mills and Bertrand (2005) also working in northern rural Ghana found that although all the women groups interviewed were knowledgeable about the life threatening signs and symptoms of complications of pregnancy and labour, decisions about place of delivery were generally made only after the onset of labour. Delays in accessing health facility is associated with the problems or constraints that women face which is usually due to poor road networks, distant health facilities and lack of transportation and inadequate community support (GHS, 2006).

With only 44% of deliveries assisted by skilled birth attendants in Kenya, the number of maternal deaths is significantly higher. In a research conducted, Mumbe (2010) found that antenatal attendance rate was 90.9% while proportion of facility deliveries was at 41.4%. Factors such as age, religion, level of education, partner's occupation, parity, residence, type of housing, monthly income, ANC attendance, facilities for ANC attendance, birth preparedness, decision to attend ANC, decision on delivery place and health facility, staffs attitude during child birth were found to influence utilisation of delivery services.

In Nigeria, 36% of births are delivered in a health facility in 2013 (as compared with 35% in 2008) 23% of deliveries occur in public sector facilities, while 13% occur in private sector facilities. 63% of births are delivered at home. Women less than age 20 are more likely to deliver at home than women in other age groups (74%). This is because the younger women are new in the reproductive circle and do not have adequate information about health care facilities. Most importantly, it could be that they are not well educated. The proportion of births occurring in health facilities decreases with increasing birth order, from a high of 48% for first births to a low of 22% for births of order six or above (NPC, 2013). Women in rural areas are more likely to deliver at home (77%) than their urban counterparts (37%) (Getachew, Abojobir, and Aychilum, 2014). The decreases in the facility delivery as a result of the order of birth can be because at the initial stage the women are amateur but haven delivered ones or twice in a health care facility, they have mastered the procedure and they try doing it at home. Women in rural areas will deliver at home more than urban women because there are lots of health care facilities in the urban centers unlike rural areas.

The results of a study conducted by Iyaniwura and Yussuf (2009) in Sagamu, Nigeria, shows that only 1.5% of the women delivered at home. The preferred places of delivery were government facilities (54.8%), private hospital (24.5%) and traditional/herbal homes (13.5%). Few women delivered at spiritual healing homes (5.6%). A lower proportion of women who received ANC at government facilities eventually delivered there while the proportion of the women who delivered at private clinics and TBA increased compared to ANC attendance. Women who had none or primary education, traditional worshippers and those who had low income were more likely to use traditional birth attendants/herbal (TBA) home for delivery compared to other women. Of those who did not deliver their babies in government facilities,

31.6% gave no reason, 29.4% complained of the long waiting time, bad attitude of staff (11.3%), non-availability of government facility in their community (10.2%) and transportation problem (8.0%).

According to Envuladu, Agbo, Lassa, Kigbu and Zoakah (2013) in a study carried out in Russia village in the Jos North, 74.3% attended ANC, 60% had their last delivery in the hospital, while 40% had their last delivery at home. 60.7% chose to deliver in the hospital, while 39.3% opted for home delivery in the index pregnancy. Determinants of choice of delivery place according to the study include cost of hospital bill, unfriendly attitude of health care workers, unexpected labour, distance to health care centers, and failure to book for ANC. The older women, those who had no formal education and those with primary school education, house-wives, divorcees, widows, low-income earners, farmers and hawkers were the majority opting for home delivery. Religion and parity however had no significant association with the choice of a place of delivery.

According to the NPC (2013), the Northwest has the highest proportion of deliveries at home (88%), followed by the North East (79%). In Kaduna State, 29.1% of deliveries were done in public sector, while 3.3% were done in private sector. The percentage of home deliveries was high (67.5%) and delivery in health facilities was 32.4%.

The result of a study conducted by Okeshola and Sadiq (2013) in Kaduna South indicated that 83.1% of the respondents prefer hospital delivery and 82% of respondents affirmed that cost of delivery determines women choice of place of delivery. Also, the cost of antenatal care is a hindrance as attested by 84% in the study. About 69% of the respondents opined that distance to the hospital is an important factor to choice of place of delivery. The determinant of place of

delivery according to the findings of the study are majorly cost of delivery which is very high and distance to the hospital which according to the respondents is very far. This, compel most women to opt for home delivery or Traditional Birth attendants place. In Giwa Local Government Area of Kaduna State, Idris, Sambo, Ibrahim (2013) found that major reasons for non-utilisation of delivery service were not having a delivery complication in the past (57%) and negative provider attitude (23.7%). In a study carried out in Zaria by Ejembi and Prata (2010), the result shows that 95.4% of women delivered their babies at home while only 4.6% delivered at health facility. Also, while 69.6% of the deliveries were done by TBAs, only 7.2% were done by health care personnel while 23.1% was done by friends, relative or alone. Another study in Zaria by Idris; Gwarzo and Shehu, (2006) reveals that while home delivery among women was high (70.2%), hospital delivery was very low (27.6%). Mother's educational level and choice of place of delivery shows that mothers who had formal education delivered their babies in hospital while those with no education delivered at home. It was however different using the husband's educational level as wives of husband with formal education tend to deliver at home compares to those with no formal education. However, ANC attendance in the previous pregnancy preceding delivery did not influence hospital delivery as most of the respondent who had at least four ANC visits (46%) delivered their babies at home.

In Northern Nigeria, especially among the Hausa Muslims, female education is considered of secondary importance due to socio-cultural practices, religious beliefs and misconceptions. Parents generally consider sending their daughters to school as a complete waste of time and resources, especially in rural communities where the latter are scarce. This resulted in poor girl-child enrolment into formal schools. It therefore, accounted for the low proportion (39.3%) of respondents with formal education. This is not surprising, since the educational level

of a woman, her age, number of children, and other socio-demographic profiles such as her husband's income and type of marriage influence the use of antenatal and delivery services.

Even though most of the studies found that education, employment opportunity, nearness of facility is majorly responsible for utilisation of delivery services. This study wants to maintain that cost of delivery is the most significant factor affecting use of delivery care. If delivery is totally free, and there are health facilities available with health care providers always on ground to attend to women, women whether educated or not will make use of it. What makes educated women to use health facilities is not because they are educated but because they can afford the fee usually charged by the health care providers.

2.3.3 Emergency Obstetric Care

Emergency obstetric care involves a set of interventions called signal functions. These are key medical interventions that are used to treat the direct obstetric complications that cause the vast majority of maternal deaths around the globe. The signal functions should be available in a health care facility that provides emergency care for women with pregnancy-related complications (WHO, 2009, UNFPA, 2010). These signal functions must be performed at a facility in order for such a facility to be recognised as an emergency obstetric care (EmOC) facility. A health care facility can either be classified as a basic EmOC or a comprehensive EmOC facility. The basic EmOC signal functions are administratively of parenteral antibiotics, manual removal of placenta; oxytocic drugs and anticonvulsants; manual vacuum aspiration of retained products of conception; and assisted vaginal delivery while the comprehensive emergency obstetric care (comprehensive EmOC) includes the six basic signal functions, plus performing caesarean section and blood transfusion (WHO, 2009; Lawn, Cousens and Zupan, 2005).

In a study on maternal health seeking behaviour and associated factors in Nigerian rural communities, Osubor, Fatusi and Chiwuzie (2006) in Garba (2015) estimated that 15% of women often develop complications requiring medical interventions with approximately seven per cent of them having serious complications requiring referral from primary care level and that the average time until death with postpartum haemorrhage, the most common cause of maternal death, is only two hours. Therefore, basic and comprehensive emergency obstetric care should be available for every delivery, with as short a delay as possible. Carlough and McCall (2005) added that there should be a minimum of four basic EmOC facilities and one facility providing comprehensive EmOC per 500,000 populations.

According to Cross, Bell and Graham, (2011) direct obstetric deaths are those resulting from obstetric complications of the pregnancy, childbirth and the puerperium to 42 days while indirect obstetric deaths are those resulting from previous existing disease that developed during the pregnancy, which was not a result of direct obstetric, but which was aggravated by the physiologic effects of pregnancy, such as cardiac conditions aggravated by pregnancy (Say and Chou, 2011). In Nigeria, Fagbamigbe and Idemudia (2016) found that three elements stand out as contributing to maternal mortality: delays in Caesarean section, unavailability of magnesium sulphate and lack of safe blood transfusion services.

2.3.4 Postnatal Care

The World Health Organization (WHO) stated that the postnatal period begins immediately after the birth of the baby and extends up to six weeks (42 days) after birth (WHO, 2008c). According to WHO, if birth is in a health facility, mothers and newborns should receive postnatal care in the facility for at least 24 hours after birth. If birth is at home, the first postnatal contact should be as early as possible within 24 hours of birth. At least three additional postnatal

contacts are recommended for all mothers and newborns, on day 3 (48–72 hours), between days 7–14 after birth, and six weeks after birth.

The principal objectives of PNC services are to support the mother and her family in the transition to a new family constellation, prevent, early diagnose and treat complications of the mother and infant, refer the mother and infant for specialist care when necessary, counsel on baby care, support breastfeeding, counsel on maternal nutrition, and supplementation if necessary, counsel and provide contraception service, and immunize the infant. With limited resources, contact with the health care system at least during the first twenty four hours and before the end of the first week would be the most effective strategy (State of Victoria, 2012).

A large number of maternal and neonatal deaths occur during the 24 hours after delivery and the first two days following delivery are critical for monitoring complications arising from delivery (Dahiru and Oche, 2015). A post-natal care (PNC) visit is also an ideal time to educate a new mother on how to care for herself and her newborn. The Safe Motherhood Program emphasizes the importance of PNC, recommending that all women receive at least two postnatal checkups and iron supplementation for 45 days after delivery (Shariff and Singh, 2002).

Despite its importance, this period is generally the most neglected in developing countries (WHO, 2008c) and most mothers and new born babies do not receive postnatal care services from a skilled health care provider during the critical first few days after delivery (UNICEF 2007). In developed countries virtually all women and their infants receive PNC, even though the nature and frequency of this care varies considerably (WHO, 2008c). However, in developing countries even the need for care and support after birth was less recognised and approximately one-third of women in sub-Saharan Africa give birth in facilities, and no more

than 13 percent receive PNC. Whether women deliver at home or in a facility, PNC services are often absent. Moreover, PNC services, where available, often lack essential elements of care required for the optimum health of the mother and her newborn (UNICEF, 2007b).

The survey of women in Anhul Province in China revealed that the rate of postnatal visits was very low. In County A, 4.2% of women received one or more postnatal visits at home, and in County B, only 4.5% had a visit. The low postnatal visit rates contrast strongly with the very high hospital childbirth rate in both counties, with 99% of women (Tao, Huang, Long, Tolhurst and Raven 2010). According to China Health Statistics Yearbook (2014), 91% of women received postnatal checkup within three days of childbirth. In 2009, Chinese government launched free antenatal care and postnatal care services for all urban and rural residents as part of the nine basic public health services (Liu, 2009; Ministry of Health of People Republic of China, 2009a). National policy and guidelines have emphasised that at least one postnatal home visit for women and children within one week after delivery, followed by a facility healthcare visit for women and children within 42 days after delivery is needed. As part of the medical reform plan, the Chinese government has invested in improving the infrastructure of primary health facilities, such as township hospitals and village clinics (Ministry of Health of People Republic of China, 2009b). Also in-service training of health workers on antenatal care and postnatal care has been conducted (Ministry of Health of People Republic of China, 2009c). However, there are still several known barriers for women to receive postnatal care. In Chinese culture, traditional "zuoyuezi", literally meaning "sitting the first month after delivery" (or "sitting month" in brief) restricts women from going out of their home or receiving visits from others (Tao et al., 2010; Liu, 2006; Raven, Chen, Tolhurst and Garner 2007). Therefore, healthcare demand of women during the postnatal period is not as strong as during the antenatal and intrapartum periods.

Before the initiation of the free postnatal care services, lack of maternal and child healthcare (MCH) workers and inadequate training on postnatal care contributed to the suboptimal coverage of postnatal care services (Raven et al., 2007).

In rural Hebei, China, a total of mothers (63.4%) reported that they had been visited during the postnatal period at home; over half of them (54%) were visited by village doctors followed by township doctors (38%). A lower proportion (24%) of mothers received postnatal care within 42 days after delivery; 50% of them went to hospitals where they delivered the baby and 44% of them went to township hospitals.

In contrast 91% of tribal women in India did not received postnatal checkup, about 53% of the deliveries was conducted by untrained dais. Reasons for not going to health facility for delivery and postnatal checkups were given as not necessary (59%), family did not allow (20%), distance too far (53%). Another survey conducted at other time in India reveals that 44.6% of women received postnatal checkups, 38.4% received less than 2 days postnatal checkups, 44% of mothers received postnatal checkups in government facility, 22.7% of poor mothers received postnatal checkups within 48 hours of birth while 77.1% of rich mothers received postnatal checkups within 24 hours of birth. While 47.4% of poor mothers received postnatal care from government facility, 65.2% of rich mothers received postnatal care from private facility (Singh, Padamadas, Mishra, Palkadavath, and Johnson 2012a). The difference in the above surveys is as a result of time. Initially the Indian women were not making use of postnatal care but with time they come to know of the importance of the postnatal care to women hence, they started using it.

In Ethiopia, Workineh (2014) found that only 20.2% utilised postnatal care service in health facilities (hospitals and health centers) under the supervision of skilled delivery attendant.

Among PNC service users, majority (60%) commenced to utilise PNC service within four hours of delivery. As to the length of stay respondents spent in health care facilities, 75.8% of PNC user reported waiting time was a problem for them. Little or no knowledge 32.8% and being healthy 27.4% were the major reasons reported for not attending PNC services utilisation. Regarding their decision making power, majority (81.3%) of the respondents who are educated reported that decision regarding PNC service utilisation was made by themselves similar with evidence from study conducted in Indonesia, Uganda, and India (Mekonnen and Asnaketch 2002, Araya; Mark and Yohannes 2012, Worku 2013, Titaley; Dibley and Robert 2008, Annet 2004, Digamber and Sahoo 2012). This could be explained by the fact that education has a valuable input in enhancing female autonomy and help women develop greater confidence and capability to make decisions about their own health. Thus, literate women seek out higher quality health services and have greater ability to use health care inputs that offer better health outcomes.

The other major factor predicting postnatal care service utilisation was place of delivery. Mothers who delivered their last baby in health institution utilised PNC services more likely when compared with those who delivered at home. This finding is nearly similar with evidence from India (Jat; Nawi and Sebastian, 2012); demographic health survey results in developing countries (India online, 2011). This strong positive association of PNC services utilisation with place of delivery can be attributed to the fact that women who gave their last birth in health institution have greater opportunity to get exposed to health education related to PNC services at the time of delivery and thus get access to learn about the types, benefits and availabilities of PNC services during their stay in the health institutions. As to the final decision maker on PNC service utilisation, mothers who decided by themselves utilised PNC services more likely as compared to those whose health care decision is made by others. This evidence is in line with

similar study conducted in Democratic republic of Congo, Mali, and Uganda (Nambe, Malonga and Dramaix, 2012).

In Nigeria, 40% of women received postnatal checkup for their last birth within the first two days following delivery, 31% of women received postnatal checkup within four hours of delivery, 5% received care within the first 4-23 hours and 4% received care 1-2 days after delivery, 2% of women received care on the 3rd day after delivery or later. Overall, 58% of women had no postnatal checkup (NDHS, 2013). It was also noted that place of delivery influences postnatal checkup as 79% of those who delivered in a health facility had a checkup within the first 2 days after delivery, while only 16% of those who delivered elsewhere had a checkup within that period. While 82% of women in the North West had no postnatal checkup, only 24% of women in the South West had no postnatal checkup. Women with no education (80%) are five time likely as those with no more than secondary education (14%) to have received no postnatal checkup.

In a study conducted by Galadanci, Ejembi, IIiyasu, Alagh, and Umar, (2007) in Northern Nigeria, the result indicated that only 11.4% of those who received ANC returned for a postnatal check after 6 weeks. The rate of postnatal check across the zone ranges from 2.4% in Machina LGA to 18.9% in Darazo LGA. In a research conducted by Msuya, Olaniyan and Adegoke (2014) in Katsina, the result indicated that 22% of the respondents attended postnatal care. Predicators for use of maternal health care services are education of the mother, occupation of the women's husband, presence of complication and previous place of birth. Barriers to use of maternal health care services included no health care provider, no equipment and supplies, and poverty. Women were more likely to use maternal care services if there are staffs available, they had their husband's approval, and the service was affordable. In Kaduna State, 48.3% of women

had no postnatal checkup while only 1.7% had postnatal checkup within 1-2 days of delivery (NPC, 2014). In Zaria, Suleiman, Mohammed and Mohammed (2013) found that 46.6% of women are aware of postnatal care while only 35.3% utilise it.

Postnatal checkup in this part of the world is almost zero if not total zero. In many African countries, especially those in rural areas, majority of their deliveries are done at home. Once they have safe delivery at home, going to hospital for postnatal does not usually arise as they do not always see any reason why they should go for postnatal checkup. Unlike in the developed countries where almost 100% of the women give birth in the hospital, less than 50% of women in developing countries delivered their babies in the hospital.

2.3.5 Family Planning

Family planning services are defined as "educational, comprehensive medical or social activities which enable individuals, including minors, to determine freely the number and spacing of their children and to select the means by which this may be achieved (WHO, 2011)**.** Family planning is the planning of when to have children (Nelson, 2012) and the use of birth control (Mushinski, 2009) and other techniques to implement such plans. Other techniques commonly used include sexuality education,(Mischell, 2007, Mushinski, 2009), prevention and management of sexually transmitted infections (Mischell, 2007), pre-conception counseling (Mischell, 2007) and management, and infertility management (Mushinski, 2009). Family planning is sometimes used as a synonym or euphemism for the use of birth control; however, it often includes a wide variety of methods, and practices that are not birth control. It is most usually applied to a female-male couple who wish to limit the number of children they have and/or to control the timing of pregnancy (also known as *spacing children*). Family planning may encompass sterilization, as well as abortion (Mischell, 2007).

Family planning benefits the health and well-being of women and families throughout the world (WHO, 2012). Using contraception can help to avoid unwanted pregnancies and space births; protect against STDs, including HIV/AIDS; and provide other health benefits (Rowlands, 2007). The purpose of family planning is to make sure that any couple, man, or woman who has the desire to have a child has the resources that are needed in order to complete this goal (Marian, 2000). With these resources a couple, man or women can explore the options of natural birth, surrogacy, artificial insemination, or adoption. In the other case, if the person does not wish to have a child at the specific time, they can investigate the resources that are needed to prevent pregnancy, such as birth control, contraceptives, or physical protection and prevention.

Women, men, or couples can choose from many contraceptive methods to help them plan their family and prevent an unplanned pregnancy. These family planning methods include: implants, IUD, female sterilization, vasectomy, injectable, pills, male condoms, female condom, fertility awareness, and withdrawal and spermicides methods. For purposes of comparability, modern methods of contraception are defined to include female and male sterilization, oral hormonal pills, the intra-uterine device (IUD), male and female condoms, injectable, the implant (including Norplant), vaginal barrier methods and emergency contraception. Traditional or natural methods of contraception include rhythm (periodic abstinence), withdrawal and lactational amenorrhoea method LAM. Some surveys also include reports of prolonged abstinence; breastfeeding, douching or folk methods, and these methods are included in the traditional methods category (United Nations, 2015a).

These methods can also be classified into groups of best, better, good and least thus:

Best	Better	Good	Least
Implants	Injectable	Male condoms	Withdrawal
IUD	LAM	Female condom	Spermicides
Female sterilization	Pills	Fertility awareness	
Vasectomy			

www.un.org/en/development/desa/population/theme/family-planning/cp-model.Shtml.
United Nations (2015a).

Contraceptive use helps couples and individuals realize their basic right to decide freely and responsibly if, when and how many children to have. The growing use of contraceptive methods has resulted in not only improvements in health-related outcomes such as reduced maternal mortality and infant mortality (Ahmed and Saifuddin 2012; Bhutta and Zulfiqar 2014; Rutstein and winter, 2015), but also improvements in schooling and economic outcomes, especially for girls and women (Canning and Schultz, 2012; Schultz and Joshi, 2013).

Contraceptives are used by the majority of married or in-union women in almost all regions of the world. In 2015, 64 per cent of married or in-union women of reproductive age worldwide were using some form of contraception. However, contraceptive use was much lower in the least developed countries (40 per cent) and was particularly low in Africa (33 per cent). Among the other major geographic areas, contraceptive use was much higher in 2015, ranging from 59 per cent in Oceania to 75 per cent in Northern America (United Nations, 2015b).

In Latin America and the Caribbean, the level of contraceptive use was lower in the Caribbean (62 per cent) than it was in Central America (71 per cent) and South America (75 per cent). Within Europe, the level of contraceptive use in 2015 was lowest in Southern Europe (65 per cent) and highest in Northern Europe (77 per cent). In Oceania, the level of contraceptive use

in Australia and New Zealand was typical of levels in regions of Europe, whereas the level was much lower, 39 per cent, in Melanesia, Micronesia and Polynesia (United Nations, 2015b). Eastern Asia had the highest level of contraceptive use (82 per cent) of all the world regions in 2015, due to the very high level of contraceptive use in China (84 per cent). In the other regions of Asia, the average level of contraceptive use was in a range between 57 per cent and 64 per cent (United Nations, 2015b)

Contraceptive use in 2015 was several times as high in Northern Africa and Southern Africa (53 per cent and 64 per cent, respectively) as in Central Africa (23 per cent) and Western Africa (17 per cent). Contraceptive use has been increasing recently in Eastern Africa and now stands at 40 per cent (United Nations, 2015b).

In Nigeria however, only 15% married women are using a contraceptive method (NPC, 2014). This is an increase of only 2% points since the 2003 NDHS. Most of the contraceptive users rely on modern methods 10% while 5% use traditional methods. The use of family planning methods is higher among sexually active unmarried women than among currently married women 68% and 15% respectively. This can be because the young unmarried women are afraid of getting pregnant not knowing who is responsible for the pregnancy since they may have more than one boyfriend at a time. So they prefer using family planning methods. Meanwhile a married woman will not want to use the family planning methods because her husband will be responsible for pregnancy. Women with one or two children are more likely to use contraception and the use of contraception is higher among women with three or four children (21%) (NPC, 2014). This category of women will use family planning because they have already gotten what they needed. Most especially if they have both boys and girls children, they will want to put a stop to having another one hence, they use family planning method to

control it. There is a highest proportion of women using a family planning method in the south west (38%), followed by south east (29%). The lowest proportion of married women using a family planning method is in the north east 3%. Among the states, Lagos and Kwara have the highest percentage of women using any method 48% and 40% respectively. Only 1% of married women use any method of contraception in the states of Kano, Katsina, Jigawa, Sokoto, Kebbi and Yobe (NDHS, 2013). The use of contraception is associated with women's level of education. While 37% of women who had more than secondary education use a contraceptive method, only 3% of women with no education did. The use of family planning is higher in the south compare to the north. This can be argued that in the south even though married couple's beliefs that children are gifts from God, they also believe that they must bear children that they can take care of. In the north, the belief is that God takes care of the children no matter how many of them you have. They also beliefs that one cannot stop bearing children until she finish bearing the number of children assign to her by God. This is very common among the Hausa Muslims in the north.

Olugbenga, Abodunrin and Adeomi, (2011) found that in rural communities in Southwest Nigeria 30.4% felt contraceptives would encourage promiscuity and would diminish sexual pleasure (26.4%), 53.7% and 60.2% respectively felt otherwise. According to the study majority (66.3%) of the respondents were currently using a modern contraceptive method, while (6.7%) were using natural methods, (0.7%) were using traditional methods and (26.3%) were not using any method. The main reason given for choice of contraceptive methods was affordability and availability, (41.2%), followed by reliability by 20.1% of the respondents. Most of the non-users (86.4%) did not have any reason for not using any method.

A study carried out in the states of Jigawa, Katsina, Yobe and Zamfara showed that 43.0% of all currently married women knew at least one method of contraception. Modern methods were more widely known than traditional methods; 36.6% of all women knew of a modern method while only 16.2% knew a traditional method. On average, knowledge of contraceptive methods was slightly higher among older women (40+ years) than among younger women (Doctor, Bairagi, Findley, Helleringer and Dahiru 2011). This is not unusual in Muslim communities. The younger Muslim women are comparatively less aware of family planning programs because they face sociocultural problems in adopting family planning methods. Supporting girls to stay in school longer to delay age of marriage and to empower girls through education, as well as empowering young Muslim women economically, and awareness creation during antenatal and post natal clinics would be possible ways managing these sociocultural barriers.

In a study in Kaduna by Abdulrazak, Kabir, Muhammad, Suleiman (2014) among women who are divided into study group and control group found that 11.8% of women use family planning in pre-intervention period while 22.4% of the women used family planning in the post intervention period in the study group. For the control group, 16.0% of the women used family planning in the pre-intervention period while 17.3% used family planning in the post-intervention period. This shows that there is need for sensitization programmes about the use of family planning. Ahmed-Adams (2012) in a study of natural family planning methods in Kaduna metropolis found that majority of the respondents approved the practice of natural family planning methods. The respondents preferred the natural family methods because they find it safe, reliable, effective, cheap, natural, easy and good without any side effects. Among these natural family planning methods, the calendar/billing method and breastfeeding methods

are the most used (23.8%) while the least used is the withdrawal and calendar methods. According to Performance Quality and Accountability (PQA) (2014) the use of modern family planning methods among all married women in Kaduna State is 10.1% while the use of other methods is 10.5%. Reasons for non-use are given as not married (22.6%), perceived not at risk (34.2%), method or health related concerns (22.8%), opposition to use (18.3%), lack of access/knowledge (10.3%), others (16.3%). In a study of family planning utilisation in Zaria, Kaduna State, Abubakar (2012) found that despite the high knowledge of family planning (93.4%) among the respondents, only 34.2% are currently using family planning. Also while oral pills and injectable contraceptives were the most used methods by women, condom was the most used method by men.

The use of family planning methods can be said to be very poor in Kaduna State despite the high knowledge of the programme. This can be as a result of many factors ranging from culture, religion, ignorance, education and many more. Majority of these women and men have no detail knowledge about the importance of family planning hence, they see it as an elite innovation.

2.3.6 Abortion Care

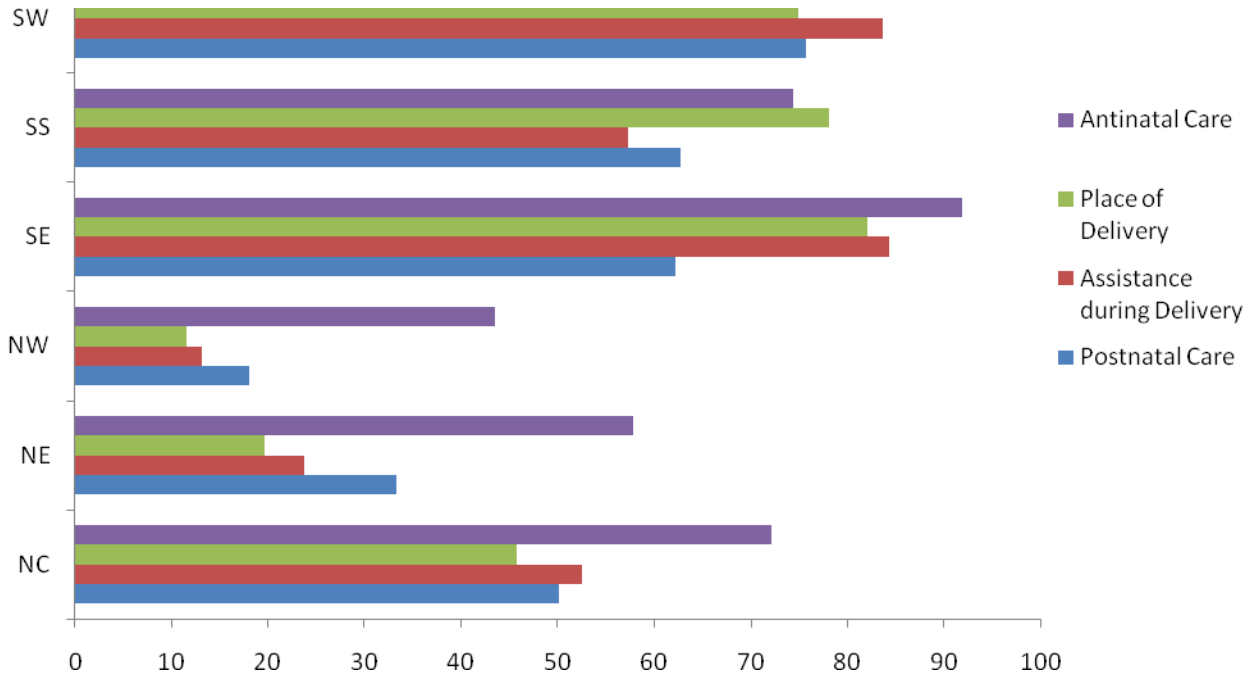
Abortion is the ending of pregnancy by removing a fetus or embryo before it can survive outside the uterus. An abortion that occurs spontaneously is also known as a miscarriage. An abortion may be caused purposely and is then called an induced abortion, or less frequently, induced miscarriage. Although safe, simple and effective evidence-based interventions exist, nearly 22 million unsafe abortions take place every year; these continue to contribute significantly to the global burden of maternal mortality and morbidity (WHO, 2015).

Among the many barriers that limit access to safe abortion care, the lack of trained providers is one of the most critical. It is estimated that the global deficit of skilled health-care professionals will reach 12.9 million by 2035. Such shortages are especially critical in regions of the world that also have a high burden of unsafe abortion and related mortality (WHO, 2015). Additionally, most countries, including many high-income ones, have subnational disparities in the availability of a skilled health workforce, with shortages being particularly high in rural areas or within the public sector.

Although in many contexts abortion-related care provision is limited to specialist doctors, many of the evidence-based interventions for safe abortion and post-abortion care, particularly those in early pregnancy, can be provided on an outpatient basis at the primary care level. The emergence of medical abortion (i.e. non-surgical abortion using medications) as a safe and effective option has resulted in the further simplification of the appropriate standards and health worker skills required for safe abortion provision, making it possible to consider expanding the roles of a much wider range of health workers in the provision of safe abortion.

While shortages of all skilled health-care professionals exist, the deficits and subnational imbalances are the greatest for physicians. The 2013 World Health Organization (WHO) report on the global health workforce highlights the fact that advanced practitioners, midwives, nurses and auxiliaries are still insufficiently used in many settings. Involving such health workers makes it more likely that services will be available to women when they need them.

Figure 1: Bar Chart of Pattern of Maternal Healthcare Utilisation across the Six Geopolitical Zones of Nigeria



Source: NPC, (2014)

2.4 Factors Affecting Access to Maternal Health Care Services among Women

2.4.1 Place of Residence and Access to Maternal Health Care Services

Geographical proximity to health care centers influences access to maternal health care services. Studies (Israelski, Gore-Felton, Power, Wood and Koopman 2011; Meechan, Collins and Petrie 2013; Sudha, Nirupa, Rajasakthivel, Sivasusbrmanian, Sundaram, and Bhatt 2013; and Adams 2005) from other countries around the world shows that the access to health care services is related to geographical proximity. Emerging views suggest that many clinical conditions and their outcomes often depend, among other things, on the geographical proximity of care facilities (Billi, Pai and Spahlinger 2010; Arcury 2005). Kloss, Assefa, Adgna, Mulatu and Mariam (2011), Onah, Ikeako, and Iloabchie (2006) posit that in some emerging economies in many parts

of the world, health care accessibility is limited to urban areas, and therefore health inequity has been heightened simply due to an asymmetry in the availability of health care services reflecting an urban-rural disparity. Gregory (2010) and Engelman (2012) reported that morbidity and mortality in a clinical population are invariably related to the geographical proximity of the health care centers.

Although the ability to access health care is influenced by myriad of factors, the relationship between care seeking and distance travelled has not been widely reported in developing countries (Tonelli, Manns, Culleton, Klarenbach, Hemmelgarn & Wiebe 2010, Uzochukwu 2010, Amoran, Lawoyin and Lasebikan, 2011). Some researchers had also identified distance to health facilities as a determinant of demand for health services especially maternal health care services (Wang, Micheal, Burgert, and Coleston, 2014; Hamlin 2010; Cham, Sundby and Vangen 2011; Vlassoff and Garcia 2002; Hjortberg 2003; McCray 2010; Buor 2004; Noor 2010).

Distance to the nearest health facility has mainly an effect for the treatment of rural rich Tanzanians since the rich have higher education and higher wages (Cham, Sundby and Vangen, 2011). In Kenya, Ethiopia and Ghana Hamlin (2010) and Wang et al., (2014) also found that distance to health facilities affect the take-up of the ill and the choice of health facilities. In Nicaragua Hjortberg (2003) found that better access to health care facilities was the strongest determinant of health care spending by household. Household that live or trek longer distance to receive health services are bound to develop evasion strategies which include patronising quack medical stores, traditional native medical attendants and self-medication. However, Buor (2004) and Vlassoff and Garcia (2002) found that household usage of health facilities is far more sensitive to quality than distance.

A discussion of mean distances for health care utilisation in Kenya is offered by Noor (2010). Peterson (2012) talked about the failure of health care referrals and follow up due to lack of finances, time and mode of transport. McCray (2010), Hadley and Tuba, (2011) also use mode of transport as one of the factors to be included in the overall discussion of access to health care and barriers to health care for populations in South Africa and Kenya. Individuals were "influenced by income, insurance, type of illness and access variables such as distance and owing a vehicle. A 1994 World Bank Report confirms that, in developing countries, lack of transport in remote areas, couple with poor road conditions, make it difficult for women to reach relatively nearby health facilities (Buor, 2004).

It would seem reasonable to suggest that those with access to transport, particularly more efficient transport, would use it, especially to access a health or medical facility if they or a member of their household were ill. This, however, becomes more complicated in reality for the reasons discussed in the literature such as availability, cost and condition of the roads. It may also be reliant upon the time that can be spread for this, which equally may rely upon the severity of the illness (Kapiriri and Norheim, 2012; Sudha, Nirupa, Rajasakthivel, Sivasusbrmanlan, Sundaram and Bhatt 2013), the person who is ill, a child versus an adult person (Pokhrel and Sauerborn, 2004) and a boy versus a girl (Bhan, Bhandari, Taneja, Mazumder, and Bahl 2015; Pillia, Williams, Glick, Polsky, Berlin and Lowe 2010; Pokhrel, Snow, Dong, Hidayat, Fleesa & Sauerborn 2010). If the person is a single parent or widowed for example, time and cost are going to be crucial (Johanson, Long, Diwan and Winkvist 2009), as well as the issue of possible productivity and income lost to person-ill time (Nyamongo, 2012). Other issues may be the perception of the quality of the treatment available once the facility is reached (Anokbonggo, Ogwal-Okong, Obua, Aupont and Ross-Degna 2014; Pavlova, Groot & van-Merode 2011).

These are just some of the many factors that may determine access to health care services and the individual cost-benefit analysis of using motorised transport.

In the UN Session on Children in 2002 the importance of improving emergency transport, especially roads, was highlighted as a prerequisite to skilled birth attendance and maternal and child health. Although patient movement has not formed a central focus of studies on pre-natal outcome in cases of obstetric complications and emergency, a few identify lack of mobility and transport to be a causal factor in maternal and neonatal disability, morbidity and mortality. In Ethiopia Hamlin (2010) identified a clear causal relationship between the development of fistula (vaginal perforations into the bladder or rectum) in cases of obstructed labour where transportation to appropriate health facilities is inadequate. Transportation problems have been shown to contribute to pre-natal mortalities in the Gambia (Cham et al., 2011), Vietnam (Ha; Berman and Larsen, 2009), and Ghana, Nigeria and Sierra Leone (Arthur, 2012; Araya, 2012). The timing of medical interventions in cases of obstetric emergencies is decisive in preventing maternal death and disability.

Rural communities found in various parts of Africa, whether Nigeria, Ghana to name a few, have diverse social, geographic and economics characteristics. Most rural communities have a larger proportion of elderly and children, with relatively small populations of people of working age (20-50years) which is resulting in a higher dependency ratio. Countryside and Community Report Unit (2003) reveals that rural communities show a health disadvantage for many health measures when compared to their urban counterparts, rural individuals have poorer socio-economic conditions, have lower educational attainment, exhibit less healthy behaviours and have overall higher mortality rate. World Bank (2008) simply put, in general that rural individuals are characterised as being less healthy overall in comparison to their urban

counterparts. This determinant is concerned with which type of health facility is more available to prospective users. This would include the level of expertise and treatment that could be assumed from the type of facility, that is a hospital versus a dispensary, or if public facilities are limited and not accessible, so private facilities have filled the gap, as is the case in Vietnam (Ha, Berman and Larsen 2009; Tuan, Dung, Neu and Dibley 2010), or Uganda (Birungi, Mugisha, Nsabagasani, Okuozi and Jeppsson 2009), or India (Rajeswari, Chandrasekaran, Suhadev, Sivasubrmaniam, Sudha and Renu 2007; Sudha et al., 2013).

Accessibility issues for those in rural areas are well documented, whether it be in developed countries (Andrews, 2010), or developing countries (Mehrotra and Jarrett 2012). This is not the only issue facing those in rural areas, where there may be questions about the quality of the service, capacity or the facilities of the nearest service. Perhaps there are few options for residents of that area, and with limited choices they are bound to use any health facility, over taking no action at all. Or perhaps instead they turn to alternative therapies (McCombie, 2012).

A number of factors influence the choice of a health service physical access to health care, including distance from the health facility, availability of transportation, and the condition of the roads. The distance separating potential patients from the nearest health facility is an important barrier to its use, particularly in rural areas. It is apparent that rural and remote locations are plagued with problematic health care services. In large part, distance, isolation and dispersed population have been the leading causes of these problems. Center for Health and Population Research, Bangladesh reports that obstacles to seeking care include fear of misconceptions about the care provided; long distance to facilities; social taboos associated with women's sexuality; preferences towards using traditional birth attendants; and the expenses associated with emergency obstetrics care. In general the assumption is that the longer the

travel time to health care facility, the least likely individuals are to use it. Improved geographic access could increase the overall use of maternal health care services Onwujekwu (2005:255) concludes. This may hold true in some cases. For instance, in the United Kingdom where Haynes, Lovett and Gale (2010) showed that the distance to facilities had a strong bearing upon visits, that is, the further the distance the less likely people were to go there.

What really influenced whether one will access and use health care facility are mainly factors such as distance to the nearest health care facility, mode of transportation, availability of care and the condition of the roads. If there is health care facility within ones reach, and services are available with many health care providers been on ground, the condition of the road is good then people will not have much problem accessing and using health care facilities. But the idea of travelling long distance and not getting health care provider to attend to one can be very discouraging.

2.4.2 Availability and Access to Health Care Services

Availability according to Hjortsberg and Mwikisa, (2002), Perry and Gesler, (2000) refers to the distance the patient lives from a health care facility, transportation and total travel time, wait time and available services, In Andean, Bolivia where travel times are greater than one hour by walking, Perry and Gesler (2000) found limited physical use of care to be a major obstacle in improved health. Limited access is especially important in rural areas where there are fewer healthcare facilities and villages may be physically isolated. In Zambia, 56% of surveyed rural household perceived distance as an obstacle (Hjortsberg&Mwikisa, 2002). In the same study, only 17% of individual living more than 40 kilometers from a facility sought care when sick compared to 50% of individuals living less than five kilometers away.

Another barrier in the rural areas is that travel time takes longer per kilometer than in urban areas due to poor quality of roads and the burden of having to use several modes of transportation. Climate is also a factor especially during the rainy season when heavy rains and flooding create even worse road conditions. Advanced transportation is often nonexistent in developing nations and healthcare may be unattainable if the means of transportation are inadequate or time consuming such as walking, bicycling or using the bus (Perry and Gesler 2000). These longer travel times deter individuals from travelling particularly to use advanced technology that may only be available in large health facility located in the cities. These sometimes overwhelming obstacles may also encourage women in developing countries to turn to traditional medical practices. Fournier, (2009) in a study found that maternity referral system in Mali, that attempts to remove geographic and financial barriers, that ensured basic and comprehensive emergency obstetric care, transportation to obstetric health services and community cost-sharing schemes, has produced a substantial reduction in maternal mortality rates.

2.4.3 Affordability and Access to Maternal Health Care Services

The cost of health care services, drugs prescription and transportation determine the affordability of health care. Hjorstborg and Mwikisa, (2002) found cost to be a critical determinant of health care use in Zambia. They argue that this is mostly a rural concern where a large percentage of the population lives in poverty and have difficulty paying for services. People residing in the rural areas pay a large proportion of their income than their urban counterparts. Studies in Ghana, Swaziland, Zaire, and Uganda showed a decline in use of health services as a result of introduction of user's fees. In Tanzania, there was a 53.4% decline in

antenatal care while Nigeria reported a 56% rise in maternal mortality after the introduction of user's fees (Bennett and Gilson, 2001).

In Zambia, several studies found that low income people have higher incidences of illnesses but use services less often. Hjorstborg and Mwikisa, (2002) showed that an increase in the cost of health care especially affects the poorer patients who need to make return visit to a health care facility and those who deem their illness not serious enough to seek care. As women in many developing countries are expected to conform to social and gender roles and remain at home to perform household work, they cannot develop economic independence. As a result, they may be unable to afford services, especially since essential goods such as food and education must be purchased before health care, thus making their access to health care services limited. Cost of health care services can be a factor that will discourage one from using it. If health care services is totally free many women will like to use it but introduction of little fee charged will make many of them to run away except if the situation is very critical and there is no any alternative way out. When there are many things to be done with little money at hand, women will prefer doing the needful which is food than going to pay for health services.

2.4.4 Quality of Care and Access to Maternal Health Care Services

Measuring patient satisfaction offers insight into possible inadequacies in the system. The importance of understanding patient perception of quality of care is important since a higher perceived quality is positively correlated with an individual level of utilisation. Factors in the quality of care influencing an individual's decision to seek health care include the perceived quality of the service including attitude of the personnel, the knowledge and abilities of the staff,

availability of supplies and the level of satisfaction with the diagnosis and effectiveness of the treatment provided.

Ondimu (2000) disapproved this assumption by finding that patient's dissatisfaction in the Nana province in Kenya created a loss of community confidence in the local public health facility. This negatively affected the health of vulnerable groups such as the poor children and the pregnant women. Maternal health is highly contingent on the quality of the local primary health care system, which is a common entry point for antenatal care that helps identify problems in pregnancy early on. Consistently poor performance in primary health facilities including lack of personnel, lack of appropriate medicines, and indifferent or contemptuous treatment by facility staff not only undermines the quality of care an expectant mother receives, but over time erodes confidence in the health care system overall and deters women from accessing care. Erim, Kolapo and Resch, (2012) in a study in Nigeria observed that women who experienced adverse pregnancy outcomes in a facility may be less likely to seek facility-based obstetrical care in the future.

2.4.5 Financial Capability and Access to Maternal Health Care Services

The investigation of the relationship between wealth, access and utilisation of ANC and also other determinants associated with ANC utilisation in Nigeria shows that women in the wealthiest quintile were over five times more likely to adequately access and use ANC. The odds of ANC use were generally lower among the poor and the least educated women living in rural areas who need ANC the most. The 2014 World Health Organization established that only 61% of pregnant women in Nigeria ever made at least one contact with a skilled ANC provider and only 57% made the WHO recommended "at least 4 visits" (WHO, 2002a). Despite free ANC in

most parts of Nigeria Fagbamigbe and Idemudia (2016) found that between 2006 and 2013 economic, cultural, societal, and socio-demographic factors are the major factors affecting ANC utilisation in Nigeria.

ANC utilisation plays a dual role in the attainment of the Millennium Development Goals (MDGs) and the Sustainable Development Goals (SDGs). While it is one of the indicators of the MDGs on improvement of maternal health, it also contributes to some of the indicators of MDG on reduction of child mortality (Lincetto, Mothebesoane-anoh, Gomez, and Munjanja, 2010), Office for the Coordination of Humanitarian Affairs [OCHA], (2015), World Bank, (2013a). Poor access and utilisation of ANC in Nigeria is a serious threat to the attainment of these MDGs and SDGs in Nigeria and the world at large, although researchers have reported that nonuse of skilled birth attendants contributes more too to preventable daily maternal deaths of nearly 800 women globally than nonuse of ANC (Lincetto et al., (2010).

Access and use of ANC could reduce this burden, of which 99% occur in developing countries (World Bank, (2013a). To the federal government of Nigeria, at least four visits by a pregnant woman to an ANC facility and birth delivery by a trained and skilled birth attendant is a must (Ashir, Doctor, and Afenyadu, (2013), Federal Ministry of Health (FMoH). (2013), National Population Commission (2014). The federal government has also established primary health care facilities across the country to achieve this purpose. These efforts have been complemented with state governments' programmes aimed at ensuring that pregnant women have access to qualitative ANC (Babalola and Fatusi, (2009). Despite all these efforts, ANC utilization in Nigeria is abysmally low while the maternal mortality rate (MMR) has remained very high.

In recent years, ANC has been made free in certain parts of Nigeria and was reported to have contributed to ANC utilisation in those areas. For instance, the over 95% ANC utilisation found among nursing mothers and pregnant women in some selected rural and semi-urban communities in Okitipupa Local Government Area (LGA), Ondo State, South Western Nigeria, in 2009 was attributed to the recently introduced free ANC services in the state (Akanbiemu, Olumide, Fagbamigbe, and Adebowale, (2013).

With the high level of poverty in the country, financial cost could pose barriers to access and use of ANC services by some women, particularly the most vulnerable the "poorest of the poor." Globally, the economic growth of a country has been assessed using its health outcomes; also increased national wealth has been related to improved health (Fagbamigbe, 2016). Health is central to overall well-being and wealth (Arthur, E. 2012). People's health and wealth status are closely related, and this relationship is bidirectional. A previously financially buoyant individual may become poor as a result of ill health; similarly, poor health may arise from being poor if an individual is unable to afford adequate basic necessities such as sanitation, health care, food, and housing (Arthur, E. 2012). While unavailability and inaccessibility of health facilities are health utilisation problems to be dealt with by various governments in less-developed countries, on an individual level, poverty may limit use of quality health care service especially among women in their reproductive period. Poverty exists when people lack basics needs to improve their standard of living. Health and wealth strengthen each other with health systems as the catalyst (Figueras, McKee, Lessof, Duran, and Menabde, 2012).

While it is on record that healthier people are more productive and can therefore generate wealth, a rather financially disadvantaged individual may be unable to access health services and become more impoverished (Figueras, (2012). A poverty-related lifestyle would ultimately

reduce access to and utilisation of health facilities and services (Arthur 2012). This has constituted health inequalities in most parts of the world, especially in less-developed countries. It has allowed better-off individuals to benefit from lifestyle changes and improved health care, while the poorer ones are left unattended.

Health and wealth cannot be disconnected from a functional health system. Figueras, Lessof, and Menabde, (2012), *Figueras et al., (2012)* established a complex, dynamic, and triangular relationship among health systems, health, and wealth, they found that the three elements impact collectively on societal well-being. This is evident from the fact that societies draw satisfaction from the existence of health services and the ability of people to access them (Figueras et al., 2012). Furthermore, wealth may be necessary to access health in the absence of a functional health system. Some previous studies have linked ANC utilisation to wealth and other factors including education, residence, employment, and spousal support (Arthur, 2012). Fagbamigbe and colleagues reported that financial hindrances were cited by about two-fifths of women not attending ANC services in Nigeria (Fagbamigbe and Idemudia, 2016).

It was reported in a recent Ghanaian study that the wealth status of individuals hinders ANC access and utilisation even though maternal health care services are rendered free of charge in Ghana (Arthur, E. 2012). Similarly, it was reported in an Indonesian study that a percentage attributable risk of 55% of the total risks for underutilising ANC services was due to combined low household wealth index and low maternal education level (Titaley, Dibley, and Roberts, 2010). Hidden costs such as transportation and opportunity costs of spending a long time travelling and waiting at health facilities may seriously affect the usage and the adequacy of usage. Some previous studies in Nigeria, however, reported that neither the income of respondents nor the income of their spouses was significant to ANC utilisation (Dairo, and

Owoyokun, 2010). Despite the established strong association between ANC utilisation and infant and MMR, the proportion of women attending ANC services has remained very low in sub-Saharan Africa and in other less-developed countries the huge global campaign targeted at promoting high ANC utilisation notwithstanding (Ajayi, and Osakinle, 2013).

2.5 Level of Access to Maternal Health Services

Access to health services according to Health Communication Network (2002) depends on factors affecting the demand side (including different aspects on the side of providers). The different supply side dimensions of access to health care services include: Availability (e.g. geographical location, transportation availability, opening hours, waiting time to appointment, and affordability. Hanson et al. (2003) analysed access constraints to scaling-up priority health interventions for the poor, whereby they used a five-level framework to capture the range and intensity of these constraints thus:

(1) Individuals, households and community;

(2) Health service delivery;

(3) Health sector level;

(4) Public policies cutting across sectors; and

(5) International and regional level.

Level 1 encompasses individuals in addition to their household and community, hereby acknowledging that health-seeking behaviour and attitude towards health and health services depends on individual preferences, in the context of cultural and social constraints of households and communities. Other authors categorise this level as the demand-side (Ensor and Cooper

2004; Peters, Garg, Bloom, Walker, Brieger, Rahman 2008; Jacobs, Bigdeli, Annear, Van, Damme, 2012). Demand-side barriers include perceived quality, health workers' attitude, as well as affordability of services (Kiwanuka, Ekipara & Peterson 2008; Chuma, Okunha, and Molyneux 2010; Patel, Gauld & Norris 2010). Such barriers tend to be used in reference to the interaction between patients and service providers at the time of illness. Irrational health seeking behaviour, medicine demand and use are also considered as contributing to reduced access. This first level of the health system is not limited to individual patients but extends to households and communities. As mentioned, demand-side barriers are present beyond the individual as they also relate to social and cultural characteristics, including stigma, determined by the household and community affiliations (Ensor and Cooper 2004; Ruxin, Paluzzi, Wilson, 2005).

Level 2: Constraints to access to health service delivery concern the supply side. First, they relate to irregular availability and high prices (Saleh and Mohamed 2005; Babar, Ibrahim, and Singh 2010; Cameron, Ewen and Ross-Degna 2009; Carasso, Lagarde, Tesfaye, and Palmer 2009; Kotwani 2009); second, to irrational prescription and dispensing (Laing, Hogerzeil, Shankar 2009; Holloway and Van Dijk 2011); and finally, to medicines quality, including sub-standard and counterfeit medicines (Cockburn, Newton, and Agyarko 2005; Burki 2010; Newton, Amin and Bird 2011). In general, constraints in access to health services either public or private affect service use. Services availability is cited as a key determinant in several studies of access to and utilisation of health services (Chukwuani, Olugboji and Ugbene 2006; Kiwanuka, Ekipara, Peterson, 2010; Pariyo, Ekipara,-Kiracho and Okui 2009). From a management perspective, availability of essential services has been used as a measure of quality of care (Ameli and Newbrander 2008; Jacobs et al. 2012). Essential services are referred to as playing a major role in primary health care performance (Rohde, Cousens and Chopra, 2008; Walley,

Lawn, and Tinker, 2008). Interaction between health care providers and service delivery is essential in interventions targeted to mothers (Mavalankar and Rosenfield 2005; Pariyo, Ekipara-Kiracho, and Okui, 2009; de Brouwere, Richard & Witter 2010) or in disease-specific areas where it is important to adopt a broader vision of access to treatment and care (Reilley, Abeyasinghe & Pakianathar 2002; Beran and Yudkin 2006; Beran, McCabe and Yudkin, 2008; Chuma, Okunga and Molyneux, 2010).

Level 3: health sector: WHO Health Systems Strengthening framework highlights that 'multiple, dynamic relationships between building blocks of the health system are essential for achieving better outcomes' (WHO 2007a). Thus, weak governance will negatively impact all building blocks of the health system. Finally, the issue of health sector pluralism, previously highlighted under Level 2 (health service delivery), is also a determinant of access to health care services.

Levels 4 and 5: above the health sector: national and international contexts, low public accountability, low priority attached to the social sector, corruption or government bureaucracy, are constraints that affect the health sector (Cohen-Kohler 2007; Zakus, Kohler, and Zakriova 2010). Although this has been often reported at the international level with the use of patents and intellectual property rights, it may as well occur at national level. Tensions can also occur with international donors' agendas related to medicines, for example in global health partnerships, which have highly contributed to relieving the burden of certain diseases such as malaria, HIV or tuberculosis, but have also diverted donors' attention from the burden of non-communicable diseases and to a certain extent from maternal and child health issues. Equitable access to quality health care, including maternal health care services, depends on global and national forces operating beyond the health sector (Tomson, 2010).

Criteria for health care planning for third world countries was specified and indicated that each service area should have a health care center within five kilometer radius for primary health care in order to have adequate and equity of access to health centers (WHO, 2005a). Kadobera, Sartorius, Msanja , Mathew and Waisuwa (2005) maintained that generally, health care utilisation is limited in sub-Saharan Africa and studies have attributed this to many reasons. For instance, long distance to health care facilities according to Say and Raine (2007) has long been established as one of the barriers to health care utilisation. Adedini (2014) argued that physical barriers to accessing health care systems and road infrastructures are poor; there are uneven distributions of health care facilities in communities that have contrasting characteristics. Community conditions according to Parry, Matters, Oxford and Dalton (2007) have been noted to impact on health outcomes of individuals through such levers as physical structures, social structures, and service provisions. For instance, Adedini (2014) posit that people who lived in communities that lack a health care facility are likely to suffer poorer health outcomes compared to those from communities where good health facilities are available. I want to agree with the above authors. The mere fact that there is health facility in each area is not enough when there are no adequate and enough health care providers to attend to people. Majority of the health care facilities are concentrated in the urban centers. This makes women to travel longer time to seek for their health issues. Also the roads are nothing to write home about as the journey of 20 minutes usually takes an hour if not more. All these can discourage women from accessing their health care issues using health care facilities.

Distance and transport to health services exerts a dual influence on use. It is use as a disincentive to seeking care in the first place and as an actual obstacle to it (Thaddeus and Maine, 1994 in Okeshola and Sadiq 2013). Many pregnant women do not even attempt to reach a

facility for delivery since walking many kilometers is difficult in labour and impossible if labour start at night and means of transport are often not available. The obstacle effect of distance is stronger when combined with lack of transport and poor roads (Okeshola and Sadiq 2013).

Some gender differences in access to health care may be greater during a woman's reproductive years (Cashine, Borowitz and Zuess, 2002) and some of the results from earlier studies that concluded women were more frequent service-users may be attributed to this. In central Asia for example, it was found that women of reproductive age use health services one and half times more than the average, while for men of a similar age it is half the average (Cashin, Borowtz, and Zuess, 2002). However, it has been found that women are more likely to delay health-seeking and treatment, particularly for health conditions that are more prone to carry social stigma, such as tuberculosis (Bashour & Mamaree 2003, Yamasaki-Nakagawa, Ozaya, Yamada, Osuga, Shimouchi & Ishikawe 2001), sexually transmitted infections (Fonk, Mwai, Ndinya-Achola, Bwayo and Temmeermen, 2002) and leprosy (Kumar, Singhasivanon, Sherchand, Mahisavariya, Kaewkugwal and Peerapakorn 2004). Falling under a similar social pall, reproductive health services in some countries have a similar reputation and it is only with some creative management that certain issues have been resolved, such as in rural Bangladesh where attendance was increased in women's reproductive health services by integrating men's reproductive health care into the previously female-focused facilities (Ubaidur, Hossain, Khan, Al-Sabir and Alam, 2004).

In Ghana, Bour (2009) studied gender and utilisation of health care services in Ashanti region and established a relationship between the complex individual variable and utilisation by gender. Although females had greater need for health care than males, they do not utilise it as much. Whereas, quality of service, health status, service cost and education have greater effect

on male utilisation, distance and income have higher impact on female utilisation. Gender has become a fashionable word for government and nongovernment, international and national organisations.

The fact remains that in developing countries there is still inadequate understanding of how gender influences health itself (Allotey and Gyapong 2006, Annan 2005), access to health information (Chakraborty, Islam, Chowdhury, bari and Akthter, 2003) and services (Araya, Mark, and Yohannes 2012) health seeking behaviour (Ahmed, Adams, Chowdhury and Bhuiya 2012; Arcrury 2005 and) and the use of services (Buor 2004; Hjortsberg 2003), treatment and attitudes of the providers (Hartgan 2001; Oliveira-Cruz, Hanson and Mills 2003).

2.6 Factors Affecting the Utilisation of Maternal Health Care Services

Utilisation of health services is a complex behavioural phenomenon which is greatly influenced by several factors. Among factors influencing utilisation of maternal health care services are: poverty, education, employment, gender, information, geographical location and socio-economic and cultural structure of people.

2.6.1 Poverty and Utilisation of Maternal Health Care Services

Poverty may be seen as a reflection of glaring defects in the economy as evidenced in mass penury, pauperization of the working and professional class, including artisans, mass unemployment and poor welfare services. It includes absence or lack of basic necessities of life including material wealth, commonplace, regular flow of wages and income, and inability to sustain one based on existing resources available (Ibrahim, 2015).

Poverty is seen as a life in environment where low income, inadequate work opportunities, poor housing and depressed mental and physical state is prevalent. It is also a lack

of power to do anything about it. Poverty is insecurity and a lack of emotional stability (Ibrahim, 2015). According to Enrenreich (2012), poverty is in two basic ways; "absolute deprivation" i.e. lacks of basic necessities and "relative deprivation" i.e. the inability to maintain the living standards customary in the society. Absolute poverty is measured in terms of basic cultural needs, including education, security, leisure and recreation while relative poverty refers to a situation in which people may not be able to provide themselves with basic necessities and are unable to maintain the standard of living that is considered normal in the society.

In Nigeria, poverty is widespread and severe when compared to the most recent poverty indicators, Human Development Report (2016) shows that 18.4% of Nigeria's population lives near poverty, 30.0% are in severe poverty while 53.5% are below income poverty, as such, insufficient money to pay for medical expenses serve as a barrier for treatment. Poverty limits accessibility to basic services like health; it influence negatively the ability to utilise modern health facilities, such limitation tend to cause high mortality especially among the poor. The effect of poverty is multi-dimensional, several studies in Ghana and Malysia have shown that there were drastic decline in hospital births apparently as a result of the countries deepening economic crises (Arthur, 2012; Babbar, Ibrahim, Singh, 2010). If a family's total income is less than the official poverty threshold for a family of that size and composition, they are considered to be in poverty (United State Census Bureau, 2016). According to Human Development Report (2016) 30.0% of the populations are in severe poverty while 53.5% are below income poverty. It can be argued here that due to the high poverty level there will be limitation to access and utilisation of maternal health care services since the services are not totally free as it supposed to be. Even if women want to go to hospital for their health problem the mere fact that they do not have the means to access their health will hinder them from going. This situation cut across all

the regions in the country as poverty is not just peculiar to a particular region but it is more pronounced in the Northern part of the country because they are less educated. The World Health Organization (1997) reported that 31 percent of women in Nigeria deliver with a skilled attendant's assistance. The development contributes to the life time risk of a woman dying as a result of pregnancy or childbirth is high; 1 woman in every 13 (WHO, 1997 cited in Adamu, 2005).

Other factors like cultural restrictions may be responsible for such phenomenon but notwithstanding; it is obvious that women have less access to crucial resources such as education, skill trainings and health. Many years of poor governance, unaccountable rules with power concentrated in the hands of small elites eroded health infrastructure and breaded corruption, the civil society remains largely excluded from broad participation in health policy, as such, the majority of the population is not part of a fully operating medical care system.

Delivery and reproductive health services in Nigeria are weak, availability and use of affordable maternal health services is appallingly low. While health service delivery is poor nationwide, it is weakest in the north (USAID, 2006). There have always been constant cuts in health and social services spending in Nigeria, these policies have been identified as major causes of worsened health condition among the populace that cannot adequately access health facilities. The multiple increases in the prices of goods, utilities and services like health and education and the depreciation of naira are as a result of continuous introduction of in-effective policies. Such conditions continue to increase the level of poverty and produce negative impact on maternal health and survival. For instance, Adamu and Salihu (2002) in Kano found that the economic crises have compelled most women to deliver their babies at home with the assistance of traditional birth attendants.

It can be strongly argued here that poverty has really affected access and utilisation of maternal health care services as majority of the women are very poor especially those in the rural areas. Health financing by the government is nothing to write home about thereby leaving poor and vulnerable women to suffer untold hardship accessing and utilising maternal health care facilities. Many women cannot afford three daily square meals talk more of going to the hospital to pay before accessing and using health care services. This is one of the reasons why maternal mortality is on the increase in the developing countries.

2.6.2 Educational Attainment and Utilisation of Health Care Services

Education is a key determinant of the lifestyle and societal status an individual enjoy and it has been found to influence utilisation of maternal health care services. A number of literature (Bloom 2011; Navaneetham and Dharmalingam 2012; Gymiah, Taky and Addai, 2012; Dey 2009) argued that utilisation of maternal health care services vary with the socio-economic characteristics of the population. These studies have shown that education of the mother is an important social variable that has positive effect on the utilisation of maternal health services. Therefore, it is not surprising to find that education and socio-economic status directly affect women's access to healthcare, specifically in developing countries (Bhan, Bhandari, Taneja, Mazumder and Bahl, 2015) and that education and economic status of the household are positively related with choosing to act and seek health care when ill in Zambia (Hjortsberg, 2003), even a women's perception of her social status and increased self-esteem is positively related to her educational level (Buor, 2004). Level of education is viewed as important in the creation and maintenance of health inequalities through socio-economic differences in the labour market (Cooper, 2002).

Organisations such as the World Bank, UNICEF and UNFPA routinely use maternal education as an indicator for the health of children and families (UNFPA, 2003), as do other studies (Moore, Castillo, Richardson, and Reid, 2013; Chukuezi 2010; Digamber and Sahoo 2012), while multiple studies around the world have also used female and maternal educational levels as health indicators for everything from social problems in dealing with types of illnesses (Kumar, Shinghasivanon, Sherchand, Mahisavariya, kaewkungwal and Peerapakorn, 2004) to utilisation of hospitals, immunization levels (Smith, 2004) and other health services (Bhan, Bhandari, Taneja, Mazumder and Bahl 2015;). Education increases the possibility of health education and health literacy, but is not a guarantee (Tomlinson, 2010). Some studies also found that those with higher levels of education are just as likely to succumb to misconceptions, misinformation and misinterpretation (Tomlinson, 2010), particularly when it involves cultural and religious beliefs, societal norms, peer and institutional pressures, and general lack of access to information.

Female education has significant impact on economic empowerment and decision making, reproductive behaviour such as age at marriage, birth intervals, number of children born and so forth. Female education also affects maternal health seeking behaviour such as use of contraceptives, antenatal clinic, and place of delivery, maternal mortality and morbidity. Mother's education has significant impact on child health such as infant mortality rate, health and well-being of children through nutrition and hygiene (WHO, 2005c). Education of parents, particularly the mother, is also important in determining child health status. Maternal schooling, for example, was found to be the most important determinant of infant survival in a study in Pakistan (Agha 2000). According to Cheptum, Gitonga, Mutua, Muku, Ndabuki, Koima (2014), education can increase the use of health facilities. In Uganda; Ibrahim, Sarah, Juliet and Lawson

(2008) reported differentials effect of education on health care demand between public and private health care providers. Their results suggest that having some form of education is associated with a higher probability of seeking health care. In addition, it could also reflect greater awareness of care during childbirth as higher levels of education may create greater awareness of maternal health care services and the need for them (Stephenson, 2006). Education may be the single most important factor to influence women's health (Cheptum, Gitonga, Mutua, Muku, Ndabuki and Koima, 2014). According to Fonk, Mwai, Ndinya-Achola, Bwayo, Temmerman (2002) one of the most important determinants of a woman's social and economic status is her educational level.

In a study carried out in Ghana by Ghana Demographic and Health Survey [GHS] (2007), education was found to be inversely related to age, that is, older women are less educated than younger women. The report of the study also show that younger women with more than secondary education (16.9%) use maternal health care services compare to the older women (8.9%) who have more than secondary educated. In a study carried out in Uttarrakhand in Indian, education of women was used as to categorise variable into four categories; illiterate, primary, secondary and higher. It was discovered that women 48% with no education, 39% with primary education, 16% with secondary education and 3.4% with tertiary education did not go for antenatal. While women with 23% no education, 34.4% primary education, 58.3% secondary education and 89.6% with tertiary education had two or more visits. In Bolivia, Egypt and Kenya, Stewart and Sommerfelt (2008) found that the use of maternal health services is influenced by a myriad of social, cultural and economic factors. The researchers found that the use of maternal health services was positively and significantly associated with education. The report shows that literate women were more likely to use antenatal care than non-literate women.

Similarly, women whose husbands had no education were less likely than those whose husbands were educated to use maternal health care services (Stewart and Sommerfelt, 2008).

In Delhi, India, Yadlapalli, Kumari and Kaushal (2013) found that more than half of the respondents who did not received any formal schooling are found not to use maternal health services while the educated mothers make use of the services. Maternal health indicators are poorer among non-educated than those with some level of education (Shaokang, Zhenwei and Blas 2012; Hayes, Enohuman, and McCaul 2011; Heaman, Bayrampour and Kingston 2013). Studies from India (Swain and Mishra 2006; Babu, Swain, Mishra, and Kar, 2010; Kusuma, Kumari, Pandav, and Gupta 2010; Singh, Rai and Singh 2012b) and abroad (Hayes and Enohumah 2011; Heaman, Bayrampour and Kingstone, 2013) reveal that the poor and uneducated migrants often forego healthcare services.

Women with higher educational attainment are more likely to make informed decisions as to place of delivery, demand better services, have financial accessibility, and more likely to live in urban areas where facilities are nearby (Magadi, Diamond and Rodrigues 2000b; Navaneetham and Dharmalingam 2012; Van Ejik, Bles, Odhiambo, Ayisi, Blockland, Rosen, Adazu, Slussker & Lindblade 2006; Misho, Schellengerg, Mushi, Obrist, Mshinda, Tanner, and Schellenberg 2007; Onah, Ikeako and lloabachie 2006). Educational status of women is likely to reduce maternal and neonatal morbidity and mortality through changes in health seeking behaviour due to acquired knowledge through education and improved access to health services. Improving the educational attainment of women is an example of a structural intervention with long-term effects.

Educational attainment is positively associated with the use of contraception. The use of contraception rises with the educational attainment of women. For example, in Nigeria, only 3 percent of women with no education use a method of contraception compared with 20 percent with primary education, 29 percent with secondary education, and 37 percent with more than secondary education (NPC, 2014). The North West and North East have the highest proportion of persons with no education roughly seven in ten women and half of men (NPC, 2014). This has adverse effect on women's health care utilisation.

Studies carried out in Kano by Adamu (2003) shows a low percentage of attendance for maternal health services in rural areas where most of the women did not pass through western education. He emphasise that 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 as non-literate or uneducated women (Adamu, 2003). Education has been described as a medication against fatalism (Béhague, Kanhonou, Fill, Legonous and Ronstmans 2008).

It can be argued here that education of a woman is her power over everything in life. A woman with western education can take decision concerning her health without waiting for anybody to decide for her. Being educated enables her to know her health problem and take inform decision as to utilise health care facility to see a care provider concerning her health issue. Also being educated make her to be economically independent, hence she has all it takes to take good care of herself.

2.6.3 Employment Opportunity and Utilisation of Health Care Services

The context within which women are employed influences their use of MHCS. It is generally assumed that women who are working and earning money will have better autonomy

and the financial ability to pay for services. However, Furuta and Salway (2006) argue that this will also depend on the intrinsic characteristics of the job and not simply on its income-generating power. Moreover, in many settings women have no control over their own earnings (Furuta and Salway, 2006) and many working women do not earn money for the work they do. Additionally, employment may be poverty-induced suggesting resource constraint. As a result of the contextual differences in women's employment, studies have presented mixed results in the association between employment and MHCS utilisation. Several studies have found a positive association between MHCS use and women's formal employment suggesting that the capacity to earn could contribute to MHCS utilisation through empowerment (Kiwanuka, Ekipari, Peteson, 2010; Kapiriri and Norheim, 2012; Abor and Abekah-Nkrumah, 2009; Arthur, 2012). On the other hand, in some regions of the world, it has also been found that non-working women are more likely to use some MHCS than working women (Short and Zhang 2014; Kamal, 2009). Few studies also indicate that women who engaged in low cadre occupations e.g. farming are less likely to utilise MHCS (Furuta 2006; Gaje 2007; Addai, 2000).

Working status of women shows a positive and significant association with decisions to access and utilise health care service (Adamu, 2003). Several studies (Furuta 2006, Matsummura 2011 and Ministry of Health Population 2009) from Nepal have shown that women, who have better employment and income, are more likely to utilise maternal health care services than other women. The studies discovered that women in formal employment were more likely to utilise maternal health care service than those who were unemployed. A significant percentage (81%) of women in employment use maternal health facility, while the lowest proportion of health facility usage was observed among unemployed women. The studies show that women in formal employment and skilled manual workers were almost twice more likely to have care visits

compared to those with no employment. In a study carried out in Migori Kenya, it was reported that occupation status of a woman was also a factor associated with utilisation of services. Another study discovered that type of occupation is related to the economic power which will translate to the ability to access the services if it is cost involving. The study argued that those who were employed were likely to utilise maternal health services (Teferra*et.al*, 2012).

Ortiz (2007) found that mothers who are working have more chance of attending a first visit and additional visits than non-working mothers in Colombia. Gage (2007) found household poverty as a result of not having any employment and personal problems to be negatively related to the use of maternal health care. A study conducted by Arthur (2012) in Ghana found that employment has a positive and significant influence on the use of ANC, contrary to expectation that it should not since the service is free. Women in employment are more likely to make more ANC visits than women who have no employment status. Women in employment will have the resources to use e.g. wealth, whereas women who are not employed will not have such resources. Even though the service is provided freely, it may come with costs either directly or indirectly and those with the resources are more likely to afford it. In general, it can be concluded that, even though maternal health care services are rendered free of charge in Ghana, wealth which signifies the financial position of the individual woman as a result of being employed or not is still a challenge in the use of these services. It still hinders the utilisation rates; expectant mothers may still use the services, but not adequately as recommended by the WHO (in the case of ANC minimum of four visits before delivery) to ward off any health effects of child birth and hence to reduce the rate of maternal deaths through delivery.

However, to improve the use of ANC, there is the need to go beyond providing the free services to finding means of support for expectant mothers. This can be in the form of the

provision of necessary drugs and more importantly ensuring that these recommended drugs are available at the health facility to the expectant mothers. This will help reduce the cost involved in purchasing the drugs when it is not available because this can hinder the mother's use of the services. Again, most of the expectant mothers end up spending the entire day at the health center for their check-ups. This is a form of indirect cost especially to the mothers in the informal sector that may have to go to the market to earn a daily living. Hence, there may be the need to increase the number of physicians/service providers attending to them at the health center so that they would be able to leave early. Thus, these can be done to complement the free delivery policy, and can help improve the use of adequate ANC and other maternal health services, and therefore reduce the rate of maternal deaths through child birth in Ghana.

In a study conducted in Migori, Kenya Cheptum, Gitonga, Mutua, Muku, Ndabuki and Koima, (2014) found that occupation status was also a factor associated with utilisation of services. The type of occupation is related to the economic power which will translate to the ability to access the services if it is cost involving. Those who were employed were likely to utilise health services. This could be attributed to their level of income since with employment; one is likely to have a good financial status as compared to one who is unemployed. This could also contribute to better decision making ability especially if it involves financial matters.

Studies conducted in India, (Nagdeve and Bharati 2013; Navaneetham & Dharmalingam, 2012; Ramarao, Caleb, Khan, & Townsend, 2011) show that women who sought out healthcare had some form of education and employment. The literature suggests that women who have some form of education and employment have a tendency to be more likely to seek out healthcare. They have a greater awareness of the existence of maternal healthcare services and understand the benefits in utilising them and can afford the use of services. Furthermore,

educated and employed women may have greater decision making power on health related matters and also attach a higher value to personal welfare and health. Socioeconomic characteristics such as education, wealth and status contribute to the likelihood of women accessing health care services.

The likelihood of having a health facility delivery was higher for women in employment compared to those unemployed. This is consistent with empirical research that greater employment enables women to seek maternal health care; whereas for unemployed women, financial constraint is an important barrier to seeking care (Muhammed, 2011, Stephenson, 2006). Women who are working and earning money may be able to save and decide to spend it on a facility delivery. However, in many settings, women either do not earn money for their work or do not control what they earn (Sharma et al., 2005 in Okeshola and Sadiq 2013). This could be attributed to their level of income since with employment; one is likely to have a good financial status as compared to one who is unemployed. This could also contribute to better decision making ability especially if it involves financial matters.

Employment, educational level, family income and marital status shape women's use of health care services. Furthermore, income provides women with the ability to access improved nutrition and adequate housing, both of which protect and advance their health status. Some studies have found that there is positive association between maternal health care services use and women's formal employment suggesting that the capacity to earn could contribute to maternal healthcare services utilisation through empowerment (Folland, Goodman, Stano, 2006; Gaje, 2007; Gott, 2003).

It has also been found that in some regions of the world, non-working women are more likely to use some maternal health care services than earning mothers (Ononokpono and Odimegwe 2014, Kamal, 2009). This may be because the non-working women have more time to spend in the hospital compare to working women who will have to go to work ask for permission before she can go to hospital. Yesuf and Caldron-Margalit (2013), in a study in Ethiopia, found that ANC use based on economic status is consistent with a study from Nigeria, which measured economic status by household assets and found that women from the very rich households were 6 times more likely to use ANC compared with women from the very poor households. Ononokpono and Odimegwe (2014) in a study in Nigeria found that 82.3% of women who have formal employment make use of health facility delivery.

In Obudu, Cross River State, Ugal, Ushie, Ushie, and Ingwu (2012), report that those that are employed obviously have better birth outcome compared to those that are not employed. Over 75% of those employed had successful birth against less than 60% among the unemployed. Adewoye et al., (2013) in Ilorin, Kwara State found that 97% of the women who are employed use the maternal health care services against 24% of unemployed women while Iyaniwura and Yussuf in Sagamu, reports that 85% of women who are employed make use of maternal health care services while only 14% of unemployed women make use of same facilities. This can be attributed to the fact that gainfully employed women have the financial capability to access their health care problem in case there is financial implication involved whereas the unemployed women do not have such facilities to settle their health financial problems, hence majority of them turn to local healers or drug peddlers for their health problems.

In Nigeria, Suleiman (2011) found a strong relationship between employment and MHCS utilisation in the north where the study shows that only 35% of women in the Northwest are

currently employed while 84% of women in the Southeast are gainfully employed. The result shows that utilisation of ANC is relatively high across the zones with a range of 73% - 94% of women in the North-Central, South-East, South-South and South-West receiving care. However, the NE (48%) and NW (24.7%) record much lower levels of ANC use. A wide disparity exists in the choice of PoD across the six zones. About 70% of women in the SE and SS delivered in a health institution, while the majority of women (about 60-90%) in all the three zones of the north delivered at home. Maternal education and employment were found to be significantly associated with PoD in both the northern and southern regions. On the other hand, mother's employment status was significantly associated with institutional delivery in the north where employed women are more likely to deliver in a HF but no association was found in the south. The fact that employed women are more likely to utilise MHCS in the north gives an indication that the earning ability of women is an important factor for utilisation.

It is very important to note here that women in employment are more inclined to use health care facility. This is because a woman that is employed has the wherewithal to take care of the bill incurred for her treatment whenever the need arise. However, the employment may be poverty-induced such that the woman although in employment but the remuneration is nothing to write home about and as such , may not be able to pay for the bill incurred for her treatment. Despite that, woman formal employment contributes to her maternal health care utilisation.

2.6.4 Gender and Utilisation of Maternal Health Care Services

'Gender' has often been used interchangeably with 'sex'. Gender is a social construct that refers not only to the biological 'sex' differences between men and women, but to the different roles and expectations, behaviours and constraints that are placed upon an individual by culture

and society, by virtue of their sex (WHO, 2014). This social stratification between the sexes, leads to differential access to and control of resources. This differential treatment that men and women experience according to Allotey and Gyapong (2006) manifests itself differently among the sexes and could help to explain some of the variations in health that we see among men and women. They further maintained that along with these societal factors, biology itself plays a role in helping to explain some of the differences that we find between men and women. Allotey and Gyapong (2006) emphasised that as a result of men and women's inherent biological differences, women and men do not seem to suffer from the same types of diseases and do not react in the same manner to them.

Women face a greater number of unavoidable health risks, in part because of their reproductive role. However, other factors such as less access to nutrition, education, employment and income mean that women also possess less opportunity to enjoy good health (WHO, n.d). WHO affirm that women have more and different health needs than men largely because of their reproductive role, yet they have less opportunity to access health resources, from nutrition and education to health services. Women make up the majority of the unpaid and paid health workers. Yet because they are concentrated at lower end of the health labour force, they have less ability to influence health policy and decision making WHO (n.d) concludes:

> Many health indicators for adult's exhibit considerable gender differences according to an individual's social position and role (Berhane, Hogberg, Byass and Wall 2012:714).

In developing countries, this process still has some way to go, where women's often lower status persists and can be reflected in the socio-economic disparities that frequently cause women to suffer poorer health (Foreit and Foreit, 2010; Furuta and Salway, 2006). It was not until 1985 at the third World Conference on Women in Nairobi that a solution to these problems

was posed in the commitment to improve the access of women to health and social services, to education, to credit facilities and to other resources that might enhance their own well-being, while at the same time maximizing their contribution to the wider community (WHO, 1998).

In Syria, Bashour and Mamaree (2003) found that gender did not affect the knowledge and attitudes of patients seeking health care services, although women did report more barriers to accessing health care. Women's health in Africa has traditionally focused upon reproductive health, family planning and safe motherhood (Hartigan, 2001). More recently harmful traditional practices (Chege, Askew, and Liku, 2011; World Health Organization, 2010), violence against women (Heise, Ellsberg, and Gottmoeller, 2012; Kapoor, 2012; Ward, 2012) and HIV/AIDS (Gordan and Crehan, n.d.; UNAIDS, 2011, 2012) have become health and political issues. It is a positive step that more emphasis is now being put on the role that men play, particularly in developing countries, in the health of women, families and communities (Cohen and Burger, 2012). Studies in Africa show mixed patterns of utilisation of health care.

In Ghana, women are more likely to utilise health care than men (Danso-Appiah, De Vlas, Bosompem, & Habbema, 2012) while in another study in Zambia, women were more likely to delay in seeking treatment, particularly if their education level was low (Needham, Foster, Tomlinson, and Godfrey-Faussett, 2011). There are other issues as to how the introduction of user fees affects the utilisation of health care services by women (Nanda, 2012), where one of the main issues for women is consideration of household income (Foreit and Foreit, 2010).

Women's access and utilisation of maternal health care services in northern Nigeria is influenced by socio cultural factors (Adamu, 2003). He maintained that time and again women

with severe health issues identified at different hospitals in Kano state were in critical conditions upon arrival. It may be that they need to get the consent of some significant few (husbands, in-laws etc. before they can go to hospital. Northern Nigeria is predominantly Hausa and Muslim. Since men hold the primary decision-making power in the society, the decision to go to a health facility in an emergency must wait until the husband (or in-laws) gives consent and this can cause serious health complications and possible death even though the woman might be knowledgeable of health services. Gender affects vulnerability to disease, access to health information and services, care received from health workers and health outcomes (Ejembi et al., 2004).

In many cases gender differences, whether in roles (division of labour) or in power (access to and control over resources) or other social differences, are central factors determining exposure to the risk of developing a specific health problem. Likewise, poverty or marginalisation, for similar reasons, can increase vulnerability to health problems. WHO is committed, not just to a preventive and promotive approach, but also to address the symptoms of the problems. Hence, the importance of understanding the underlying determinants gender tools identify factors which make men and women's lives different, and hence are useful in identifying factors which potentially influence differences in their health. Different tools give greater or lesser attention to different factors. In general, gender differences are ascribed to:

- Differences in roles (who does what);
- Differences in the relationship of women and men to resources, both their access to and their control over resources (including information, decision- making, bargaining power, educational opportunities, time, income and other economic resources, and internal

resources such as self-esteem and confidence); and social norms which value women and men differently and expect different behaviour from them (WHO, 2002a). It can be argued here that gender roles affect women utilisation of health care as the society dictate to women what to do and what not to do. Women in the rural areas especially do not have that courage to take a bold step against the society norms unlike their counterpart in urban areas. The rural women need the permission of some significant few in the society be it husband, family head and others before they can take any decision even when it has to with their health. This may deter their utilisation of maternal health care services.

2.6.5 Health Financing and Utilisation of Maternal Health Care Services

Carrin, Evans, and Xu (2010) documented that how health systems are financed largely determines whether people can obtain needed health care and whether they suffer financial hardship at the instance of obtaining care. In Nigeria, the major sources of health financing have been identified as through (i) the tax-based public sector that comprises Local, State and Federal Governments (ii) the private sector (including the not-for-profit sector) financing which is done, directly or indirectly through health insurance of their employees (iii) households, through out-of-pocket expenditures, including user fees paid in public facilities; (iv) other insurance-social and community-based; and (v) external financing (through grants and loans) from donor organisations (Soyibo, Olaniyan and Lawson, 2005).

Despite the health financing options identified in Nigeria, there exists disproportions in health system financing. For instance, Olaniyan and Lawrence (2010) observed severe budgetary constraints and uneven distribution of resources among the urban and rural areas with the rural areas mostly affected by inequitable budgetary health expenditure allocation. Ichoku and Fontan

(2009) had also noticed a catastrophic healthcare financing in Nigeria which eventually has led to further impoverishment of the poor. According to Ichoku and Fonta (2009) Nigeria's health financial arrangement has shifted from health provisioning by government as a normal good towards a competitive market where greater proportion of health services are provided by ability to pay through out of pocket expenses (often referred to as user fee). Furthermore, excessive reliance on the ability to pay through Out-Of-Pocket-Expenses (OOPE) reduces health care consumption, exacerbates the already inequitable access to quality care, and exposes households to the financial risk of expensive illness at a time when there are both affordable and effective health financing instruments to address such problems in low income settings (O'Donnell 2009; Onwujekwe, et al 2010). Summarily, it could be argued that the system of health care financing in Nigeria is disproportionate, such that, it pushes the burden and risk of obtaining health services to the poor especially women.

The dominant private expenditure is through out-of-pocket-expenses, and this account for more than 90% of private health expenditures (Soyibo, Olaniyan and Lawanson 2009; Soyibo, 2004). Income is used in this study as determinant for health care seeking behavior, and has been used in previous studies to determine not just health seeking behavior, but risk factors associated with health outcomes (Mackenbach and Howden-Chapman, 2010), barriers to seeking health care (Taffa and Chepgeno, 2010), types of treatment (Nyamongo, 2012) and delays in service use (Johanson, et al., 2009). Income is one of the factors used as a measure of socio-economic status (Pavlova, Groot and Van Merode 2011; Mattews and Power 2010; Mehrotra and Jarrett 2012; Zwi and Yach 2012) and it is socio-economic status that is often used as an indicator of health.

For Hjortsberg (2003), in Zambia, financial resources in terms of income were found to be better correlated with health, particularly in rural populations. One consideration for those that are self-employed in farming or small business from the tourist trade for example, is that income can be unpredictable in terms of amount and regularity and this can be problematic in using health care. Onwujekwe and Uzochukwu, (2005) in a study in Southeast Nigeria, found that rural populations were less likely to pay the cost of health care treatment upfront and more likely to pay in installments. The assumption in the current study therefore is that regularity of income may be a more appropriate predictor, for not just willingness to pay for health care services, but ability to do so.

Economy can affect use of health care services as evidences from other countries have established that user fees often dissuade the poor from utilising health care services (Anyanwu and Erhijakpor, 2007). The dominance of out-of-pocket payments reduces equity since they impose a burden on those least able to pay though it is suggestive of existence of substantial willingness to pay among relatively poor people in low-income countries (Soyibo, Olaniyan and Lawanson, 2005). Similarly, the relative roles of public and private sectors to provision of health care services have implication for accessibility by the poor, as private health care provision is usually non-affordable to the poor.

In a study carried out by Muhammed (2001) in a rural community of Kebbi, Bauchi, Sokoto and Adamawa States the report shows virtual absence of reproductive health services in their immediate surrounding environment. Their women according to the findings have to travel to the nearest major towns for antenatal, delivery, and post-natal services. When services are available and they are free women will always use them but the situation where women are asked to pay some fee before they can access and utilise the health care facilities, many rural women

will always find alternative means. Health financing which supposed to be government responsibility at all levels is left in the hands of individuals. This affect the utilisation of health care services as majority especially rural women cannot afford the health expenses.

2.6.6 Socio-Cultural Factors and Utilisation of Maternal Health Care Services

At individual and group levels, cultural norms have a substantial role in influencing health care behaviours while cultural differences can also affect the responsiveness of the diverse population's health care system. At the national level, cultural norms may inform the formation of health policies and programmes (Chimbiri 2002; 2007). As such, a critical understanding of roles of culture in accessing and utilising health care services by women is imperative. Culture can directly or indirectly influence accessing and utilisation of health care due to presence of some norms that may promote male power control and female subservience in home matters. The dominance of male over the female with regard to utilisation of health has been documented particularly in many developing countries (Ervo and Johnson, 2003; Chimbiri, 2002; Ruxton, 2004). These gender inequalities have profound implications on women's health.

The female's lack of control over their health issues as well as inability to negotiate for save health could compound their risk to maternal mortality (Dreze and Murthi, 2009; Engelman 2012, Mesfin 2012, WHO 2002b, Wolff, Blanc, Sekamatt-Ssebuliba, 2010). In addition, the male dominance in overall issues can also limit female's utilisation of health care services as they would need approval from their male partner before they can attend to their health care issue (Chimbiri 2002, UNFPA 2000). Male control and female subservient can also affect their health situation as women are vulnerable and depend on their husbands for everything they need (WHO, 2002b). As a result of female vulnerability and lack of financial control, her partner takes

advantage of her. Thus, cultural norms that promote gender inequalities can disempower some women in taking necessary precaution against their health.

Many cultural, religious, or social factors may impede the demand for health care. In communities where women are not expected to mix freely, particularly with men, utilisation of health services from static facilities may be impeded. In some communities in Bangladesh, the restrictions of purdah may prevent mothers from accessing medical treatment for themselves or their children (Ahmed, 2010). The presence of male practitioners for obstetric and gynecological care has been shown to be an important reason for low use of these services by Asian women in Western societies (Whiteford and Szelag 2010). Cultural conventions on modesty are also important. The restrictions imposed on women by Purdah may themselves mean that the impact of travel time on utilisation is much more important for women than for men. In India, for example, Digamber and Sahoo, (2012) found that travel time and costs had a much greater negative impact on female access to services than the direct user charges. In Guatemala rural women were put off attending a hospital for obstetric care because they were required to remove their skirts in public and without proper regard to patient privacy (Araya, Mark, Yohannes, 2012).

Cultural and family opinion is particularly important in the demand for contraceptives and wider family planning advice. A study in Pakistan, for example, found that resistance by a husband and cultural unacceptability of contraception were more important determinants than fears of further pregnancy and knowledge of methods (Agha, 2000). Wide differences in social status between practitioner and patient may also inhibit utilisation. This may be through feelings of inferiority or simply an inability to communicate properly. This is demonstrated in a range of

societies from the use of midwives in Benin to the treatment of low-caste Makkuvar women by higher caste doctors in Tamil Nadu (Whiteford and Szelag 2010).

Cultural conventions about proper treatment of health issues may also inhibit utilisation. The Alur women of Uganda may be thought weak if they receive help during delivery (Kawungezi, et al., 2015). A similar finding is reported for the Bariba tribe in Benin (Kuo et al., 2014). There is also evidence that women often accept illness with genito-urinary symptoms as part of life and may be embarrassed to seek medical care (Bhatia, 2010). Another study, in Bolivia, found that women were put off by well-ventilated delivery rooms when their own understanding required warm conditions for the delivery to progress (Araya, Mark, Yohanees, 2012).

Most societies have norms about some health issues e.g. HIV/AIDS, STD, VVF etc. These norms act as social control to people's behaviours in the society in order to discourage women from becoming immoral (Harvey 2009). However, literature shows that some forms of social control like stigma may hinder women from discussing their health issues. Certain behaviour which is stigmatised can cause women to be socially isolated, discriminated, rejected or lose their self-worth (Fife and Wright, 2011). Thus, stigma can make people especially women with socially-perceived deviant behaviours being discriminated in the society (Rankin, Breannan, Schell, Rankin 2005a; Rankin, Breannan, Schell, Laviwa and Rankin 2005b). The discrimination which can be self, social or institutional as well as loss of self-worth can hinder some women from seeking health care, receive social support or even participate in self-care (Fife and Wight 2011; India online 2011; Rankin et al., 2005a; 2005b; Dlamini, Kohi, Uys, Phetlhu, Chirwa, Naidoo, Holzemer, Greeff and Makoae, 2007).

In some societies, provision of social reproductive health (SRH) information to young people especially girls has been challenging because sexual issues involve matters of great culture sensitivity (Lee, Arozullah and Cho, 2004). Provision of SRH services to unmarried young girls in some societies is equated to promoting premarital sex which is a taboo (Araya; Mark and Yohannes 2012 and Butawa, 2010). Because of this, many societies customarily withhold SRH information from unmarried young girls till it is felt necessary to give it, which usually happens following puberty or marriage. This however denies the girls easy access to sex and SRH information (Irwin, Brindis, Holt and Langlykke, 2010, Ram, 2011). Most traditional societies do not give freedom and rights to women to control their health in general and reproductive health in particular in societies with rigid cultural norms. However, this lack of rights denies the women from making reproductive health decisions (Chimbiri 2002; 2007; Chege, 2011).

In highly patriarchal societies like Nigeria, socio-cultural and/or religious norms and practices restrict social and physical contact between women patients and male care providers (Govender and Penn-Kekana, 2007, Halroyd, Twins and Adab 2004, Rizk, Shaheen, Thomas, Dunn & Hassan, 2009). For this and other reasons, women may prefer to use traditional care providers even where other health care services are available. Religious factors according to Chukuezi (2010) also affect maternal health in a large scale in Nigeria. Religion, she said is a problem not only due to its effect on women's societal position but also because of harmful beliefs and traditions relating to childbirth.

The Islamic custom of purdah the seclusion of women from the sight of men is practiced in Northern Nigeria (among the Hausa Muslims). Purdah she said generally applies to married women and girls who have reached puberty; although the practice varies from country to country

and region to region. Purdah takes various forms but in essence it prohibits women from interaction with strangers outside the home. The women are required to ask for their husband's permission when they need to seek medical assistance. Although any intervention to promote their use especially in its fundamental form has declined, Chukuezi (2010) maintained that it nonetheless exists and is being re-introduced under Sharia law in various states in the north. The practice she emphasised, deprives women of their rights to freedom of movement and association, and their access to education and other social services , it impedes their contribution to family income and their ability to care for their families, it exclude them from participation in the wider society, thus adding to their poverty level.

The opinion here is wrongly presented as the religion of Islam did not frown at women seeking for knowledge outside their homes. The religion of Islam says people should seek for knowledge as far as China and it did not say men but rather people which mean men and women. Also that it impedes women from contributing to family income, this is not also true. Many Muslim women are seen working outside their homes and assisting their husbands in complementing the house finances. Also, many Muslim women from the North participate in politics these days as we have some of them in the National assembly representing their communities and some are serving as ministers in the federal republic of Nigeria.

The cultural belief in northern Nigeria (among the Hausa Muslims) that woman's nakedness should not be seen by another man aside her husband is believed to be another reason why women choose to deliver at home. More specifically, women may avoid facility delivery due to cultural requirements of seclusion in the household during this period or because specific requirements around delivery position, warmth and handling of the placenta. Beliefs that birth is a test of endurance and care seeking is seen as a sign of weakness may be another reason for

delivery at home in some context. Gabrysch and Campbell (2009) in Okeshola, (2013) argued that socio-cultural beliefs and the need for immediate and specialised services have hampered women's ability to access services in health care facility centers. "Kunya" or shame plays an extremely important role in Hausa childbirth particularly in the first pregnancy. The newly pregnant girl should not draw attention to her state, and all mention of the pregnancy should be avoided in conversation and action. Older women stand ready to scold her should her behaviour deviate from the expected norm. This social pressure to remain modest may well prevent her from asking questions about seeing antenatal care or to deliver in hospital when labour begins. It was observed that the situation in northern Nigeria is critical where strong cultural beliefs and practices on childbirth and fertility-related behaviours partly contribute significantly to the maternal mobility and mortality picture.

2.6.7 Information and Utilisation of Maternal Health Care Services

One of the most common ways to define information is to describe it as one or more statements or facts that are received by a human and that have some form of worth to the recipient. For example, information is described as "news or facts about something," "knowledge communicated or received concerning a particular fact or circumstance; news" (Szpankowaski, 2012). Access to information influence utilisation of health care services, Education and awareness programmes within the mHealth field are largely about the spreading of mass information from source to recipient through short message services (SMS).

In education and awareness applications, SMS messages are sent directly to users' phones to offer information about various subjects, including testing and treatment methods, availability of health services, and disease management. SMSs provide an advantage of being relatively

unobtrusive, offering patients confidentiality in environments where disease (especially HIV/AIDS) is often taboo. Additionally, SMSs provide an avenue to reach far-reaching areas such as rural areas which may have limited access to public health information and education, health clinics, and a deficit of healthcare workers (Vital Wave Consulting, 2009).

The mHealth field operates on the premise that technology integration within the health sector has a great potential to promote a better health communication to achieve healthy lifestyles, improve decision-making by health professionals (and patients) and enhance healthcare quality by improving access to medical and health information and facilitating instantaneous communication in places where this was not previously possible (Shields, Chetley and Davis, 2009; WHO 2005b). It follows that the increased use of technology can help reduce health care costs by improving efficiencies in the health care system and promoting prevention through behavior change communication (BCC). The mHealth field also houses the idea that there exists a powerful potential to advance clinical care and public health services by facilitating health professional practice and communication and reducing health disparities through the use of mobile technology.

Education or literacy level limits the ability of women to read health literature which give information concerning health and use of health care services (Adamu, 2003). Availability and control of radio influence access to health care services which majority of women does not possess. Limitation of movement, especially seclusion, limits ability of health workers to reach them with health information. In a study carried out in the north by Galadanci et al., (2007), it was revealed that Parent-to-child or spousal communication on health especially reproductive health issues is still generally challenging in most states of the North.

There are two ways to look at communication: what comes in and what goes out. Therefore, different methods of communication can be used to bring information to people such as public health and educational messages, while others can be used to access resources and send messages out – like when someone is ill or educational health information. Mobile phones, for example, can be very useful especially when used to send health messages to people. Mobile phones can be used to enlighten people about a particular ailment, how to prevent it and how to treat it in case one contacts it (The Economist, 2005). The impact of mobile phones in the developing world has been significant and is the fastest growing means of telecommunications in Africa today (Sarin, Gough, Grezo, Coyle, Wavweman and Meschi, 2010). Mobile phone has helped many Nigerians to know more about Ebola virus and how to prevent it. In summary, mass communication has been heavily criticised and it has also been used as a tool to positively promote the health of populations.

As good as the mHealth, it is only meant for urban people who can read and write. The village woman in rural area can neither afford nor access it so it makes no meaning to her. For mHealth to reach the local women, the network providers will need to find an alternative method for the rural women.

2.7 Strategies to Overcome the Barriers to Access and Utilisation of Maternal Health Care Services

Facility health committees can be invaluable in contributing to improved demand for and access to quality maternal health services in health facilities in northern Nigeria. They provide strong linkages between community members and the health facilities, directly work to increase demand for services, and address supply-side challenges that often limit utilisation of services in health facilities. The intervention can be improved by more broadly communicating committee

activities in the community, and by incentivizing facility health committee members. Public accountability is increasingly recognised as a pivotal element in improving health system performance globally (Standing, 2004). In developing countries, where government responsibilities for public services are often not strictly scrutinized, public accountability mechanisms could contribute to improvement in government and health facilities delivering quality health care services (Molyneux, Atela, Angwenyi and Goodman,2012).

Given the potential benefits of such mechanisms for access and quality of care, governments and non-governmental organizations have invested significant resources in integrating public accountability mechanisms into service delivery, with the aim of improving the overall performance of the health system (Goodman, Opwora, Kabera, Molyneux, 2011). Public accountability mechanisms may follow different models, including direct individual involvement, groups, or committees. Maternal health indicators in northern Nigeria continue to be among the poorest in the world. For example, in 2013 maternal mortality rate in Nigeria's North-West region was 89 (per 1000 live births) (NPC, 2013), compared to the African average of 55 and the European average of 10 (WHO, 2017).

Utilization of health services in northern Nigeria is low: only 2.7% of married women of reproductive age in the North-East region reported using a modern contraceptive method in 2013 (NPC, 2014). These troubling figures persist despite decades of programming designed to increase availability and accessibility of maternal health services, improve service quality, and grow the demand for these services. As part of a large scale five-year UKaid funded health system strengthening programme that ended in 2015, Facility Health Committees were established in three states in northern Nigeria as an accountability platform to improve the

quality of maternal health services. The implementation of this intervention was continued and reinforced by the UKaid follow-on Maternal Newborn and Child Health Programme 2.

The committees, which are still active, are usually formally constituted with membership that comprises one facility health provider and 12-15 community residents. Members represent all ethnic, religious, age, and gender groups who receive services in the facility. Residents of hard-to-reach locales in the facility catchment area are also included. Members are charged with trying to find solutions to problems that people report about health facilities, as well as with mobilizing the community to improve utilisation of maternal and child health services, and sensitizing men and women in the community about the importance of obtaining maternal and child health services in the health facility. Each committee engages with all community groups to understand their views about health services delivery at the facility, decides on a programme of service improvements based on feedback from the community, tells the community what improvements the facility health committee and health facility staff are trying to accomplish and keeps the community updated on progress toward achieving these improvements. Essentially, these committees are responsible for making it easier for the community to use health facilities and receive quality care.

A literature review of facility health committee initiatives around the world showed evidence that some are more successful than others. They can be highly effective in improving quality of care and health outcomes, but only if they are administered with care. For facility health committees to be successful clarity of roles, responsibilities, mandates and authority are essential. Systems for accountability must be in place, and facility staff must be sensitized to the committee concept (McCOY, Hall, Ridge, 2012). The above can be achieved only if there is

interplay between health system characteristics, contextual factors, societal attributes and norms, and process elements. Improving maternal health care use is not just only government work.

The communities need to play vital roles to make it successful. If the government provide all the necessary things to use health facilities and some people due to some cultural or/and religion factors see no any good in using it, it will all become a fruitless effort. What I am saying here is that it takes the communities to make government efforts successful. Here, the role of the communities' leaders, religious leaders and some significant people in the communities will be highly needed to sensitize the women about the importance and what they (the women) stand to gain should they use the health facilities as expected. The women themselves can help one another by organizing a sensitization programmes on monthly or fortnightly basis to encourage other women in using the health facilities. By so doing the barriers of utilisation of maternal health care services will be reduced to the barest minimum in Northern Nigeria especially in Kaduna State.

2.8 Theoretical Framework

To interpret and integrate the research data within a cohesive body of knowledge, this study has adopted theoretical framework that synthesizes interrelated theoretical perspectives: Anderson health behavioural model. The logic of this framework is anchored on the strength of its perspective and how it fuses into one complete whole to explain maternal health. The health behavioural model is used because it is based on the assumption that individual's use of health services is a function of their predisposition to use them in the society. Predisposition such as age, sex, parity, educational attainment, occupation of the head of the family and attitudinal-belief factors.

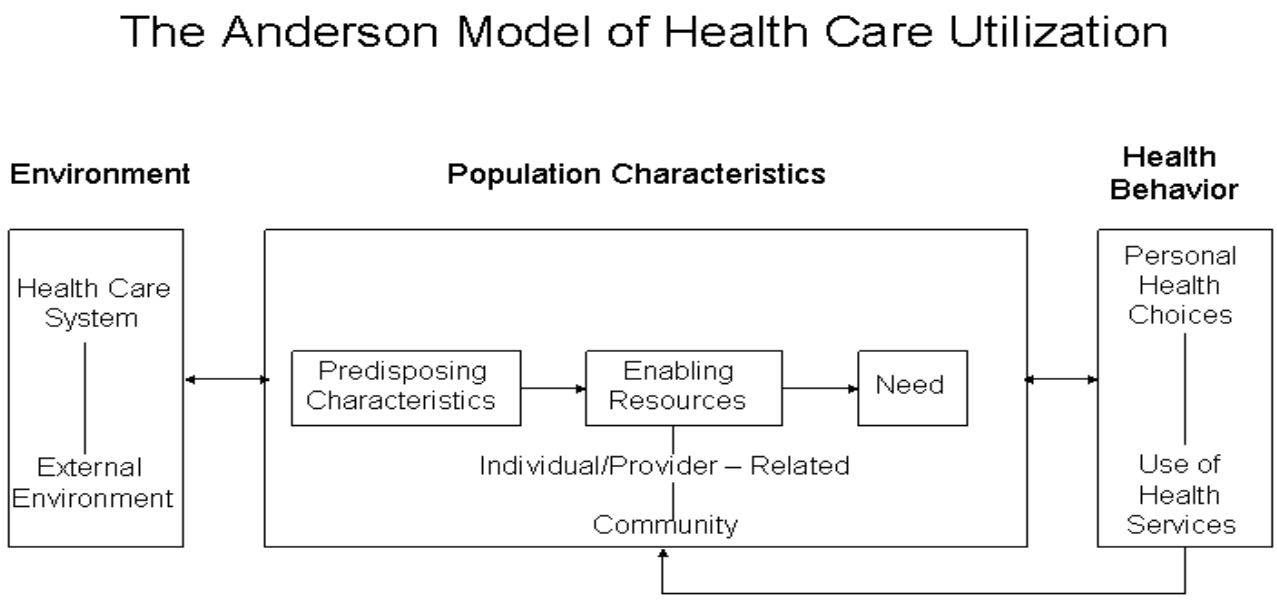
2.8.1 Anderson Health Behavioural Model

Anderson health behavioural model was created to empirically test hypotheses about inequality of access to health services in the United State of America (USA) (Andersen, 1968). The model is based on the assumption that individual's use of health services is a function of their predisposition to use them in the society. It also has bearing with their need for health care (illness level). According to Anderson and Newman (1968) cited in Ricketts and Goldsmith (2005), patients' illness level (representing the need factor) is considered as the major determinant of health care utilisation. The model addresses the concern that some sectors of society in particular people from ethnic minority groups, those who live in inner cities and individuals who live in rural areas receive less health care provision than the rest of the population (Andersen & Newman, 1973). Andersen's model views access to services as a result of decisions made by individuals who are constrained by their position in society and the availability of health care services. This model, therefore, allows people to explore hypotheses regarding social inequalities.

The model was initially developed in the late 1960s to assist in the understanding of why families use health services; to define and measure equitable access to health care; to assist in developing policies to promote equitable access (Andersen 1968). It was not the first or only model at the time, but it did attempt to integrate a number of ideas about the "how's" and "why's" of the use of health services'. It was intended to assist in the analysis of national survey data collected by the Center for Health Administration Studies and the National Opinion Research Center at the University of Chicago (Andersen &Anderson, 1967).

The model contains three sets of predictive factors: predisposing, enabling and need factors (see Figure 2). It assumes that a sequence of factors determines the utilisation of health services: the predisposition to use services, the ability to use services and the need to use services. Andersen's first study focused on the family as the unit of analysis, and hence several family-level variables were used. Later versions of the model focus on the individual as the unit of analysis (Andersen & Newman, 1973).

Fig. 2: The Anderson Model of Health Care Utilisation



Source: Anderson, (1995): 1-10

Behavioural Model (Anderson, 1968, Pokhrel and Sauerborn, 2004) consists of predisposing factors such as sex, age, occupation, education; enabling factors such as income, household materials; and need factors, like perception of illness and service indicators (Pokhrel and Sauerborn, 2004). These models for instance, are based on determinants that affect decision-

making and take into account economic circumstance, distances to travel, level of education, previous consumer satisfaction and perceived quality of services. While other cultural, social, organisational, environmental, geographic and economic aspects that appear to affect peoples' health or are the prerogative of the investigators, consideration is given to individual level, household level and health systems level characteristics (Pokhrel and Sauerborn, 2004).

Cues for access to health care and health service use according to this Model are determined by social, cultural, political and economic factors as seen by the individual and as defined by the community (Solomon, 2005). This kind of analysis of access to health care leads to a recognition of the importance of the social determinants of health. With the growing body of research regarding access to health, particularly in response to the United Nations Millennium Development Goals 2000, and the expanding globalisation of health, there has been a substantial increase in research concerning health inequalities (Gwatkin 2005; Low and Ithindi 2003; Sainsbury and Harris 2002; Joshi, Paci, and Wagstaff 2001) and barriers to achieving good health (Ensor and Cooper, 2004; Lubbock and Stephenson, 2008). This is viewed as a consequence of unequal access to society's resources such as education, employment, quality air and water, inferior housing, inadequate diet, basic services, and health care (Cachelin, Rebeck, Veisel, and Striegel-Moore, 2001; Ensor and Cooper, 2004; Gott and Hinchliff, 2003; Graham, 2004; Joshi, Paci and Wagstaff, 2001; Mattes, Bratton, and Davids, 2002; Moss, 2002; Needham, Bowman, Foster, and Godfrey-Faussett, 2011; Zwi and Yach, 2012).

There are many terms to classify the different areas of concern related to health, inequalities in health and the maintenance of the health of populations: health equity (Low and Ithindi, 2003), health literacy (Kickbusch, 2010; Lee, Arozullah, and Cho, 2004; St. Leger, 2010), health knowledge (Currie and Wiesenberg, 2009), health promotion (Dean and

Kickbusch, 2005; Labonte, 2007), health education (Bhan, Bhandari, Taneja, Mazumder, Bahl, 2015; Khan and Baillie, 2003), health communication (Health Communication Network, 2002; Szpankowaski, 2012), and social responsibility (Green and Collins, 2003; World Health Organization, 2010). There would seem to be as many variations on terms as there are studies.

Several perceived barriers deter women from having access to health care. These include inaccessible location, cost, and availability of care, transport and mostly cultural barrier. According to Anderson and Newman (2005), access and utilisation of health services can be regarded as a type of individual behaviour. In line with this, several frameworks for analysing health services access and utilisation were found in the literature. These include Rosenstock's health belief model, Young's choice-making model and Anderson's health behavioural model (Rebhan, n.d). Of all these models, only Anderson's Health Behavioural Model access health services utilisation from a socio-demographic perspective. This tallies with the objectives of this study; hence, Anderson's behavioural model was used and is explained below.

Andersen's (1968) Health Behavioural Model assumes that certain characteristics contribute to, or determine, an individual's access and utilisation of health services. He divided these characteristics into three categories, and proposed that access and utilisation of health services is dependent on: a). Predisposing characteristics; b) Enabling characteristics; and c) Need based characteristics.

a. **Predisposing Characteristics:** It is postulated that some people are more likely to use services than others and this likelihood can be predicted by individual characteristics. People that possess certain characteristics have been found to be more disposed towards health services use, even though these characteristics are not directly responsible for

access and utilisation. These characteristics include demographic factors, such as age, sex, parity, etc., social structural factors, which is a reflection of the individuals social standing or status and is measured by characteristic such as educational attainment and occupation of the head of the family; and attitudinal-belief factors, where individuals who have stronger faith in the efficacy of treatment are more inclined towards healthcare utilisation (Rebhan, n.d.; Anderson and Newman, 2005). The rural women do not have strong faith in the efficacy of treatment using orthodox treatment, hence, they associate lots of barriers to accessing and utilisation of health care in orthodox way but rather prefer traditional medicine where their time will not be wasted and is always within their reach and cost them less.

b. Enabling characteristics: Certain resources need to be available to an individual in order to actualise access and health services utilisation even in the presence of predisposing factors. These resources are defined as enabling as they make health services available to the individual and are found both at the family and community levels. Family resources include income (economic status), health insurance coverage and location of residence (Rebhan, n.d.; Anderson and Newman, 2005). Family income is an important enabling factor as it determines the amount of funds available to an individual to cover healthcare and related costs, e.g. physician consultation, drugs, transportation costs, etc.

Resources at the community level include the number of health facilities and health personnel available for use to an individual. A greater number of health facilities and personnel reduce the unpleasantness of queuing-up for limited services and might be used more frequently by individuals. Community level resources also include the nature of the

area where an individual resides, i.e. region of the country or whether residence is in the urban/rural area. This is because local norms and values influence an individual's behaviour towards the practice of medicine (Anderson and Newman, 2005). Majority of the women in Kaduna state have no stable income as they depend largely on their husbands to provide for all their needs especially the non-literate among them. The man as the head of the family has more than one wife and many children. If he gives money for one wife to deliver in a hospital, others will follow suit hence, he discouraged the idea of going to hospital and result to home delivery or traditional birth attendants. Health insurance is only meant for civil servants and since majority of them is not civil servants, then it is difficult to access and utilise the health services.

The health facility is another area that makes access and utilisation of health care inaccessible by this category of women. In actual sense there is supposed to be a Primary Health Care (PHC) clinic at every five kilometer radius. This is not the case in Nigeria especially in the northern region of the country. Even when decision is taken at the family level to go to hospital, the distance post a threat for the women to have access and utilise such facility as distance to travel, cost of medical care, queue at the clinic for limited services might be another discouraging factor for accessing and utilisation of health care services by these women. Local norms again are other factors that hindered women in Kaduna state access and utilisation of health care services. It is a common belief among Hausa Muslims traditions that delivery of a baby should not be done in the hospital but rather at home with traditional birth attendant. Hausa tradition also belief that illness needs to be handled at home first using local herbs and/or rubutu, but when it gets out of hand, then alternative solution would be sort for.

c. **Need-based characteristics:** Measures of this characteristic include perceived needs i.e. the perception of illness and its severity or the probability of an illness occurring; and needs as evaluated by a health professional (Rebhan, n.d.; Burgard, 2004; Anderson and Newman, 2005).Not only must a family recognise that there is an illness, but the members must also respond appropriately in order to access available services. A woman's need for care may be influenced by past experiences in pregnancy and childbirth or personal preferences. Thus, perceived need serves as a stimulus for the use of health services. Perceived illness can be measured by the number of disability days, and symptoms experienced by the individual during a specified time frame (Anderson and Newman, 2005). Once a woman dies in the hospital either while delivering a baby or for any other ailment, other members of the family will not have the courage to go to hospital for fear of losing their lives. Also, the first visit of a woman in the hospital may discourage her not wanting to go there again. Her time was wasted and eventually when she was allowed to see a doctor, it is a male provider who by her belief cannot examine her. Ordinarily, rural woman would not see the need to go to hospital except after trying all other alternatives and seems not yielding any positive result. Even when she perceived that there is illness, the first thing that will come to her mind is to use local remedy. When the illness becomes severe and she cannot take decision on her own to go to hospital except with the consent of her husband or significant few members of the family, this delay can lead to lose of life.

The Anderson health behavioural model according to Guendelman (2008) and Portes, Kyle, and Eato*n,* (2007) has been criticised for not paying enough attention to culture and social interaction. However, Andersen argues that social structure is included in the

predisposing characteristics component. Another criticism as posited by Wolinsky and Johnson (2005) was the overemphasis placed on need and at the expense of health beliefs and social structure. Andersen further argues that need itself is a social construct. That is why need is split into perceived and evaluated. Where evaluated need represents a more measurable/objective need, perceived need is partly determined by health beliefs, such as whether or not people think their condition is serious enough to seek health services. Another limitation of the model as argued by Wilson, Deane, Garroch and Rickwood, (2005) is that the model also placed emphasis on health care utilisation or adopting health outcomes as a dichotomous factor, present or not present. Other help-seeking models also consider the type of help source, including informal sources. According to Harris, McLean and Sheffield, (2009), more recent work has taken help-seeking behaviours further, and more real-world, by including online and other non-face-to-face sources (Harris et al., 2009).

Within the framework of Anderson health behavioural model, clearly, maternal health can be explained from social and cultural framework of our society. The strategies must reflect the social catalysts of maternal health complications. Focusing solely on women without considering the circumstances negate any contextual perspective, ignore macro analysis. Issues of institutional policy, gender intolerance, and equitable and empathetic working conditions in any country must be recognised as the ultimate way to change systems that afflict women during reproductive age and eventually impact their health. According to the model, it should be possible to change attitudes towards some health-impairing behaviour by modifying the social environment. Much of the research into subjective meanings and health behaviour points strongly to the need for a more prominent social environment focus to health promotion, rather

than a narrow focus on individual behavioural change (Aina, 2012). For example, a pregnant woman's decision concerning her health is more strongly affected by perceived social pressure than personal attitudes.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter discusses the methods and materials for the study. It presents the study location, study design, study population. The chapter presents an explanation of the instruments and methods of data collection, data analysis, problems encountered during the research and ethical considerations.

3.1 Study Location

The study was carried out in Kaduna State which is located in the North-West geopolitical zone of Nigeria. The State has a population of 8,216,037 inhabitants, consisting of 4,153,290 male and 4,062,747 females distributed across the 23 Local Government Areas (LGAs) and 225 political wards (NPC, 2016 projected population). The State has three Senatorial zones, they are: the Northern Zone, Southern Zone and Central Zone. The Northern zone comprises the following Local Government Areas: Sabon Gari, Zaria, Kudan, Lere, Soba, Ikara, Makarfi and Kubau. The indigenous of the Central zone are mostly Hausa and Muslim. Major towns in the northern zone are: Zaria, Ikara, Makarfi, Soba and Hunkuyi with four major hospitals which are: Gambo Sawaba General Hospital, General Hospital Sabon Gari (Limi) Saye Leprosrium Hospital and Ahmadu Bello University Teaching Hospital, Zaria.

The Southern senatorial zone has the following Local Government Areas; Jaba, Kachia, Kaura, Jema'a, Kauru, Kagarko, Zangon Kataf and Sanga. Majority of the inhabitants in the zone are Christians and they comprise several ethnic groups such as Kagoro, Gure, Bajjuu, Gwong, Atyab, Ham and Adara. The major towns in the Southern zone are Kachia, Kafanchan, Kwoi and

Saminaka. Each of the towns has a General Hospital. The Central zone is made up of Kaduna North, Kaduna South, Birnin Gwari, Chikun, Igabi and Kajuru Local Government Areas. Gbagyi who are the indigenous group; Hausa and many other tribes are found within the Local Government Areas. The zone has Kaduna as the major town and State Capital. Over one third of the population lives in the three major towns of Kaduna, Zaria and Kafanchan.

Statistics from the Kaduna State Ministry of Health (2015) indicated that health care services in the State are provided from a total of 1,692 health care facilities; 40.2% of these health facilities belong to the private sector. 96.5% of all the health facilities are primary health care, 3.2% secondary health care and 0.3% tertiary healthcare facilities. In addition, there is a rich network of traditional healers and patent medicine vendors that provide care. Free maternal and child health services are provided in all the 34 health facilities belonging to the State government and 116 LGA-owned PHC facilities.

The State has five tertiary health facilities belonging to the federal government, four of which provide specialized care, while the Ahmadu Bello University serves as the apex reference tertiary health care facility. In addition, there are two hospitals belonging to the armed forces. All the federal government health facilities are based in Kaduna/Zaria. The general hospitals belonging to the state have been categorized as either rural hospitals, general hospitals or specialist hospitals, a range of services and skills available for service delivery improving along as one moves from the rural hospitals to the specialist hospitals. The primary health care facilities are divided into health clinics and Primary Health Care Centers (PHC), with the PHC centers expected to provide the full complement of PHC services. These are all owned by the LGAs. The state is comparatively well endowed with private health facilities, majority providing primary care (Kaduna State Ministry of Health, 2015).

Every zone has Primary Health Care centers and Private clinics/hospitals, traditional medicine homes, spiritual healing centers and patent medicine stores, In Kaduna State, there are 739 local government health facilities, 29 secondary health facilities, and 5 tertiary hospitals, 656 private health clinics, and 2500 registered patent medicine stores. The state and private service sectors have about 190 doctors, which translate to about one doctor to every 32,000 people (Kaduna State Government, 2011). The General hospital belongs to the State Ministry of Health while the Primary Health Care Centers are under the control of Local Government Primary Health Care Board. Kaduna State was chosen for the study because (1) the researcher is familiar with the area (2) of the time frame of the study and more importantly because despite the efforts of the government, maternal mortality is still high in the state.

3.2 Study design

A population based, cross-sectional study design was adopted to identify factors that determine patronage of maternal health care services by women of childbearing age in the study area.

3.3 Study population

The survey population comprised women aged 15-49 years living in Kaduna State because this age bracket represents reproductive years of women as defined by WHO (2006). The population includes all women who had given birth in the last five years and/or were pregnant and resident in Kaduna State. The IDIs study population includes health workers in the primary and secondary health care facilities in the study areas and traditional birth attendants (TBA). The FGDs study population also includes married men and married women living in the study areas.

3.4 Instruments for Data Collection

The instruments used for data collection were structured questionnaire as well as IDI and FGD guides. The survey questionnaire (Appendix A) which contained open-ended and close-ended questions was used for the collection of data from 379 female respondents resident in the study areas. The questionnaire is adapted and the broad objectives were reflected in the specific questions asked. The questionnaire was pre-tested among women of reproductive age in Zaria city so as to identify gaps before conducting the main study. Information obtained from the women through the questionnaire includes their socio-demographic characteristics, their awareness of maternal health care services rendered in the maternal health care centers; the questionnaire also obtained information about the women's utilisation of maternal health services and factors affecting services utilisation.

In-depth interview guide (Appendix B) was used to collect data from nineteen (19) key informants comprising of medical personnel and traditional birth attendants in the study areas. The IDI guide obtained data about the facilities and the health care problem presented in the clinics, the number of staff and funding. The IDI was also used to assess women utilisation of health care services and factors affecting health care utilisation in the maternal health care centers in the communities. The interview guide was written in the English Language. The interviewers translate to Hausa for respondents who cannot speak English Language.

For the FGDs (Appendix C), focus group discussion guide was used to get information from married males and females of reproductive age living in the study areas. Information on general problems in the communities, knowledge of maternal health services, use of the ANC, family planning and delivery services, socio-cultural determinants of utilisation of maternal

health care services by women in the community were also investigated with the aid of the FGD guide. The FGDs guide was written in the English Language. The interviewer translated to Hausa for the respondents.

Documentary review was also used to collect information from the hospital records of women utilisation of maternal health care services in the health care facilities. The hospital records enable us to know the rate of utilisation of maternal health care services by women of reproductive age group in the study areas.

3.5 Methods of Data Collection

3.5.1 Quantitative Method

The researcher engaged four research assistants who were students from the Faculty of Social Sciences, Ahmadu Bello University, Zaria. The research assistants who were trained in one day were used for data collection. The research assistants were selected because they are students of social sciences very versed in data collection and speak Hausa fluently. On arrival at each of the communities, the researcher introduced herself to the community leader and explained the research topic and its expectations. The researcher sought for the consent of the leaders of the community. The community members attached to the researcher helped in the numbering of the houses. The questionnaire was directly administered and retrieved by the researcher and the research assistants. The researcher ensured that the research assistants are up to date in administering the questionnaire, this, the researcher did by going through the questionnaire filled by the respondents one after the other to ensure clarity and efficiency. The questionnaire was distributed to women at home within the sampled households in the selected

wards in the Local Government Areas based on the population in each of the selected wards to make a total of three hundred and seventy-nine (379) respondents for the study.

3.6 Sampling Method and Sample Size

3.6.1 Selection of Research Communities

Six LGAs were selected through a multistage cluster sampling technique from the three (3) Senatorial districts in Kaduna State; Southern senatorial zone, Central Senatorial zone, and Northern Senatorial zone as clusters. **The first stage** involved selecting two (2) LGAs from each of the three clusters (the 3 Senatorial districts) through a simple random sampling technique for each Senatorial District to make a total of six LGAs. The selected LGAs were Kachia and Kaura LGAs in Kaduna South senatorial district, Chikun and Giwa LGAs in Kaduna Central Senatorial district and Zaria and Makarfi LGAs in Kaduna North senatorial district.

In the second stage, in each of the local government areas selected, two wards were purposively selected for the study from where the households were drawn. The wards were purposively selected because of their nearness to the road. Thus, in each LGA, two (2) wards were purposively selected to make a total of 12 wards selected for the study. The list of communities within the wards was collected from the ward heads.

In the third stage, households were selected from each community for the study using a systematic sampling method. Main streets observed to have many houses were randomly selected and every calculated nth house using systematic sampling method on both sides of the streets were selected for administration of questionnaire. Individual respondents were selected from a sampling frame which comprise of women of reproductive age based on the criteria of having had a baby within the last five years or being pregnant at the time of data collection.

Availability and willingness to participate in the study were also considered in the selection. In all, 1-2 women each was selected in most of the selected households, depending on the number in each household that met the selection criteria. In houses where there is only one woman, the woman is selected if she meets the criteria. If not, the researchers move to the next house.

Where there are difficulties in selecting houses for interview due to lack of proper identification as the streets in the wards were not properly arranged, there was a door-to-door interview until the desired sample in that ward was achieved. For households with more than one eligible woman, one female respondent was randomly selected using balloting. In the event of a household with no eligible woman the immediate next household was selected. Revisit was done in cases where eligible respondents were not available at the time of the visit. This was done until the desired number of respondents from each ward was achieved. To avoid missing any respondents, interviews were mostly conducted in the mornings and evenings.

3.6.2 Sample Size Determination for Quantitative Survey of Women of Reproductive age Group

The sample size was calculated using this formula by Singha, (2003):

$$n= Z^2pq/d^2$$

Z- The normal deviate corresponding to the desired confidence level=1.96

p- The proportion of women in the study population thought to have the key characteristic being measured.

q- The opposite of p, q=1-p= 0.4

d- Degree of accuracy desired =0.05

Where n= the desired sample size,

P =0.6

q= 1-P =1-0.6 =0.4

$$Therefore\ n = \frac{(1.96)^2 \times 0.6 \times 0.4}{0.0025}$$

$$= \frac{0.921984}{0.0025} = 368.792 = 368.8$$

Therefore, the sample size is calculated to be 369 using this formula. The number was increased to 379 for replacement of likely non-response or missing responses, as well as to increase the adequacy of the sample. The questionnaires were distributed accordingly within the senatorial zones based on the population size to have a proportionate distribution of respondents. Thus: Central Senatorial Zone=148, Southern Senatorial Zone= 122 and Northern Senatorial Zone =109

3.6.3 Qualitative Data

Qualitative data were obtained through In-depth interviews and Focus Group Discussion. The IDIs was conducted by the researcher while the FGDs were conducted by both the researcher and a male research assistant. Also documentary review was collected using hospital records.

3.6.3.1 In-depth interviews (IDIs)

One maternal health care provider was interviewed by the researcher in each of the 12 facilities selected and visited for the study. The maternal health worker selected for the IDI was

either the personnel in-charge of the maternity unit of the facility or one of the workers providing maternal health services in the facility. Six traditional birth attendants were also interviewed from six (6) communities selected and one matron from Gambo Sawaba General Hospital. This gave a total of 19 IDIs conducted.

3.6.3.2 Focus Group Discussion (FGD)

Twelve (12) FGDs were conducted with the aid of an FGD guide with married adult male and female of reproductive age participants in six (6) locations of the research communities. Information from each of the FGD sessions complemented the survey data.

3.6.3.3 Selection of Maternal Health Care Providers

In all, a total of 12 maternal health facilities located in the 12 selected communities were selected for the study. With regards to the maternal health care providers, 2 health care personnel directly involved in the provision of maternal health services were selected from each of the six selected LGAs. They were selected based on their being head of the maternity units of the PHC facilities or direct providers of maternal health services in the PHC facilities. This gave a total of 12 health personnel drawn from Nurses/Midwives and Community Health Officers/Community Health Extension Workers.

In all, one maternal health service provider was interviewed in each of the selected health care facilities providing maternal health services in the study area. The maternal health care providers supply information on the quality and availability of personnel and the types of maternal health services provided by their respective facilities, maternal health problems commonly reported by mothers. They also provided information on the factors affecting the utilisation of the services by women of childbearing age in their facilities.

3.6.3.4 Selection of Participants for In-depth interview

In-depth interviews were conducted with key informants in the study locations. The key informants were purposively selected because it is assumed that they have rich information to the study. The key informants include health care providers, and traditional birth attendants. In all, a total of nineteen (19) key informants were selected for the IDIs, one health care personnel from each of the wards selected for the study, six traditional birth attendants from some selected wards and a matron from the Gambo Sawaba General Hospital.

3.6.3.5 Selection of Participants for Focus Group Discussion (FGDs)

The focus Group Discussions comprise of adult male groups and female of reproductive age groups. Each FGD session consists of between eight and twelve members who are similar in identity (men and women). The respondents for the FGDs were purposively selected with the help of the village leaders. Six wards were used for the FGDs. One female FGD for women of different socioeconomic background in the communities and one male FGD were conducted. In each community, two FGDs were conducted. In all, 12 FGDs were conducted, six among the women and six among the men. With the help of the village head, the primary school in each of the wards was used for the FGDs to ensure an environment free of noise and comfort. The FGDs were conducted in a conducive atmosphere where participants sat in a semi-circle sitting arrangement so as to ensure quality of the recordings and relaxation of the participants. The discussion was conducted in Hausa Language, recorded on tape and notebook. There were a note taker and a tape recorder was used to record the voices of the respondents. Every session of the discussion lasted about fourty minutes to one hour. The research assistant later translates and transcribes the note into the English Language.

3.6.3.6 Documentary Review

Hospital records in the last one month shows that 65 women in Kaduna South registered for antenatal out of which 39 has delivered using facility delivery and 28 came back for family planning, the rest are yet to deliver and they are still coming for antenatal care. In Kaduna Central, record shows that 85 women registered for antenatal in the last one month of which 40 has delivered using facility delivery, 28 came back for family planning and out of the 45 that are yet to deliver, only 15 are still attending antenatal. The rest have probably delivered at home. In Kaduna North however, hospital records shows that 112 women registered for antenatal in the last one month of which only 29 has come for facility delivery and 10 came for family planning. As as the time of collecting this record, only 18 women are still attending antenatal care. The remaining has probably delivered at home.

Table 1: Senatorial Zones Selected, Local Government Areas and Wards

Senatorial Zones	**Urban Local Government Areas and Wards**		**Rural Local Government Area and Wards**	
	Local Government Areas	**Wards**	**Local Government Areas**	**Wards**
Southern Senatorial Zone	Kafanchan	Gidan Waya, Atuku	Kaura	Kpak, Agban
Central Senatorial Zone	Chikun	Kakau, Kujama	Giwa	Kankangi, Shika
Northern Senatorial Zone	Zaria	Dutsen Abba, Dambo	Makarfi	Mayere, Gima

Source: Kaduna South LGA List of Towns and Villages. Available from: **www.mycyberict.com/nigeria_zip_codes/kaduna-south/**

3.7 Data Analysis

Data cleaning and entry was done manually. Data analysis for quantitative study was done using the Statistical Package for Social Sciences (SPSS) programme version 20. Both univariate, bivariate and multivariate analyses were done. While univariate analysis was used for frequency computation, Multivariate analysis was used to test the relationship between a factor and many variables. The factor is the dependent variable while the causative are the independent variables.

For the qualitative data, content analysis along thematic area was used to critically analyse the digitally recorded files immediately after each session of the interview. The interviews and focus group discussions were transcribed not more than twenty-four hours after the interview or discussion has taken place. Verbatim quotations, summaries and content analysis were done. Responses in Hausa language were translated into English by the research assistant and transcribed along with others. After doing all these, the researcher then synergise the findings so as to identify areas of convergence and divergence between the data generated from both the qualitative and quantitative sources. This helped in complementing each other and also enriches the content of the research.

For the documentary data, hospital records in most of the maternal health care centers shows that majority of the women do come for antenatal care and delivery service in both Southern senatorial zone and Central senatorial zone. In the Southern senatorial zone, the records shows that in the last one month, they had a total number of sixty-five women (65) who came for antenatal, thirty-seven of the women had delivered using facility delivery and the remaining women are still coming for antenatal as they are yet to be due for delivery. For family planning,

in the last one month, the record showed that total number of thirty-six women had come for family planning.

In Kaduna North senatorial zone, the hospital records showed that in the last one month, one hundred and twenty-three women turned up for antenatal care while twenty-three had delivered in the hospital. The officer in charge said although some are yet to be due for delivery but many who were due did not come to the hospital for delivery as they prefer to have their babies at home. However, in Gambo Sawaba hospital, a nursing officer said in the last one month they recorded one hundred and fourty-six women who came for antenatal, only twenty-seven of them came back for delivery. Some of them are still coming for the antenatal while majority of them have delivered their babies at home. She further said that only seventeen of them came for family planning.

In Kaduna Central, the hospital records showed that women do turn up for antenatal care, delivery services and family planning. The records showed that seventy-eight women came for antenatal in the last one month and fourty-seven of them had delivered using facility delivery while thirty-six of them came back for family planning.

3.8 Ethical Consideration

Ethical approval was sought and obtained from the Ethical Review Committee of Ahmadu Bello University Teaching Hospital, Zaria. Research proposal was presented at the Faculty Postgraduate Seminar in line with research ethics of Ahmadu Bello University, Zaria. Letter of introduction was obtained from the Department of Sociology, Ahmadu Bello University, Zaria for the field work. Also, consent from individual respondents, key informants and household heads in the communities was sought for and their confidentiality was guaranteed.

To facilitate easy access to the Primary and Secondary health care centers in the communities, rapport with the communities' leaders/gate keepers and other significant individuals was developed.

3.9 Challenges Encountered during Data Collection

A number of challenges were recorded on the field by the researcher. We had to make repeated visits in other to collect information from health personnel in various health centers. Several appointments were booked in order to enable us get detailed information from some traditional birth attendants in the study areas. When we got there at times the respondents would not have the time to attend to us and we would have to book for another day. On the part of the women who were to submit information through questionnaire, some of them initially proved very difficult claiming that they must be tipped before they could agree to give us any information. When we explained to them that we are student and not from the government, they replied that many people had come in the past on the platform of being students and promised them that they would make sure that government came to their aid but as soon as they got want they wanted from them (the villagers), they (the students) never came back nor did they (the villagers) see anything from the government.

It took the intervention of the Traditional head that sent someone to the women before some of them agreed to be interviewed. One of the respondents refused to participate if we did not give her some incentives. Since we were not ready to give any incentives, we made do with those that were ready to give us some information regarding our topic. In all, we have the total of three hundred and seventy-eight (378) questionnaires responded to from the 379 questionnaire

given out of which one was not properly filled. In all we had three hundred and seventy-seven (377) questionnaires.

CHAPTER FOUR

ANALYSES AND INTERPRETATION OF FINDINGS

4.0 Introduction

This chapter is divided into four sections. Section A describes the Socio-demographic characteristics of the respondents such as age, educational qualification, religion, marital status, monthly income, number of children. Section B, describes the awareness and utilisation of maternal health care services. Section C, presents data on accessibility to maternal health care services while section D, describe the strategies put in place to overcome barriers to access and utilisation of maternal health care services. The data classification has been carried out on the basis of both nursing and pregnant women. The objectives formulated for this study guided the arrangement of the tables. A summary of the main findings follows each objective. This chapter focused on the socio-economic characteristics of the respondents. The discussions were based on the findings of the research. The background characteristics considered include socio-demographic, economic and educational attainment and their influence on the maternal health care services as it regards knowledge and utilisation in Kaduna State.

4.1 Socio-Demographic Characteristics of the Respondents

Socio-demographic characteristics of respondents considered in this study include age, marital status, religion, highest level of education, occupation and income as shown in Table 4.1.

Table 4.1.1: Socio-demographic Characteristics of the Respondents

Variable	Kaduna North (n = 109)		Kaduna South (n = 123)		Kaduna Central (n = 145)		Total (n = 377)	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Age								
Less than 18 years	1	0.9	0	0.0	0	0.0	1	0.3
18-22 years	7	6.4	9	7.3	21	14.5	37	9.8
23-27 years	7	6.4	19	15.4	32	22.1	58	15.4
28-32 years	21	19.3	59	48.0	45	31.0	125	33.2
33-37 years	22	20.2	18	14.6	28	19.3	68	18.0
Above 37 years	51	46.8	18	14.6	19	13.1	88	23.3
Marital Status								
Married	67	61.5	99	80.5	127	87.6	293	77.7
Divorced/Separated	0	0.0	5	4.1	2	1.4	7	1.9
Widowed	42	38.5	19	15.4	16	11.0	77	20.4
Religion								
Christianity	11	10.1	110	89.4	77	53.1	198	52.5
Islam	98	89.9	13	10.6	68	46.9	179	47.5

Source: Field Survey, 2016

Table 4.1.1 shows that the age of the respondents ranged from less than 18years to above 37years with majority (58.4%) of ages between 23-37years while the least 0.3% represented those less than 18 years. The mean age of the respondents was 32 years with (±6.76) standard deviation. This result clearly indicates that most of the respondents were within their active child bearing age which was the criterion for sample selection. Older women tend to be more in Kaduna North given that about 47.0% of the respondents within this zone were above 37 years as such have 35years (±6.92) as the mean age of the respondents unlike in the other zones. It further show that Kaduna North (16 years) have the youngest respondents while the oldest was in Kaduna Central (49 years). The marital status shows that 77.7% of the respondent in the three zones were married. Spatial variation across the zones indicated that Kaduna Central (87.6%) and Kaduna South (80.5%) had the highest number of married respondents in the study area.

Religion is considered as one of the important factors that could influence the utilization of maternal health care services indicates that most (52.5%) respondents practice Christianity while it was observed that Kaduna North is Islam dominated zone. The presence of Islam faithful (Muslims) especially in Kaduna North is expected to influence maternal health care service utilization like the use of family planning following the work of Kabir, IIiyasu and Sani (2005) that discovered most Muslims believed the use of any form of family planning contradicts the practice of Islam.

Table 4.1.2: Educational level, Occupation and Monthly Income of the Respondents

Variable	**Kaduna North (n = 109)**		**Kaduna South (n = 123)**		**Kaduna Central (n = 145)**		**Total (n = 377)**	
Level of Education	**Freq.**	**%**	**Freq.**	**%**	**Freq.**	**%**	**Freq.**	**%**
None	18	16.5	0	0.0	19	13.1	37	9.8
Quranic	69	63.9	0	0.0	28	19.3	97	25.7
Primary	13	11.9	2	1.6	4	2.8	19	5.0
Secondary	9	8.3	80	65.0	37	25.5	126	33.4
Tertiary	0	0.0	41	33.3	57	39.3	98	26.0
Occupation								
Unemployed	13	11.9	3	2.4	16	11.3	32	8.5
Petty trading	70	64.2	37	30.1	51	35.9	158	41.9
Farming	12	11.0	4	3.3	3	2.1	19	5.0
Unskilled labour work	3	2.8	8	6.5	1	0.7	12	3.3
Skilled labour work	9	8.3	34	27.6	33	23.2	76	20.2
Others	2	1.8	37	30.1	41	28.9	89	21.2
Monthly Income Level								
No Fixed Income	27	24.8	6	4.9	20	13.8	53	14.1
Less than 5000	2	1.8	0	0.0	4	2.8	6	1.6
₦5,000 - ₦10,000	7	6.4	6	4.9	4	2.8	17	4.5
₦11,000- ₦20,000	68	62.4	70	56.9	56	38.6	194	51.4
₦21,000- ₦30,000	5	4.6	15	12.2	18	12.4	38	10.1
₦31,000 and Above	0	0.0	26	21.1	43	29.7	69	18.3
Mean Monthly Income				₦21,390				

Source: Field Survey, 2016

As regarding educational qualification, Table 4.1.2 shows that about (64.4%) of the respondents possess at least a level of formal education although in Kaduna North most (80.4%) of the women did not have any formal education. This implies that the level of education among

women in Kaduna State is relatively high, therefore the level of awareness of maternal health care services is expected to be high so also its utilisation.

Occupational distribution of the respondents shows that 50.4% were either unemployed or work with informal sector with only 20.2% engaged in skilled labour. Also about 28.0% and 23.2% of women from Kaduna South and Kaduna Central engaged in skilled labour work respectively with only 8.1% in Kaduna North. Table 4.4 further revealed that 71.6% of the respondents either indicated no fixed monthly income or earn less than ₦20,000 while only 18.3% earn ₦31,000 and above. Given this low income status of most respondents, the populace might not be able to afford the maternal health care services.

Table 4.1.3: Number of Ever-Born Children and Number alive of the Respondents

Variable	**Kaduna North (n = 109)**		**Kaduna South (n = 123)**		**Kaduna Central (n = 145)**		**Total (n = 377)**	
Ever-Born Children	Freq.	%	Freq.	%	Freq.	%	Freq.	%
1 child	1	0.9	9	7.3	26	17.9	36	9.5
2 children	4	3.7	11	8.9	32	22.1	47	12.5
3 children	4	3.7	24	19.5	12	8.3	40	10.6
4 children	24	22.0	22	17.9	16	11.0	62	16.4
5 children	20	18.3	21	17.1	18	12.4	59	15.6
6 children	47	43.1	12	9.8	37	25.5	96	25.5
7 children and above	9	8.3	24	19.5	4	2.8	37	9.8
Mean				6				
Number of Living Children								
None	0	0.0	0	0.0	1	0.7	1	0.3
1 child	0	0.0	0	0.0	26	17.7	26	6.9
2 children	1	0.9	0	0.0	34	23.4	34	9.1
3 children	8	7.3	0	0.0	12	8.5	20	5.4
4 children	47	43.1	0	0.0	45	31.2	92	24.4
5 children	1	0.9	11	8.9	2	1.4	14	3.7
All of them	52	47.7	112	91.1	25	17.0	189	50.2
Mean				5				

Source: Field Survey, 2016

It also shows that a little above half (50.2%) of the respondents indicated that all of their children ever born were living. Also noticed was the across the zones, Kaduna South and Kaduna North have the highest survival rate of children ever born.

This section provides data on selected maternal health care services by women. The selected services are: Antenatal care, family planning and delivery services

4.2 Women's' Awareness of Selected Maternal Health Care Services

This section provides data on selected maternal health care services by women. Respondents were asked about their awareness of selected services provided by the maternal health care centers and it suggests that most are aware of the antenatal care, family planning and delivery services. But not of about management of infertility and treatment of sexually transmitted diseases.

Table 4.2: Awareness of Services by Maternal Health Care Centers

Service	Kaduna North				Kaduna South				Kaduna Central				Total			
	Yes		No		Yes		No		Yes		No		Yes		No	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Antenatal Care	109	100	-	-	123	100	-	-	141	97.2	4	2.8	373	98.9	4	1.1
Delivery Services	109	100	-	-	123	100	-	-	141	97.2	4	2.8	373	98.8	4	1.1
Family Planning	109	100	-	-	123	100	-	-	145	100	-	-	377	100	-	-

Source: Field Survey, 2016

As shown in Table 4.2, all the women are aware of the three selected maternal health care services in the area with Kaduna Central having the lowest awareness of antenatal care and delivery services. It could be that women in Kaduna Central are too occupied with other

activities that make them not have full awareness of antenatal care and delivery services as women from other zones. Most respondents in FGDs and IDIs conducted indicated that majority of the women are aware of antenatal care, delivery services, and family planning. The male discussants are aware of antenatal care, delivery services and some of them are aware of family planning. This point was confirmed by the qualitative data.

In the word of one of the key informants in one of the maternal health care centers:

> Most of the women are not aware of any other maternal health care services except delivery care, antenatal care family planning, postnatal care and immunization

In all the FGDs conducted, it is only few women with tertiary education that mentioned other maternal health care services apart from delivery care, antenatal care, postnatal care and family planning as part of services rendered in the maternal health care centers.

One of the IDIs key informants, a nursing officer in the ANC section of the Gambo Sawaba General Hospital said:

> Whenever they come for their antenatal clinic, we usually tell them about importance of family planning and the health benefit attached to it but most of them will always argued that it is against the injunctions of Allah for it is only Allah that determines the number of children one will have

In all the Focus Group Discussions conducted in the study areas, it is only very few women that claimed not aware of family planning. Many of the respondents said they heard of family planning from one hospital or another. One of the respondents confirmed that

> They always tell us about the importance of family planning anytime we go for antenatal care.

On the other hand, majority of the male discussant are not aware of family planning as some of them claimed hearing it for the first time. One of the male discussant asked: what is the

importance of this family planning you are talking about? After explaining what family planning is all about to him, he said:

> It is only God that plan ones family and not any medical provider or anybody. How many children you are going to have has already been ordained by God and nobody can change it. Not even the doctors because they are not God.

The most known and utilised maternal health care services across the senatorial zone is the antenatal care. While Kaduna South ever used of family planning was 49.6%, the current use is 11.5%. This may be due to the adverse effect of the family planning methods used. Kaduna Central has ever used of family planning at 20.1% while current use is 16.7%. Kaduna North with 8.3% ever used of family planning has 33.3% current use of family planning. This may be as a result of sensitization programme on the benefits of family planning. For delivery services utilisation, Kaduna South has the highest with 65.0% while Kaduna North is the lowest with 32.1% utilisation of delivery services. While the least maternal health care services utilised across the senatorial zone is family planning, the most used is antenatal care.

4.3 Utilisation of Maternal Health Care Services by Women of Reproductive Age

Utilization of Family Planning by Women of Reproductive Age

The utilisation and decision on what methods of family planning to use, respondents demonstrated a high level of awareness but low level of use of family planning and often the decision on use of family planning is jointly made by both spouses.

Table 4.3.1: Family Planning Utilisation and Decision on Methods n=377

Ever-Use FP	**Kaduna North**		**Kaduna South**		**Kaduna Central**		**Total**	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Yes	9	9.0	41	49.4	28	25.2	78	26.5
No	91	91.0	42	50.6	83	74.8	216	73.5
Total	**100**	**100**	**83**	**100**	**111**	**100**	**294**	**100**
Currently-Using FP								
Yes	3	33.3	7	17.5	10	29.4	20	24.1
No	6	66.7	33	82.5	24	85.7	63	75.9
Total	**9**	**100**	**40**	**100**	**34**	**100**	**83**	**100**
Who decide FP Method								
Me	0	0.0	0	0.0	1	25.0	1	7.1
Me and my husband	3	100	7	100	3	75.0	13	92.9
Total	**3**	**100**	**7**	**100**	**4**	**100**	**14**	**100**

Source: Field Survey, 2016

Table 4.3 shows that of those who were aware of family planning, only 26.5% had ever used any family planning method while 24.1% of the respondents are currently using family planning. Of those who used family planning, factually all did with their husbands (75.0%). Focus Group Discussion on family planning elicited the greatest number of responses from various communities. In fact a few respondents held the view that, even if family planning were to be used by couples, it should be mutually agreed on. Some respondents were of the view that family planning is against the injunction of God and they will not use it. This view is corroborated by a male respondent during one of the FGD sessions. The man asked "please madam researcher what is this family planning you are asking of?" After explaining to him his response was

> I am hearing it for the first time and I cannot allow any of my wives to practice it because it is completely undermining Allah's commandment that we should multiply.

This type of response suggests that many men are not aware of family planning devices or artificial methods of contraception. And even if they are aware of family planning they are not likely to encourage it as explained by this respondent thus:

> If any of my wives should engage in this family planning and I get to know of it, I will divorce her immediately because it is totally against the injunction of Allah.

Many male respondents in Kaduna North and Kaduna Central gave reasons for being afraid to use family planning device. These reasons included that it is against the will of Allah; when you want to have a child and you stop the family planning device pregnancy will not come; it fails at times; it can make woman to be promiscuous. However, some respondents in Kaduna South and Kaduna Central said they were not afraid to use it as is very good for them and enable them to plan their family size. Meanwhile, the attitude of the respondents (especially in Kaduna North and Kaduna Central) was very negative. They belief that family planning is elites innovation and should be meant for them. However, one woman from Kaduna South said:

> Family planning is very good. It enables women to have good care of themselves. I am using family planning and I always tell my friends to use it because it is very good for the body.

Also, a man in one of the FGDs conducted in Southern Kaduna said:

> It is very good to use family planning because it helps the parent to Plan for their lives and also help the children to grow well. But the Government needs to make it easy for the people by providing the contraceptives free to the people.

The focus of this study on antenatal care, family planning and delivery services among other maternal health care services is because they are the most used in Kaduna State among all other maternal health care services.

4.3.1 Method of Family Planning Utilised by Women of Reproductive Age

Table 4.3.1 on the methods of family planning utilised by the respondents, majority indicated injectable as method of family planning utilised in the study area.

Table 4.3.2: Methods of Family Planning Used

Method	Kaduna North		Kaduna South		Kaduna Central		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Oral pills	-	-	4	8.0	3	10.3	7	9.0
Injectable	9	100	46	92.0	16	84.2	71	91.0
Total	**9**	**100**	**50**	**100**	**19**	**100**	**78**	**100**

Source: Field Survey, 2017

Table 4.3.1 shows the injectable and oral pills were the only family planning methods used by the women within the reproductive age with injectable (91.0%) representing the most used family planning method in the study area. It further indicated that across the zones, the use of oral pills family planning method is very low. This may be as a result of women not wanting to be swallowing tablets every day majority of them settled for injectable which is safer. Most respondents in FGDs were unanimous in supporting the use of injectable method of family planning to prevent unwanted pregnancy. Other methods of family planning identified during the FGDs are oral pills, injectable, IUCD, breastfeeding, ring, waist band, Arabic writing. Some respondents acknowledged that they prefer the injectable because it saves them from swallowing pills every day. In fact, one of the women after a session called the researcher aside and said:

> My friend, do you know why we prefer injectable? So that our husbands will not know what we are doing. But if it is family planning pills we are using, we will not enjoy it. Because if our husbands see us swallowing pills everyday what are we going to tell them?

One key informant a community health officer interviewed in one of the Community Health Care Centers in Southern Kaduna said:

> Majority of the women when they come for family planning, prefer the injectable and some of them want the pills method. The women prefer the injectable because according to them, it saves them from swallowing pills every day.

4.3.2 Reason for Non-Utilisation of Family Planning Methods by Women of Reproductive Age

Respondents were asked about the reasons why they did not utilise family planning methods. The responses are given below

Table 4.3.2: Reason for Non-Use of FP

Factor	Kaduna North (n = 99)		Kaduna South (n = 62)		Kaduna Central (n = 111)		Total	
	Freq.	**%**	**Freq.**	**%**	**Freq.**	**%**	**Freq.**	**%**
Religion	2	1.9	0	0.0	0	0.0	2	0.7
Not aware of it	0	0.0	2	2.6	0	0.0	2	0.7
Love Many Children	26	26.4	18	29.3	71	64.0	115	42.3
Husband disagree	71	71.7	42	68.1	40	36.0	153	56.3
Total	**99**	**100.0**	**62**	**100.0**	**111**	**100.0**	**272**	**100.0**

Source: Field Survey, 2016

Most of the respondents as shown in Table 4.3.2 do not use family planning because their husbands do not agree the highest was in Kaduna North (71.7%) and the lowest in Kaduna Central (36.0%). Also love of many children with the highest in Kaduna Central (64.0%) and the lowest in Kaduna North (26.4%). According to one of the key informant (a community health officer) interviewed in one of the maternal health care center he said:

> Whenever we tell the women about the importance and benefits of using family planning, most of them always say that their husbands are not in support and they cannot go against their husbands wishes.

He further said:

> Although some of them always said that they want to have many children because their mothers too gave birth to many children.

During the FGDs session, many women confirmed that they are not using family planning because their husbands are not in support. One woman said:

> My mother- referring to the researcher. Can you as a woman go against the wish of your husband? We are not using it because our husbands are not in support.

However, one woman differed in one of the groups. She said:

> I used family planning and I am still using it in agreement with my husband. We have three children right now and we have agreed to have just four. Family planning is very good for me I love it.

4.4 Availability and Utilisation of Antenatal/Delivery Services

4.4.1 Antenatal Care and Place of Attending Antenatal

Table 4.4 shows the attendance of antenatal and place of attendance by the respondents in the study area.

Table 4.4: Antenatal Care Utilisation

Antenatal	Kaduna North		Kaduna South		Kaduna Central		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
Yes	109	100.0	123	100.0	144	99.3	376	99.7
No	0	0.0	0	0.0	1	0.7	1	0.3
Total	**109**	**100.0**	**123**	**100.0**	**145**	**100.0**	**377**	**100.0**

Table 4.4 shows that most of the respondents constituting 99.7% utilised antenatal care during the period of pregnancy while only 0.3% did not. Women from Kaduna North and Kaduna South utilised antenatal care most in the study area.

Table 4.4.1: Place of Antenatal Care

Place of Antenatal	Kaduna North		Kaduna South		Kaduna Central		Total	
	Freq	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
PHC	44	40.0	1	0.8	52	36.9	97	25.7
SHC	65	59.6	122	99.2	93	64.1	280	74.3
Total	**109**	**100.0**	**123**	**100.0**	**145**	**100.0**	**377**	**100.0**

Source: Field Survey 2016

Table 4.4.1 shows that majority of the respondents (74.2%) attended antenatal care in secondary facilities. While 99.2% of women in Kaduna South attended antenatal care in secondary health centers, 40.0% of women in Kaduna North attended antenatal care in primary health care. Of the 99.7% of women that attended ANC, 99.5% utilised abdominal examination and weight measurement while 98.9% utilised BP measurement. Women that utilised malaria prophylaxis (92.3%), folic acid and tablet (91.2%), blood test (85.1%), urine test (86.2%), toxoid injection (1.6%), counsel for HIV (2.7%), and ultrasound scan (13.0%). On Antenatal attendance by women, most IDIs and FGDs conducted revealed that majority of the respondents attended ANC in the study areas while only very few of the respondents did not attend ANC. Most respondents in FGDs and IDIs said: "Majority of the women does go for antenatal clinic and they do regularly". In all the FGDs conducted in the study areas, all the female discussants said they attend antenatal clinic and that they do so regularly. The male FGDs also confirmed that their wives do go for antenatal and they allow them because it is very good as it will enable them (the women) to know their health and position of the baby.

According to one of the men in one of the FGDs session he said:

> We do allow our wives to go for antenatal because it is very good as it enable them to know how the baby is doing and it helps the mother too to know the state of her health. In fact we do give our wives money to go for antenatal.

4.4.2 Services Utilised During Antenatal Visits

Respondents were generally aware of the types of services rendered by the maternal health care centers especially for those who go for antenatal visits.

Table 4.4.2: Services utilised During Antenatal Clinic Visit

Service	Kaduna North				Kaduna South				Kaduna Central				Total			
	Yes		No		Yes		No		Yes		No		Yes		No	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Abdominal Exam	109	100	-	-	123	100	-	-	143	98.6	2	1.4	375	99.5	2	0.5
Weight	109	100	-	-	123	100	-	-	143	98.6	2	1.4	375	99.5	2	0.5
Measurement																
BP Measurement	109	100	-	-	122	99.2	1	0.8	142	97.9	3	2.1	373	98.9	4	1.1
Blood Test	94	86.2	15	13.8	86	69.9	37	30.1	141	97.2	4	2.8	321	85.1	56	14.9
Ultrasound scan	-	-	109	100	-	-	123	100	49	33.8	97	66.2	49	13.0	328	87.0
Urine Test	109	100	-	-	80	65.0	43	35.0	135	93.8	9	6.2	324	86.2	53	13.8
Counsel for HIV	-	-	109	100	5	4.1	118	95.9	6	3.5	139	96.5	11	2.7	366	97.3
Tested for HIV	-	-	109	100	81	65.9	42	34.1	62	42.8	83	57.2	143	37.9	234	62.1
Malaria prophylaxis	92	84.4	17	15.6	123	100	-	-	133	91.7	12	8.3	348	92.3	29	7.7
Toxoid injection	3	2.8	106	97.2	-	-	123	100	4	2.1	141	97.9	7	1.6	370	98.4
Folic acid tablets	109	100	-	-	123	100	-	-	112	77.2	33	22.8	344	91.2	33	8.8
Iron tablets	105	96.3	4	3.7	-	-	123	100	62	42.8	83	57.2	167	44.3	210	55.7
Provision of ITN	-	-	109	100	39	31.7	84	68.3	3	2.1	142	97.9	42	11.1	335	88.9

Source: Field Survey, 2016 *** Multiple Responses**

Table 4.4.2 indicates that the most utilised services during antenatal visits in Kaduna North are abdominal examination, weight measurement, BP measurement, urine test and folic acid and tablet with 100% utilisation. In Kaduna South, the most utilised services during antenatal visits are abdominal examination, weight measurement, malaria prophylaxis, folic acid and tablet each representing 100% except BP measurement which is 99.2%. In Kaduna Central however, abdominal examination and weight measurement with 98.6% are the most utilised services while the least utilised been malaria prophylaxis with 91.7%. Furthermore, the result shows that the most utilised services across the senatorial zones are abdominal examination and weight measurement with 99.5% each while the least utilised services are Toxoid injection (1.6%) and counsel for HIV/AIDS (2.7%).

4.4.3 Utilisation of Delivery Service

Table 4.4.3 shows the place of child delivery by the respondents in the study area.

Table 4.4.3: Respondents' Place of Child Delivery

Place of Birth	Kaduna North		Kaduna South		Kaduna Central		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
Home	70	64.2	43	34.9	65	44.8	178	47.2
Government hospital	35	32.1	80	65.1	74	51.0	189	50.1
Private Clinic	0	0.0	0	0.0	6	4.1	6	1.6
Traditional attendant	4	3.7	0	0.0	0	0.0	4	1.1
Total	**109**	**100.0**	**123**	**100.0**	**145**	**100.0**	**377**	**100.0**

Source: Field Survey, 2016

Most of the respondents (51.7%) delivered their babies in health facility while 47.2% of the women delivered their babies at home while only 1.1% had their children through traditional birth attendant. Table 4.4.3 shows that while most women in Kaduna South (65.0%) and Kaduna

Central (51.0%) use government hospitals as place of delivery, 64.2% of women in Kaduna North delivered their babies at home. This may be due to the Kaduna North women level of education as majority of them (63.9%) has Quranic education while only 22% of them have formal education. On place of child delivery by women, the FGDs and IDIs conducted revealed that while majority of women in Kaduna South and Kaduna Central delivered their babies in hospital, majority of women in Kaduna North still prefer home delivery.

According to a key informants interviewed in Kaduna south, a medical personnel,

> Majority of the women prefer to have their babies in the hospital except for reasons beyond their control.

While a key informant interviewed in one of the MHCC in Kaduna North said:

> Majority of the women preferred home delivery. Even though they come for ANC but when it comes to delivery they hardly come to deliver their babies here.

This view is in consonance with that of another IDI key informant, medical personnel who acknowledged that: "Reason for the delay on going to the hospital is probably because of some of the demands made by the hospital staff". One of the women in a FGD confirmed this when she said:

> We prefer giving birth in the hospital but what usually drive us away from the hospital are the items they always asked us to bring along while we would not pay anything doing it at home and even when we use traditional birth attendant

For other women, it is not the items demanded of them that discourage them; rather, they just prefer home delivery and the privacy that it offers.

Another health officer said that

> Most of the women prefer to give birth within the confinement of their rooms as they always said that it is more comfortable for them than hospital environment where there is noise.

One of the medical personnel said that the women usually said jokingly when they come for antenatal clinic that

> Delivery should be done in secret place and not in the open where everybody will know what you are doing and the best secret place is their room.

One of the women said if there is no any complication she prefers to deliver her baby in her room and the rest nodded their heads in support of what she said. They all agreed that hospital delivery is the best but too expensive to afford.

According to the TBAs interviewed, "We don't collect anything for taking delivery except if the woman just feels like giving soap or anything she has". The male FGDs discussant agreed that "hospital is good but it is only when there is problem". Another one asked, "If there is no any problem during delivery why will you need a TBA or hospital?" All others nodded saying "haka ne gaskiya nka" meaning: yes you are right. They all agreed that a woman only needs TBA or hospital assistance during delivery when there is problem in delivering the baby.

4.4.4 Challenges in Utilising Delivery Services

Table 4.4.4 shows the delivery problems, the nature of the problems, and treatment received by the respondents in the study area

Table 4.4.4: Occurrence of Problems at Delivery, Nature and Seeking of Treatment

Did you have Problem at Delivery?	Kaduna North		Kaduna South		Kaduna Central		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
Yes	6	5.5	0	0.0	3	2.1	9	2.4
No	103	94.5	123	100.0	142	97.9	364	97.6
Total	**109**	**100.0**	**123**	**100.0**	**145**	**100.0**	**373**	**100.0**
Nature of problem								
Labour more than 12 hours	6	100.0	-	-	0	0.0	6	66.7
Excessive bleeding	0	0.0	-	-	1	33.3	1	11.1
Others	0	0.0	-	-	2	66.7	2	22.2
Total	**6**	**100.0**	**-**	**-**	**3**	**100.0**	**9**	**100.0**
Seek treatment								
Yes	6	100.0	-	-	2	66.7	8	88.9
No	0	0.0	-	-	1	33.3	1	11.1
Total	**6**	**100.0**	**-**	**-**	**3**	**100.0**	**9**	**100.0**
Place of treatment								
Government hospital	6	100.0	-	-	2	100.0	8	100.0

Source: Field Survey, 2016

Table 4.4.4 reveals that majority (97.6%) of respondents did not encounter any problem during delivery. Being in labour for more than 12 hours (66.7%) was the major problem encountered during child delivery and it was peculiar among women in Kaduna North zone. About 89% of the respondents that encountered problems during child delivery did seek for treatment all in government hospitals.

4.5 Factors Affecting Access to family planning, antenatal care and delivery Care Services

This section investigate some of the factors affecting women's access to the selected maternal health care services

4.5.1 Presence of Health Care Facility in the Community

Table 4.5.1 indicates the presence of health care center within the community of the respondents in the study area.

Table 4.5.1: Presence of Health Care Facilities within the Communities

MHC facility	Kaduna North		Kaduna South		Kaduna Central		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
Yes	109	100.0	123	100.0	144	99.3	376	99.7
No	-	-	-	-	1	0.7	1	0.3
Total	**109**	**100.0**	**123**	**100.0**	**145**	**100.0**	**377**	**100.0**

Source: Field Survey, 2016

Table 4.5.1 reveals that majority (99.7%) of the respondents agreed to having Maternal Health Care Center within their communities in the study area while only (0.3%) represented those that no maternal health care center was in their community. This is an indication of the government's involvement in the provision of maternal health care services to the populace.

Table 4.5.2 reveals the respondents access to the free maternal health care services provided in the study area.

4.5.2 Whether or not Maternal Health Care Services are free

Table 4.5.2 shows the nature of maternal health care services as perceived by the respondents in the study area.

Table 4.5.2: Whether or not the Maternal Health Care Services are free

Antenatal	Kaduna North		Kaduna South		Kaduna Central		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
Free	109	100.0	5	4.1	142	98.6	256	68.1
Not free	0	0.0	118	95.9	2	1.4	120	31.9
Total	**109**	**100.0**	**123**	**100.0**	**144**	**100.0**	**376**	**100.0**
Family Planning								
Free	9	100.0	61	100.0	25	90.2	95	96.9
Not free	0	0.0	0	0.0	3	9.8	3	3.1
Total	**9**	**100.0**	**61**	**100.0**	**28**	**100.0**	**98**	**100.0**
Delivery								
Free	0	0.0	0	0.0	3	3.5	3	1.5
Not free	35	100.0	80	100.0	77	96.5	192	98.5
Total	**35**	**100.0**	**80**	**100.0**	**80**	**100.0**	**195**	**100.0**

Source: Field Survey, 2016

From Table 4.5.2, 68.1 % of the respondents agreed that antenatal care services offered by the maternal health care centers was free although most women in Kaduna South (95.9%) and few in Kaduna Central (1.4%) were of the opinion that the services were not free. Majority (96.9%) of the respondents hold that family planning services were rendered free to the women in the study area with only 3.1% whose view was that the services were not free. For delivery services however, 98.5% of the women said they had to pay for such services. Only in Kaduna Central were delivery services offered free according to 3.5% of the respondents.

Table 4:5.3: Access to Free Maternal Health Care Services

Access to Free Services	Kaduna North		Kaduna South		Kaduna Central		Total	
	Freq	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
Yes	109	100.0	123	100.0	145	100.0	377	100.0
No	0	0.0	0	0.0	0	0.0	0	0.0
Total	**109**	**100.0**	**123**	**100.0**	**145**	**100.0**	**377**	**100.0**
Access Charged Services								
Yes	14	12.8	123	100.0	85	58.5	222	58.9
No	95	87.2	0	0.0	60	41.5	155	41.1
Total	**109**	**100.0**	**123**	**100.0**	**145**	**100.0**	**377**	**100.0**
Source of Money								
Collect from husband	14	100.0	123	100.0	50	59.1	187	84.2
Personal money	0	0.0	0	0.0	35	40.9	35	15.8
Total	**14**	**100.0**	**123**	**100.0**	**85**	**100.0**	**222**	**100.0**
Reason for not accessing								
Charged Services								
I don't need them	29	30.5	-	-	23	38.3	52	33.5
Male medical personnel	66	69.5	-	-	37	61.7	103	66.5
Checking female patients								
Total	**95**	**100.0**	**-**	**-**	**60**	**100.0**	**155**	**100.0**

Source: Field Survey, 2016

Table 4.5.3 shows all the respondents do have access to free services offered by the maternal health care centers in the state. Regarding the services Maternal Health Care Centers charges respondents, about 59% agreed to have access to those services while 41% expressed they lack access to those services. It also reveals that most women (84.2%) collect maternal health care services charges from their husbands which all the women in Kaduna South and Kaduna North agreed to. A few of the women in the state used their personal savings to seek for maternal health care services. The result further indicated that male medical personnel checking

female patients (66.5%) was the main reason for women not accessing charged maternal health care services in Kaduna State.

4.5.3 Perception on Health Care Centre Staff Reception by the Respondents'

Table 4.5.5 shows the perception on the health care center staff reception in the study area.

Table 4.5.4: Perception on Staff Reception

Reception of MHCC Staff	Kaduna North		Kaduna South		Kaduna Central		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
Very friendly	2	6.4	56	69.1	23	33.3	81	46.8
Somewhat friendly	18	75.2	25	30.9	33	48.6	76	43.9
Not too friendly	4	18.3	-	-	12	18.1	16	9.3
Total	**24**	**100.0**	**81**	**100.0**	**68**	**100.0**	**173**	**100.0**

Source: Field Survey, 2016

Table 4.5.4 shows that majority (90.7%) of the respondent perceived that the staff reception at the Health Care Centers in the study area was either very friendly or somewhat friendly. This was a common perception in all the zones in the study area. The "Not too friendly" nature of staff reception was only observable in Kaduna North and Kaduna Central.

4.5.4 Mode and Cost of Transportation to Maternal Health Care Centre

Table 4.5.5 shows the modes of transport used by the respondents in accessing health care center within their community.

Table 4.5.5: Mode and Cost of Transportation to Health Care Centre

Mode	Kaduna North		Kaduna South		Kaduna Central		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
Walking	19	17.4	38	30.9	46	31.9	103	27.4
Motorcycle	81	74.3	1	0.8	82	56.2	164	43.4
Bus	8	7.3	84	68.3	8	5.6	100	26.6
Private car	1	0.9	0	0.0	9	6.2	10	2.7
Total	**109**	**100.0**	**123**	**100.0**	**145**	**100.0**	**377**	**100.0**
Transport Cost								
Mean	₦160		₦80		₦100			
SD	₦30		₦25		₦50			

Source: Field Survey, 2016

Motorcycle (43.4%) accounted for the highest mode of transportation used by the women in accessing maternal health care services, followed by walking (27.4%), with private car (2.7%) representing the least used mode of transport. In Kaduna North (74.3%) and Kaduna Central (56.2%) motorcycle was mostly used mode of transportation whereas it was bus (68.3%) in Kaduna South. Also, observed was that none of the women in Kaduna South used private car to access maternal health care center. It further shows that respondents spent more in Kaduna North and Kaduna Central accessing health care centers in the state. This might be attributed to the preference for motorcycle and though they are more expensive, they are more convenient.

4.5.5 Challenges Experienced Accessing Maternal Health Care Centre

Table 4.5.6 reveals the difficulties experienced by the respondents in accessing health care center within their community.

Table 4.5.6: Difficulties Experienced Accessing Health Care Facilities

Difficulty	Kaduna North		Kaduna South		Kaduna Central		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
Financial	109	100.0	123	100.0	138	95.2	370	98.1
Attitude of the workers	-	-	-	-	7	4.8	7	1.9
Total	**109**	**100.0**	**123**	**100.0**	**145**	**100.0**	**377**	**100.0**

Source: Field Survey, 2016

Finance (98.1%) was the major difficulty experienced for accessing health care facilities in the area, while only 1.9% of the respondents reported that the attitude of the workers limited their access to health care facilities (Table 4.5.8). Also noted were that all the respondents in Kaduna North and Kaduna South agreed that finance was a major challenge accessing health care facilities.

4.6 Strategies to Overcome Barriers to Maternal Health Care Services

This section asked the respondents what they do to overcome the maternal health care services barriers.

4.6.1 Measures in Overcoming Maternal Health Care Barriers

Table 4.6.1 reveals the measures put in place to overcome maternal health care services barriers within the community.

Table 4.6.1: Measures in Overcoming Maternal Health Care Barriers

Measures	Kaduna North		Kaduna South		Kaduna Central		Total	
Insurance for poor	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
Yes	-	-	74	60.2	87	60.0	270	71.6
No	109	100.0	49	39.2	58	40.0	107	28.4
Total	109	100.0	123	100.0	145	100.0	377	100.0
Enlightenment programme								
Yes	-	-	123	100.0	73	50.4	196	52.0
No	109	100.0	-	-	72	49.6	181	48.0
Total	109	100.0	123	100.0	145	100.0	377	100.0

Source: Field Survey, 2016

Table 4.6.1 shows that 72.0% of the respondents use maternal health care insurance for the poor while 28.4% said that such do not exist within their communities. Maternal health care insurance was only in Kaduna South and Kaduna Central zones. Also, 52.0% revealed that maternal health care enlightenment programme was always carried out in their community while 48.0% reported that such do not exist in their community. Maternal Health care enlightenment programme was mostly conducted in Kaduna South (100%) and Kaduna Central (50.4%) zones.

Table 4.7: Educational Level and Antenatal Care Attendance (ANC)

Educational level	Yes		No		Total	
	Freq	**%**	**Freq**	**%**	**Freq**	**%**
None	37	9.8	-	-	37	9.8
Quranic	97	25.8	-	-	97	25.7
Primary	19	5.1	1	100.0	20	5.0
Secondary	125	33.2	-	-	125	33.4
Tertiary	98	26.1	-	-	98	26.0
Total	**376**	**100.0**	**1**	**100.0**	**377**	**100.0**

Source: Field Survey, 2016

Table 4.7 shows the distribution of respondents by attended ANC based on their educational level. It revealed that among the respondents that attended ANC, 33.2% had secondary school level of education followed by 26.1% with tertiary level of education. Only 9.8% had no educational qualification. All the respondents that did not attend ANC were people with only primary school qualification. The table therefore shows that educational level is not a yardstick to measure antenatal care utilisation. Antenatal care utilisation cut across all levels irrespective of being literate or non-literate.

Table 4.8: Educational Level and Place of Antenatal Services

Educational Level	PHC	Secondary Health Care	Total
None	35(36.1%)	2(0.7%)	37(9.8%)
Quranic	18(18.6%)	79(28.3%)	97(25.8%)
Primary	5(5.2%)	14(5.0%)	19(5.1%)
Secondary	22(22.7%)	103(36.9%)	125(33.2%)
Tertiary	17(17.5%)	81(29.0%)	98(26.1%)
Total	**97 (100.0%)**	**279 (100.0%)**	**376 (100.0%)**

Source: Field Survey, 2016

Table 4.8 shows the distribution of educational level and places of antenatal services, which revealed that among the respondent that visited government PHC for antenatal service, most (36.1%) of them do not have any educational qualification with 5.2% of them being primary school holders. Also, among the respondents that visited secondary health care majority (36.9%) had secondary school education, while only 0.7% account for the least were without any educational qualification. This therefore means that educational level determine place of antenatal care.

Table 4.9: Educational Level and Place of Delivery

Education Level	Home	Government Hospital	Private Clinic	Traditional Attendant	Total
None	37(20.8%)	0(0.0%)	0(0.0%)	0(0.0%)	37(9.8%)
Quranic	78(43.8%)	18(5.9%)	0(0.0%)	1(25.0%)	97(25.7%)
Primary	8(4.5%)	8(4.2%)	0(0.0%)	3(75.0%)	19(5.0%)
Secondary	38(21.3%)	87(46.0%)	1(16.7%)	0(0.0%)	126(33.4%)
Tertiary	17(9.6%)	76(40.2%)	5(83.3%)	0(0.0%)	98(26.0%)
Total	178(100.0%)	189(100.0%)	6(100.0%)	4(100.0%)	377(100.0%)

Source: Field Survey, 2016

Table 4.9 results revealed that 43.8% of the respondents that delivered at home had Quranic education while only 9.6% were with tertiary education. Also, 46.0% of the respondents with secondary school qualification delivered their babies in government hospital. The result further shows that majority of the respondents 83.3% that delivered in private clinics possess tertiary educational level. People with primary education (75.0%) delivered their babies using traditional birth attendants. Therefore we can say that educational level determine place of delivery as majority of the respondents with educational level deliver using government facilities.

Table 4.10: Religion and Place of Delivery

Religion	Home	Government hospital	Private Clinic	Traditional attendant	Total
Islam	128(71.9%)	45(23.8%)	0(0.0%)	4(100.0%)	177(46.9%)
Christianity	50(28.1%)	144(76.2%)	6(100.0%)	0(0.0%)	200(53.1%)
Total	178(100.0%)	189(100.0%)	6(100.0%)	4(100.0%)	377(100.0%)

Source: Field Survey, 2016

In testing the relationship between religion and the place of delivery, Table 4.10 shows that 71.9% of the respondents that delivered at home were Muslims with 28.1% of them being Christians. More so, 76.2% of the respondents that deliver at the government hospitals were Christians while 23.8% of them were Muslims. Also, all the respondents that deliver in private hospitals were Christians while all the respondents that delivered using traditional attendant were Muslims. This simply means that religion can determine the place of delivery. This is because majority of the Christians delivered their babies in government hospital while majority of the Muslims delivered their babies either at home or with the traditional birth attendants.

Table 4.11: Monthly Income and Place of Delivery

Level	Home	Government hospital	Private Clinic	Traditional attendant	Total
No Fixed Income	39(22.2%)	14(7.0%)	0(0.0%)	1(25.0%)	54(14.2%)
Less than ₦5000	4(2.3%)	0(0.0%)	0(0.0%)	0(0.0%)	4(1.1%)
₦5,000 - ₦10,000	12(6.2%)	4(2.1%)	0(0.0%)	0(0.0%)	15(4.0%)
₦11,000-₦20,000	105(59.1%)	87(46.5%)	0(0.0%)	3(75.0%)	195(52.0%)
₦21,000-₦30,000	16(9.1%)	21(11.2%)	1 (16.7%)	0(0.0%)	38(10.2%)
₦31,000 and Above	2(1.1%)	62(33.2%)	5 (83.3%)	0(0.0%)	69(18.5%)
Total	178(100.0%)	189(100.0%)	6(100.0%)	4(100.0%)	377(100.0%)

Source: Field Survey, 2016

Table 4.11 shows that 65.3% of the respondents that delivered at home earn #5,000-#20,000 monthly while only 1.1% earn above #30,000 monthly. Also, 57.7% of the respondents that delivered in government hospital earn #11,000-#30,000 monthly. The result also shows that 83.3% of the respondents that delivered in private clinics earn #31,000 above monthly. However, 75.0% of the respondents who patronized traditional birth attendants were people that earn between #11,000-#20,000 monthly, with no fixed income (25.0%) being the least. This simply means that level of monthly income can determine place of delivery. Since women who earned

higher can afford facility delivery they used it. On the other hand, women whose earning capacity could not afford facility delivery used either home or traditional birth attendance place.

Respondents' educational qualification by use of family planning was cross tabulated with those who had ever used any form of family planning. Majority of the respondents with the exception of those with tertiary education had never used any form of family planning. See Table 4.12 for details.

Table 4.12: Education and Ever Use of Family Planning

Level	Yes	No	Total
None	0(0.0%)	37(13.3%)	37(9.8%)
Quranic	6(6.1%)	91(32.7%)	97(25.8%)
Primary	1(1.0%)	18(6.5%)	19(5.1%)
Secondary	38(38.8%)	88(31.7%)	126(33.5%)
Tertiary	53(54.1%)	44(15.8%)	97(25.8%)
Total	98(100.0%)	278(100.0%)	376(100.0%)

Source: Field Survey, 2016

Table 4.12 shows the distribution between the respondents' educational level and ever use family planning. It was revealed that 54.1% of the respondents that ever used family planning were tertiary institution graduates, followed by secondary school qualification holders (38.8%) while none without educational qualification ever used family planning. Of those who had never used family planning were more prominent among respondents with Quranic qualification. This table shows that there is a relationship between educational level and ever used of family planning as majority of the respondents who has ever used family planning has one form of educational level.

On those currently using family planning, very few respondents are currently doing such and of these, most were those with secondary school education.

Table 4.13: Educational Level and Current Use of Family Planning

Level	Yes		No		Total	
	Freq	**%**	**Freq**	**%**	**Freq**	**%**
None	0	0.0	37	13.3	37	9.8
Quranic	0	0.0	97	26.7	97	25.7
Primary	1	7.1	18	5.0	19	5.0
Secondary	10	71.4	116	32.0	126	33.4
Tertiary	3	21.4	95	26.2	98	26.0
Total	14	100	363	100	377	100

Source: Field Survey, 2016

Table 4.13 shows the distribution of the respondents' educational level and current use of family planning. About 71.4% of the respondents currently using family planning were said to possess secondary education with 21.4% of them having tertiary education while none with Quranic education currently use any family planning method. Furthermore, among the respondents that are not currently using family planning, 32.0% of them do have secondary school education. This table depicts that there is a relationship between education and current use of family planning as majority (92.8%) of those that are currently using family planning have secondary and tertiary level of education.

Table 4.14: Religion and Previous Use of Family Planning

Response	Islam		Christianity		Total	
	Freq	**%**	**Freq**	**%**	**Freq**	**%**
Yes	10	5.6	88	44.0	98	26.0
No	167	94.4	112	56.0	279	74.0
Total	177	100	200	100	377	100

Source: Field Survey, 2016

On the relationship between religion and previous used family planning, Table 4.14 revealed that 94.4% of the Muslims have never used family planning while only 5.6% have ever used family planning whereas among the Christians, 56.0% had never used family planning while 44.0% have ever used it. This indicates that Christians have ever used family planning than the Muslims.

Table 4.15: Religion and Current Use of Family Planning

Response	Islam		Christianity		Total	
	Freq	**%**	**Freq**	**%**	**Freq**	**%**
Yes	4	40.0	10	11.4	14	14.3
No	6	60.0	78	88.6	84	85.7
Total	10	100	88	100	98	100

Source: Field Survey, 2016

Table 4.15 shows the relationship between religion and current use of family planning. It revealed that among the Muslims, 40.0% are currently using family planning while 60.0% of them do not use it. Likewise, among the Christians that have ever used family planning, 88.6% of them are not using it currently while only 11.4% do currently use family planning. This table shows that Muslim respondents are more currently using family planning than the Christians. This could be as a result of sensitization programmes on the importance and benefits of family planning in the Muslim communities.

Table 4.16: Number of Children and Previous Used Family Planning

Number of Child	Yes		No		Total	
	Freq	**%**	**Freq**	**%**	**Freq**	**%**
1 child	0	0.0	35	12.5	35	9.3
2 children	9	9.2	38	13.6	47	12.5
3 children	20	20.4	20	7.3	40	10.6
4 children	18	18.4	44	15.7	62	16.4
5 children	24	24.5	35	12.5	59	15.6
6 children	4	4.1	92	33.0	96	25.5
7 children and above	23	23.5	15	5.4	38	10.1
Total	98	100	279	100	377	100

Source: Field Survey, 2016

Tables 4.16 showing the relationship between the numbers of children and ever use family planning revealed that 24.5% of the respondents that has ever use family planning have 5 children followed by 23.5% of them that have 7 children and above. Likewise, among the respondents that have not ever use family planning, 33.0% of them have 6 children while 12.5% of them have only one child. This table shows that 50.0% of the respondents with 5 and above children have ever used family planning. The reason why those with one child (12.5%) have ever use family planning could be that they still want to have more children while those with 5 and above children have already gotten enough children that they needed.

MULTIVARIATE RELATIONSHIP

Table 4.17: Antenatal Attendance and Socio-economic Variables

	Unstandardized Coefficients		**Standardized Coefficients**	**T**	**Sig.**
	B	Std. Error	Beta		
(Constant)	.956	.016		59.226	.000
Religion	.009	.009	.085	1.002	.317
Marital Status	.008	.004	.121	2.096	.037*
Educational Qualification	.005	.004	.122	1.204	.230
Monthly Income	-.007	.003	-.200	-2.688	.008*
Age	.001	.000	.141	2.369	.018*

R^2 = .040DF = 5/367 F = 3.087 p-value = .010 * Significant at 0.05 Level of Significance

Source: Field Survey, 2016

The regression summary shows that antenatal attendance has a negative association with monthly income only whereas it was a positive relationship with religion, marital status, educational level and age (Table 4.17). Furthermore, the F-test result shows that the regression is significant at 0.05 level of significance. The t-values also show that marital status, monthly income and age were significant. The value of the coefficient of determination, R^2 (4.0%) shows that the model is not a good fit for the data hence the predictive ability of the model is not confirmed. If R^2 coefficient of determining any model is below 60% it is believed that it is not good for predictive purposes. However, the regression model obtained is:

Y = 0.956 + .009 (religion) + .008 (marital status) + .005 (education) - .007 (income) + .000 (age).

Table 4.18: Place of Delivery and Socio-economic Variables

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.559	.158		3.531	.000
Religion	-.059	.086	-.051	-.688	.492
Marital Status	-.049	.036	-.068	-1.362	.174
Educational Qualification	.224	.038	.521	5.949	.000*
Monthly Income	.012	.025	.030	.460	.646
Age	.011	.004	.130	2.516	.012*

R^2 = .279DF = 5/367 F = 28.437 p-value = .000 * Significant at 0.05 Level of Significance

Source: Field Survey, 2016

Table 4.33 revealed that place of delivery has a negative association with religion and marital status while a positive relationship was observed with educational level, monthly income and age. The F-test result indicates that the regression is significant whereas the t-values show that only educational qualification and age were significant. The value of the coefficient of determination, R^2(27.9%) shows that the model is not a good fit for the data hence this model cannot be used for predictive purpose because the R^2 is below 60%. However, the regression model obtained is:

Y = 0.559 - .059 (religion) - .049 (marital status) + .224 (education) + .012 (income) + .011 (age).

Table 4.19: Ever Use Family Planning and Socio-economic Variables

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	2.872	.110		26.029	.000
Religion	-.232	.060	-.263	-3.867	.000*
Marital Status	.155	.025	.285	6.165	.000*
Educational Qualification	-.029	.026	-.088	-1.089	.277
Monthly Income	-.041	.018	-.137	-2.286	.023*
Age	-.023	.003	-.358	-7.490	.000*

R^2 = .383DF = 5/366 F = 45.385 p-value = .000 * Significant at 0.05 Level of Significance

Source: Field Survey, 2016

Table 4.19 indicates that ever use family planning has a positive relationship only with marital status while negative relationship existed in other socio-economic variables. It further shows that the regression is significant given the F-test (45.385) at p-value .000. The t-values revealed that religion, marital status, monthly income and age were significant. The value of the coefficient of determination, R^2 (38.3%) shows that the model is not a good fit for the data hence the predictive ability of the model is not confirmed. However, the regression model obtained is:

Y = 2.872 - .232 (religion) + .155 (marital status) - .029 (education) - .041 (income) - .023 (age).

Table 4.20: Current Use Family Planning and Socio-economic Variables

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	2.046	.060		34.247	.000
Religion	.013	.033	.035	.407	.685
Marital Status	.028	.014	.118	2.031	.043*
Educational Qualification	-.015	.014	-.105	-1.036	.301
Monthly Income	.000	.010	-.003	-.034	.973
Age	-.003	.002	-.102	-1.709	.088

R^2 = .027DF = 5/367 F = 2.051 p-value = .071 * Significant at 0.05 Level of Significance

Source: Field Survey, 2016

The regression summary shows that current use of family planning has a negative association with educational qualification and age whereas a positive relationship was observed with other socio-economic variables (Table 4.20). Further the F-test result shows that the regression is not significant at 0.05 level of significance. The t-values show that marital status was the only socio-economic variable that has significant relationship with current use of family planning. The value of the coefficient of determination, R^2 (2.7%) shows that the model is not a good fit for the data hence the predictive ability of the model is not confirmed. However, the regression model obtained is:

Y = 2.046 + .013 (religion) + .028 (marital status) - .015 (education) + .000 (income) - .003 (age).

Table 4.21 Access to Antenatal Service and Socio-economic Variables

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.977	.028		34.577	.000
Age	.001	.001	.087	1.450	.148
Religion	.006	.015	.035	.413	.680
Marital Status	-.010	.006	-.093	-1.593	.112
Educational Qualification	-.005	.007	-.074	-.721	.471
Monthly Income	.004	.005	.068	.898	.370

R^2 = .015, DF = 5/367, F = 1.130, p-value = .344

Source: Field Survey, 2016

Table shows that access to antenatal care service has a positive relationship with age, religion and monthly income while marital status and level of education have a negative relationship (Table 4.21). The t-values also show that none of independent variable has a statistical significant relationship with access to antenatal services. The value of the coefficient of determination, R^2 (0.02%) shows that the model is not a good fit for the data hence it cannot be used for prediction. However, the regression model obtained is: Y = 0.977 + .001 (age) + .006 (religion) - .010 (marital status) - .005 (educational level) + .004 (monthly income).

Table 4.22: Utilisation of Antenatal Service and Socio-economic Variables

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.956	.016		59.226	.000
Religion	.009	.009	.085	1.002	.317
Marital Status	.008	.004	.121	2.096	.037*
Educational Qualification	.005	.004	.122	1.204	.230
Monthly Income	-.007	.003	-.200	-2.688	.008*
Age	.001	.000	.141	2.369	.018*

R^2 = .040 DF = 5/367 F = 3.087 p-value = .010 * Significant at 0.05 Level of Significance

Source: Field Survey, 2016

The regression summary shows that antenatal utilisation has a negative association with monthly income only whereas it was a positive relationship with religion, marital status, educational level and age (Table 4.22). Furthermore, the F-test result shows that the regression is significant at 0.05 level of significance. The t-values also show that marital status, monthly income and age were significant. The value of the coefficient of determination, R^2 (4.0%) shows that the model is not a good fit for the data hence the predictive ability of the model is not confirmed. However, the regression model obtained is: Y = 0.956 + .009 (religion) + .008 (marital status) + .005 (education) - .007 (income) + .001 (age).

Table 4.23 Utilisation of Delivery Service and Socio-economic Variables

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.658	.125		21.249	.000
Age	-.013	.004	-.177	-3.706	.000*
Religion	-.053	.068	-.053	-.782	.435
Marital Status	.012	.029	.020	.427	.670
Educational Qualification	-.207	.030	-.563	-6.939	.000*
Monthly Income	.002	.020	.007	.116	.908

R^2 = .383, DF = 5/367, F = 45.540, p-value = .001 * Significant at 0.05 Level of Significance

Source: Field Survey, 2016

Table 4.23 shows that utilisation of delivery services has positive relationship with marital status and monthly income whereas, is negative with age, religion and educational level. Furthermore, the F-test result shows that the regression is significant at 0.05 levels. The t-value also shows that age, educational level, and monthly income were significant. The value of the Coefficient of determination, R^2 (38.3%) shows that the model is not a good fit for the data hence, the predictive ability of the model is not confirmed because it is below 60%. However, the regression model obtained is Y=2.658 -013(age) -058(religion) -012(marital status) -207(educational level) +002(monthly income).

4.7 Discussion of Findings

There are growing cases of maternal health challenges, diagnostic and intervention strategies as predominantly related to medical condition of women, also, there are socio-cultural conditions that need to be looked into in order to reduce the risk of maternal health complications. This study examined some of these socio-cultural conditions. This section highlights findings from the study. The total number of 377 respondents took part in this study.

4.7.1 Awareness of Maternal Health Care Services

On awareness of maternal health care services rendered at maternal health care centers, the study revealed that majority of the respondents across the zones are aware of antenatal care, delivery service, postnatal care and family planning services as the most common services offered by the maternal health care centers in Kaduna State but very few have knowledge of STI and management of infertility in the study areas. The study shows that majority of the respondents are aware of family planning across the zones.

This finding correspond with that of Adewoye et al., (2013) who found that majority of the women mentioned services rendered at maternal health care centers as ANC, delivery care, family planning, postnatal care and Immunization while few mentioned management of fertility, prevention and treatment of sexually transmitted infections including HIV/AIDS. The findings is also consistent with that of Onasoga et al., (2014) who found that of the majority who claimed to know the services rendered at maternal health care centers, only 10.4% agreed that preconception care is part of the services while 45.8% included postnatal care and 12.5% included family planning; only 28% included immunization as part of the services. However, all the respondents 94.8% are of the opinion that antenatal care and delivery care are part of the

services rendered in maternal health care centers. Anderson health behavioural model postulated that some people are more likely to use services than others and to use services; there must be awareness of those services. This likelihood can be predicted by individual characteristics such as level of education, age, sex, parity. Most respondents in FGDs and IDIs conducted shows that majority of the women are aware of antenatal care, postnatal care, delivery services, and family planning while very few are aware of management of infertility, prevention and treatment of sexually transmitted infection (STI) including HIV/AIDs. This point was confirmed by the qualitative data.

4.7.2 Utilisation of Maternal Health Care Services

On utilisation of maternal health care services, the study revealed that majority of the respondents attended antenatal clinic during the period of pregnancy. This is contrary to the study conducted in rural village of Kano a state in Northern Nigeria by Adamu and Salihu (2002) where only very few women were reported to have attended antenatal during the period of pregnancy. The study also revealed that among the respondents that attended antenatal care, majority did so in Secondary Health Care while 25.8% used the Primary Health Care. The study revealed that among the respondents that attended ANC, majority had formal education while very few had no education. Meanwhile, all the respondents that did not attend ANC were women with only primary education. The result therefore shows that there is no significant relationship between ANC attendance and educational level in Kaduna State.

On Antenatal care attendance by women, most IDIs and FGDs conducted revealed that majority of the respondents attended ANC in the study areas while only very few of the respondents did not attend ANC. Most respondents in FGDs and IDIs said: "Majority of the women do go for antenatal clinic and they do regularly". In all the FGDs conducted in the study

areas, all the female discussants said they attend antenatal clinic and that they do so regularly. The male discussants also said they don't only allow their wives to go for antenatal care they also give them money for the antenatal care. The hospital records shows that majority of the women come for antenatal. Anderson health behavioural model has describe that perceived benefits of action including understanding the benefits of antenatal care as well as modifying factors like socio-economic factors as important factors determining utilisation of health care services.

However, the study revealed that there is significant relationship between educational level and place of attending ANC as most of the respondents that visited PHC for ANC do not have any formal educational with very few of them having primary school education. Meanwhile, majority of women that visited Secondary Health Care for ANC had secondary education while only 0.7% was without any formal education. The study is in line with the findings of Sambo et al., (2013) at Falaka area of Giwa Local Government Area of Kaduna State who found that ANC attendance was high among respondents. Average ANC attendance was four times. However, majority of the respondents, who attended ANC or are attending it, have no formal education. Also, majority of the respondents, who did not attend or do not attend ANC, had no formal education. Availability and access, cost, distance and quality of service were identified as factors that influenced the utilisation of ANC services by the respondents. Hospital records show that antenatal care is highly utilised across the zones.

Some of the women in the FGDs explained that they use ANC regularly because it is closer to their houses and the staffs there are very friendly and they don't ask them to pay anything except when one has a serious case. This result is in support of the findings of Chimankar and Sahoo (2012) who found that availability of health facilities, affordability,

quality of services and schedule of ANC influenced the utilisation of ANC services among pregnant women in Uttarakhand, India. Also Oluwabamide and Inyang (2006) posit that major factor in the utilisation of health services is the distance between the health workers and mostly the rural consumers of health care who found it difficult to relate with the health workers.

The study also revealed that out of the majority of the respondents that claimed to have heard of family planning, only few agreed to have ever used family planning while very few of the respondents are currently using family planning. The IDIs and FGDs conducted shows that majority of the respondents are not using family planning. Some of the respondents who have ever used and currently using family planning agreed that they and their husbands decide on method of family planning to use. This indicates good knowledge but poor utilisation of family planning services among the women. Documentary from hospital records across the zones shows that women from Kaduna South and Kaduna Central used family planning averagely while women from Kaduna North do not come for family planning. The poor utilisation of family planning services are the result of ignorance, cultural or religious beliefs which have been described by Anderson health behavioural model as modifying factors and could be effectively address as cues to action.

On methods of family planning utilised, the study shows that the respondents in Kaduna North uses injectable method of family planning while women in Kaduna South use oral pills and injectable. The result shows that the use of oral pills contraceptive method was more in Kaduna Central and Kaduna South. The IDIs and FGDs conducted also revealed that majority of the respondents who used family planning preferred oral pills and injectable. Among reasons for not using family planning method, most of the respondents reported that their husbands disagreed with it, while some constituted love for many children. Furthermore, some of the

respondents that ever used family planning had tertiary education, while none of the non-literates ever used family planning. Similarly, no respondents with Quranic education used any contraceptive device. The study also shows that there is a significant relationship between education and use of family planning as majority of the respondents' currently using family planning had secondary education.

The study revealed that majority of the Muslims has not used family planning whereas among the Christians, 44.0% have ever used family planning. This shows that Christians are more prone to use family planning than the Muslims. On religion and current use family planning, the study revealed that there is no significant relationship between religion and current use of family planning as the study shows that among the Muslims, 40.0% are currently using family planning. Likewise, among the Christians that have ever used family planning, majority of them are not currently using it while only very few are currently using it.

The contradiction between ever used and current use of family planning can be explained on the part of the media and health care workers. In the past, the Muslims women don't practice family planning. With series of sensitization on the importance of family planning by the health care workers, state government over the radio, many Muslim women are now practicing family planning This study is consistent with the study carried out in Kenya by Bakibing et al., (2015) which established that religion is of no significant consequence on women's attitudes towards family planning. This finding however is at variance with the report of a study conducted in Cameroon and Senegal by Browne (2012) which demonstrated that religion influences women's decision making including decision on family planning. The study revealed that there is a significant relationship between number of children and the use of family planning as some of the respondents who had ever used family planning had 5 children and some of them had 7

children and above. Also among the respondents who have never used family planning, some of them had 6 children while very few have only 1 child. This shows that number of children determine the use of family planning.

The study revealed that average number of the respondents delivered their babies in health facilities while some delivered at home only 1.1% had their babies through the traditional birth attendants. The study also revealed that while majority and average number of women in Kaduna South and Kaduna Central used health facilities as a place of delivery respectively, majority of women in Kaduna North had home delivery. This is because women in Kaduna North believe that delivery should be done in a private and secluded place and the room is the best place to have ones baby. Documentary from the hospital records shows that women from Kaduna South and Kaduna Central used delivery services while majority of the women from Kaduna North do not come for delivery in the hospital. On place of child delivery by women, the FGDs and IDIs conducted revealed that while majority of women in Kaduna South and Kaduna Central delivered their babies in hospital, majority of women in Kaduna North still prefer home delivery.

The study revealed that there is a significant relationship between educational level and place of delivery as among the respondents that delivered at home, some had Quranic education while very few had tertiary education. For respondents that delivered in government hospitals, some had primary and secondary education. Majority of the respondents that delivered in private hospitals had tertiary education while majority of the respondents that delivered using traditional birth attendant had primary education. Women who are formally educated delivered their babies in the hospital more than others thus, lending credence to the Anderson health behavioural model that education is a modifying factor for health action. This finding is consistent with those of

Magadi, Diamond and Rodrigues, (2000a); Navaneetham and Dharmalingam (2012); Van, Ejik et.al. (2006). Misho, et.al. (2007), Onah Ikeako and lloabachie, (2006) who reported that women with higher educational attainment are more likely to make informed decisions as to place of delivery, demand better services, have financial accessibility, and more likely to live in urban areas where facilities are nearby. However, it is contrary to the findings of Tomlison (2003) who argued that education increases the possibility of health education and health literacy but is not a guarantee. He argued that those with higher levels of education are just likely to succumb to misconceptions, misinformation and misinterpretation particularly when it involves cultural and religious beliefs. The study correspond with Stewart and Sommerfelt (2008), who found that the use of maternal health services are influenced by a myriad of social, cultural and economic factors. The researchers found that the use of maternal health services was positively and significantly associated with education. The report shows that educated women were likely to use delivery care than non-educated women.

The study also shows a significant relationship between religion and place of delivery as majority of the respondents that delivered at home were Muslims while majority of the respondents that delivered at health facilities were Christians. All the respondents that delivered in private hospital were Christians while all the respondents that delivered using traditional birth attendant were Muslims. Documentary data from hospital records shows that majority of the women from Kaduna south and Kaduna central delivered their babies in the hospital while women from Kaduna north prefer home delivery as they do not come to hospital to deliver their babies. Kaduna south is mainly Christian dominated area while Kaduna north is mainly Muslims dominated area, Kaduna central is a mix of both Christians and Muslims. This finding is not different from that of Envuladu et al., (2013) who found that religion had significant association

with the choice of place of delivery. The finding is similar to other studies where home delivery was the preferred choice of delivery for most pregnant women (Idris et al., 2006).

The study also revealed that there is a significant relationship between monthly income and place of delivery as majority of the respondents that delivered in private hospital earn N31, 000 and above monthly while some of the respondents that earn N11, 000-N20, 000 had home delivery. This indicates that income enables one to purchase health care as Anderson health behavioural model believes that family income is an important enabling factor as it determines the amount of funds available to an individual to cover healthcare and related cost e.g. physician consultation, drugs, transportation cost etc.

This study is in line with the report of Uzochukwu and Onwujekwe (2010) who acknowledged that financial consideration poses real obstacles among the low-income groups. According to them, in the traditional setting especially a rural area, this condition may be very challenging. Sometimes, even the availability of financial power may not change the health care behaviour of people due to their culture of poverty and ignorance. Anderson affirmed that there is need for certain resources to be available to an individual in order to actualise access and health services utilisation. These resources among others are financial consideration which possess obstacle among low income group as it make health services available to the individual and are found both at the family and community levels.

4.7.3 Access to Maternal Health Care Services

The study revealed that majority of the respondents perceived that the staff reception at the maternal health care centers in the study areas was either friendly or somewhat friendly. The study also shows that majority of the respondents agreed to having maternal health care center

within their communities in the study areas. This is an indication of the government involvement in the provision of maternal health care services to the populace. The study revealed that motorcycle accounted for the highest mode of transportation used by the women in accessing maternal health care services. The result revealed that respondents spent more in Kaduna North and Kaduna Central accessing their health care in the state. This might be attributed to the much use of motorcycle in these zones that charged more due to convenience unlike the use of buses in Kaduna South. The study revealed that majority of the respondents indicated finance as the major difficulty they experienced in accessing and using maternal health care services in the area while only very few of the respondents complained that the attitude of the health workers limited their access to maternal health care services.

4.7.4 Strategies to Overcome Barriers to Access and Utilisation of Maternal Health Care Services

On measure in overcoming maternal health care barriers, the result revealed that majority of the respondents reported that they have health care insurance while few said such did not exist within their communities. About one half reported that maternal health care enlightenment programme was always carried out in their communities to enlighten them on the importance of maternal health care services while few said such do not exist in their communities.

The study successfully identified some of the barriers in access and utilisation of selected maternal health care services in Kaduna State. The risk factors were identified and they include educational level, economic situation/status, and male dominance. All these variables are significantly related to the well-being of mothers during pregnancy. Furthermore, economic status of mothers, which is also, a function of education, is found to be the greatest predictor of maternal health care utilisation. This means that a woman who is highly educated does not face

economic pressure and is better able to be on top of these social factors than a woman who is not educated. What can therefore be drawn from this point is that for maternal health to improve, operational intervention must be design for education, economic situation and other social circumstances of women. In this regard therefore, proper education, poverty reduction social infrastructural developments are germane to maternal health.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summary of major findings conclusion and recommendations. The recommendations are drawn based on the findings of the study.

5.2 Summary of findings

The study is titled factors affecting access and utilisation of selected maternal health care services in Kaduna State. The specific objectives of the study are to access women's awareness of selected maternal health care services in the study area, to determine the extent of utilisation of selected maternal health care services in the study area, to identify factors affecting access to selected maternal health care services among women in the study area, and to determine the strategies put in place by women to overcome barriers to utilisation of these maternal health care services in the study area.

The study adopted Anderson health behavioural theory. The basic assumption of the Anderson health behavioural model is that individual's use of health services is a function of their predisposition to use them in the society. Anderson health behavioural model was adopted to explain the utilisation of maternal health care services by women in Kaduna State. Data for the study was collected using quantitative (questionnaire) and qualitative (IDIs, FGDs and Hospital records) techniques.

Findings from the study shows that majority (33.2%) of the respondents were of ages between 28-32 years and the older women were more in Kaduna North (47%) given most above 37 years. Majority (52.5%) of the respondents practiced Christianity while the rest practice Islam

with 33.4% of respondents having secondary school level of education. Petty trading (41.9%) was the main occupation of the people with monthly income level of N11, 000-N20, 000 accounted for the highest in all the three zones.

The study indicated that awareness of antenatal care, delivery care, and family planning services were the most common services known by the respondents in Kaduna State. About 98.1% of the respondents have heard about family planning, however only 26.5% have ever used any family planning method. Injectable and oral pills were the only family planning methods used by the women within the reproductive age in the study area. Also 56.8% of the respondents reported that their husbands disagreed to the use of family planning as the reason for not using family planning.

Regarding antenatal attendance most of the respondents constituting 99.7%, did attend with women from Kaduna North and Kaduna South attended most in the study area. Abdominal examination, weight measurement and BP measurement were the most offered services during antenatal visit. Some of the respondents use either government hospital or private clinics as their place of child delivery with 47.2% delivering at home. About 68.1% of the respondents agreed that antenatal care services offered by the maternal health care centers were free. Motorcycle (43.4%) accounted for the highest mode of transportation used by the women in accessing maternal health care services and finance (98.1%) was the major difficulty experienced in accessing and using health care facilities in Kaduna State. Most respondents agreed to the provision of maternal health care insurance for the poor and maternal health care enlightenment programme mostly conducted in Kaduna South (100%) and Kaduna Central (50.4%) zones.

The results shows that there is no significant relationship between educational level and antenatal care attendance while significant relationship exist between educational level and places of ANC, the place of delivery, ever use and current use of family planning.

The results show that there is a significant relationship between place of delivery and religion as well as with monthly income. Also the regression summary shows that antenatal attendance has a negative association with monthly income only whereas it was a positive relationship with religion, marital status, educational level and age as the F-test result shows that the regression is significant at 0.05 levels. The regression summary shows that current use of family planning has a negative association with educational level and age whereas a positive relationship was observed with the other socio-economic variables as the F-test result shows that the regression is not significant at 0.05 level of significant.

5.3 Conclusion

The main objectives of maternal health services are to ensure that every expectant mother maintains good health up to time of delivery and to bear healthy children. The woman is also expected to receive antenatal, intranatal postnatal and child spacing services from well-equipped health facilities and adequately trained health personnel. The study examines factors affecting access and utilisation of selected maternal health care services in Kaduna State.

While maternal healthcare centers are relatively uniformly distributed throughout Kaduna State, some women still under-utilise maternal health services especially delivery services, and family planning services. Although there is no single solution to this problem in Kaduna State, some strategies that could result in enhanced utilisation of maternal health services have been variously outlined. These include capacity building and empowerment of people within the

community through orientation, mobilization and women empowerment. Similarly, quality of maternal health care and service delivery especially in the rural areas must be assured by those in management positions.

The study showed that availability and access, education and income were important determinants of utilisation of maternal health services in the study locations. These created disparities in access and utilisation of maternal health services. Quality of maternal health services, finance and male dominance were key factors in the women's access and utilisation of maternal health services. Lack of women empowerment and poor decision making power of the women were significantly responsible for poor utilisation of maternal health services. These modifying factors as described by the Anderson health behavioural model were mostly responsible for non-utilisation of maternal health services by the women.

The study revealed that economic status and level of education and male dominance are the factors affecting utilisation of maternal health care services especially delivery and family planning services. The study also shows that antenatal care is the most utilised service among all the services of maternal health care.

It is instructive to note that although people in the state exhibited patriarchal values of exerting control on their wives including their health care, women who are economically empowered showed departure from that value. This was shown by the Southern Kaduna women paying for the services by themselves thus utilising the services more than their Hausa counterparts who were mostly dependent on their husbands.

This study has also revealed that socio-cultural risk factors of maternal health cluster together and are mutually reinforcing. Hence it has become problematic to attempt to develop a

single description of the situation of women. It is imperative to also consider the two-way nature of many of the possible relations observed. For instance, despite the relatively massive emphasis and expansion of maternal health care services, maternal health challenges prevail. The complexity of the nature of maternal health means that solutions need to be equally complex. Maternal health complication does not just have one model of causes, so government must focus on the various dimensions of social causes of maternal health complications to reduce maternal mortality and morbidity. Understanding the influences is very important to improving maternal health.

To push this country out of its plague of high maternal mortality rate as it is done in developed countries and the emerging middle-income countries around the globe, there is need for practical and sustainable development. It was evident from the study why the achievement of MDGs and vision 20-20-20 was a mirage as the current poor planning, poor infrastructure and basic amenities, growing poverty and deteriorating health outcomes are not forcefully and sustainably addressed.

5.4 Recommendations

Based on the findings of this study, the following measures were recommended to be taken to improve access and utilisation of maternal health care services in Kaduna State especially Kaduna North.

i. There must be sensitization programmes to increase the awareness of all other services rendered in maternal health care centers.

ii. Low family planning use in the presence of high awareness and low felt need suggests a need to make family planning commodities available. This calls for

communication strategies which include accurate information about specific contraceptive methods in order to dispel any misconceptions about family planning. Involving men and other religious leaders in program design will be critical in the uptake of family planning.

iii. There should be enlightenment programme concerning facility delivery especially for women in Kaduna North senatorial zone and delivery should be totally free without demanding any commodities from the women.

iv. Government should make accessibility to maternal health care centers easy by providing all it needs to access the health facilities so as to encourage women to utilise the services.

v. Also there should be public enlightenment programme on maternal health service utilisation and male responsibilities should be effectively carried out in all communities especially among women in Kaduna North who hardly utilise delivery care and family planning services.

vi. Women empowerment programme should be put in place to improve the women's economic power.

vii. Health promotion and education as a primary prevention approach will create opportunity for easier communication, dealing with the dynamics of knowledge, power and decision making process in the family, as part of the effort to ensuring good health during pregnancy.

viii. The government of the state should make it as a priority to put in place drugs revolving funds so as to get regular supply of essential drugs and consumables in the maternal centers.

ix. Finally, there must be strong political will on the part of government at all levels which include more commitment in supporting maternal health care programmes that will help in improving maternal health in Nigeria.

5.5 Contribution of the study to the Body of Knowledge

i. The study apart from contributing to empirical study, also contribute to public awareness and will also help government in formulating health policies.

ii. Contrary to many studies, this study found that education is not a yardstick to use ANC as both the literate and non-literate women utilised antenatal care.

iii. Contrary to many studies that women in Kaduna State do not use facility delivery, this study found that women in Southern senatorial zone and Central senatorial zone use facility delivery.

REFERENCES

Abdulraheem IS, (2011). Reasons for Incomplete Vaccination and Factors for Missed Opportunities among Rural Nigeria Children. Journal of Public Health Epidemiology, 3:194-203.

Abdulrazaq, AG., Kabir, S., Muhammad, NS., Suleiman, IH (2014). The Effect of Educational Intervention on Family Planning Knowledge, Attitude, and Practices among Married Women in a Military Barrack in Northern Nigeria. African Journal of Reproductive Health 18 (1):93-101.

Abel, NML., Francoise, MK., Michele, DW. and Phillipe, D. (2012), Determinants of Maternal Health Services Utilization in Urban Settings of the Democratic Republic of Congo-A Case Study of Lubumbashi City, *BMC Pregnancy and Childbirth*, 12(66), 1-11.

Abiodun, AJ. (2010). Patients' Satisfaction with Quality Attributes of Primary Health Care Services in Nigeria, Journal of Health Management, 12(1), 39-54.

Abor, O and Abekah-Nkrumah, E (2009). The Socio-Economic Determinants of Maternal Health Care Utilization in Ghana. Submitted to African Economic Research Consortium.

Abubakar, M., (2012). An Assessment of Men's Role and Attitude towards Family Planning in Zaria Local Government Area of Kaduna State, Nigeria. A MSc Thesis Submitted to the Postgraduate School Ahmadu Bello University, Zaria, Kaduna State, Nigeria. Available from: www.kubanni.abu.edu.ng:8080/jspui/bitstream/123456789/918/1/Mainbody.pdf. Accessed on 9/06/2017.

Acharya, LB and Cleland, J. (2012). Maternal and Child Health Services in Rural Nepal: Does Access or Quality Matter more? *Health Policy and Planning,* 15(2), 223-229.

Adams, T., Lim, SS., Mehta, S., Bhutta, ZA., Fogstad, H., Mathai, M., Zupan, J., Darmstadt, GL., (2005). Cost effectiveness Analysis of Strategies for Maternal and Neonatal Health in developing Countries. BMI. 331 (7525): 1107. In Tran T.K, Nguyen C.T.K, Nguyen H.D,Eriksson B, Bondjers G, Gottvall K, Ascher H and Petzold M. 2011. Urban-rural disparities in antenatal Care Utilization: A Study of Two Cohort of Pregnant Women in Vietnam BMC Health Services Research.11: 120.

Adamu, M., Yusuf, H., Salihu, M., Sathiakumar, N (2003). Maternal Mortality in Northern Nigeria: A Population-Based Study. *European Journal of Obstetric Gynecology Reproductive Biology* 109(2): 153–159.

Adamu, YM. (2005). Patterns of Maternal Morbidity and Mortality in Kano State: A Geographical Analysis. *Journal of Social and Management Sciences, 9(Special edition): 196 – 221*.

Adamu, YM., Salihu, HM. (2002) 'Barriers to the use of antenatal and obstetric care services in rural Kano, *Nigeria Journal of obstetrics and Gynaecology* (2002), Vol. 22, 6, 600-603 [online available from: http://web.ebscohost.com.ezproxy.liv.ac.uk/ehost/pdfviewer/pdfviewer?hid=122&sid=62889a21-ce73-455d-b9bc-4d60dc2ecf2%40sessionmgr112&vid=2 Accessed: (December 16, 2010).

Addai, I. (2000) 'Determinants of Use of Maternal-Child Health Services in Rural Ghana'*Journal of Biosocial Sciences*, 32 (1) 1-15 [Online] Available from: http://journals.cambridge.org.ezproxy.liv.ac.uk/download.php?file=%2FJBS%2FJBS32_01%2FS0021932000000018a.pdf&code=34c96ce29d45c1907fc0936b8a4b398c (Accessed: February 02, 2015).

Adebayo E.F (2014). Factors that Affect the Uptake of Community-based Health Insurance in Low and Middle-Income Countries:A SystematicProtocol. BMC Open, 4(2).

Adedini, SA., Odimegwu, C., Imasiku, ENS., Ononokpono, DN., and Ibisomi, L. (2014). Regional Variations in infant and child mortality in Nigeria: a multilevel analysis. *Journal Bio Social Science* 1-23.

Adegboyega O and Abioye K (2017). Effects of Health-care Services and Commodities Cost on the Patients at the Primary Health Facilities in Zaria Metropolis, North Western Nigeria. *Nigeria Journal of Clinical Practice.* Vol.2 (8):1027-1035.

Adewoye, KR., Musa, IO., Atoyebi, OA., and Babatunde, OA. (2013). Knowledge of Utilisation of Antenatal Care Services by Women of Child Bearing Age in Ilorin-East Local Government Area, North Central Nigeria. *International Journal of Science and Technology* 3(3): 188-193.

Agency for Healthcare Research and Quality, (AHRQ), (2014). Stakeholders 'Guide. www.effectivehealthcare.ahrq.gov. Accessed on 15/05/2017.

Agha, S. (2000). "The Determinants of Infant Mortality in Pakistan." *Social Science and Medicine*51: 199-208.

Agus, Y., Horiuchi, S. (2012). Factors Influencing the Use of Antenatal Care in Rural West Sumatra, Indonesia. Available from: https://bmcpregnancychildbirth.biomedcentral/.com/articles/10.1186/1471-23. Accessed on 2/06/2017.

Ahmed, S. (2010). Differing health and health-seeking behaviour of the indigenous population of the Chittagong Hill Tracts, Bangladesh. *Asia Pacific Journal of Public Health,*13(2); 100-108.

Ahmed, S., Saifuddin, A., (2012). Maternal Deaths Averted by Contraceptive Use: An Analysis of 172 Countries. The Lancet, 380 (9837):111-125. Available from: www.lancet.com. Accessed on 24/05/2017.

Ahmed-Adams, ZB (2012). Knowledge, Attitude, and Practice of Natural Family Planning among Couples in Kaduna Metropolis. A MSc thesis submitted to the Postgraduate School, Ahmadu Bello University, Zaria, Kaduna, Nigeria. Available from: www.Kubanni.abu.edu.ng/8080/…/KNOWLEDGE%2C%20ATTITUDE%20AND20P.

Aigbiromolen, AO., Alenoghena, I., Eboreime, E., Abejegah, C (2014). Primary Health Care in Nigeria: From Conceptualisation to Implementation. Journal of Medical and Applied Biosciences 6(2):1-10.

Aina, OI. (2012). Two Halves Make a Whole: Gender at the Crossroads of the Nigerian Development Agenda. Inaugural Lecture Series 250. Ile-Ife: Obafemi Awolowo University.

Ajayi IO and Osakinle DC (2013). Socio-demographic Factors Determining the Adequacy of Antenatal Care among Pregnant Women Visiting Ekiti State Primary Health Centers. Online Journal of Health and Allied Science 12(2)1-6.

Akanbiemu A.F and Adebowale AS (2013). EFFECT OF Perception of Free Maternal Health Services on Antenatal Care Facilities Utilisation in Selected Rural and Semi-Urban Communities of Ondo State, Nigeria. *British Journal of Medicine and Medical Research* 3(3):681-697.

Alakija, W (2000). Essentials of Community Health, Primary Health Care and Health Management, Benin-City, Ambik Press.

Alfonso Y.N, Bishai D, Bua J (2015). Cost-effectiveness Analysis of a Voucher Scheme Combined with Obstetrical Quality Improvements: Quasi Experimental Results from Uganda. *Health Policy and Planning* 30: 88–99.

Almeida, L.M., Caldas, J., Ayres-de-Campos D (2013). Maternal Healthcare in Migrants: A Systematic Review. *Maternal and Child Health J* 17(8):1346e54.

Alvarez G, Hernandez G (2009). Factors ASSOCIATED WITH Maternal Mortality in Sub-Sahara Africa: An Ecological Study. *BMC Public Health,* 9, 16 doi 10.1186/1471/2458-9-462.

Ameli, O., Newbrander, W. (2008). Contracting for Health Services: Effects of Utilization and Quality on the Costs of the Basic Package of Health Services in Afghanistan. Bulletin of the World Health Organization 86: 920–9.

Amoran, O., Lawoyin, T., and Lasebikan, V (2011). Prevalence of Depression among Adults in Oyo State, Nigeria: A Comparative Study of Rural and Urban Communities. *Australian Journal of Rural Health.15:211–215.*

Andersen, R., and Newman, JF. (2005). 'Societal and Individual Determinants of Medical Care Utilization in the United States' *The Milbank Quarterly, Vol. 83, No. 4, 2005 (pp. 1–28)* [Online]Available from:http://www.milbank.org/quarterly/830422andersen.pdf. Accessed: (August 23, 2010).

Andersen, R., Newman, JF. (1973). "Societal and Individual Determinants of Medical Care Utilization in the United States". *Milbank Mem Fund Q Health Soc*51 (1): 95–124.doi:10.2307/3349613. PMID4198894.

Andersen, R., Ronald M., and Odin, W. (1967). A Decade of Health Services. Chicago, IL: University of Chicago Press.

Andersen, RM. (1968). Behavioral Model of Families' Use of Health Services. Research Series No. 25. Chicago, IL: Center for Health Administration Studies, University ofChicago.

Andersen, RM. (1995). Revisiting the behavioural model and access to medical care: Does it matter? *Journal of Health and Social Behaviour, 36:1-10.*

Annan, K. (2005) *Gender and Development (GAD) Paradigm in Disaster and Gender: The Indian Ocean Tsunami and Women in Sri lanka*. Source: www.tsunamiandwomen.com. Retrieved: March, 13th 2017.

Annet, N. (2004). Factors Influencing Utilization of Postnatal Services. University of the Western Cape. Available at: http:etd. uwc.ac.za/usrfiles/modules/ etd/.../ etd_ init_ 6986_1174047746.pdf. Accessed on 8 January 2015.

Anokbonggo, W., Ogwal-Okeng, J., Obua, C., Aupont, O., and Ross-Degna, D. (2014). Impact of Decentralization on Health Services in Uganda: A Look at Facility Utilisation, Prescribing and Availability of Essential Drugs. *East Africa Medical Journal, Supple*, S2-7.

Anyanwu, JC., Erhijakpor, AEO. (2007). Health Expenditure and Health Outcomes in Africa, ADB Economic Research Working Paper Series No. 91. Available@ http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/26820442-FR-ERWP-91.PDF. Retrieved on 6/12/2014.

Araya, M., Mark, S., and Yohannes, K. (2012). The role of health extension workers in improving utilization of maternal health services. BMC Health Services Research; 12(35), 6-7.

Arcury, TA. (2005). The Effects of Geography and Spatial Behavior on Health Care Utilization among the Residents of a Rural Region. *Health Service Resolution.*40:135–155.

Arthur, E. (2012). Wealth and Antenatal Care use: Implication for Maternal Health Care Utilisation in Ghana. *Health Economics Review* 2:14. Retrieved from: http://www.healtheconomisreview.com/content/2/1/14 Accessed on 23 January 2015.

Asante-sarpong, H. (2007) *From their Own Perspective: Perceptions of Women about Modern and Natural/Traditional Methods of Contraception in Koforiduape and Asokore in the Eastern Region of Ghana*. A Research Paper in University of Science and Technology, Troudheim.

Ashir Doctor and Afenyadu (2013). Performance Based Financing and uptake of Maternal and Child Health Srvices in Yobe State, Nigeria. Global Journal of Health Science 5(3):34-41. Retrieved from: http://doi.org/10.5539/gjhs.v5n3p34.

Australia Health Ministers Advisory Council (2014-2015). National Maternity Service Plan. Annual Report. Available from: https://health.gov.au/.../NSMP%20Annual%20Report-FINAL%20ENDORSED%20(D... Accessed on 31 March, 2018.

Ayele, DZ., Belayihum, B., Teji, K., Admassu, D. (2014). Factors affecting Utilisation of Maternal Health Care Services in Kombolcha District, Eastern Hararghe Zone, Oromia Regional State, Eastern Ethiopia. International Scholarly Research Notices Volume (2014), Article ID917058,7 pages. Available from:http://dx.i.rg/10.1155/2014/917058 Accessed on 2/06/2017

Babalola, S., Fatusi, A. (2009). Determinants of Use of Maternal Health Services in Nigeria-Looking Beyond Individual and Household Factors. *Bio Med Central Pregnancy and Childbirth*; 9 (43), doi: 10.1186/1471-2393-9-43.

Babar, ZUD., Ibrahim, MIM., Singh, H. (2010). Evaluating Drug Prices, Availability, Affordability, and Price Components: Implications for Access to Drugs in Malaysia. PLoS Medicine 4: 466–75.

Babatunde, OA., Aiyenigba, E, Awoyemi, OA, Akande, TM., Musa, OI., Saludeen, AG., Babatunde, OO., Atoyebi, OA. (2013). Primary Health Care Consumers' Perception of Quality of Care and Its Determinants in North- Central Nigeria. *Journal of Asian Scientific Research.* 3(7): 775-785.

Babu, BV., Swain, BK., Mishra, S., Kar, SK. (2010). Primary Health Care Services among Migrant Indigenous Population Living in an Eastern Indian City. *Journal of Immigrant and Minority Health* 12, 53–59.

Bakibing, P., Mutombo, N., Mikiira, C., Kamande, E., Ezeh, A., and Muga, R. (2015). The Influence of Religion and Ethnicity on Family Planning Approval: A Case for Women in Rural Western Kenya. *Journal of Religion Health*. Do1 10:1007/S10943-015-0030-9. Pp. 1-14.

Banda, F. (2005). *Women, Law and Human Rights: An African Perspective*, Hart Publishing, Oxford – Portland Oregon.

Bashour, H., Mamaree, F. (2003). Gender Differences and Tuberculosis in the Syrian Arab Republic: Patients' Attitudes, Compliance and Outcomes. *Eastern Mediterranean Health Journal*, 9(4):757 – 768.

Béhague, DP., Kanhonou, LG., Filippi, V., Légonou, S., Ronstmans, C. (2008): Pierre Bourdieu and Transformative Agency: A study of How Patients in Benin Negotiate Blame and Accountability in the Context of Severe Obstetric Events. *Journal of Socio Health Illness*,30:289-510.

Beran, D., McCabe, A., and Yudkin JS. (2008). Access to Medicines versus Access to Treatment: the case of Type 1 Diabetes. *Bulletin of the World Health Organization* 86: 648–9.

Berhane, Y., Hogberg, U., Byass, P., and Wall, S. (2012). Gender Literacy and Survival among Ethiopia Adults, 1987-96. *Bulletin of the World Health Organisation*, 80 (9):714-720.

Bhan, G., Bhandari, N., Taneja, S., Mazumder, S., Bahl, R. (2015). The Effect of Maternal Education on Gender Bias in Care-Seeking for Common Childhood Illnesses. *Social Science and Medicine, 60*(4), 715-724.

Bhatia, JC., Cleland, J. (2010). Determinants of Maternal Care in a Region of South India. *Health Transition Review*, 5: 127- 142.

Bhutta, M., Zulfiqar, S (2014). Can Available Interventions end Preventable Deaths in Mothers, Newborn Babies, and Stillbirths and at What Cost? *The Lancet*, 384: 347-370. Available from: www.thelancet.com

Billi, JE., Pai, CW., and Spahlinger, DA. (2010). The Effect of Distance to Primary Care Physician on Health Care Utilization and Disease Burden. *Health Care Manage Review*. 32:22–29.

Birungi, H., Mugisha, F., Nsabagasani, X., Okuozi, S., Jeppsson, A. (2009). The Policy on Public- Private Mix in the Ugandan Health Sector: Catching up with Reality. *Journal of Health Policy and Planning.* 16(2):80-87.

Bloom, SS., Wypij, DD., Gupta, M.(2011). Dimensions of Women are Autonomy and the Influence on Maternal Health Care Utilization in a North Indian City. *Demography*, 38: 67-78.

Bour, D. (2010). Gender and the Utilization of Health Care Services in the Ashanti Region Ghana. Health Policy**,** *Science Direct.* Vol. 69, Issue 3. Pp. 375-388.

Buor, D. (2004). Accessibility and Utilisation of Health Services in Ghana.(PhD Thesis Presented at Maastricht University. Defended in June 2004). Netherlands Foundation for Advancement of Tropical Research (WOTRO), Netherlands Institute for Health Services Research (NIVEL), Twin Design (Printers), Netherlands, p 272.

Burgard, S. (2004). Race and Pregnancy Related Care in Brazil and South Africa. *Social Science & Medicine.* Available from: http://www.sciencedirect.com/science?ob=MImg&imagekey=B6VBF-4byjv2K&cdi=5925&user=8554888&pii=S0277953604000085&origin=search&coverDate=09%2F30%2F2004&sk=999409993&view=c&wchp=dGLBVlzSkWb&md5=b5f4596c7daadaaf7ce2d11f279f86&ie=/sdarticle.pdf. Accessed: December 03, 2011.

Burki, T. (2010). The Real Cost of Counterfeit Medicines. Lancet Infectious Diseases 10: 585–6.

Butawa, NN., Tukur, B., Idris, H., Adiri, F., and Taylor, KD. (2010). Knowledge and Perceptions of Maternal Health in Kaduna State, Northern Nigeria. Africa Journal of Reproductive Health 14(3):71-76

Cachelin, F., Rebeck, R., Veisel, C., Striegel-Moore, R. (2001). Barriers to Treatment for EatingDisorders among Ethnically Diverse Women. *International Journal of Eating Disorders, 30*(3), 269-278.

Cage A (2007). Barriers to Utilisation of Maternal Health Care in Rural Mali. Journal of Social Science and Medicine Vol. 65 (8):1666-1682.

Cameron, A., Ewen, M., Ross-Degnan, D. (2009). Medicine prices, availability, and affordability in 36 developing and middle-income countries: a secondary analysis. Lancet 373: 240–9.

Canning, D., Schultz, TP (2012). The Economics Consequences of Reproductive Health and Family Planning. The Lancet 380: 165-171. Available from: www.thelancet.com Accessed on 24/05/2017.

Carasso, BS., Lagarde, M., Tesfaye, A., Palmer, N. (2009). Availability of Essential Medicines in Ethiopia: An Efficiency–Equity Trade-off? *Tropical Medicine and International Health.* 14: 1394-400.

Carlough, M., and McCall, M. (2005), Skilled Birth Attendance: What Does it Mean and How can it be Measured? A Clinical Skills Assessment of Maternal and Child Health Workers in Nepal, *International Journal of Gynaecology and Obstetrics*, 89, 200-208.

Carrin, G.D., Evans, and Xu, K. (2010). Designing Health Financing Policy towards Universal Coverage. *Bulletin of World Health Organisation. Vol* 85(9).

Cashin, C., Borowtz, M., and Zuess, O. (2002). The Gender Gap in Primary Health Care Resource Utilisation in Central Asia. *Health Policy and Planning* 17 (3): 264-272.

Celik, Y., Hotchkiss, DR. (2000). The Socio-Economic Determinants of Maternal Health Care Utilization in Turkey. *Social Science & Medicine*; 50(12):1797-1806.

Center for Disease Control and Prevention (CDC) (2014). Division of Reproductive Health, Atlanta, U.S.A.

Chakraborty, N., Islam, MA., Chowdhury, RI., Bari, W., and Akhter, HH. (2003).Determinants of the Use of Maternal Health Services in Rural Bangladesh: *Health Promotion International* Vol. 18, No. 4 [Online] Available from: http://heapro.oxfordjournals.org/content/18/4/327.full.pdf+html Accessed: (August 20, 2013).

Cham, M., Sundby, J., and Vangen, S. (2011). Maternal Mortality in the Rural Gambia, a Qualitative Study on Access to Emergency Obstetric Care. *Reproductive Health,* 2:3 (Draft).

Chege, J., Askew, I., Liku, J. (2011). An Assessment of the Alternative Rites Approach for Encouraging the Abandonment of Female Genital Mutilation in Kenya. Nairobi: United States Agency for International Development (USAID).

Chen, L., Dai, Y., Zhang, Y., WU, Q., Rudan, D., Saftic, V., van Velthoven, M., Su, ZT., Scherpbier, RW. (2014). A Comparison between Antenatal Care Quality in Public and Private Sector in Rural Hebei, China. *Croat Medical Journal*. 54: 146-56.

Cheptum, J., Gitonga, M., Mutua, E., Muku, S., Ndabuki, J., and Koima, W. (2014). Barriers to Access and Utilisation of Maternal and Infant Health Services in Migori, Kenya. *Journal of Developing Country Studies.* 14 (15): 1-6.

Chimankar, DC., and Sahoo, H. (2012). Factors Influencing the Utilisation of Maternal Health Care Services in Uttarakhand, *Ethno medicine*, 5(3), 209-216.

Chimbiri, AM. (2002). Women's Empowerment, Spousal Communication and ReproductiveDecision-Making in Malawi (A Doctoral Dissertation), Hamilton, New Zealand: Waikato University.

Chimbiri, AM. (2007). The Condom is an 'Intruder' in Marriage: Evidence from Rural *Malawi Social Science and Medicine 64*(5):1102-1115.

China Health Statistical Yearbook (2014). China: National Bureau of Statistics of China.

Chote, AA., Koopmans, GT., Redekop, WK (2011). Explaining Ethnic Differences in Late Antenatal Care Entry by Predisposing, Enabling and Need Factors in The Netherlands. The Generation R Study. *Maternal and Child Health Journal* 15 (6):689e99.

Chukuezi, C. (2010): Socio-cultural Factors Associated with Maternal Mortality in Nigeria Research *Journal of Social Sciences*, 1 (5): 22-26.

Chukwuani, CM., Olugboji, A., and Ugbene, E. (2006). Improving Access to Essential Drugs for Rural Communities in Nigeria: The Bamako Initiative re-visited. Pharmacy World and Science 28:91-5.

Chuma, J., Okungu, V., and Molyneux, C. (2010). Barriers to Prompt and Effective Malaria Treatment among the Poorest Population in Kenya. *Malaria Journal* 9: 144.

Cockburn, R., Newton, P., Agyarko, E. (2005). The Global Threat of Counterfeit Drugs: Why Industry and Governments Must Communicate the Dangers. PLoS Medicine 2:302–8.

Cohen, S., Burger, M. (2012). Partnering: A new Approach to Sexual and Reproductive Health. Technical Paper 3. Retrieved May 5, 2003, from http://www.unfpa.org/upload/libpubfile/170filenamepartnering.pdf.

Cohen-Kohler, JC. (2007). The Morally Uncomfortable Global Drug Gap. Clinical Pharmacology and Therapeutics 82: 610–4.

Connelly, M.P., Murray, T., MacDonald, M., and Parpart, JL. (2012) "Feminism and Theoretical Perspectives". In Parpart, J. L., Connelly, M.P. and Barriteau, V.E. (eds.) *Theoretical Perspectives on Gender and Development*, Ottawa: International Development Research Center.

Cooke, JG., and Tahir, F. (2013). Maternal Health in Nigeria. With Leadership, Progress is Possible. A Report of the Center for Strategic and International Studies (CSIS). Global Health Policy Center.

Cross, S., Bell, JS., Graham, WJ (2011). What You Count is What You Target: The implications of Maternal Death Classification for Tracking Progress towards Reducing Maternal Mortality in Developing Countries, *Bull World Health Organ*, 88(2): 147-153. http://www.ncbi.nlm.nih.gov/pubmed?term=What%20you%20count%20is%20what%20you%20target%3A%20the%20implications%20of%20maternal%20death%20classification%20for%20tracking%20progress%20towards%20reducing%20maternal%20mortality%20in%20developing%20countries%2C%20ealth/topics/maternal_perinatal/research/en/.

Currie, D., and Wiesenberg, S. (2009). Promoting Women's Health-Seeking Behavior: Research and the Empowerment of Women. *Health Care Women International 24*(10), 880-899.

Dahiru, T., Oche, M. (2015). Determinants of Antenatal Care, Institutional Delivery and Postnatal Care Services Utilisation in Nigeria. *Pan African Medical Journal.* 21.

Dairo M, and Owoyokun KE (2010). FACTORS Affecting The Utilisation of Antenatal Care Services in Ibadan, Nigeria. Benin Journal of Postgraduate Medicine 12(1):1-6.

Danso-Appiah, A., De Vlas, S., Bosompem, K., and Habbema, J. (2012). Determinants of Health-Seeking Behaviour for Schistosomiasis-related Symptoms in the Context of Integrating Schistosomiasis Control within the Regular Health Services in Ghana. *Tropical Medicine & International Health, 9*(7), 784-794.

de Brouwere, V., Richard, F., and Witter, S. (2010). Access to Maternal and Perinatal Health Services: Lessons from Successful and Less Successful examples of Improving Access to Safe Delivery and Care of the Newborn. Tropical Medicine & International Health, 15:901–9.

Dean, K., and Kickbusch, I. (2005). Health Related Behavior in Health Promotion: Utilizing the Concept of Self-Care. *Journal of Health Promotion International, 10*(1), 35-40.

Dey, D. (2009). The Reproductive and Child Health (RCH) Status in West Bengal: Observations from NFHS Surveys in 1992-93 and 1998-99. In: DK Adak, A Chattopadhyay, P Bharati (Eds.): *People of Contemporary West Bengal.* New Delhi: Mohit Publications.

Digambar, A., Sahoo, H. (2012). Factors Influencing Utilization of Maternal Health Care Services in Uttarakhand, India: *Ethno Med;* 5(3), 209-216.

Dlamini, P., Kohi, T., Uys, L., Phetlhu, R., Chirwa, M., Naidoo, J., Holzemer, W., Greeff, M., and Makoae, L. (2007). Manifestations of HIV/AIDS Stigma: Verbal and Physical and Neglect Abuse in Five African Countries *Public Health Nursing. 24*(5): 389-399.

Doctor, H.,V. Bairagi, I., Findley, SE., Helleringer, S., and Dahiru, T. (2011). Northern Nigeria, Maternal, Newborn and Child Health Programme: Selected Analysis from Population-Based Baseline Survey'. *The Open Demography Journal*, *4*, 11-21 [Online] Available from: http://www.benthamscience.com/open/todemoj/articles/V004/11TODEMOJ.pdf. Accessed: (April 24, 2011).

Dreze, J., and Murthi, M. (2009) Fertility, Education, and Development: Evidence from India Population *and Development 27*(1) 33- 63.

Edward, B. (2011). Factors Influencing the Utilisation of Antenatal Care Content in Uganda. Austral Medical Journal 4(9):516526. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3562912. Accessed on 2/06/2017.

Ejembi, C.L., Alti-Muazu, M., Chirdan, O., Ezeh, HO., Sheidu, S. (2004). Utilisation of Maternal Health Services by Rural Hausa Women in Zaria environs, Northern Nigeria: Has Primary Health Care Made a Difference? *Journal of Community Medicine and Primary Health Care* 16(2); 47-54.

Ejembi, CL., and Prata, N (2010). Prevention of Postpartum Hemorrhage at Home Births in Five Communities Around Zaria, Kaduna State, Nigeria. www.bixby.berkeley.edu/wp-content/uploads/2015/03/vsi-PRHP-MIS-PPH-Home-Birth- 2010F.pdf. Accessed: May 15, 2016.

Engelman, KK. (2012). Impact of Geographic Barriers on the Utilization of Mammograms by Older Rural Women. *Journal of American Geriatric Society*.50:62–68.

Enrenreich, B. (2012). What "Other America"? Salon.com Retrieved from: http://www.salon.com/2012/03/15/thetruthaboutthepoor./ Accessed: November 13, 2016.

Ensor, T., Cooper, S. (2004). Overcoming Barriers to Health Service Access: Influencing the Demand Side. *Health Policy & Planning, 19*(2), 69-79.

Envuladu, EA., Agbo, HA., Lassa, S., Kigbu, JH., and Zoakah, AI. (2013). Factors Determining the Choice of Place of Delivery among Pregnant Women in Russia Village of Jos North, Nigeria: achieving the MDGs4 and. *International Journal of Medicine and Biomedical Research* 2(1):23-27.

Ervo, S., and Johansson, T. (eds) (2003) *Among Men: Moulding Masculinities* Aldershot Ashgate Ethno medicine *African Journal of AIDS Research 1*(2): 87 – 95.

Ezekiel K, Iwelunmor J, Grigsby T.D., (2017). Maternal and Child Health in Africa for Sustainable Development Goals Beyond 2015. Journal of Global Public Health. Vol.12(6):643-647.

Fagbamigbe, AF., Idemudia, ES (2016). Wealth and Antenatal Care Utilisation in Nigeria: Policy Implications. *Journal of Health Care for Women International* 38(1):1-37.

Falkingham, J. (2010), Inequality and Changes in Women's Use of Maternal Health Care Services in Tajikistan, *Studies in Family Planning*, 32, 32-43.

Federal Ministry of Health (2008), *National HIV/AIDS and Reproductive Health Survey (NARHS Plus) 2007*, Federal Ministry of Health, Abuja.

Federal Ministry of Health, Nigeria (2005). Roadmap for Accelerating the Attainment of the Millennium Development Goals Related to Maternal and Newborn Health in Nigeria, Abuja-Nigeria.

Federal Ministry of Health, Nigeria, (2010). National Strategic Health Care Development Plan, 2010-2015.

Federal Ministry of Health, Nigeria, (2013). Council Communiqué: 56th National Council on Health (NCH) Meeting, Held at the Civic Centre, Ozumba Mbadiwe Road, Victoria Island, Lagos State 26th – 30th August, 2013.

Federal Republic of Nigeria (2012). Saving One Million Lives. Accelerating Improvement in Nigeria's Health Outcomes Through a New Approach to Basic Services Delivery. Office of the Honourable Minister of State for Health, Federal Ministry of Health, Nigeria.

Feyisetan, BJ., and Bankole, A. (2002). Fertility transition in Nigeria: trends and prospect, paper presented at the Expert Group Meeting on Completing the Fertility Transition, United Nations,NewYork, <http://www.un.org/esa/population/publications/completingfertility/RevisedBANKOLEpaper.PDF>, accessed April 18, 2016.

Fife, BL., and Wright, ER. (2010). The Dimensionality of Stigma: A Comparison of its Impact on the Self of Persons with HIV/AIDS and Cancer *Journal of Health and Social Behaviour 41*(1), 50–67.

Figueras MK, Lessof D, Menabde (2012). Health Systems. Health Wealth and Societal Well-being. Assessing the Case for Investing in Health Systems 1st Edition Pp1-18.

Folland, S., Goodman, AC., and Stano, ML. (2006). The Economics of Health and Health Care (5th ed.). Upper Saddle River, NJ: Prentice Hall.

Fonk, K., Mwai, C., Ndinya-Achola, J., Bwayo, J., and Temmerman, M. (2002). Health seeking and Sexual Behaviour among Primary Patients in Nairobi, Kenya. Sexually Transmitted Diseases. 29(2):106-111.

Foreit, J., Foreit, K. (2010). The Reliability and Validity of Willingness to Pay Surveys for Reproductive Health Pricing Decisions in Developing Countries. *Health Policy, 63*(1), 37-47.

Furuta, M., and Salway, S. (2006) 'Women's Position within the Household as a Determinant of Maternal Healthcare Use in Nepal'. *International Family Planning Perspectives*, 2006, 32(1):17–27 [Online] Available from: http://www.guttmacher.org/pubs/journals/3201706.pdf Accessed: (February 02, 2015).

Gage, AJ. (2007). Barriers to the Utilisation of Maternal Health Care in Rural Mali. Social Science and Medicine. doi:10.1016/j.socscimed.

Galandanci, H., Ejembi, CL., Iliyasu, Z., Alagh, B., and Umar, U. (2007) 'Maternal Health in Northern Nigeria—a Far Cry from Ideal'. *BJOG 2007; 114:448–452*. [Online] Available from: http://www3.interscience.wiley.com/cgibin/fulltext/118523378/PDFSTART. Accessed: June 15, 2012.

Garba, SN., (2015). Pattern of Utilisation of Maternal Health Services in Primary Health Care Facilities in Niger State, Nigeria. A PhD Dissertation Submitted to the School of Postgraduate Studies, Ahmadu Bello University. Available from: www.Kubanni,edu.ng:/8080. Accessed on 15th April, 2017.

Garcia-Moreno, C. (2002) Violence against women: consolidating a public health agenda. In Sen G, G. A., Östlin P (Ed.) *Engendering international health: a challenge of equity* Cambridge MIT Press.

Getachew, T., Abajobir, AA., Aychilum, M (2014). Focused Antenatal Care Service Utilisation and Associated Factors in Dejen and Aneded Districts, Northwest Ethiopia. Primary Health Care. 4:170.doi:10.4172/2167-1079,1000170

Ghana Health Survey (GHS) (2006). Reproductive and Child Health Annual Programme of Work. Annual Programme of Work, Ghana Health Services, Ghana.

Ghana Health Survey (GHS) (2007). *Reproductive Health Strategic Plan 2007-2011*. Accra, Ghana: Ghana Health Service.

Glei, DA., Goldman, N., and Rodriguez, G. (2010), Utilization of Care During Pregnancy in Rural Guatemala: Does Obstetrical Need Matter. Office of Population Research, Princeton University, Working Paper Series, Working Paper 2002-01.

Global Development (2014). Maternal Mortality down 45% globally, but 33 women an hour are still dying. Retrieved from: https://www.theguardian.com/news/datablog/2014/may/07/maternal-mortality-rate-drops- half-report-who-childbirth-pregnancy. Accessed on 31 March, 2018.

Global One (2015). Maternal Health in Nigeria: A Statistical Overview.

Goodman C, Opwora A, Kabare M, Molyneux S (2012). Health Facility Committees and Facility Management - Exploring the Nature and Depth of their Roles in Coast Province. Kenya *BMC Health Serv Res.* 2011;11:229.

Gordan, P., and Crehan, K. (n.d.). Dying of Sadness: Gender, Sexual Violence and the HIV Epidemic. *SEPED Conference Paper Series* Retrieved March 26, 2003, from www.undp.org/seped/publications/conf_pub.htm.

Gott, M., and Hinchliff, S. (2003). Barriers to Seeking Treatment for Sexual Problems in Primary Care: A Qualitative Study with Older People. *Family Practice, 20*(6), 690-695.

Govender, V., and Penn-Kekana, L. (2007). Gender Biases and Discrimination: A Review of Health Care Interpersonal Interactions. Paper Commissioned by the Women and Gender Equity Knowledge Network.

Graham, H. (2004). Social Determinants and their Unequal Distribution: Clarifying Policy Understandings. *Milbank Q, 82*(1), 101-124.

Green, A., and Collins, C. (2003). Health Systems in Developing Countries: Public Sector Managers and the Management of Contradictions and Change. *International Journal of Health Planning & Management, 18*(Suppl 1), S67-78.

Gregory, PM. (2010). Impact of Geographic Proximity to Cardiac Revascularization Services on Service Utilization. Medical Care.38:45.

Guendelman, S. (2008). Health Care Users Residing on the Mexican Border. What Factors Determine Choice Of the U.S. or Mexican health system?. Med Care 29 (5): doi: 10.1097/00005650-199105000-00003. PMID2020207.

Gwatkin, D (2005). How much would poor people gain from faster progress towards the millennium development goals for health? The Lancet. 365:813–7.

Gyimah, SO., Takyi, BK., and Addai, I. (2012) 'Challenges to the Reproductive Health Needs of African Women: On Religion and Maternal Health Utilization in Ghana' Social Science & Medicine Vol. 62, Issue 12, June 2006, pp. 2930-2944. [Online] Available from: http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6VBF-4J022W11&_user=10&_coverDate=06%2F30%2F2006&_rdoc=1&_fmt=full&_orig=search&_origin=search&_cdi=5925&_sort=d&_docanchor=&view=c&_acct=C000050221&_version=1&_urlVersion=0&_userid=10&md5=4f9ea9f62d7bfdeae163ae9bc1c449b9&searchtype=a Accessed: (December 04, 2010).

Ha, N., Berman, P., Larsen, U. (2009). Household Utilization and Expenditure on Private and Public Health Services in Vietnam. *Health Policy & Planning, 17*(1), 61-70.

Hadley, MB., Tuba, M (2011). Local Problems; Local Solutions: An Innovative Approach to Investigating and Addressing Causes of Maternal Deaths in Zambia's Copperbelt, *Reprod Health* 8(17). Available from: http://www.reproductive-health-journal.com/content/8/1/17. Accessed May 12, 2016.

Halroyd, E., Twins, S., Adab, P. (2004). Time to Right the Wrongs: Improving Basic Health Care in Nigeria. 359 *Lancet* 2030.

Hamlin, C. (2010). Preventing Fistula: Transport Role in Empowering Communities Health in Ethiopia, (August 30- September 13, 20040 Back to Office Report, Addis Ababa Fistula Hospital.

Hanson, K., Ranson, MK., Oliveira-Cruz, V., Mills, A. (2003). Expanding Access to Priority Health Interventions: A Framework for Understanding the Constraints to Saling-up. *Journal of International Development* 15: 1–14.

Harris, KM., McLean, JP., Sheffield, J. (2009). Examining Suicide-Risk Individuals Who go online for Suicide-Related Purposes. Archives of Suicide Research, 13(3), 264-276. doi: 10.1080/13811110903044419. PMID 19591000.

Hartigan, P. (2001). The Importance of Gender in Defining and Improving Quality of Care: Some Conceptual Issues. *Health Policy & Planning, 16*(Suppl.1), 7-12.

Harvey, L., and Myers, MD. (2009). "Scholarship and Practice: The Contribution of Ethnographic Research Methods to Bridging the Gap", *Information Technology & People,* Vol. 8, No. 3, pp. 13–27, accessed on 15/02/2009, at: http://www.fhi.rcsed.ac.uk/rbeaumont/virtualclassroom/chap5/s5/requirements_qual/Harvey-Myers.pdf.(MCB-University Press).

Hayes, I., Enohumah, K., McCaul, C. (2011). Care of the Migrant Obstetric Population. *International Journal of Obstetric Anesthesia*20, 321–329.

Haynes, R., Bentham, G., Lovett, A., Gale, S. (2010). Effects of distances to hospital and GP surgery on hospital inpatient episodes, controlling for needs and provision. *Social Science & Medicine, 49*(3), 425-433.

Health Communication Network. (2002). Health Communication Network Providing Innovative e-health Solutions. Retrieved 11 April, 2013, from: http://www.hcn.com.au/index.html.

Heaman, M., Bayrampour, H., Kingston, D. (2013). Migrant Women's Utilisation of Prenatal Care: A Systematic Review. *Maternal and Child Health Journal* 17, 816–836.

Heise, L., Ellsberg, M., Gottmoeller, M. (2012). A global overview of gender-based violence. *International Journal of Gynaecology and Obstetrics, 78 Suppl 1*, S5-S14.

Hewitt, N. A. (2010). Introduction. In N. A. Hewitt (Ed.), No permanent waves: Recasting histories of U.S. feminism (pp. 1-14). New Brunswick, NJ: Rutgers University.

Hjortsberg, C. (2003). Why Do the Sick Not Utilise Health Care? The Case of Zambia. *Health Economics*, *12*(9), 755-770.

Holloway, K., van Dijk, L (2011). Rational Use of Medicines. The World Medicines Situation 2011. Geneva, Switzerland: World Health Organization.

Human Development Report (2016). Human Development for Everyone. Briefing Note for Countries on the 2016 Human Development Report. Retrieved from: www.hdr.undp.org/sites/all/themes/hdr_theme/country-notes/NGA.pdf. Accessed on 5 April, 2018.

Hyacinth, EO., Laurence, C., Ikeako, G., Iloabachie, C. (2006). Factors Associated with Use of Maternity Services in Enugu, South West Nigeria. *Journal of Social Science & Medicine;* 63(7)1870-8.

Ibrahim, KS., Sarah, N., Juliet, D., and Lawson, O. (2008) Demand for Health Care Services in Uganda; Implications for Poverty Reduction. MPRA Paper No. 8558.

Ibrahim, Y. (2015). Poverty and Conflicts in Kaduna State: A Study of Zango Kataf Local Government Area (1987-2011). A MSc Thesis Submitted to the Postgraduate School, Ahmadu Bello University, Zaria, Kaduna State, Nigeria. Available from: www.kubanni.abu.edu.ng:8080/jspui/bitstream/123456789/72721/povertyandconflict. Accessed on 9/06/2017.

Ichoku, HE., and Fonta, WM. (2009). The Distributional Impact of Healthcare Financing in Nigeria: A Case Study of Enugu State. PMMA Working Paper No. 17: 3-22.

Idris, SH., Gwarzo, UMD., Shehu, AU.(2006). Determinants of Place of Delivery among Women in Semi-Urban Settlement in Zaria, Northern Nigeria; *Ann Afri Med* 5: 68-72.

Idris, SH., Sambo, M., Ibrahim, MS. (2013). Barriers to Utilisation of Maternal Health Services in Semi-Urban Community in Northern Nigeria: The Clients' Perspective. *Nigerian Medical Journal* 54(1):27-32.

India Online (2011) *Population of India 2012*. Source: www.indiaonlinepages.com. Retrieved, August 18, 2012.

Irwin, CE., Brindis, C., Holt, KA., Langlykke, K. (Eds) (2010) *Health Care Reform: Opportunities for Improving Adolescent Health* National Centre for Education in Maternal and Child Health Arlington VA.

Israelsk, I D., Gore-Felton, C., Power, R., Wood, MJ., Koopman, C. (2011). Socio Demographic Characteristics Associated with Medical Appointment Adherence among HIV-Sero Positive Patients Seeking Treatment in a County Outpatient Facility. *Prev Med*.33:470-475.

Itoe, ME. (2014). Determinant of Women's Access to and Utilisation of Health Care Services in Kaduna State, Nigeria. An MSc thesis submitted to Post Graduate School, Ahmadu Bello University, Zaria, Kaduna State. Nigeria.

Iyaniwura, CA., and Yussuf, Q. (2009). Utilisation of Antenatal Care and Delivery Services in Sagamu, South-Western Nigeria. *African Journal of Reproductive Health* 13 (3):1-12.

Iyer, A. (2005). Gender, Caste, Class, and Health Care Access: Experiences of Rural Households in Koppal district, Karnataka, Trivandrum, Achutha MenonCenter for Health Science Studies, Sree Chitra Tirunal Institute for Medical Science and Technology.

Izugbara CO, and Krassen-Coven E (2014). Research on Women's Health in Africa: Issues, Challenges and Opportunities. *Health Care for Women International*. 35(7):697-702.

Jacobs, BI., Bigdeli, P., Annear, M., Van, PL., Damme, W. (2012). Addressing Access Barriers to Health Services for the Poor: An Analytical Framework for Selecting Appropriate Interventions in Low Income Countries. *Health Policy and Planning* 27: 288–300.

Johanson, E., Long. NH., Diwan, VK., Winkvist, A. (2009). Gender and Tuberculosis Control: Perspectives on Health Seeking Behaviour among Men and Women in Vietnam. *Journal of Health Policy*. 52, 33-51.

Joshi C, Torvaldsen S, Hodgson R, Hayan A. (2014). FACTORS Associated with the Use and Quality of Antenatal Care in Nepal: A Population-based Study using the Demographic and Health Survey Data. BMC Pregnancy and Childbirth 14(1):94. Doi 10.1186/1471-2393-14-94.

Joshi, H., Paci, P., Wagstaff, A. (2001). *Inequalities in Health: Who you are? Where you live? Or who your parents were?* Washington DC: The World Bank.

Kabir, M., Iliyasu, Z., Abubakar, I., Sani, A (2005). Determinants of Utilization of Antenatal Care Services in Kumbotso Village, Northern Nigeria. *Journal of Tropical Doctor*. 35(2):110.

Kadobera, D., Sartorius, B., Masanja, H., Mathew, A., Waisuwa, P. (2005). The Effect of Distance to Formal Health Facility on Childhood Mortality in Rural Tanzania. *Global Health Action* 2012(5):1-9.

Kaduna State Ministry of Health (2015). The Report of the Committee on the Provision of Free Medical Services to Pregnant Women and Children Under 5 Years in Kaduna State.

Kamal, SMM. (2009) 'Factors Affecting Utilisation of Skilled Maternity Care Services among Married Adolescents in Bangladesh', Asian *Population Studies*, 5: 2, 153 — 170. [Online] Available from: http://pdfserve.informaworld.com/890307__913427575.pdf Accessed: (January 31, 2015).

Kane, Eileen. (2004). Girls Education in Africa. What Do We Know About Strategies That Work? Africa Region Human Development Working Paper Series. Human Development Sector Africa Region, the World Bank.

Kapiriri, L., Norheim, O.F. (2012). Criteria for Priority Setting in Health Care in Uganda: Exploration of Stakeholders' Values. Bulletin of the World Health Organisation, 82(3):172-179.

Kapoor, S. (2012). Domestic Violence Against Women and Girls. *UNICEF: Innocenti Digest, 6*.

Kawungezi, PC., AkiiBua, D., Aleni, C., Chitayi, M., Niwaha, A., Kazibwe, A., Sunya, E., Mumbere, E., Mutesi, C., Tukei, C., Kasangaki,A., Nakubulwa, S (2015). Attendance and Utilisation of Antenatal Care Services: Multi-Center Study in Upcountry Areas of Uganda. Open Journal of Preventive Medicine, 5, 132-142vailable from: http://dx.doi.org/ /.10.4236/ojpm.2015.53016 Accessed on 2/06/2017.

Keleha, A. (2006). Why Primary Care Offers a Comprehensive Approach to Tackling Health Inequities than Primary Care. Australian Journal of Primary Health 7(2):57-61.

Khan, M., Baillie, P. (2003). An Integrated Approach Through Health, Education and Community Development for the Developing Countries: the Baqai Model. *Education and Health (Abingdon), 16*(1), 75-78.

Khan, MSI. (2009), Operation Research Project, Health and Population Extension Division, Centre for Health and Population Research Working Paper, India, p131.

Kickbusch, I. (2010). Health Literacy: Addressing the Health and Education Divide. *Health Promotion International, 16*(3), 289-297.

Kiwanuka, SN., Ekipara, EK., Peterson, S. (2010). Access to and Utilisation of Health Services for the Poor in Uganda: A Systematic Review of Available Evidence. Transactions of the Royal Society of Tropical Medicine and Hygiene 102: 1067–74.

Kloos, H., Assefa,Y., Adugna, A., Mulatu, MS., Mariam, DH. (2011). Utilisation of Antiretroviral Treatment in Ethiopia between February and December: spatial, temporal, and demographic patterns. *International Journal of Health Geography*. 2007:6–45.

Koblinsky, MA., and Campbell, O. (2010), Factors affecting the reduction of maternal mortality. In Reducing maternal mortality: Learning from Bolivia, China, Egypt, Honduras, Indonesia, Jamaica and Zimbabwe. Washington, DC: The World Bank.

Kolahdooz, F., Launier, K., Nader, F., June Yi, K., Baker, P., McHugh, T., Vallianatos, H., Sharma, S (2016). Canadian Indigenous Women's Perspectives of Maternal Health and Health Care Services: A Systematic Review. *Diversity and Equality n Health and Care* 13(5): 334-348.

Koria, B., Banker, K., and Nayak, A (2012). Utilisation of Maternal Health Services. A Comparative Study, National Journal of Integrated Research in Medicine, 3(4): 38-41

Korinek, K., Smith, KR (2011).Prenatal Care among Immigrant and Racial-Ethnic Minority Women in a New Immigrant Destination: Exploring the Impact of Immigrant Legal Status. *Social Science and Medcine*72(10):1695e703.

Kotwani, A. (2009). Availability, Price and Affordability of Asthma Medicines in Five Indian States. *The International Journal of Tuberculosis and Lung Disease* 13: 574–9.

Kumar, R., Singhasivanon, P., Sherchand, JB., Mahisavariya, P., Kaewkungwal, J., Peerapakorn, S. (2004). Gender Differences in Socio-Epidemiological Factors for Leprosy in the Most Hyper-Endemic District of Nepal. *Nepal Medical College Journal.* 6(2):98-105.

Kuo, G., Hawley, S., Weiss, L., Balkrishnan, R., Volk, R. (2014). Factors Associated with Herbal Use among Urban Multiethnic Primary Care Patients: A Cross-Sectional Survey. *Biomedical Central: Complementary and Alternative Medicine, 4*(1), 18.

Kusuma, YS., Kumari, R., Pandav, CS., Gupta, SK. (2010). Migration and Immunization: Determinants of Childhood Immunization Uptake among Socioeconomically Disadvantaged Migrants in Delhi, India. *Tropical Medicine & International Health* 15,1326–1332.

Labonte, R. (2007). Participation in Health Promotion: The 'Hardware' and the 'Software'. In *Power, Participation and Partnerships for Health Promotion.* Victoria: Victoria Health Promotion Foundation.

Laing, R., Hogerzeil, H., Ross-Degnan, D. (2009). Ten Recommendations to Improve Use of Medicines in Developing Countries. *Health Policy and Planning* 16: 13–20.

Lanre-Abass, BA. (2008). Poverty and maternal mortality in Nigeria: towards a more viable ethics of modern medical practice, International Journal for Equity in Health, 7:11.

Laura, L., Manila, B., Spinelli A, Grandolfo M (2013). Inequalities in Maternal Care in Italy: The Role of Socioeconomic and Migrant Status. *Ann 1st Super Sanita* 49(2):209-218

Lawn, JE., Cousens, S., and Zupan, J (2005), 4 Million Neonatal Deaths: When? Where? Why? *Lancet,* 365(9462), 891-900.

Lawoyin, T. (2000), Risk Factors for Infant Mortality in Rural African Community, *Journal of the Royal Society for Health,* 32(1), 23-29.

Lee, S., Arozullah, A., Cho, Y. (2004). Health Literacy, Social Support, and Health: A Research Agenda. *Social Science & Medicine, 58*(7), 1309-1321.

Levine, A., Robert, A., Sarah, E., LeVine, L., Beatrice S.(2001). "Improve the Women: Mass Schooling, Female Literacy, and Worldwide Social Change." *Harvard Educ. Rev*.71(1):1–50.

Linceto O, Mothebesoane-anoh S, Gomez P, and Munjanja S (2010). Antenatal Care: Opportunities for Africa's Newborns. New York, NY: WHO. Retrieved From: http://www.who.int/pmnch/media/publications/aonsectionaIII2.pdf

Liu, Y. (2009). Reforming China's Health Care: for the People, by the People? Lancet 2009, 373(9660):281–283.

Lorenzo R, Wang H, Foreman K.J, Rajaratnam J.K, Nagbiayi M, MarcusJ.R, Murray C.J (2011). Progress towards Millennium Development Goals 4 and 5 on Maternal and Child Mortality: An update Systematic Analysis. The Lancet, 378, 1139-1165. Doi 10.1016/S0140-6736(11)61337.

Low, A., Ithindi, T. (2003). A step too far? Making Health Equity Interventions in Namibia more Sufficient. *International Journal of Equity in Health, 2*(1).

Lubbock, LA., and Stephenson, RB. (2008) Utilization of Maternal Health Care Services in the Department of Matagalpa, Nicaragua: *Rev Panam Salud Publica*. 24(2):75-84.

Mackenbach, J., Howden-Chapman, P. (2010). New Perspectives on Socioeconomic Inequalities in Health. *Perspectives in Biology and Medicine, 46*(3), 428-444.

Magadi, MA., Madise, NJ., Rodrigues, RN. (2000a). Frequency and Timing of Antenatal Care in Kenya: Explaining the Variations between Women of Different Communities. *Journal of Social Sciences*, 51:551–561.

Mangham-Jefferies L, Pitt C, Cousens S, Mills A, Schellenberg J. (2014). Cost-effectiveness of Strategies to Improve the Utilization and Provision of Maternal and Newborn Health Care in Low-income and Lower-middle-income Countries: A Systematic Review. *BMC Pregnancy and Childbirth* 14: 243.

Marchie, CL. (2012), Socio-Cultural Factors as Correlates of Maternal Mortality in Edo South Senatorial District, *Nigeria, Asian Pacific Journal of Reproduction*, 1(4), 315-317

Marian, R. (2000). *Encyclopedia of birth control*, Greenwood Publishing Group.

Masters SH, Burstein R, Amofah G, Abaogye P, Kumar S, Hanlon M. (2013). Travel Time to Maternity Care and its Effects on Utilisation in Rural Ghana: A Multi-level Analysis. Journal of Social Science and Medicine 93:147-154. Doi 10.1016/j.socscimed.2013.06.012.

Maternal and Child Health2 Monthly Flasher (2017). Retrieved from: www.mnch2.com/wp-content/.../August-2017-Monthly-Flash-Report-Kaduna.pdf.

Matsumura, M., Gubhaju, B. (2011). Women's Status, Household Structure and the Utilization of Maternal Health Services in Nepal. Asia-Pacific Population Journal; 16 (1):23-44.

Mattes, R., Bratton, M., Davids, YD. (2002). *Poverty, Survival and Democracy in Southern Africa* (No. 23). Cape Town: Afrobarometer.

Matthews, S., Manor, O. Power, C. (2010). Social Inequalities in Health: Are there Gender Differences? *Social Science & Medicine, 48*(1), 49-60.

Mavalankar, DV., Rosenfield, A. (2005). Maternal Mortality in Resource-Poor Settings: Policy Barriers to Care. *American Journal of Public Health* 95: 200–3.

McCombie, SC. (2012). Self-Treatment for Malaria: The Evidence and Methodological Issues. *Journal of Health Policy and Planning,* 17 (4): 333-344.

McCoy D, Hall J, Ridge M (2012). A Systematic Review of the Literature for Evidence on Health Facility Committees in Low- and Middle- Income Countries. *Health Policy Plann.* 27:449–66.

McCray, TM. (2010). Promoting the Journey to Health: Healthcare Access and Transportation in Rural South Africa. Unpublished PhD thesis. University of Michigan United States-Michigan.

McTavish, S., and Moore, S (2015). On est ensemble: Social Capital and Maternal Health Care Use in Rural Camerron. *Journal of Global Health* 15(6):11-33.

Medhanyie, A., Spigt, M., Kifle, Y., Schaay, N., Sanders, D., Blanco, R., Geertjan, D. and Berhane, Y. (2012), The Role of Health Extension Workers in Improving Utilization of Maternal Health Services in Rural Areas in Ethiopia: A cross Sectional Study, *BMC Health Services Research,* 12, 352-361.

Meechan, G., Collins, J., Petrie, KJ. (2013). The Relationship of Symptoms and Psychological Factors to Delay in Seeking Medical Care for Breast Symptoms. *Prev Med*.; 36:374–378.

Mehrotra, S., Jarrett, SW. (2012). Improving Basic Health Service Delivery in Low Income Countries: Voice to the Poor. *Journal of Social Science and Medicine*, 54(11):1685-1690.

Mekonnen, Yared., Asnaketch, M. (2002). Utilization of Maternal Health Care Services in Ethiopia. Calverton, Maryland, USA: ORC Macro.

Mesfin, G. (2012). The Role of Men in Fertility and Family Planning Program in Tigray Region *Ethiopian Journal of Health Development 16* (3): 247 – 255.

Mills, S., Bertrand, J. (2005). Use of Health Professionals for Obstetric Care in Northern Ghana;*Study Family Planning.* 36(1):45-56.

Ministry of Health of People's Republic of China (2009a). Norm of National Basic Public Health Services 2009. http://www.gov.cn/jrzg/2009-07/10/content_1362010.htm. Accessed: May 15, 2016.

Ministry of Health of People's Republic of China (2009b). Central Government Allocated 10.4 Billion Yuan For Basic Public Health Services. http://www.gov.cn/gzdt/2009-07/06/content_1358394.htm. Accessed: May 15, 2016.

Ministry of Health of People's Republic of China (2009c) News Release From Ministry Of Health On Introducing Health Reform for Health System In China. http://www.gov.cn/xwfb/2009-04/10/content_1282161.htm. Accessed: May 15, 2016.

Ministry of Health Population (MoHP) (2009). Second Long term Health Plan 1997-2017. Ministry of Health and Population, Kathmandu, Nepal.

Mischell, DR. (2007). Family planning: contraception, sterilization, and pregnancy termination. In: Katz, V. L., Lentz, G. M., Lobo, R. A., Gershenson, D. M., eds. *Comprehensive Gynecology*. 5th ed. Philadelphia, PA: Mosby Elsevier.

Misho, M., Schellenberg, JA., Mushi, AK. Obrist, B., Mshinda, H., Tanner, M., Schellenberg, D. (2007). Factors affecting home delivery in rural Tanzania. *Journal of Tropical Medicine and International Health*, 12(7):862–872.

Mohammad, SB. (2011) 'Why Are We so Poor in Northern Nigeria?'[Online]Available from:http://www.leadershipeditors.com/ns/index.php?option=com_content&view=article&id=11080:why-are-we-so-poor-in-northern-nigeria&catid=38:issues-&Itemid=15. Accessed: (April 13, 2010).

Molyneux S, Atela M, Angwenyi V, Goodman C (2012). Community Accountability at Peripheral Health Facilities: A Review of the Empirical Literature and Development of a Conceptual Framework. *Health Policy Plann.* 27:541–5.

Moore, D., Castillo, E., Richardson, C., Reid, RJ. (2013). Determinants of Health Status and the Influence of Primary Health Care Services in Latin America, 1990- 98. *International Journal of Health Planning & Management, 18*(4), 279-292.

Moss, N. (2002). Gender Equity and Socioeconomic Inequality: A Framework for the Patterning of Women's Health. *Journal of Social Science & Medicine, 54*(5), 649-661.

Mrisho, M., Obrist, B., Schellenberg, JA., Haws, RA., Mushi, AK., Mshinda, H. (2009). The Use of Antenatal and Postnatal Care: Perspectives and Experiences of Women and Health Care Providers in Rural Southern Tanzania. BMC Pregnancy Childbirth, 9:10.

Msuya, AA., Olaniyan, SE., Adegoke, AA. (2014). Utilisation of Skilled Birth Attendants in Northern Nigeria. A cross sectional survey. *Journal of Midwifery*, 30(1): 7-13

Muhammed, ZI. (2001) "Knowledge, Attitude and Practices about Family Planning among the Fulani in Northern Nigeria" in *Journal of General Studies*, Vol. 4 No. 1.

Mumbe, KC. (2010). Utilisation of Skilled Birth Attendants among Women of Reproductive Age in Central District, Kitui County. www.ku.acke/schools/public_health/images/.../caroline-mumbi.pdf. Accessed on December 31 2014.

Musa, OI., Salaudeen, AG., Babatunde, OO., Atoyebi, OA (2013). Primary Health Care Consumers' Perception of Quality of Care and its Determinants in North Central Nigeria. Journal of Asian Scientific Research 3(7):775-785

Mushinski, M. (2009). Promises to Keep: The Toll of Unintended Pregnancies on Women's Lives in the Developing World.

Nagdeve, D., Bharati, D. (2013). Urban-Rural Differentials in Maternal and Child Health in Andhra Pradesh, India. *Journal of Rural & Remote Health Research, Education, Practice & Policy.* Retrieved on 23/01/2015 from: http://rrh.deakin.edu.au.

Nanda, P. (2012). Gender Dimensions of User Fees: Implications for Women's Utilization of Health Care. *Reproductive Health Matters, 10*(20), 127-134.

Nanlwanga, A. (2004). Factors Influencing Utilization of Post Natal Services in Mulago and Mengo Hospital. Uganda. Available at: etd.uwc.ac.za/USrfiles/modules/etd/.../etd/ init.6986.1174647746.pdf.2004: 1-73. Assessed on 1-7-2010.

National Audit Office (2013). Department of Health . Maternity Services in England. Retrieved from: https://www.nao.org.uk/wp-content/.../2013/.../10259-001-Maternity-Services-Book-1.... Accessed on 31 March, 2018.

National Institute of Population Research and Training (NIPORT) (2011). Mitra and Associates, and Macro International. *Bangladesh Demographic and Health Survey 2011-Preliminary Report.* Dhaka, Bangladesh and Calverton, Maryland, USA: National Institute of Population Research and Training, Mitra and Associates, and Macro International; 2012.

National Population Commission (NPC) [Nigeria] and ICF Macro (2006) *Nigeria Demographic and Health Survey 2008.* Abuja, Nigeria: National Population Commission and ICF Macro [Online] Available from: http://pdf.usaid.gov/pdf_docs/PNADQ923.pdf Accessed: (June 10, 2010).

National Population Commission (NPC) [Nigeria] and ICF Macro (2014). Nigeria Demographic and Health Survey 2013, Abuja, Nigeria.

National Population Commission (NPC) [Nigeria] and ICF Macro (2016) Projected Population.

National Primary Health Care Development Agency (NPHCDA), (2011). Guidelines for Implementing Maternal, Newborn and Child Health Week. Abuja: NPHCDA.

National Primary Health Care Development Agency (NPHCDA), (2012). National Guidelines for the Development of Primary Health Care System in Nigeria. Abuja: NPHCDA.

National Primary Health Care Development Agency, (2013). Integrating Primary Health Care Governance (PHC under One Roof): Implementation Manual. Abuja: NPHCDA.

Navaneetham, K., Dharmalingam, A. (2012). Utilization of Maternal Health Care Services in Southern India. *Journal of Social Science and Medicine*, 55(10):1849–1869.

Needham, DM., Bowman, D., Foster, SD., Godfrey-Faussett, P. (2011). Patient Care Seeking Barriers and Tuberculosis Programme Reform: A Qualitative Study. *Health Policy, 67*(1), 93-106.

Nelson, A. (2012) *Dying for Life: the Selective Suffering of Women in Liberia*. Project Bibloteket, Aalborg University.

Newton, PN., Amin, AA. Bird, C. (2011). The Primacy of Public Health Considerations in Defining Poor Quality Medicines. PLoS Medicine 8: e1001139.

Nigeria Demographic and Health Survey (2013). Preliminary Report. National Population Commission Abuja.

Noor, AM. (2010). Developing Spatial Model of Health Service Access and Utilisation to Define Health Equity in Kenya. Unpublished PhD. Open University (United Kingdom), England.

Nuhu, MA.(2010). Knowledge and Perception of Maternal Health in Kaduna State, Northern Nigeria. *Africa Journal of Reproductive Health Special Issue*, 14(3): 71-76

Nyamongo, IK. (2012). Health Care Switching Behaviour of Malaria Patients in a Kenyan Rural Community. *Journal of Social Science and Medicine,* 54(3): 377-386.

O'Donnell, O. (2009). Access to Health Care in Developing Countries: Breaking Down Demand Side Barriers. *Cavernous de Saudi Pública* 23 (12): 2820-2834.

Obasi, EZ. (2013). A Review of Barriers and Socio-Cultural Factors Influencing the Access to Maternal Health Care Services in Nigeria. Helsinki Metropolis University of Applied Sciences. Master Degree.

Office for the Coordination of Humanitarian Data and Trends 2014: Global Challenges and Risks. Retrieved from: http://www.uncha.org/data-andtrends-2014/downloads/global-risks.pdf.

Ogunbekun, IO. (2010). Which Direction for Health Care in Nigeria? Health policy and Planning. 6(3):254-261

Ohiri, K. (2012). Savin One Million Lives Initiative. A Framework for National Leadership and Accountability for Women and Children's Health. Federal Ministry of Health, Nigeria.

Oishi, N. (2002), Gender and Migration: An Integrative Approach, CCIM, San Diego.

Okeshola, FB., Sadiq, IT. (2013). Determinants of Home Delivery among Hausa Women in Kaduna South Local Government Area of Kaduna State, Nigeria. *American International Journal of Contemporary Research. 3(5).*

Olaniyan, O. and Lawanson, A. (2010) Health Expenditure and Health Status in Northern and Southern Nigeria: A Comparative Analysis Using NHA Framework. Paper presented at the 2010 CSAE conference held at St Catherine College, University of Oxford, Oxford, UK. Available online at www.csae.ox.ac.uk/conferences/2010-EDiA/.../451-Lawanson. Retrieved on 10th June 2013.

Olise, P. (2012): Primary Health Care for Sustainable Development.

Oliveira-Cruz, V., Hanson, K., Mills, A. (2003). Approaches to Overcoming Constraints to Effective Health Service Delivery: A Review of the Evidence. *Journal of International Development.* 15, 41-65.

Olugbenga, O., Oladipo, A., Muhammed, SI., Umar, HS., Paige, P (2010). Antenatal Care and Skilled Birth Attendance in Three Communities in Kaduna State, Nigeria. African Journal of Reproductive Health. 14 (3):89-96.

Olugbenga-Bello, AI., Abodurin, OL., and Adeomi, AA. (2011). Contraceptive Practices among Women in Rural Communities in South-Western Nigeria. *Global Journal of Medical Research 11(2): 1-9.*

Oluwabamide, AJ., and Inyang, JD. (2006). Factors Affecting the Utilisation of Health Care Facilities by Elderly Women in Nigeria. A case Study of Akwa Ibom State, *International Journal of African Culture, Politics and Development,* 1(1), 100-109.

Omer, K., Nshadi, JA. Muhammed, CB., Adamu, M., Abubakar-Mallam, S., Oyo-Ita, A., Cockroft, AN. (2014). Seeking Evidence to Support Efforts to Increase Use of Antenatal Care in Two States of Nigeria. http://www.biomedcentral.com/1471-2393/14/380 Accessed on January 1 2015.

Onah, HE., Ikeako, LC., and Iloabachie, GC. (2006). Factors Associated with the Use of Maternity Services in Enugu South East Nigeria. *Social Science Medicine;* 63(7): 1870-78 [Online] Available at: http://www.sciencedirect.com.ezproxy.liv.ac.uk/science?_ob=ArticleURL&_udi=B6VB-4K5HWR84&_user=822084&_coverDate=10%2F31%2F2006&_rdoc=1&_fmt=high&_orig=search&_origin=search&_sort=d&_docanchor=&view=c&_acct=C000044499&_version=1&_urlVersion=0&_userid=822084&md5=7048d3f58dc8279fdd4f12e40108ffb4&searchtype=a Accessed: (December 03, 2010).

Onasoga, (2014). Awareness and Barriers to Utilisation of Maternal Health Care Services among Reproductive women in Amassoma community, Bayelsa State. *International Journal of Nursing and midwifery.* 6(1): 10-15

Ononokpono, DN., Odimegwu, CO., Imasiku, E. (2014). Contextual Determinants of Maternal Healthcare Service Utilisation in Nigeria, *Journal of Women and Health*, 53(7): 647-668.

Onwujekwe, O., Hanson, K., Uzochukwu, B., Ezeoke, O., Eze, S., and Dike, N. (2005). Geographic Inequities in Provision and Utilization of Malaria Treatment Services in Southeast Nigeria: Diagnosis, providers and drugs. *Health Policy*. 94: 144- 149.

Onwujekwe, O., Uzochukwu, B. (2010). Socio-economic and Geographic Differentials in Costs and Payment Strategies for Primary Healthcare Services in Southeast Nigeria. Journal of *Health Policy, 71*(3), 383-397.

Ortiz, AV. (2007): Determinants of Demand for Antenatal Care in Colombia. *Journal of Health Policy*, 86:363–372.

Osubor, KM., Fatusi, AO., Chiwuzie, JC. (2006). Maternal Health-Seeking Behavior and Associated Factors in a Rural Nigerian Community. *Maternal Child Health Journal*; 10:159-69.

Oyibocha E (2014). Sustainable Healthcare System in Nigeria: Vision, Strategies and Challenges. *Journal of Economics and Finance 5(2):28-39*

Pariyo, GW., Ekipara-Kiracho, E., Okui, O. (2009). Changes in Utilisation of Health Services among Poor and Rural Residents in Uganda: Are Reforms Benefitting the Poor? *International Journal for Equity in Health 8: 39.*

Parry, J., Matters, J., Laburn-Peart, C., Oxford, J., Dalton, S. (2007). Improving Health in Deprived Communities: what can residents teach us? Critical Public Health 17:123-36.

Patel, A., Gauld, R., Norris, P. (2010). This Body Does Not Want Free Medicines: South African Consumer Perceptions of Drug Quality. *Journal of Health Policy and Planning 25: 61–9.*

Pavlova, M., Groot, W., van Merode, G. (2011). The Importance of Quality, Access and Price to Health Care Consumers in Bulgaria: A Self-Explicated Approach. *International Journal of Health Planning & Management, 18*(4), 343-361.

Performance Quality and Accountability (PMA) (2014). Available from: www.pma2020org/sites/default/files/NGRI-KADUNA-FPBrief-2015-03-06.pdf Accessed on 23/05/2017

Peters, DH., Garg, A., Bloom, G., Walker, DG., Brieger, WR., and Rahman. MH. (2008). Poverty and Access to Health Care in Developing Countries**.** *Annals of New YorkAcademic Science,* 1136:161-171.

Peterson, JE. (2012). Oman's diverse society: Southern Oman. *Middle East Journal;*58:254.

Phillips, H. (2003). Use of Maternal Health Care among Women in South Africa. South Africa Journal of Demography 8(11):61-72

Pillia, RK., Williams, SV., Glick, HA., Polsky, D., Berlin, JA., Lowe, RA. (2010). Factors Affecting Decisions to Seek Treatment for Sick Children in Kerela, India. *Journal of Social Science and Medicine* 57(5): 783-790

Pokhrel, S., Sauerborn, R. (2004). Household Decision-Making on Child Health Care in Developing Countries: The Case of Nepal. *Health Policy & Planning, 19(4),218-233.*

Pokhrel, S., Snow, R., Dong, H., Hidayat, B., Flessa, S., & Sauerborn, R. (2010). Gender Role and Child Health Care Utilization in Nepal. *Health Policy, 74*(1), 100-109.

Population References Bureau (2014). World Population Data Sheet. Retrieved from: http://www.prb.org/pdf14/2014-world-population-data-sheet-eng.pdf. Accessed on 19 April, 2018

Portes, A., Kyle, D., Eaton, WW. (2007). Mental Illness and Help-Seeking Behavior among Mariel Cuban and Haitian Refugees in South Florida. *Journal of Health and Social Behaviour*33 (4): 283–298.

Rajeswari, R., Chandrasekaran, V., Suhadev, M., Sivasubramaniam, S., Sudha, G., Renu, G., (2007). Factors Associated with Patient and Health System Delays in the Diagnosis of Tuberculosis in South India. *International Journal of Tuberculosis& Lung Disease, 6*(9), 789-795.

Ram, F., Singh, A. (2011). Is Antenatal Care Effective in Improving Maternal Health in Rural Uttar Pradesh: Evidence from a District Level Household Survey. *Journal of Biosocial Science*.38(4):433–448.

Ramarao, S., Caleb, L., Khan, M., Townsend, J. (2011). Safer Maternal Health Rural Uttar Pradesh: Do Primary Health Services Contribute? *Health Policy and Planning* 16 (3): 256-263.

Rankin, W, Breannan, S., Schell, E., and Rankin, S (2005a) *A call For Community: Two Papers on HIV and AIDS Related Stigma in Africa* San Francisco, California Global AIDS Interfaith Alliance

Rankin, WW., Brennan, S., Schel, lE., Laviwa, J., Rankin, SH. (2005b) The stigma of being HIV-Positive in Africa. *PLoS Med 2*(8): e247 Accessed at http://www.pubmed central.nih.gov/picrender.fcgi?artid=1176240andblobtype=pdf]. Retrieved on June 15, 2014

Raven, JH., Chen, Q., Tolhurst, RJ., Garner, P (2007). Traditional Beliefs and Practices in the Postpartum Period in Fujian Province, China: A Qualitative Study. BMC Pregnancy Childbirth 2007, 7:8.

Rebhan, DP. (n.d.). Healthcare Utilisation: Understanding and Applying Theories and Models of Healthcare Seeking Behavior' [Online] Available from: http://www.cwru.edu/ med/epidbio/mphp439/healthcareutil.pdf. Accessed: June 11, 2010.

Reeves, H., Baden, S. (2000) *Gender and Development: Concepts and Definitions*. U K: BRIDGE Institute of Development Studies.

Reilley, B., Abeyasinghe, R., Pakianathar, MV.(2002). Barriers to Prompt and Effective Treatment of Malaria in Northern Sri Lanka. Tropical Medicine & International Health 7:744–9.

Ricketts, MI., Gold, ID. (2005). Access in Health Services Research: The Battle of the Frameworks, Nurse Outlook, *Journal of Public Medicine*, 53:274-280.

Rizk, DEE., Shaheen, H., Thomas, L., Dunn, E., Hassan, MY. (2009).The Prevalence and Determinants of Health Care-Seeking Behavior for Sultan Qaboos *University Medical Journal* Sultan Qaboos University.

Rohde, J., Cousens, S., Chopra, M. (2008). Alma-Ata: Rebirth and Revision 4 30 years after Alma- Ata: Has Primary Health Care Worked in Countries? *Lancet* 372: 950–61.

Romo, LH. (2014). An Examination of Subsidy Re-investment and Empowerment Programme in Nigeria. A MSc Thesis submitted to the Postgraduate School, Usman Danfodio University, Sokoto, Nigeria

Ropers-Huilman, B. (Ed.). (2003). Gendered futures in higher education: Critical perspectives for change. Albany, NY: SUNY.

Rowlands, S (2007). Contraception and abortion. *Journal of Rural Socio Medicine* 100 (10): 465–8.

Rutstein, S., Winter, R (2015). Contraception Needed to Avoid High Fertility Risk births, and Maternal and Child Deaths that would be Averted DHS Analytical Studied No 50. Rockville, Maryland, USA: ICF International

Ruxin, J., Paluzzi, JE., Wilson, PA. (2005). Emerging Consensus in HIV/ AIDS, Malaria, Tuberculosis, and Access to Essential Medicines. *Lancet* 365: 618–21.

Ruxton, S. (2004).*Gender, Equality and Men: Learning from Practice* Oxford OXFAM

Sainsbury, P., Harris, E. (2002). Understanding the Causes of Health Inequalities: Incorporating Personal, Local, National, and Global Perspectives. *New South Wales Public Health Bulletin, 13*(6), 121-123.

Saleh, K., Ibrahim, MI. (2005). Are Essential Medicines in Malaysia Accessible, Affordable and Available? Pharmacy World & Science 27: 442–6.

Sambo, M., Abdulrazaq, GA., Shamang, AF., Ibrahim, AA. (2013). Household Cost of Antenatal Care and Delivery Services in a Rural Community of Kaduna State, North-Western Nigeria. *Nigeria Medical Journal* 54(2): 87-91

Sarin, A., Gough, N., Grezo, C., Coyle, D., Waverman, L., Meschi, M.(2010). *Moving the Debate forward. Africa: The Impact of Mobile Phones* (No. 2).

Say, L., Chou, D (2011). Better Understanding of Maternal Deaths — The New WHO Cause Classification System, *An International Journal of Obstetrics and Gynaecology*,118 (Suppl s2):15–17. Available from www.who.int/entity/reproductiveh. Accessed: May 12, 2016.

Say, L., Raine, R. (2007). A Systematic Review of Inequalities in the Use of Maternal Health Care in Developing Countries: Examining the Scale of the Problem and the Importance of Context. *Bulletin of World Health Organisation* 85:812-19.

Schultz, TP., Joshi, S (2013). Family Planning and Women's and Children's Health: Consequences of an Outreach Program in Matlab, Bangladesh. *Demography* 50 (1):149-180

Seljeskog, L., Sundby, J., Chimango, J. (2006).Factors Influencing Women's Choice of Place of Delivery in Rural Malawi--An Explorative Study; *Africa Journal on Reproductive Health*. 10(3):66-75.

Shaikh, T., and Hatcher, J. (2009). Health seeking behaviour and health utilization in Pakistan. Challenging the policy makers. *Journal of public health.* 27(1): 49-54.

Shaokang, Z., Zhenwei, S., Blas, E. (2012). Economic Transition and Maternal Health Care for Internal Migrants in Shanghai, China. *Health Policy and Planning*, 17 (Suppl), 47–55.

Shariff, A., Singh, G. (2002). Determinants of Maternal Health Care Utilization in India: Evidence from a Recent Household Survey. National Council of Applied Economic Research. *Working Paper Series*; 85.

Shields, T., Chetley, A. and Davis, J. (2009). ICT in the Health Sector: Summary of the online Consultation Information Development.

Short, SE., and Zhang, F. (2014) Use of Maternal Health Services in Rural China. *Journal of Population Studies.* 58 (1): 3-19.

Silas S, Penn-Kekana L, Harris B, Birch S, McIntrye D (2012). Exploring Inequalities in Access to and Use of Maternal Health Services in South Africa. BMC Health Service Research. Vol. 12(120): 1-12

Singh, A., Padamadas, SS., Mishra, US., Pallkadavath, S., Johnson, FA. (2012a). Socio-Economic Inequalities in the Use of Postnatal Care in India. PLoS ONE 7(5):e37037, doc 10.1371/journal.pone.0037037

Singh, PK., Rai, RK., Singh, L. (2012b) Examining the Effect of House Hold Wealth and Migration Status on Safe Delivery Care in Urban India 1992–2006. PLoS ONE, 7, e44901.

Singha, P. (2003). Textbook on Biostatistics, Department of Community Medicine. A.B.U. Zaria, 2nd Edition Pg. 185-205

Smith, KM., Maeusezahl-Feuz, M. (2004) Indoor air Pollution from Household Use of Solid Fuels. in Ezzati, M., Rodgers, A. D. & Lopez, A. D. (Eds.) *Comparative Quantification of Health Risks: The Global and Regional Burden Of Disease Due to Select Major Risk Factors.* Geneva, World Health Organisation.

Solomon, NM. (2005). Health Information Generation and Utilization for Informed Decision-Making in Equitable Health Service Management: The Case of Kenya Partnership for Health program. *International Journal of Equity in Health*, *4*, 8.

Soyibo, A (2004). National Health Accounts of Nigeria, 1998–2002. Final Report, 2005 submitted to the World Health Organization

Soyibo, A., Olaniyan, A., Lawanson, AO. (2005) Estimation of National Health Accounts of Nigeria: Where are we and what is Future Direction? Paper Presentation, West African Health Economics Network Inaugural Workshop. Enugu.

Soyibo, A., Olaniyan, O., and Lawanson, A. (2009) A Situational Analysis of the Nigerian Health Sector; Report Submitted to Management Education Research Consortium, Washington DC

Ssengooba, F., Neena, S., Mbonye, A., Sentubwe, O., Onama, V (2003). Maternal Health Review. Makerere University Institute of Public Health. Health System Development Programme

St. Leger, L. (2010). Schools, Health Literacy and Public Health: Possibilities and Challenges. *Health Promotion International*, *16*(2), 197-205.

Standing, H (2004). Understanding the 'Demand Side' in Service Delivery: Definitions, Frameworks and Tools from the Health Sector. London: DFID Health Systems Resource Centre.

State of Victoria, (2012). Postnatal Care Program Guidelines for Victorian Health Services: Victoria: State of victory department of health; 2012.Available at: http://docs.health.vic.gov.au/docs/doc/715A53A28AA4E8CACA257ACC006D257E/$FILE/121022%20Postnatal%20care%20guidelines_web.pdf. Accessed on 9 January 2015.

Stephenson, A. (2006). Multilevel Modeling Determinants of Maternal Health Care Utilisation in Nigeria. www.paa2013.princeton.edu/papers/130560.Accessed 7th June, 2014.

Stewart, K., and Sommerfelt, E. (2008). Utilisation and Maternal Health Services. A Comparative Study Using DHS Data Demographic and Health Surveys. World Conference: Washington DC.

Streatfield, PK., Arifeen, SE., Al-Sabir, A., Jamil, K. (2010).Bangladesh Maternal Mortality and Health Care Survey 2010: Summary of Key Findings and Implications. Dhaka, Bangladesh: National Institute of Population Research and Training; 2011.

Sudha, G., Nirupa, C., Rajasakthivel, M., Sivasusbramanian, S., Sundaram, V., Bhatt, S. (2013). Factors Influencing the Care Seeking Behaviour of Chest Symptomatics: A Community Based Study Involving Rural and Urban Population in Tamil Nadu, South India. *Tropical Medical International Health.*8:336–341.

Suleiman, AH. (2011). Utilisation of Maternal Health Care Services in Nigeria: An Analysis of Regional Differences in the Patterns and Determinants of Maternal Health Care Use. A MSc. Dissertation submitted to the University of Liverpool.

Suleiman, HI., Mohammed, NS., Mohammed, SI. (2013). Barriers to Utilisation of Maternal Health Services in Semi-Urban Community in Northern Nigeria. The Clients' Perspective. *Nigeria Medical Journal,* 54(1):27-32.

Swain, BK., Mishra, S. (2006). Immunization Coverage among Migrant Tribal Children in Slums of Orissa. *Journal of Indian Pediatrics,* 43, 1011–1013.

Szpankowaski, W. (2012). What is Information?-Purdue Computer Science-Purdue University. Available from: https://www.cs.purdue.edu/homes/spa/talks/info.pdf. Accessed on 9/06/2017

Taffa, N., Chepngeno, G., Amuyunzu-Nyamongo, M. (2010). Child Morbidity and Health Care Utilization in the Slums of Nairobi, Kenya. *Journal of Tropical Pediatrics*, *51*(5), 279-284.

Tao, F., Huang, K., Long, X., Tolhurst, R., Raven, J (2010). Low Postnatal Care Rates in Two Rural Counties in Anhui Province, China: Perceptions of Key Stakeholders. *Midwifery*, 27(5):707–715.

Teferra, AS., Alemu, FM., Woldeyohannes, SM. (2012). Institutional Delivery Service Utilisation and Associated Factors among Mothers Who Gave Birth in the Last 12 Months in Sekela District, North-West of Ethiopia. A Community-Based Cross Sectional Study. BMC Pregnancy and Childbirth Pp. 1-11. http://www.biomedcentral.com/1471-2393/12/74. Retrieved on 5 January, 2015.

The Economist. (2005). Mobile Telecommunications: Mobile-Phone Firms Have Found a Profitable Way to Help the Poor Help Themselves.

The Millennium Development Goals Report (2015). www.un.org/Millenniumgoals/2015_MDG_Report/pdf/MDG2015rev(July1).pdf. Accessed on 15/05/2017

The Reproductive and Child Health Unit; (2007). (Family Health Division), Public Health Department-Ghana Health Service (RCH/PHD-GHS): Annual Report 2007. Ghana: Accra.

Titaley, CR., Hunter, CL., Heywood, P., and Dibley, MJ. (2008) 'Why Don't Some Women Attend Antenatal and Postnatal Care Services?: A Qualitative Study of Community Members' Perspectives in Garut, Sukabumi and Ciamis districts of West Java Province, Indonesia'. *BMC Pregnancy and Childbirth 2010*, 10:61. [Online] Available from: http://www.biomedcentral.com/content/pdf/1471-2393-10-61.pdf Accessed: (December 13, 2011).

Tomson, L. (2010). Patient and Practitioner Literacy and Women's Health: A Global View from the Closing Decade 1990-2000. *Ethnicity and Disease, 13*, 248-258.

Tonelli, M., Manns, B., Culleton, B., Klarenbach, S., Hemmelgarn, B., Wiebe, N. (2010). Kidney Disease Network. Association between Proximity to the Attending Nephrologist and Mortality among Patients Receiving Hemodialysis. *CMAJ*.177:1039–1044.Tuan, T. Dung, V. T. M. Neu, I. & Dibley, M. (2005). Comparative Quality of Private and Public Health Services in Rural Vietnam. *Health Policy and Planning, 20*(5), 319-327.

Tuan, T., Dung, VTM., Neu, I., Dibley, M. (2010). Comparative Quality of Private and Public Health Services in Rural Vietnam. *Health Policy and Planning, 20*(5), 319-327.

Ubaidur, R., Hossain, S., Khan, M., Al-Sabir, A., Alam, M. (2004). Integrating of Reproductive Health Services for Men in Health and Family Welfare Centers in Bangladesh, FRONTIERS Final Report, Washington, DC: Population Council.

Ugal, AB., Ushie, BA., Ushie, M., Ingwu, J. (2012). Utilisation of Facilities and Maternal Health Outcome among Urban Dwellers of Obudu and Ogoja Local Government Area of Cross River State, Nigeria. *Afro Asian Journal of Social Sciences* 3(3): 1-20.

Ugboaja, JO., Nwosu, OB., Igwegbe, AO., OBI-Nwosu, AL. (2013). Barriers to Postnatal Care and Exclusive Breastfeeding among Urban Women in Southeastern Nigeria. *Nigerian Medical Journal;* 54(1): 45-50.

UNAIDS (2011). World AIDS Day Report. Fact Sheet. Available from: www.files.unaids.org/en/media/unaids/contents/documents/factsheet/2011/20111121_FS_WAD2011_global_en.pdf. Accessed May 10, 2014

UNAIDS (2012). Report on Global AIDS Epidemic. Available from: www.unaids.org/sites/default/files/media_asset/20121120_UNAIDS_Global_Report_2012_with_annexes_en_1.p.... Accessed May 10, 2014

UNFPA (2000). State of the World Population 2000: Lives Together, Worlds Apart: Men and Women in a Time of Change.

UNFPA (2003). Maternal Mortality Updates2002*:* A Focus on Emergency Obstetric Care. New York: UNFPA 2003.

UNFPA (2010), Emergency Obstetric Care. Available at www.unfpa.org Accessed on 25/05/2017

UNICEF (2007). State of the World's Children. UNICEF, Oxford University Press.

UNICEF (2007b). Postnatal Care: A Critical Opportunity to Save Mothers and Newborns. Washington, DC; population reference bureau:2007.Available at: http://www.prb.org/pdf07/snl_pncbrieffinal.pdf-Postnatal Care: Accessed on 9 January 2015

UNICEF (2015). Antenatal Care.http://data.unicef.org/maternal-health/antenatal-careAccessed 30-05-2017.

UNICEF (2016). Maternal Mortality Fell by almost Half between 1990and 2015. Retrieved from: http://data.unicef.org/maternal-health/maternal-mortality.html

UNICEF, WHO, World Bank and UN Population Division (2015). Levels and Trends in Child Mortality: Report 2015, Estimates Developed by the UN Inter-Agency Group for Child Mortality Estimation: New York, NY:United Nations Children's Fund. Retrieved from: http://www.childmortality.ofg/filesv20/download/IGME%20report%202015%20child%20mortality%20final.pdf

UNIFEM (2000) *Gender and Development: An Information Kit*. United Nations Development Fund for Women. Source: www.siyanda.org.

United Nations (2015a). Model-based Estimates and Projections of Family Planning Indicators 2015. Available from: www.un.org/en/development/desa/population/theme/family-planning/cp_model.Shtml. Accessed on 24/05/2017

United Nations (2015b). World Contraceptive Use 2015(POP/DB/CP/Rev2015) Available from: www.un.org.en/development/desa/population/publications/dataset/contraception/wcu2015.Shtml Accessed on 24/05/2017

United State Census Bureau (2016). Poverty in the U.S. Official Poverty Report. Retrieved from: www.census.gov/topics/income-poverty/poverty.html. Accessed on 3 April, 2018.

USAID (2006). United State Agency for International Development. Country Strategy Statement.

USAID (2012). Evaluation: Philippines: Performances Evaluation of the Family Planning and Maternal and Child Health Portfolio. Available from: www.camris.com/pdf/USAID_Philippines_Perfomance_Evaluation_of_the_FP_and_... Accessed May 10 2014

Uzochukwu, B. S. and Onwujekwe, O. E. (2010). Socio-Economic Difference and HealthSeeking Behaviour for the diagnosis and Treatment of Malaria: A Case Study of Four Local Government Areas Operating the Bamako Initiative Programme in South-East Nigeria. *International Journal of Equity Health.* (6): doi: 10.1186/1475-9276-3-6.

Van Eijk, A.M. Bles, H.M. Odhiambo, F. Ayisi, J.G. Blokland, I.E. Rosen, D.H. Adazu, K. Slussker, L. Lindblade, K.A.(2006). Use of Antenatal Services and Delivery Care among Women in Rural Western Kenya: A Community Based Survey. *Reproductive Health* 3:2 http://www.reproductive-health-journal.com/content/3/1/2 (Accessed on 03/06/2016).

Vital Wave Consulting (2009). *mHealth for Development: The Opportunity of Mobile Technology for Healthcare in the Developing World*. United Nations Foundation, Vodafone Foundation. p. 9.

Vlassoff, C., Garcia Moreno, C. (2002). Placing Gender at the Centre of Health Programming: Challenges and Limitations. *Social Science & Medicine, 54*, 1713-1723.

Walley, J., Lawn, J., Tinker, A. (2008). Alma-Ata: Making Alma-Ata a Reality. *Lancet* 372: 1001–7.

Wang, W., Micheal., W., Burgert, C., Coleston, J (2014). Influence of Service Readiness on Useof Facility Delivery Care: A Study Linking Health Facility Data and Population Data in Haiti. DHS Working Papers No.114 Rockville, Maryland, U.S.A: ICF International

Ward, J. (2012). *If not Now, When? Addressing Gender-Based Violence in Refugee, Internally Displaced, and Post-Conflict Settings. A Global Overview.* New York: The Reproductive Health for Refugees Consortium.

WH O (2017). Infant Mortality: Situation and Trends. In: Global Health Observatory (GHO) Data. Retrieved from: http://www.who.int/gho/childhealth/mortality/neonatalinfanttext/en/. Accessed 5 Apr 2018.

Whiteford, LM., and Szelag, BJ. (2010). Access and Utility as Reflections of Cultural Constructions of Pregnancy. Primary Care Update 7(3): 98-104.

WHO (2006a). The World Health Report: Working Together for Health

WHO (2014c). World Health Statistics. Retrieved from: http://apps.who.int/iris/bitstream/10665/112738/1/9789240692671/eng.pdf

WHO, UNICEF, UNFPA and the World Bank (2008). World Health Organization, UNICEF, UNFPA and The World Bank, Trends in maternal mortality: 1990 to 2008. Available from: http://whqlibdoc.who.int/publications/2010/9789241500265_eng.pdf. Accessed: May 11, 2016

WHO, UNICEF, UNFPA, World Bank and UN Population Division (2014c). Trends in Maternal Mortality: 1999 to 2013. Geneva: World Health Organisation Press. Retrieved from: http://apps.whoint/iris/bitstream/10665/112682/2/9789241507226.eng.pdf. Accessed on 31 March, 2018.

WHO, UNICEF, UNFPA, World Bank Group, and United Nations Population Division (2015). Trends in Maternal Mortality 1990-2015. Available from: www.data.worldbank.org/indicator/SH.STA.MMRT

WHO. (1998). Postpartum Care of the Mother and Newborn: A Practical Guide,0WHO, Geneva, p. 17.

WHO. (2000a). The World Health Report Health Systems: Improving Performance. Geneva: World Health Organisation.

WHO. (2005a). Attending to 136 Million Births every Year. In: *The World Health Report 2005* Available from: http://www.who.int/whr/2005/chap4-en.pdfAccessed: (November 07, 2012).

WHO. (2005c). World Health Report: Make Every Mother and Child Count, WHO, Geneva, pp. 73–74.

WHO. (no date). Maternal and Perinatal Health. Causes of Maternal Death. Available from: http://www.who.int/reproductivehealth/topics/maternal_perinatal/epidemiology/en/

WHO. (2002a). Gender Analysis in Health: A Review of Selected Tools.

WHO. (2002b). Global Action for Skilled Attendants for Pregnant Women. http://www.who.int/making_pregnancy_safer/documents/who_fch_rhr_0203/en/index.html

WHO. (2006).*Neonatal and Perinatal Mortality: Country, Regional and Global Estimates 2004*. Geneva: World Health Organization; 2006. Available at: http://www.who.int/maternalchild_adolescent/documents/9789241596145/en/index.htm (Accessed: December 20, 2011).

WHO. (2007a). Everybody's Business—Strengthening Health Systems to Improve Health Outcomes. Geneva, Switzerland: WHO.

WHO. (2007b). Maternal Mortality in 2005: Estimates Developed by WHO, UNICEF, UNFPA and The World Bank. Geneva: World Health Organization.

WHO. (2008c) Technical Consultation on Postpartum and Postnatal Care: Department of Making Pregnancy Safer; Switzerland; World Health Organization; Available at: http://whqlibdoc.who.int/hq/2010/ WHO_MPS_10.03_eng.pdf

WHO. (2009). Monitoring Emergency Obstetric Care. A Handbook by WHO,UNICEF,UNFPA and AMDD

WHO. (2010). Maternal Mortality. Fact Sheet No 348 November 2010. Key facts. Available from: www.who.int/entity/mediacentre/factsheets/fs348/en/ . Accessed: May 11, 2016

WHO. (2010b).Trends in Maternal Mortality:1990 to 2008: Estimates Developed by WHO, UNICEF, UNFPA and The World Bank. Geneva: World Health Organization; 2010.

WHO. (2011) Maternal Health Source: www.who.int/topics/maternal_health/en/. Retrieved June 17, 2012.

WHO. (2012) "Maternal Mortality" Retrieved from www.who.int/mediacentre/factsheet/fc348/en.

WHO. (2013). Nigeria Fact Sheet. Retrieved on 8th September 2013 from http://www.who.int/countries/nga/en/.

WHO. (2014). Gender, Women and Health: What Do We Mean by "Sex" and "Gender"?

WHO. (2014a). Health Topics: Maternal Health

WHO. (2014b). Accountability for Women's and Children's Health Recommendations 2: Health Indicators.

WHO. (2016). Pregnant Women Must be Able to Access the Right Care at the Right Time. Retrieved from http://www.who.int/making_pregnancy_safer/en. Accessed on 23 April 2017

Wilson, CJ., Deane, FP., Ciarrochi, J., Rickwood, D. (2005). Measuring Help-Seeking Intentions: Properties of the General Help-Seeking Questionnaire. *Canadian Journal of Counseling*, 39(1), 15-28.

Wolff, B., Blanc, AK., and Sekamatte-Ssebuliba, M. (2010) The Role of Couple Negotiation in Unmet Need for Contraception and the decision to Stop Childbearing in *Uganda Studies in Family Planning 31*(2) 124 – 137.

Wolinsky, FD., Johnson, RJ. (2005). "The Use of Health Services by Older Adults". *Journal of Gerontology*46(6): S345–57.

Workineh, YG., and Hailu, DA. (2014). Factors Affecting Utilisation of Postnatal Care Services in Jabitena District, Amhara Region, Ethiopia. *Science Journal of Public Health*2 (3): 169-176

Worku, H. (2013). Factors Affecting Utilization of Skilled Maternal Care in Northwest Ethiopia: A Multilevel Analysis. BMC International Health and Human Rights 13:20

World Bank (2013). Millennium Development Goals. Retrieved from: http://www.worldbank.org/mdgs/maternal/health.html

World Bank Group (2008) *Overview: What is Empowerment* accessed at http://web.worldbank.org/WEBSITE/EXTERNAL/TOPICS/EXTPOVERTY/EXTEMPO WERMENT. Retrieved on 15 October 2014.

World Population Data Sheet (2005).

Yahaya, MK. (2004). Analysis of Women's Reproductive Health Situation in Bida Emirate of Niger State, Nigeria. *African Journal of Reproductive Health.* 6(1):50–64.

Yaldlapalli, SK., Kuamari, R., Kaushal, S. (2013). Migration and Access to Maternal Health Care: Determinants of Adequate Antenatal Care and Institutional Delivery among Socio Economically Disadvantaged Migrants in Delhi, India. *Journal of Tropical Medicine and International Health* 18(10): 1202-1210

Yamasaki-Nakagawa, M., Ozasa, K., Yamada, N., Osuga, K., Shimouchi, A., Ishikawa, N., (2001). Gender Difference in Diagnosis and Health Care Seeking Behaviour in Rural Area of Nepal. *The International Journal of Tuberculosis and Lung Disease*. 5(1):24-31

Yar'zever S.I. (2014). Temporal Analysis of Maternal Mortality in Kaduna State. Northern Nigeria. A six Years Review. American Journal of Public Health Research. Vol.12(2):62-67 Doi: 10.12691/ajphr-2-2.

Ye, Y., Yoshida, Y., Rashid, MDH. (2010). Factors Affecting the Utilisation of ANC Services among Women in Khan District, Xiengkhouang Province, Lao PDR. Nagoya Journal of Medical Science 72:23-33. Available from: https://www.med.nagoya-u.ac.jp/medlib/nagoya_j_med-sci/..../p023-034_Ye.pdf. Accessed on 2/06/2017

Yesuf, EA., Calderon-Margalit, R. (2013).Disparities in the Use of Antenatal Care Service in Ethiopia Over a Period of Fifteen years. BMC Pregnancy and Childbirth.

Zakus, D., Kohler, J., Zakriova, V.(2010). Achieving a Dream: Meeting Policy Roals related to Improving Drug Access. *The Open AIDS Journal*4: 25–7.

Zhao, QI., Kulane, AS., Gao, YI., Biao, XU (2009). Knowledge, Attitude on Maternal Health Care among Rural to Urban Migrant Women in Shanghai, China. BMC Women health; 9:5-15.

Zwi, AB., and Yach, D. (2002). International Health in the 21st Century: Trends and Challenges. *Journal of Social Science & Medicine, 54*(11), 1615-1620.

APPENDICES

QUESTIONNAIRE FOR WOMEN

Respondents: Women in the reproductive age group 15-49 years either married, divorced, separated or widowed.

IDENTIFICATION

Serial Number: …….
NAME OF WARD: …….
HOUSE HOLD NUMBER: ……..
NAME OF RESPONDENT: …….
NAME OF HEAD OF THE HOUSE: ……

Postgraduate Students' Questionnaire on Socio-Economic and Cultural factors influencing Access and Utilisation of Maternal Health Care Services by women in Zaria and Giwa Local Government Areas of Kaduna State, Nigeria.

Dear Respondent,

I am a doctoral student in the department of sociology, Ahmadu Bello University, Zaria and I am conducting a study on Factors Affecting Access and Utilisation of Maternal Health Care Services in Kaduna State, Nigeria. This questionnaire was designed to collect data on access and utilisation of health care by women in these areas. Kindly provide appropriate information which will be used for academic purpose only. Also be assured of utmost confidentiality of any information provided.

Thank you.

Please fill in the blank, tick (√) the answers in the box and circle the correct answer(s) appropriately.

SECTION A: SOCIO-DEMOCRAPHIC CHARACTERISTICS OF THE RESPONDENTS

1. How old are you? (Age in years) ……
2. What is your religion? 1. Islam ( ) 2. Christianity ( ) 3. Traditional ( ) 4. Others Specify……
3. What is your marital status? 1. Married ( ) 2. Divorced/separated ( ) 3. Widowed ( )
4. What is your highest educational qualification? 1. None ( ) 2. Quranic education ( ) 3. Primary ( ) 4. Secondary ( ) 5. Tertiary education ( )

5. What do you do to generate an income? 1. Nothing ( ) 2. Petty trading ( ) 3. Farming ( ) 4. Unskilled labour work (e.g. cleaner, cook, washing plates, house help etc.) ( ) 5. Skilled labour work- Artisan (e.g. hair dressing, tailoring etc.) ( ) Other Specify ( )

6. What is your monthly level of income? 1. No income ( ) 2. Less than ₦5,000 ( ) 3.. ₦5,000-10,000 ( ) 4. ₦11,000-₦20,000 ( ) 5. ₦21,000-30,000 ( ) 6. ₦ 31,000 and above ( )

7. How many children have you? 1. None ( ) 2. 1 ( ) 3. 2 ( ) 4. 3 ( ) 5. 4 ( ) 6. 5 ( ) 7. 6 ( ) 8. 7 and above ( )

8. How many of them are alive? 1. None ( ) 2. 1 ( ) 3. 2 ( ) 4. 3 ( ) 5. 4 ( ) 6. 5 ( ) 7. All of them ( )

SECTION B: AWARENESS AND UTILISATION OF MATERNAL HEALTH CARE SERVICES

I WOULD LIKE TO TALK TO YOU ABOUT FAMILY PLANNING, ANTENATAL AND DELIVERY CARE SERVICES.

9. Kindly mention some of the services rendered by Maternal Health Care Centers. 1. Antenatal Care ( ) 2. Delivery services ( ) 3. Postnatal care ( ) 4. Family planning ( ) 5. Management Of infertility ( ) 6. Prevention and treatment of sexually transmitted infections, including HIV/AIDS. ( ) 7. All of the above ( ) 8. I don't know ( ). You can tick as many as possible

10. Have you ever heard of family planning? 1. Yes ( ) 2. No ( )

11. Have you ever used any family planning method before? 1. Yes ( ) 2. No ( )

12. If yes what type?

Modern Method	Heard about it (1) Yes (2) No	Ever used with Partner (1) yes (2) No	Currently using (1) yes (2) No
Male condoms			
Female condoms			
Oral pills			
Injectable			
IUCD or coil			
Foam/jelly			
Norplant			
Female sterilization			
Male sterilization			
Rhythm method			
Lam			
After sex pills or emergency contraception			
Other traditional methods (specify)			

13. Are you currently using any family planning method? 1. Yes ( ) 2. No ( )

14. If No to question 15 above why don't you use any family planning method? 1. It is against My religion ( ) 2. I am not aware of it ( ) 3. I love to have many children ( ) 4. My husband Did not agree to it ( )

15. If yes to question 15 above who decide on the family planning method to use? 1. Me ( ) 2. My husband ( ) 3. Me and my husband ( ) 4. My husband and his brother ( )

AVAILABILITY AND UTILISATION OF ANTENATAL AND DELIVERY SERVICES.

ANTENATAL CARE

16. When was your last pregnancy? 1. Less than 24 months ago ( ) 2. 24-60 months ago ( ) 3. More than 5 years ago …… If more than 5 years skip questions on ANC, And delivery

17. During your last pregnancy, did you attend ANC? 1. Yes ( ) 2. No ( )
If No skip to question 22

18. If yes, how many months was your pregnancy when you started attending ANC? ……..
……gestational age in months

19. What was the total number of times you attended the ANC clinic during the pregnancy?
…….

20. Where did you go to receive ANC? 1. Government PHC ( ) 2. Government hospital ( )
3. Private clinic ( ) 4. Chemist ( ) 5. Others (specify)……..

21. Which of the following services were offered to you in the antenatal clinic?
1. Abdominal examination ( ) 2. Weight measurement ( ) 3. BP measurement ( ) 4. Blood Test ( ) 5. Ultrasound scan ( ) 6. Urine test ( ) 7. Counseled for HIV ( ) 8. Tested for HIV ( ) 9. Malaria prophylaxis ( ) 10. Tetanus toxoid injection ( ) 11. Folic acid tablets ( ) 12. Iron tablets ( ) 13. Provision of ITN ( ) You can tick as many as possible

DELIVERY

22. Where did you give birth? 1. Home ( ) 2. Government hospital ( ) 3. Private clinic ( )
4. Traditional birth attendant place ( ) 5. Others (specify)……

23. What was the reason for your choice? Specify……
……..

24. Who assisted with the delivery? 1. Nobody ( ) 2. TBA ( ) 3. Relative(s) ( )
4. Nurse/midwife ( ) 5. Doctor ( ) 6. CHEW ( ) 7. Others (specify)…….

25. Did you have any problem around the time of delivery? 1. Yes ( ) 2. No ( ) If no skip to Question 29

26. If yes, which of the following did you have? 1. Labour more than 12 hours ( )
2. Excessive bleeding ( ) 3. Convulsion ( ) 4. High fever with bad smelling vaginal Discharge ( ) 5. Others (specify)……..

27. Did you seek treatment? 1. Yes ( ) 2. No ( )

28. If yes, where did you go for treatment? 1. Government hospital ( ) 2. Private clinic ( ) 3. Traditional healer ( ) 4. Chemist ( ) 5. Others (specify)……..

29. After delivery, did you attend the postnatal clinic? 1. Yes ( ) 2. No ( )

30. If yes, what was the interval between delivery and your first visit to the PNC?.....

31. If no to question 29 above, what was/were your reasons? 1. Don't know about service ( ) 2. Distance too far ( ) 3. Don't see the need for it ( ) 4. Don't have money to pay for the service ( ) 5. Lack of money for Transportation ( ) 6. Others (specify)……..

32. How friendly are the staffs in the Maternal Health Care Center in your community? i. Very friendly ( ) ii. Somewhat friendly ( ) iii. Not too friendly ( ) iv. Harsh/Nasty ( ) Cold and distant ( ).

33. What is your perception towards the facilities in the maternal health care center in your Area? i. Good ( ) ii. Very good ( ) iii. Bad ( ) iv. Very bad ( ) v. I don't know ( )

34. What are the factors that influenced the choice of these services?

	Nearness to service	Cultural acceptability	Comfortability	Quality of Care received	Very cheap	Prefer to any other
Antenatal services						
Delivery services						
Treatment of pregnancy Complications						
Family planning services						

35. What are the problems you have in using these services?

Services	Availability	Affordability	Acceptability	Accessibility
ANC				
Family Planning				
Delivery				

SECTION C: ACCESSIBILITY TO MATERNAL HEALTH CARE SERVICES

- **ECONOMIC ACCESS TO ANTENATAL, DELIVERY AND FAMILY PLANNING SERVICES.**

36. Which of these services are free and not free in your community health centers?

Services	Free	Not free
ANC		
Family Planning		
Delivery		

37. For those services that are free do you access them? 1. Yes ( ) 2. No ( )

38. If No to question 37 above why don't you access them? 1. I don't need any of them ( )
2. I don't like orthodox medicine ( ) 3. Male medical personnel check female patients ( )
4. They waste peoples time ( ) 5. Distance too far ( ) 6. No money for transport ( )

39. For those services that are not free do you access them? 1. Yes ( ) 2. No ( )

40. If yes to question 39 above how do you get money to pay for the service(s)? 1. Collect money from my husband ( ) 2. I used my personal money from my trading ( ) 3. I borrow money from my friend ( ) 4. I sell some of my things to get the money ( )

GEOGRAPHICAL ACCESS

41. Do you have any maternal health care center in your community? 1.Yes ( ) 2. No ( )

42. What is the distance of these facilities to your house? 1. Less than 1 kilometer ( )
2. 1 kilometer ( ) 3. 2 kilometers ( ) 4. 3 kilometers ( ) 5. More than 3 kilometers ( )

43. What is the mode of transportation to the facilities centers? 1. Walking ( ) 2. Motorcycle ( )
3. Bus ( ) 4. Own car ( ) 5. Others (specify)……

44. How much does it cost to get to the facilities centers? 1. Less than 50 naira ( ) 2. 50 naira ( )
3. 100 naira ( ) 4. 150 naira ( ) 5. 200 naira ( ) 6. More than 200 naira ( )

45. What difficulties do you have in accessing these facilities? 1. Financial difficulties ( )
2. Distance too far ( ) 3. Attitude of health workers () 4. My husband not agreeing to it ( )

SECTION D: MECHANISMS PUT IN PLACE TO OVER-COME BARRIERS TO ACCESS AND UTILISATION OF MATERNAL HEALTH CARE SERVICES.

46. Is there any form of insurance/subsidies for the poor in form of NHIS? 1. Yes ( ) 2. No ( )

47. Is there any public enlightment programme by the community to educate members of the Importance of using maternal health services? 1. Yes ( ) 2. No ( )

48. Is there any organisation in your community that usually come to the aid of women who have financial difficulties in accessing maternal health clinics? 1. Yes ( ) 2. No ( )

49. What have you done in your community to overcome some of these Barriers?
……
……..

50. What have you done in your community to help yourselves in overcoming some of these Barriers?.....
……..
……..
…….....

APPENDIX II

IN-DEPTH INTERVIEW GUIDE FOR HEALTH PERSONNELS

(Informants chosen from selected hospitals in the study area)

1. **General characteristics of the informants**
   - i. Age…… in years
   - ii. Sex…….
   - iii. Ethnic group……
   - iv. Religion……
   - v. Staff category……
   - vi. Position/post held……
   - vii. Educational Qualification……
2. **What are the general problems people have in this community? Water, light, crime etc.?**

   Probe for:

   Problems faced by women

   Problems faced by men

   Problems faced by the youths
3. **Characteristics of the hospital/community**

   Probe for:

   - Health challenges prevalent in this health center
   - Causes and effects of the health challenges on the community and family
   - Addressing these problems by the community
4. **Accessibility to the hospital**

   Probe for:

   - Numbers of doctors available
   - Number of nurses available
   - Numbers of midwives available
   - Quality of care given to women
5. **Utilisation of health care facilities.**

   Probe for:

   - Health services rendering to women in the community
   - Facilities in the health care center for women (e.g. free drugs, referrals etc.)
   - Maternal health services provided for women in the community (e.g. ANC, FP, Delivery etc.)
   - Barriers to utilisation of maternal health care services by the women

Cultural barriers to maternal health seeking behaviour

Probe for:

- Health policies in use
- Use of referrals
- Paying for services rendered
- Preferred place for women to attend ANC, FP and Delivery
- Challenges women face in seeking for these services
- Male health care providers and female health care providers
- Preference of traditional medicine to modern medicine
- Reason(s) for the preference
- Quality of the health care providers in these health care centers
- Punctuality of health care providers in this center

7. **Advice for**

(a) Health care provider i. ……..
ii. …….. iii. …….

(b) Community leaders i. …….. b. ……
iii. ……..

(c) Government i. …… b. ……..
iii. ……..

Closing: Thank you for your cooperation. Are there any additional comments omitted in the discussion of Factors Affecting Access and Utilisation of Maternal Health Care Services in Kaduna State, Nigeria. Is there any important thing uncovered? We would like to thank you for your time taken.

IN-DEPTH INTERVIEW GUIDE FOR TRADITIONAL BIRTH ATTENDANTS

(Informants chosen from selected wards in the study areas)

1. **How long have you being delivering women of their babies?**
   Probe for:
   - Years of practicing
   - Number of babies ever delivered
   - Number of babies delivered on daily basis
   - Number of babies that died at delivery
   - Number of mothers that died at delivery
2. **What do you usually charged for taking delivery of a woman?**
   Probe for:
   - Amount charged at each delivery
   - Payment before or after delivery
   - Whether every woman are able to pay
   - Whether if they are unable to pay what happen
3. **Were you trained on how to take delivery of women at birth?**
   Probe for:
   - Years of acquiring training
   - Certificate of training
   - Place or institute of training
4. **Do you have a place where you take the delivery or you go to their homes?**
   Probe for:
   - Environment where the delivery takes place
   - The instruments used to take the delivery
   - Availability of antenatal care
   - Availability of postnatal care
   - Availability of family planning
5. **If a woman run into problem while taking her delivery what would you do?**
   Probe for:
   - Take the woman to hospital
   - Try using all the methods that is known to get her out of the problem
   - Calling other traditional birth attendants to give a helping hands
   - invite some medical personnel to give a helping hands

6. **If a woman died during the course of labour or delivery what will you do?**
   Probe for:
   - Try all within my reach to rescue her
   - Will clean her up and call her husband
   - Will call her husband to come and carry her for cleaning
   - Will take her to hospital for confirmation

WE THANK YOU FOR GIVING US YOUR TIME MAY GOD BLESS YOU

APPENDIX III

FOCUS GROUP DISCUSSION GUIDE FOR MEN

1. **What are the general problems people have in this community? Water, light, crime etc.?**

   Probe for:

   - What are the problems faced by women?
   - What are the problems faced by men?
   - What are the problems faced by youths?

2. **On awareness and use of family planning**

   Probe for:

   - Knowledge of family planning
   - Practice of family planning
   - Ever used family planning
   - Currently using family planning
   - Reason(s) for use/not use of family planning
   - Type of family planning used/using

3. **Awareness and use of Antenatal clinic in the community**

   Probe for:

   - Knowledge of antenatal clinics in the community
   - Allowing wives to use antenatal clinic
   - Time of visits before they gave birth
   - Reason(s) for allowing them visit
   - Reasons for not allowing them use

5. **Delivering of babies**

   Probe for:

   i. Hospital delivery
   ii. Home delivery
   i. Traditional Birth Attendants Place
   ii. Preferred place of birth
   iii. Reasons for the preferred place of delivery

4. **If you are not around and your wife goes into labour what should she do to take care of herself?**

   Probe for:

   i. Seek for my permission
   ii. Go to hospital to have her baby
   iii. Go to my mother to seek permission
   iv. Call a traditional birth attendant to take her delivery

5. **Do you prefer hospital delivery to traditional birth attendants' delivery?**
   Probe for:
   i. Belief about the two types of delivery
   ii. Reason(s) for preferring one to another

6. **If all the health providers in the hospital are males, would you allow your wives to still attend the hospital?**
   Probe for:
   i. Cultural implication of male health care provider examining female patient
   ii. Religion implication of male health care provider examining female patient

We would like to thank you for your time.

FOCUS GROUP DISCUSSION GUIDE FOR WOMEN

1. What are the general problems people have in this community? Water, light, crime etc.?
   Probe for:
   - Problems faced by women?
   - Problems faced by men?
   - Problems faced by youths?
2. **How many children have you?**
   Probe for:
   - Number of children
   - Number alive
   - Reason(s) for having that number
   - Caring for them all equally

3. **On practice of family planning**
   Probe for:
   - Knowledge of family planning devices
   - Ever used family planning
   - Who decide on family planning use
   - Reason(s) for use/ not use
   - Type of family planning used
   - Currently using family planning
   - Type of family planning using
4. **On use of antenatal care in the hospital**
   Probe for:
   - Using antenatal care in health center
   - Reason(s) for using and/or not using
   - Where antenatal care is attended
   - Times of visits
   - Cultural belief of using this maternal service
5. **Delivering of babies**
   Probe for:
   - Hospital delivery
   - Home delivery
   - Traditional Birth Attendants Place
   - Preferred place of delivery
   - Reason(s) for the preferred place
   - Cultural belief of using this maternal service

6. **If your husband is not around and you go into labour how will you take care of yourself?**
   Probe for:
   - Ask for his permission
   - Go to hospital to deliver the baby
   - Go to mother in-law for permission
   - Go to traditional birth attendant to deliver the baby
   - Deliver the baby at home
7. **Preferring hospital delivery to traditional birth attendants' delivery**
   Probe for:
   - Belief about the two types of delivery
   - Reason(s) for preferring one to another
8. **Delivering in health care center where most health care providers are male**
   Probe for:
   - Cultural implication of male health care provider examining female patients
   - Religion implication of male health care provider examining female patients

We would like to thank you all

APPENDIX IV: Map of Kaduna Senatorial Zones Showing the Sample Points

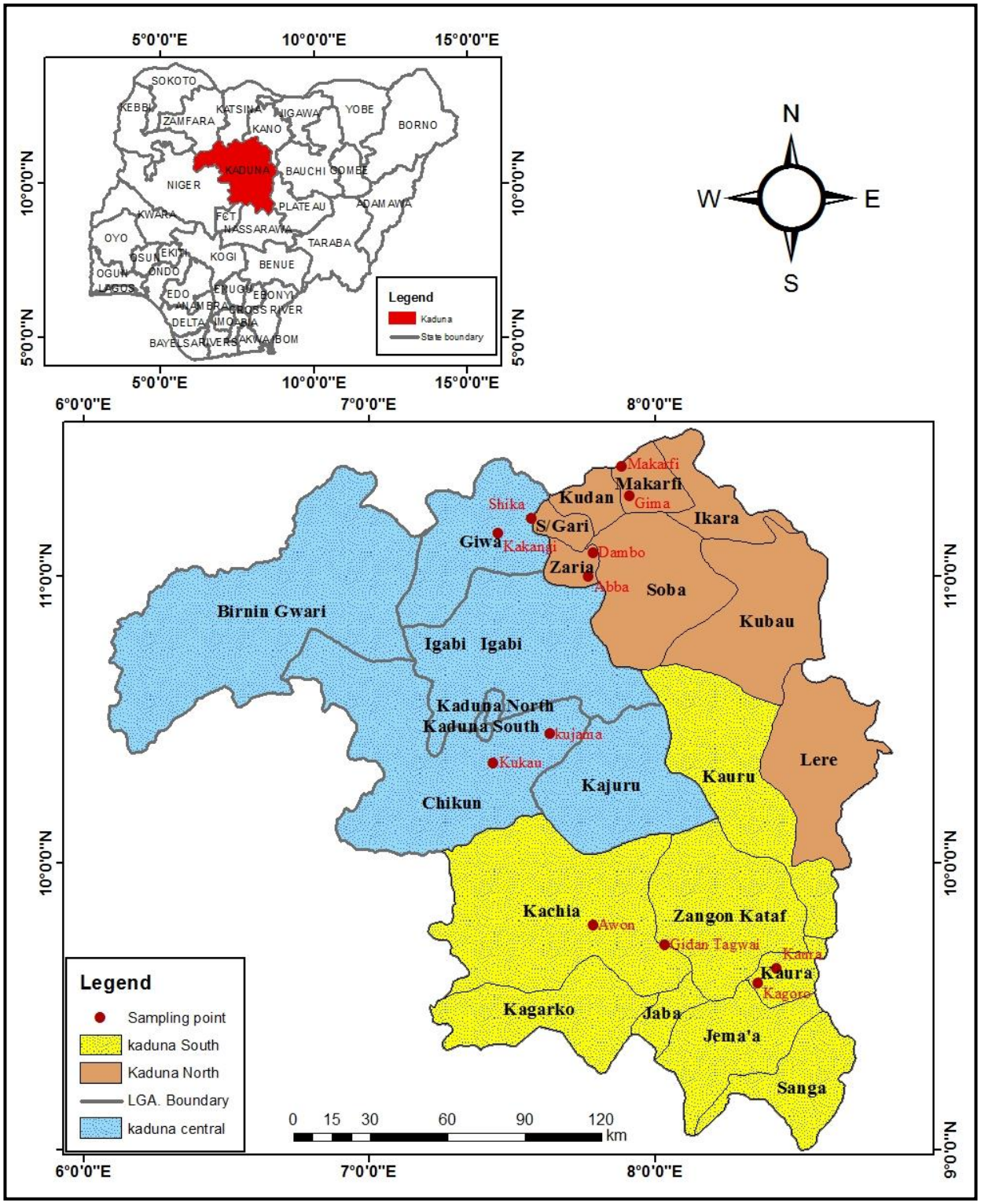


Figure 4: Map of Kaduna Senatorial Zones Showing the Sampling Points
Source: Adapted and Modified from Administrative Map of Kaduna State (2016)