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A Review of the Barriers and Socio-Cultural Factors Influencing the Access to Maternal Health Care Services in Nigeria

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Abstract

Access means that services are available whenever and wherever the patient needs them and that the point of entry is defined.

Access to maternal healthcare facility is vital for both the wellbeing of the mother and survival of the child during pregnancy and childbirth.

The objective of the thesis was to review the barriers and socio-cultural factors influencing the access to maternal healthcare services in Nigeria. "The review answered the following questions:"

What factors prevent access to maternal healthcare services in Nigeria?

What are the socio-cultural factors that hinder/prevent women from utilizing maternal health services in Nigeria?

The study was literature based and an extensive search was carried out to find relevant studies. A range of electronic databases was searched for articles published from 1998 to 2013.

The results of the review showed that factors that influence the access and utilization of maternal health care services were economic, socio-cultural, and health system factors. These factors include to a larger extent the household, community, the state, the health institution and also the social and political environment.

The study recommends reducing the cost of care and improving the quality of maternal health care especially for the poor and rural dwellers and also the empowerment of women as prerequisites for any tangible improvement in the access and

utilization of maternal health care and obstetric delivery services in Nigeria.	
Keywords	maternal health, antenatal care, maternal healthcare services utilization, maternal mortality, access to maternal healthcare.

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Abbreviations used in the thesis

ANC   Antenatal care

GDP   Gross Domestic Product

HF   Healthcare Facility

MHCS   Maternal Healthcare Services

PNC   Postnatal care

POD   Place of delivery

SBA   Skilled birth Attendant

STDS   Sexually transmitted Diseases

UNDP   United Nations Development Program

UNFPA   United Nations Fund for Population Activities

UNICEF United Nations Children Endowment Fund

USAID   United States Agency for International Development

WHO   World Health Organization

WRA   Women of Reproductive Age

PPH   Postpartum Hemorrhage

VVF   Vesico- Vaginal Fistula

1 Introduction

1.1 Background

The term maternal health includes the health of women during pregnancy, childbirth and the postpartum period. It encompasses the health care dimension of family planning, preconception, prenatal and postnatal care in order to reduce maternal morbidity and mortality (World Health Organization, 2012.Maternal Health). In developing countries like Nigeria, pregnancy and child birth complications are major causes of maternal and child death and these deaths are attributed to the fact that most pregnant mothers do not get the appropriate care they need as a result of certain barriers to the health care facilities.

Therefore, the aim of this review is to identify these factors that prevent women from having appropriate access to maternal health care services in Nigeria. The study will answer the following questions:

(a) What factors prevent access to maternal healthcare services in Nigeria?

(b) What are the social cultural factors that hinder/prevent women from utilizing maternal health services in Nigeria?

1.2 Brief History about Nigeria

Nigeria is a big country comprising many ethnic group and different religious belief. It is reported that about 374 identifiable ethnic groups (NDHS, 2008) exist and the major religions are Islam and Christianity. Apart from the two major religions, a few people also participate in traditional religions. Nigeria is a major producer and exporter of oil in Africa. There are six geographical zones in Nigeria, these zones include, North Central, North East, North West, South East, South South, and South West. It is pertinent to note that the socioeconomic, cultural and religion pattern of the Southern and Northern region of Nigeria are not a similar. They differ in all ramifications. There is also a wide difference in the literacy rate between the different regions in Nigeria. The people from the southern part of Nigeria are more educated than their counterparts in the Northern region. According to previous reports, approximately 70% of women and half of men do not have education in the North East and North West compared 15% of Women and 8% of men in the South South .The South West records

highest proportion of women 16% and men 21% who have completed more than a secondary level of education (NDHS, 2008). More women in the Southern region are more gainfully employed in professional, technical or managerial occupations and this places them in a higher wealth quintiles compared to their Northern counterpart. This could be attributed as the main reason for the differences observed in utilization of various Maternal Health Care Services across the country. For instance, the births percentage that is handled by a skilled professional range from as high of 81.8% in the South East as low as 9.8% in the North West. Similarly, 90.1% of women in the North West are more likely to give birth at home compared to 22.5% in the South West (NDHS, 2008).

It is believed that about 10% of all maternal deaths globally come from Nigeria. Nigeria is the second highest in maternal mortality rate in the world after India. It is reported that for every women that dies from pregnancy related causes, 20 to 30 more will develop short and long term damage to their reproductive organs resulting in disability such as obstetric fistula, pelvic inflammatory diseases, a ruptured uterus etc. (MNPI report, n.d.; Ogunjuyigbe & Liasu, n.d.; WHO, 2007). This high morbidity and mortality rates make maternal health a huge public health issue in Nigeria and most developing countries.

1.2   Maternal Health in Nigeria

Nigeria has experience some progress in the last two decades in reducing maternal deaths, but unfortunately, the number of women that die during pregnancy and childbirth from complications arising from childbirth remains appallingly high. Nigeria is the most populous and one of the wealthiest countries in Africa but with all these wealth, the country continues to experience high rates of maternal deaths. Nigeria has the 10th highest maternal mortality ratio (MMR) in the world, according to UN estimates, with 630 women dying per 100,000 birth a higher proportion than in Afghanistan or Haiti, and only slightly lower than in Liberia or Sudan. (Ibid, p.23). An estimated 40,000 Nigerian women die in pregnancy or childbirth each year and another 1 million to 1.6 million suffer from serious disabilities from pregnancy and birth related causes annually (WHO, UNICEF,UNFPA and WORLD BANK, 2012). Nigerian women have an average total of 5.7 births in their life with each pregnancy exposing them to the risk of

maternal complications. Over her lifetime, Nigerian women's risk of dying from pregnancy or childbirth is 1 in 29, compared to the sub-Saharan average of 1 in 39 and the global average of 1 in 180. In developed regions of the world, women's risk of maternal death is 1 in 3,800(WHO May, 2012).

The Millennium Development Goal on improving maternal health calls first for a 75 percent reduction by 2015 in the maternal mortality rate from 1990 levels for Nigeria (using estimates from the country's 2008 Demographic and Health Survey, which are slightly lower than UN estimates), a reduction to 250 maternal deaths per 100,000 live births; and second, for 100 percent of deliveries to be assisted by a skilled birth attendant. It is possible, according to the Nigerian government's 2010 estimation, that the country can reach the maternal mortality target by 2015, but this will require dramatic and sustained progress in the next three years (National planning Commission, 2010, p.31).

Significant disparity exists among regions in Nigeria. There are higher maternal mortality rates in the Northern Nigeria than in the Southern part of Nigeria, perhaps because the Southern region is wealthier and has abundant mineral and natural resources. According to Seye Abimbola et al 2012, the extremely poor North East has an estimated maternal mortality rate of 1,549, and this is believed to be more than five times the global average.

It is also believed that poverty, lack of investment in health systems, low educational levels, and infrastructure have each contributed to the disparity. Also cultural factors that give women limited mobility and contact with the formal health care system and little say in household and personal decision making also contribute measures of women's empowerment are consistently lower than in most of Nigeria's southern states. There have been instances of leadership on maternal health in the North. Kano was the first State in Nigeria to introduce free maternal care in 2003, but they have not always been sustained. Currently, terror attacks by the extremist group Boko Haram have forced many health and development implementers to shut down or scale back operations in the North, and public health experts are afraid that prolonged insecurity might destroy the gains and efforts of the last decade

2   Background literature review

This chapter discusses the pertinent literature. It discusses those concepts that are related to maternal health during pregnancy and after childbirth

Literature is reviewed under the following headings,

- Women's health,
- Maternal mortality,
- Fertility rate/access to contraceptives,
- Sexually transmitted diseases,
- Component of maternal health;
- Factors affecting access to maternal healthcare,
- Quality of maternal healthcare services.

Literature search

The Medline database was searched for the background literature by developing search strategies specific to the subject headings and text words. Subject headings related to reproductive and maternal healthcare delivery was used as search words.

The following search words were used, barriers AND access AND "mothers" OR "mothers" OR "maternal OR "maternal" AND " delivery of healthcare" OR "delivery" AND "health AND "care" OR "delivery of health care"OR "healthcare "AND services AND "nigeria" OR "nigeria. My searches were limited to articles published in English,

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2.1   Women's Health

An obstacle to determining women health status in developing countries is the lack of health studies focusing on women (Sitthi-amron & Somrong thong, 2000) Life expectancy is one of the most common statistics used to gauge the health of a population. Life expectancy does not take into account the difference in health status and needs between men and women such as women reproductive abilities menstruation and breast feeding. As a result even though, women's health needs are greater than that of men's needs women may utilize health care services less if they cannot access these services or if the services do not adequately treat their illnesses.

Women's health status has implications for a country's development and quality of life. Women's health is important in developing countries since their traditional role as family caregivers makes them chiefly responsible for the health of their children, husband and other family members in the home.

An increase in women's health studies can help developing nations address problems and implement polices to improve health as good health and wellbeing is positively correlated with a socially and economically productive life. Problems such as reproductive tract infections, breast cancer, and cervical cancer are only now examined (Sen. George & Ostlin, 2002). This dearth has been blamed on the developing countries lack of research capacity.

Currently, high maternal mortality rates, high fertility rates, inadequate access to contraceptive methods and the spread of sexually transmitted diseases, obesity and diabetes are major health threats to women in developing nations.

2.2 Maternal Mortality

Women of the child bearing age, 15 to 44 years old are at risk of maternal mortality during pregnancy and child birth as a result of complication arising from pregnancy and child birth. In developing nations, the average maternal mortality rate is 480 deaths per 100,000 live births (UNDP, 2004). In deep contrast, maternal mortality in the United States of America is eight deaths per 100,000 live births (UNDP, 2004). Leading causes of maternal death are prepartum and postpartum hemorrhage, eclampsia and sepsis. Lack of access to or low use of prenatal and postnatal services often contribute to high maternal mortality rates and other pregnancy complications. Lack of access to antibiotics, blood transfusions and aseptic conditions contribute to high maternal mortality rates and these complications arise when women give birth with the help of untrained traditional birth attendants such as village midwives.

In developing nations 45% of women give birth with untrained traditional birth attendants and are unable to prevent or treat potential fatal complications. (UNDP, 2004). Lower maternal mortality is also associated with fewer pregnancies, thus maternal mortality can be lowered with increased use of contraception. Women who are to delay their first pregnancy, lower their fertility rate, increase the time between births, protect themselves from sexually transmitted diseases, (STDS) and prevent late life pregnancies reduce their lifetime risk of

maternal mortality. The use of contraceptive devices also helps to reduce un-
wanted pregnancies that may end in abortion since safe abortions are seldom
available to women in developing nations. Another benefit of using contracep-
tives is healthier children. Children that are delivered earlier before two years
subsequent to their closest siblings has a very high chance of dying when they
are one year old than children born more than two years after their closest sib-
lings. It is advisable to space pregnancies since pregnancies that are not well
spaced may give rise delivery of low weight babies. Prolonged breastfeeding
particularly in developing countries where potable water may not be accessible
plays an important role in child's morbidity and mortality by reducing the inci-
dence of diarrheal and infectious diseases. Breastfeeding provides children with
increased immunological and nutritional benefits (Wolf, 2003)

Women who utilize contraception have more control over their fertility and
health and this generates educational and economic opportunities that a woman
might loose if she has many children to take care of at home. With fewer chil-
dren, a woman may have the chance to seek employment and raise their family
standard of living. A reduction in number of children in developing countries re-
duces the burden on food supply natural resources and social services.

2.3   Fertility Rates and Access to Contraceptive Methods

A high fertility rate contributes to women's overall poor health condition in addi-
tion to maternal mortality. The current fertility rate of 5.1 children per woman of
child bearing age in developing countries is much larger than the 1.7 children
per woman of childbearing age in developed nations. (UNDP, 2004). However,
decreasing fertility in developing nations is difficult because birth control meth-
ods are largely unavailable and little utilized by women. The United States
Agency for International Development (USAID) estimates that 23% of unmarried
women of reproductive age have an unmet need for contraceptive methods in
developing nations (2001). Barriers using contraception include lack of accessi-
bility, lack of availability, lack of education about birth control and cultural and
religious practices preventing use.

Factors contributing to inaccessibility to birth control include cost and the dis-
tance the woman travels to obtain it. Without personal income, women custom-
arily lack the funds to pay for birth control or transportation to the clinic. If birth

control is unaffordable, women will not utilize it. Women in developing countries cannot afford the burden of import duties, advertising or distributing because they do not have the necessary resources available to engage in this.

Another barrier to use of birth control is lack of education and knowledge about contraceptive methods. Inadequate method about contraception may lead to fear of health complications that do not result from contraceptive use. Educational programs about the availability and assortment of contraceptive their proper use and side effects are seldom available to women. The lack of promotion on radio television and newspapers about birth control prevents women from gaining valuable knowledge.

Religion and culture can also create a barrier for developing countries wishing to acquire funding for contraceptive methods. Certain religious beliefs prevent women from incorporating birth control into their daily lives or their husband opinions may dissuade her from using birth control. Men's desire to have more children, men's distrust for modern contraceptives or the inconvenience of contraception is hurdles. Predominantly Catholic or Muslims countries have condemned contraceptive use and women's in these countries continue to be heavily influence by their religion and culture. Some women are even requested and forbidden to use family planning services (Murphy, 2004). Women lack the right to openly embrace contraception and may frequently feel embarrassed to ask question about birth control or afraid to use contraceptive due to punishment from their husband or family. Women who do not use contraceptives especially condoms are at high risks for STDS.

2.4   Sexually Transmitted Diseases

Sexually transmitted diseases particularly HIV /AIDS are increasingly contributing to poor women ill health in developing nations. AIDS is a leading cause of death in Africa and fourth leading globally. In 2001, there were five million newly infected with the diseases (UN Program on HIV/AIDS, 2002). Half of the people infected with the HIV virus are women. Obesity and Diabetes

The rising prevalence of diabetes in developing countries due to in part to urbanization, obesity and limited physical activity is expected to double by 2030 in urban areas (WHO, 2004). The WHO, 2004, points out that those most affected by diabetes in developing nations are between the ages of 35 and 64 while

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those affected in developed nations are above 60 years old. Of those affected globally more women than men are reported to have diabetes.

2.5   Component of Maternal Healthcare Services

2.5.1   Antenatal Care:

Women usually face the risk of complication during pregnancy and delivery. Unfortunately, the complications experienced by women during pregnancy and delivery most times come unexpected without giving prior signs. Antenatal care has been useful for early diagnosis and management of pregnancy related complications and also for wellbeing of the fetus. For Example, detection and treatment of high blood pressure, to prevent eclampsia has been found to greatly reduce maternal mortality (Mc Caw- Binns et al, 2004). Also improved maternal outcomes have been recorded through the detention and treatment of anemia (Reynolds, Wong & Tucker, 2006). Antenatal care makes it possible to screen for sexually transmitted diseases such as HIV /AIDS infection, which is known to have taken its toll in most of the developing countries. The WHO recommends a minimum of four ANC visits for every pregnant woman. A greater number of visits are recommended for women with higher risks of obstetric complications. Evidence has shown that more than four visits in case of complications (WHO, 2002). Utilization of health facilities are determined by many factors, maternal age, parity, income, standard of living of household, ANC user's fees, and travel distance to antenatal care provider are common economic factors that have been cited by previous researchers (Mekonnen et al, 2002). Maternal health outcomes is greatly reduced in the absence of a viable health and referral system where women can receive emergency obstetric care needed.

2.5.2   Skilled Birth Attendance:

Skilled birth attendants involve the provision of pregnant women with the relevant care they need during labour, child bearing and in the early stage of postpartum. This process involves the use of qualified personnel, healthy and safe in environment to attend to expectant mothers. It also includes the provision of relevant drugs, equipment, good feedback system and also effective referral system. A well trained skilled birth attendant manages pregnancy and delivery processes and he is also trained to identify and manage complications arising

from childbirth and makes referrals if there is need. Improving maternal healthcare in Nigeria requires that more skilled birth attendants should be trained and employed in all maternal health facilities.

2.5.3 Post natal Care:

The post natal care is the period after the baby has been born. Postnatal care involves the provision of both enabling and supportive environment for the mother, the new-born baby and the entire family. The postnatal care involves the essential care which the mother and the baby should receive during the first 6 to 8 weeks after delivery. The nature, type and quality of postnatal care given to both the mother and the child in the first days and weeks after birth can have a huge in impact on the mother's prediction and experience about parenthood. The core components care for the new-born babies involves promoting and supporting early and exclusive breast feeding, hygienic skin and umbilical cord care, identifying warning and risk signs that requires urgent doctors /medical attention, keeping the baby warm counselling and general health education for the mother on how best to take care of the new-born.

Kangaroo care which simply means that the newly delivered baby has the opportunity to enjoy lots of skin to skin contact with the mother has been useful for many years in the management of premature babies.

Dhakal et al 2007 in a study in rural Nepal discovered that the major obstacles to postnatal care were lack of awareness among women and their families about care, distance to the healthcare facility, lack of trained health care workers and lack of healthcare facilities in the village. They also discovered in their studies that women who had, and children low education, high number of pregnancies had little or no access to postnatal care.

2.6 Access to Health Care

Many health problems are preventable and curable through improve access to health care services. The creation of an acceptable definition for access is difficult since it is influenced by many factors. Some researchers have defined ac-

cess as the ability to health care services. Others have argued that access is shaped by factors influencing the use of services.

System infrastructure affects access by accommodating or limiting use through hours of operation, the appointment system, walk in facilities and telephone services. Culture can influence access through inherent inequalities in the social system. Gender also affects access, pushing women into gender specific roles that negatively influence their health or force to seek permission to obtain health care. Other researchers measure access via cultural beliefs, communication between patients and doctors, patient waiting time and modes of transportation to and from the facilities (Wyss, 2003).

Access in this study is defined as the ability to use health care services particularly the number of times a woman visits a health care facility in a one year period.

2.7 Factors influencing the use of Health services

Many factors impede a woman from seeking care. Almost three quarters of Nigerian women have at least one problem accessing care, with concern over costs, drug availability, and distance to a health facility most often cited. Nigeria s 2008 Demographic and Health Survey DHS reveals that a woman's likelihood of seeking antenatal care and delivering her baby with a skilled birth attendant present is closely correlated with residence (urban or rural), level of education, wealth, and level of empowerment within her household. A woman with a primary school education, for example, is almost 10times more likely than a woman with no education to seek at least one antenatal care visit and four times more likely to deliver her baby in a health facility. According to the DHS, one third of Nigerian women with no education will deliver their babies completely alone.

Access can be determined or prevented by availability, traditional medicine use, and perception of quality, affordability and socio-cultural factors.

2.7.1 Availability

Availability refers to the distance the patient lives from a health care facility, transportation and total travel time, wait time and available services, (Hjortsberg & Mwikisa, 2002,Perry&Gesler, 2000). In Andean, Bolivia where travel times are greater than one hour by walking, (Perry and Gesler 2000) found limited physical access to 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 in adequate or time consuming such as walking, bicycling or using the bus (Perry&Gesler 2000). These longer travel times deter individuals from travelling particularly to access advanced technology that may only be available in large health facility located in the cities. These sometimes overwhelming obstacles may also en-courage women in developing countries to turn to traditional medical practices.

Fournier *et al* (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 re-duction in maternal mortality rates .

2.7.2 Traditional Medicine
The World Health Organization (2003) defines traditional medicine as health practices, approaches, and knowledge and beliefs incorporating animal and mineral based medicines, spiritual therapies, manual techniques and exercise singularly or in combination to treat diagnose and prevent illness or maintain wellbeing. Culture and society shape traditional medical beliefs and practices. Traditional Medicine is often used when the economic, social and cultural cost of using public health services are perceived as too high. In Africa up to 80% of the populations utilize traditional   medicine for health care (WHO, 2003). In

Ghana, Mali, Nigeria and Zambia, 60% of children with Malaria are treated with local herbal medicines (WHO, 2003).

Traditional birth attendants are also considered a part of traditional medicine. Women are often more comfortable with traditional practice and the individual performing these services, which in turn alleviates the stress of using unfamiliar western style medical services at health care facilities.

Scientific evidence for the efficiency and safety and of traditional medicine is ambiguous. Also the lack of coordination between traditional medicine and western medicine creates problems of competition, communication and safety. Overdoses of some traditional medicines can have negative health effects. In China, the Herb Ma Huan or Ephedra is traditionally used to treat upper respiratory tract infections however; overdoses have caused heart attacks and strokes in the United States (WHO, 2003). In South Africa, the medical research council is studying the efficiency of traditional medicine for treating of AIDS patients.

2.7.3 Affordability

The cost of health care services, prescription drugs and transportation determine the affordability of health care. Hjorstborg and Mwikisa, 2002 found cost to be a critical determinant of health care access 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 &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.

2.7.4 Quality of care

Measuring patient satisfaction offers insight into possible inadequacies in the system. The importance of understanding patient perception of quality of care is importance since a higher perceived quality is positively correlated with an individual level of utilization. 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 seeking care (Erim et al 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

2.7.5 Socio-cultural Factors

Socio-cultural variables also affect access to health care services. The educational level of a woman often affects her health care use. Attaining at least a primary education contributes positively to the health of women by providing women with skills training for employment and personal income thus enabling women to afford health care services (Wickrama & Lorenz , 2002) Education level, employment, 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 (Buor, 2004).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 utilization through empowerment. It has also been found that in some regions of the world that non-working women are more likely to use some maternal health care services than earning mothers (Skelenburg et al ,2004, Kamal, 2009).A woman's marital status can also affect his health. Women may spend more time caring for their husbands and families which impose a strain on his health.

Ali Yesuf *et al* (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

2.8   Consequences on Women:

All the above major issues affecting women in the developing countries are caused or worsened by poverty and socio-cultural factors. Poverty is defined as the denial of opportunities and choices most basic to human development (UNDP, 2004). Poverty contributes to poor health through economic dependence, poor nutrition, substandard housing, and inadequate access to sanitation and safe drinking water. The low socio-cultural status of women can also negatively influence women's health in developing countries since a major barrier to improve health is the unequal status between men and women.

Lower education levels, age, and marital status also contribute to women's poor health condition devote to the issue. Maternal health in Nigeria is a powerful barometer of broader trends in development, in health and health capacity, and ultimately in governance and investment on behalf society's' least powerful citizens

2.9 Quality of Maternal Health Care Services and Women Experience of Care

Routine and emergency cares are basic indicators for maternal healthcare services it includes the capacity of the healthcare facility to provide maternal health services by trained staff and also adequate access to maternal health services at ante natal. However, in developing countries, these services are inadequate, inaccessible and where available, standards are low most especially in the rural areas (Rodolfo *et al,* 2002). Nigeria's health system functioning was ranked 187th out of 191 countries by WHO (Federal Ministry of Health, 2009). This is not surprising as Makeri (2001), reported that some hospital operating theatres lacked equipment and functional operating lamps. The medical facilities are more closely located and equipped more in the urban areas than the rural areas living the rural dwellers to suffer. The structure of health care delivery is intricately intertwined with the quality of health personnel, efficient management, effective financing, and management. In most rural health facility, manpower is seriously lacking and mostly unskilled are employed and inadequate and female health workers are in short supply. Assistance from doctors was four times more likely in urban areas than in rural areas. The available health services are characterized by inefficiency, wasteful use of resources and low quality of services (Ademiluyi and Arowole, 2009).

In Nigeria, access to safe motherhood services in rural areas where majority of the risk population live is more limited compared to the urban areas. The rating of maternal and neonatal services in Nigeria received 43 out of 100 for access, with an average of 29 for rural access and 57 for urban access. Some of the indicators that received lowest ratings in Nigeria which required urgent attention include rural access to safe motherhood services and 48-hour postpartum checkup (Maternal and Neonatal Program Effort Index). Similarly, the coverage of care for maternal health and the content of antenatal care (ANC) visits in Nigeria do not reflect a focused ANC package of intervention. Only 47% of mothers received the recommended two or more doses of TT, over half were counseled on danger signs during pregnancy and malaria interventions are rare as just one percent received treatment for malaria. During childbirth for those who give birth in health facility, the quality of care is low. The knowledge, availability, and use of pantograph are limited in health facilities. Basic facilities are often lacking such as power supply, water, equipment, and drugs. Twenty four hour

services are available in most tertiary and secondary health facilities while very few primary centers in the country offer round the clock service (Federal Ministry of Health Nigeria, 2009). The level of use of health care facilities for maternal care among Nigeria women is lower compared to many countries in Sub-Saharan Africa. One of the reasons advanced for the lower coverage of skilled and institutional delivery compared to antenatal care coverage is the difficulty in accessing health facilities in resource-poor environments.

Maternal health services are provided at all levels of health care in Nigeria. Basic elements of essential services are provided at the Primary Health Care (PHC) facilities which are closer to the teaming rural population, where the burden of causes of maternal mortality are highest (Federal Ministry Of Health/National Primary Health Care Development Agency/Midwives Service Scheme, 2009) . In Sub-Saharan Africa most of the communities are faced by some environmental challenges which are, characterized by poor road networks, limited transportation means and underserved population in terms of health facilities. The poor staffing of the health facilities, particularly the primary health care facilities, makes it difficult to guarantee twenty four hour availability of services, had also been reported as a factor that discourages women, even when they had received antenatal care services, to seek medical services when labor commences (Babalola and Fatusi,2009) .

The state of these facilities were highlighted by Odogwu et al (2010) , in a study conducted in selected rural areas in Zaria where none of the Primary Health Care(PHC) facilities was able to perform basic emergency obstetric care services, which a standard PHC is expected to do. In terms of skilled personnel and material resources, all the PHCs fell significantly short of national standard of at least four midwives per center.

Galandanci *et al* (2007) asserted that in northern Nigeria, the quality of care was far from ideal. In their study, they observed that significant number of women did not receive tetanus toxoid and about 80% of deliveries were supervised by personnel that have no verifiable training in hygienic birth techniques. The quality of health care service provided and experienced in normal delivery may have influence on timing of presentation at primary health care facility. Late presentation is an example of an indication of poor quality of care in this cir-

cumstance. It may represent poorly communicated health messages or a desire to stay at home as long as possible before delivery to avoid laboring alone in hostile environment of a hospital maternity (Hulton et al, 2000). Hospital staff may ridicule the tradition or practices of a community and impose unfamiliar dorsal supine position for deliveries, culturally inappropriate hospital dress, all of which may influence women in deciding to give birth in more sympathetic environment outside of health services (PNMN, 1997 cited in Ladipo, 2009).

Bazant (2008), in the study on quality of care and experience of care, found out that some women appreciated continuous care from providers, being treated with respect and facilities' cleanliness. However, some delivered unattended and providers insulted others. At government hospitals, women complained of high costs, being detained for unsettled bills, and shortage of beds. It is common for some health providers' manner to be authoritarian, careless, and unsympathetic. Therefore, women experience of quality in delivery care was more positive in private than government facilities. In studies of ANC in Sub-Saharan Africa and India, nurses scolded women for talking, moving too slowly, viewed as "deviant" or dirty and arriving late in labour. In addition, verbal abuse, slaps and beatings to women during labour and delivery do occur. (Weeks *et al.* 2005,Behague, Victor a and Barros 2002, Center for Reproductive Law and Policy, Latin American cited in Bazant, 2008).

Lubbock and Stephenson (2008) identified poor communication or miscommunication with health professionals also contributed to women's misperceptions and lack of understanding regarding healthy behaviors and potential complications. Reported misdiagnoses or unclear communication from health workers have led to delayed antenatal care visits and home deliveries. Uncomfortable or negative past experiences in receiving care that includes lack of attendance, excessive waiting times, and embarrassing physical examinations discouraged women from seeking care at health facilities. Few women who experienced complications and had to deliver via cesarean section believed returning to the health facility for a future delivery would result in the same outcome

2.9.1 Challenges Faced by Maternal Health Care Providers

Kuteyi *et al* (2001), in a study in Atakumosa, in Nigeria, found out that 54% of TBAs studied had no designated room for deliveries, 80% did not consider any pregnant woman to be at high risk, few recognized complications and 46.2% never referred patients and were inadequately equipped and trained. Poor enabling environment and lack of motivation among health workers affects their performance in rendering services. According to Kaduna State Government (2011), poor conditions of services including inadequate staff housing have made it extremely difficult to recruit and retain staff particularly in rural areas. Murray and Frenk (2000) were of the opinion that gap in knowledge and inappropriate applications of available technology could be a challenge and results to low quality of care. There are some underlying factors, which may produce a low standard of care for the patient. This includes situations produced by the action of the woman herself or her relatives, which may be outside the control of the clinician. It also takes into account shortages of resources for staffing facilities, administrative failure in maternity service, and the back-up facilities such as anesthetics services (Victorian Government, 2001). Among rural communities, social distance serves as a barrier to access services. Social distance consists of differences in language, behavior and expectations between the consumer of health care and its providers. Ethnic and linguistic differences, and even when providers are of the same ethnic group, there can be social distance barriers caused by differences in education, experience, and socioeconomic status (PNMN, 1997 cited in Ladipo, 2008)

2.9.2 How Quality of Healthcare reduce Maternal Mortality

Improved medical interventions alone cannot address the problem of maternal mortality as such Weeks (2007) argued that in other to reduce maternal mortality, political action by government through provision of financial resources and promotion of high-quality care, especially in rural areas is essential. This will take decentralization of care systems, a regular supply of well trained staff and consumables, and national and local audits to evaluate the service. Kean and Marquez (2002) identified supportive supervision among health care providers as essential in approving quality of care. This includes teamwork by colleagues whereby health workers participate by supervising themselves in other to moni-

tor and improve their performances, participatory decision making, and a better two way communication, which promotes continuous improvement in quality of care, and meet clients need. Consequently if providers are empowered and motivated to provide high quality services and their needs satisfied and that of the client, then client satisfaction and outcome will be enhanced.

Abass (2008), was of the view that emphasis should be based on the importance of care ethics, which is an ethical orientation that seeks to rectify the deficiencies of medical practices in order to improve patient satisfaction with services rendered.

Koblinsky *et al* 2008 suggested that higher use of magnesium sulphate for eclampsia, improve hygiene during delivery, efficiency of referral services by alleviating resource constraint, increase supply and deployment in team of skill care providers and adopting the norm of teams of providers delivery will improve the quality of care rendered to pregnant women.

Oladapo *et al* (2005) emphasized that necessary facilities should be made available and training of personnel and emergency drills should be frequently conducted to combat the identified disease processes that received suboptimal care.

Goodrum (2001) called attention for the need for physicians to provide preconception counseling to female of reproductive age as they have the potential of being pregnant. Good preconception counseling consists of risks assessment, education, intervention or modification and counseling. Preconception counseling entail, identifying any preexisting condition that may affect an anticipated pregnancy, it allows time for interventions that could lead to more favorable outcomes, educate the patient about importance of prenatal care and overall good health, and address home, social, financial and emotional issues that could affect attitudes towards pregnancy and prenatal care.

Hailu *et al* 2009) recommended that actions are to be taken to improve training of medical staff; develop and maintain standards of care for emergency obstetric care; and improve health information systems. Proper and regular death au-

dits need to be instituted in the health system. In addition, skilled attendance at delivery and a strengthen health system to ensure twenty four hours emergency obstetric care. Encouraging communities to create emergency transport plans, enhancing referral systems between communities and health care providers are good options to resolve the type three delays. Enhancement of referral systems must extend to the inter-tier referral of obstetric emergencies based on a realistic assessment of the health providers' skills available at each level of care.

To upgrade quality of care at health facilities, there is need for improvement in providers technical and personal skills, motivation and performance establishing national protocols for treating obstetric conditions, adequate and sustainable supplies of emergency drugs, equipment, providing twenty-four hour service at facilities that provide emergency obstetric care among other things are all necessary (Ladipo, 2009)

Agan *et al* (2010) suggested that hospital policies be revised such that senior residents and consultants on call are contacted as soon as a life-threatening emergency arrives in a health care facility to reduce the delays, which frequently occur.

2.10 Summary of background literature review

After reading several literatures and different studies done by different researchers on this topic, I will summarize by pointing out that the poor health of women in most developing countries is caused by factors such as poverty and low socio-cultural status. To improve the health of women, Women need adequate and improved access to health care services. Access to health care services can be prevented by factors such as availability, the perception of quality, traditional medicine use, affordability and socio-cultural factors. The barriers to access are multiple, ranging from a woman's immediate economic circumstances and cultural context to the weakness and limited reach of the country's primary health system to poor financing capacity, and lack of commitments from both the federal and state Governments

3 Data Collection and Method

The study was literature based (literature review). It involves extensive search using various search terms to identify sufficient relevant literature relating to the study aim and objectives. A systematic review of literature is a scientific method that is used to summarize, evaluate and communicate results and the implication of the studies in a specific way. Systematic review brings the same level of rigour to reviewing research evidence as should be used in producing that research evidence in the first place(Hemingway et al, 2009).Systematic approaches to literature searching have great potentials to increasing the chances of finding pertinent information. This study cannot be taken as a pure systematic review of literature however it followed some of the basic steps used in a typical systematic literature review. A review of several studies is a better way of evaluating whether the findings can be applied to a particular group of patients. Without a systematic review, researchers may as a result of oversight miss promising leads and perhaps duplicate work that has been done already. Systematic review helps practitioners to create clinical polices that makes outcomes optimal and this is why review is normally used in health and social science research. Reviews are very important in healthcare literature. In health science, reviews of literature are mainly used to verify effectiveness especially in uncertainty regarding potential harm or benefits of an intervention. I have adopted this method for my thesis because of its numerous benefits to health science research and also because the multidisciplinary nature of my master's program. I have also adopted this method in my master's thesis because the topic I am working on, many researchers have worked on it in Nigeria, there has been lots and lots of primary studies but the way forward is still unclear and also the existing policies have failed to tackle the existing problem on ground as a result I want to use this study as a means of making future proposal the Nigerian Government on this issue.

3.1 Search Strategy/search engines and database

Literature search was initially performed in June, 2013 to locate articles dealing on maternal health services in Nigeria. Another search was made in August, 2013 to make sure that all articles were complete and intact.

I selected five electronic databases for my literature search. These databases include, Pub Med, EMBASE, OVID (Medline), CINAHL and Cochrane.

Electronic search was mainly from Pub Med integrated bibliographic and full text databases. This database was searched starting from the year 1998 to 2013 using the Boolen operators" AND" and"OR".

3.2 Search Words

The following search words were used, barriers AND access AND "mothers" OR "mothers" OR "maternal OR "maternal" AND " delivery of healthcare" OR "delivery" AND "health AND "care" OR "delivery of health care"OR "healthcare "AND services AND "nigeria" OR "nigeria. My searches were limited to articles published in English.

3.3 Search Results

The literature search gave a huge number of publications on maternal health. To be precise, a total of 409 articles were obtained from Pub Med. All the publications that was obtained were finally reviewed for eligibility and all those articles that have titles with direct relevance to the topic of study were selected and full text were accessed. A total of 18 articles had direct relevance to the topic under review and these articles were selected and included in the review.

3.4 Organizing documents for review

All the articles that were generated from the searches were the organized in a way for easier abstraction of pertinent information. The choice of relevant articles was based on some inclusion criteria which include:

- Citations in English language.
- Review, empirical or guidelines articles.
- Year of study/publish of the article
- Studies with full text available.
- Studies with content relevant to the research objectives.

3.5   Abstraction of information from articles

All the relevant information from the articles was abstracted in a matrix with column and rows. The review matrix used for literature abstraction in this review identified the following core information (which served as the various column headings).

a. Lead author, article title, journal citation.

- Year
- Quality ranking
- Study settings

b. Methodological characteristics

- Study design
- Study population
- Subject selection
- Sample size
- Measured variables
- Statistical analysis

c. Content-specific information

- Main findings
- Conclusion
- Other comments

3.6   Inclusion Criteria Used

One of the inclusion criteria I used in this review was the selection of articles from 2008 to date on maternal health with age range of women between 15 to 49 years. Research papers with direct relevance to maternal/obstetric care were the main focus for this review, regardless of design. Only journals with full text were selected for the study. Original studies meta-analysis and case reports were considered. Quantitative research papers with direct relevance to antenatal care were considered for this review, regardless of design. All articles used were in English and all the articles were also published in journals. Only empirical studies were included in the study.
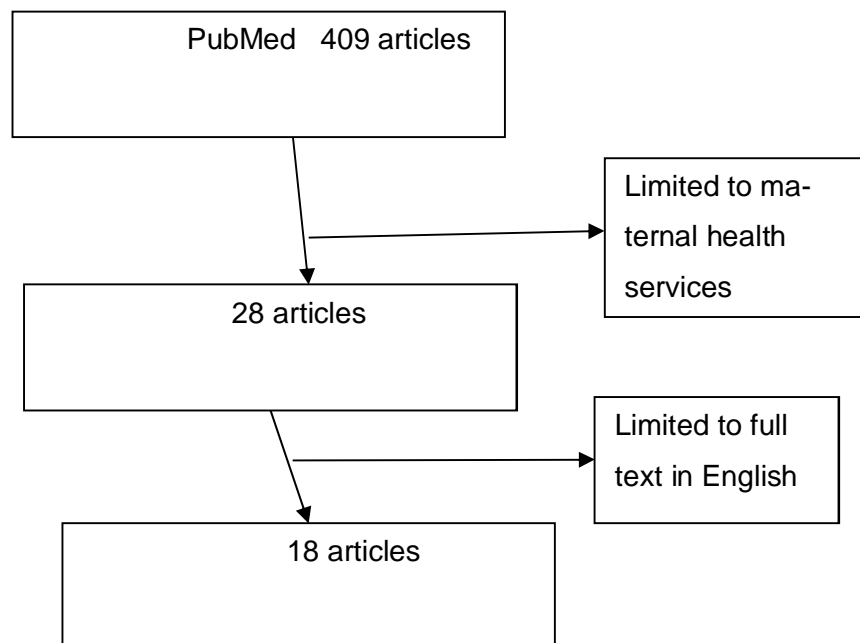
3.7   Exclusion Criteria

Abstract only were not included as they did not give full information. Commentaries were excluded. Studies that were not in English language were not used in the review because they did not meet the inclusion criteria. Studies that were

not published were also excluded from the review. Opinion papers were excluded from this part of the review. Poor quality studies were excluded from the review. I excluded all the research that was published before 1990 because of the rapid development in maternal healthcare in the 1990 made data from 1980 less relevant.

3.8   Data description

A total number of eighteen articles/studies (N=18) on maternal health care in Nigeria met the inclusion criteria in this review. All these articles were published in a diverse collection of scientific journals between the years 2000 to 2013. The studies for all the articles used in this review were carried out in Nigeria.

3.9   Flowchart of search strategy

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┌─────────────────────────────┐
│    PubMed   409 articles     │
│                             │
└─────────────────────────────┘
              │                        ┌──────────────────┐
              │                        │ Limited to ma-   │
              ▼                        │ ternal health    │
                                       │ services         │
┌─────────────────────────────┐       └──────────────────┘
│      28 articles            │
│                             │
└─────────────────────────────┘
              │                        ┌──────────────────┐
              │                        │ Limited to full  │
              ▼                        │ text in English  │
                                       └──────────────────┘
┌─────────────────────────────┐
│      18 articles            │
│                             │
└─────────────────────────────┘
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3.10 Quality appraisal

I used the quality appraisal scale and check list to ascertain that the articles reviewed met the quality requirement in terms of methodological quality, precision, and external validity. I used prisma 2009 checklist to make sure that everything is in the right place (Moher D, Liberati A, Tetzlaff J, Altman DG, 2009)

3.11 Items used to assess the quality of studies

I assessed the studies based on their relevance to the review questions and the method of conducting and reporting the studies.

Some of the items I used to assess the quality of the studies include the following:

- Whether the purpose and importance of the study were clearly described
- Whether there is clear evidence of comprehensive literature review relating to the study
- Are there justifications for the approach taken and also whether the approach taken was clearly described?
- What is the sample size? Did it give a proper coverage of the population under study?
- How sample for the studies was selected
- How access to the study sample was achieved
- What are the characteristics of the subjects? Were they clearly described?
- How data was collected
- How data was recorded to ensure consistency
- The context in which the study took place whether the researcher is new
- or familiar to the study settings and the whether the researcher have potential influence on the study.
- Data analysis method, was data properly analyzed, was appropriate statistical method or package used.
- How coding for the data was achieved, were findings clearly described?
- How was literature incorporated in the data?
- Ethical considerations, how was the consent for the study obtained?
- Outcome clearly defined
- What are the implication of the findings for practice and further studies?

3.12 Ethical Considerations.

The study was literature based and as a result I had no contact with subjects. The thesis did not need any ethical approval as no active participants/subjects were used in the study. However, I reviewed the ethical considerations that are integral to the conduction of patient/human related research.

I made sure that all the articles/studies that I reviewed met up with the required ethical standards. All the articles I used in the review got all the necessary approval from the respective ethical committees and they all adhered strictly to the ethical procedures and guidelines.

4 Description of articles

A total of 18 studies on access to maternal health care in Nigeria met the criteria for inclusion in this review. The findings from the study is presented as follow,

Babalola, S, *et al* (2009), conducted a study in Nigeria to identify the determinants of use of maternal health services in Nigeria. The study was based on an interviewer administered nationally representative survey. They used data from the 2005 National HIV/AIDS and Reproductive Health Survey which included 2148 women who had a baby during the five years preceding the survey. In their study they found that Education is the only individual level variable that is consistently a significant predictor of service utilization, while socio-economic level is a consistent significant predictor at the household level. At the community level, urban residence and community media saturation are consistently strong predictors. They arrived at the conclusion that the factors influencing maternal health services utilization operate at various levels individual, household, community and state. Also the determinants vary depending on the indicator of maternal health services, the relevant determinants vary. They recommended that effective interventions to promote maternal health service utilization should target the underlying individual, household, community and policy-level factors. The interventions should reflect the relative roles of the various underlying factors**.**

Dairo, M D *et al,* 2010 conducted a study in Ibadan Nigeria to determine the factors affecting the utilization of antenatal care services in Ibadan, Nigeria. It was a cross-sectional study carried out in two randomly selected local government council areas in Ibadan. They administered a pretested questionnaire to 400 women. Information was obtained from the women on their attendance at antenatal clinic and the reasons for not attending the antenatal clinics**.**They found that women in urban areas were more than 2 times likely to attend antenatal clinic than women in rural areas. Women who were Muslims or other religions were more than 2 times likely to attend ANC clinic than women who were Christians [(OR=2.398, 95%CI, 1.264-4.557)]. Also, Women whose ages range

from 25 years and older were more than 2 times more likely to utilize antenatal than women who were 25 years or younger [(OR=2.236, 95% CI, 1.106-4.107]. They came to a conclusion that efforts towards ensuring the utilization should be targeted towards rural areas, the importance of modern antenatal care should be emphasized even in the religious settings and younger women should be encouraged to utilize antenatal care services.

Azuh Dominic, 2011 carried out a study to determine the socio-demographic factors influencing health programme usage by pregnant mothers in Nigeria: The study took place in five (5) rural wards of Ado-Odo/Ota Local Government Area in Ogun State, Nigeria. The study was based on face-to-face structured interview and focus group discussion (FGD) with a two-level analytical approach in data analysis. Also interviews were held in depth with specific stakeholders in the community, some officials of the five primary health care units in the wards selected and staff of the only general hospital residing in the Local Government of the study area. The study adopted a stratified sampling technique in selecting the respondents who were ever married women in child bearing age (15-49) years who had at least one live-birth in the last two years preceding the survey. On the whole, 260 female respondents were randomly selected from five wards out of the sixteen wards in the local government area.

The study identified several factors that have important influence on utilization of maternal health services in the study area. Some of the factors that were identified by the study include the predictor variables such as education and occupation of mothers, distance to the health facility, and cost of antenatal care among others.

They concluded that maternal mortality in developing countries continues to be a serious public health problem and contributes to the low life expectancy in Nigeria. They recommended that culturally appropriate health education especially on harmful traditional practices and benefits of safe motherhood should be employed as a short term measure. Socio-economic transformation and 'cultural revolution' should be effected for better healthcare utilization among pregnant women.

Ajaegbu, O.O (2013) carried out a study to determine the perceived challenges of using maternal healthcare services in Nigeria. The data he used for this study came from the 2008 Nigeria Demographic and Health Survey. The sampling frame used for the 2008 NDHS was the 2006 Population and Housing Census of the Federal Republic of Nigeria conducted in 2006, provided by the National Population Commission (NPC). The survey collected information from a nationally representative sample of 33,385 women age 15-49, who had given birth in the five years preceding the survey. His findings from 56.4% of the respondents noted that money to access maternal healthcare service is the major barrier that hinders them from accessing maternal healthcare service even when they have health complications. He said that Nigeria is a country in which most of its citizens live below one dollar per day. Therefore as long as needs concerning feeding are not met, money to access good maternal healthcare service remains secondary need. The study identified that use of maternal health services by pregnant mothers in Nigeria is determined by their socioeconomic status in the society. Some of the barriers he found in this study that affect the use of maternal health care by Nigerian women include getting permission to go for treatment, getting money for treatment, distance to health facility, transport cost, not wanting to go alone, for fear that there may not be a female provider or any health provider, to attend to their needs and concern that drugs may not be available. He concluded that money for treatment is the major barrier that hinders women from accessing maternal health care service in Nigeria. For women living in the rural areas in Nigeria, transportation and distance to hospital are major factors affecting the use of maternal Health services in Nigeria.

Yar 'Zever, I.S *et al*, 2013 conducted a study in Kano, the Northern part of Nigeria to determine knowledge and barrier in utilization of maternal healthcare services in Kano State. They used sample of one thousand (1,000) married respondents and they drew these samples from both rural and urban areas. They considered this sample adequate because of the homogeneous nature of the population. They found that averagely about 68% of married women had at least four ANC visits, a little over 35% had undergone safe delivery care, and nearly 28% both urban and rural practice family planning. They came to a conclusion that women's education, distance to health facility, wealth quintile, reli-

gious misconception, cultural believes and residences were documented as the most important factors associated with maternal health care services and utilization in Kano Nigeria.

Ugal D.B *et al* (2012) conducted a study in Obudu and Ogoja local government area of Cross River State, Nigeria to assess the availability, utilization and relationship with maternal health outcome (childbirth). The cross sectional study was carried out among women of reproductive age in the urban areas of Obudu and Ogoja Local Governments of Cross River State, Nigeria. The results of the study indicated that maternal health facilities were available but majority of them do not satisfy the international standards for both Basic Essential Obstetrics Care (BEOC) and Comprehensive Essential Obstetrics Care (CEOC). In addition, the utilization of health facilities was hampered by cost, culture and decision-making. The study also found that there was a significant relationship between utilization of maternal health facilities and maternal health outcome manifest in successful and healthy birth outcomes. They recommended that upgrading of maternal health facilities in all areas is germane to improving maternal health outcome. This can be achieved by providing facilities cheaply and readily to the people and relevant information to women.

Marchie, C.L (2012) conducted a study to investigate the socio-cultural factors that contribute to Maternal Mortality in Edo South senatorial district. The population of the study was made up of 2157 female of reproductive age and she used multi stage random sampling technique. She developed a structured and validated questionnaire with a reliability of 0.82 as her instrument for data collection. Focus group discussion and in depth interview guide were employed to complement the instrument. She found that social cultural variables when taken together contributed positively to maternal mortality (i.e. economic status, educational attainment, female genital mutilation, women decision making power, early marriage/child bearing traditional obstetric care services).
She concluded that in addition to medical causes of maternal mortality, there are also socio cultural factors that contribute to women dying during pregnancy, labour and pueperium. She suggested that cultural and traditional factors that have the tendencies to increase the risks of maternal deaths should be dis-

cussed with community leaders and a village audit instituted for every maternal death to generate useful data base. Also harmful traditional practice like female genital mutilation should be stopped because of their deleterious effect.

Idris, S.H, *et al* (2013) carried out a study in the Northern part of Nigeria, to determine the barriers to utilization of maternal health services from the perspective of mothers in northwestern Nigeria. It was cross-sectional study of 150 mothers, selected through multistage technique, Data were collected using a structured interviewer-administered questionnaire, and analyzed using SPSS statistics. They found that the use of MHS among the study subjects was poor. The major reasons that the subjects gave for poor use of maternal healthcare facilities were that they had never experienced obstetric complication in the past and also the health care provider in the healthcare facility showed   negative attitudes to them. Cost of care was not seen as prominent factor hindering them from utilizing the healthcare facility. They recommended that, while there is a need to increase the use of MHS by raising awareness on it, bringing it closer to the mothers and making it more affordable, there is a more pressing need to improve its quality which could be achieved by building the capacity of the health care providers on modern concepts for delivery of MHS. Furthermore, they prescribed that further studies should be carried out to explore ways through which the negative attitude of health care providers could be alleviated.

Ononokpono, D N*, et al* (2013) carried out a study in Nigeria to examined the relationship of community factors to the use of antenatal care in Nigeria, and explored whether community factors moderated the association between individual characteristics and antenatal care visits. They got data for this study from the 2008 Nigeria Demographic and Health Survey among 16,005 women aged 15-49 years who had their last delivery in the five years preceding the survey. Results from multilevel models indicated that living in communities with a high proportion of women who delivered in a health facility was associated with four or more antenatal care visits. Residence in high poverty communities decreased the likelihood of antenatal care attendance. Living in communities with a high proportion of educated women was not significantly related to antenatal care visits. Community factors acted as moderators of the association between

educational attainment and antenatal care attendance. They recommended that improvement in antenatal care utilization may therefore be enhanced by targeting poverty reduction programs and increasing health facility delivery in disadvantaged communities.

Ibor, U.W *et al*, (2012) carried out a study to examine the utilization of antenatal care centers in Ibadan, Oyo State. The purpose of the study was to evaluate the utilization of antenatal care centers among child-bearing women in Ibadan North Local Government Area, of Oyo State, Nigeria. They obtained data for the study through the administration of two hundred and thirty-one copies of questionnaire to child bearing women and the data was analyzed using tables, simple percentages and multiple regression analysis. The result showed that 6.3% of the utilization of ANC by childbearing women was explained by age, cultural preference, income, education, religion, marital status and occupation. The strength of contribution of each of these selected factors showed that mother's education had the greatest contribution to the utilization of ANC, followed by cultural preference, income, marital status and mother's occupation. The ANOVA result also indicated that age, culture, income, education, religion, marital status and occupation significantly influenced the utilization of ANC by child-bearing women. The study therefore, revealed that though the utilization of ANC centers was low but the combination of socioeconomic and demographic variables significantly influenced their utilization by child-bearing women. From the findings of the study, they made a recommendation that government and other sponsoring agencies should provide antenatal care free or subsidize the charges in order to guarantee easier access to ANC by childbearing women.

Batawa, N.N *et al*, (2010) carried out a study to explored knowledge and perceptions of maternal health and awareness of health services among women and men of reproductive age in rural communities in Zaria, Kaduna state Nigeria. It was a cross sectional descriptive study which is made up of the sample of 647 respondents, consisting of men and women who had received formal education. Respondents were between the ages of 15 and 49, except for 17 younger married girls and 49 men and women who were over 50 years of age. They used closed-ended questionnaires to collect information from 326 women

who had delivered within the past two years and 321 adult male heads of household. The questions were asked of husbands and wives, with some men having more than one wife. They found that knowledge of maternal health was very low. In a three point scale (poor, fair, good), only 3.1% of men and 1.2% of women had good knowledge of maternal health. The association between the respondents" educational level and their maternal health knowledge was statistically significant. Socio-economic barriers were identified as limiting this population's optimal utilization of maternal health services. Also, some respondents" perceived available health care services to be of low quality. They concluded that for reproductive health to be improved in the rural part of Northern, Nigeria, formal education must be improved as well. Also the quality of maternal care given by the attendants must be improved and there should be increase awareness about maternal healthcare services in the rural areas of the North.

Iyaniwura, C.A *et al,* (2009) carried out a study in Sagamu, South – Western, Nigeria to determine the pattern of use of maternity services and access factors that may influence the observed pattern. They carried out a survey which involved 392 women who have carried at least one pregnancy to term in Sagamu. It was descriptive cross sectional study and this was conducted in Sagamu town between the months of September and October 2005. They used five interviewers which were community extension workers who were trained to collect the data. They used structured questionnaires to get information about the respondent's awareness of ANC and delivery facilities in their community, the facility used during their last pregnancy and the reason for their choice. Then the results of the questionnaires were analyzed using Statistical Package for Social Sciences version 10.

Their findings show that women in the study were aware of ANC and assistance during labour although a considerable proportion of women still use non-medical institution or do not use at all. The major factor they found that deter women from using the healthcare facility include the long waiting time and perceived attitude of staffs. They recommended that Government should make effort to improve the quality of services at the health facilities, by minimizing waiting time and training health care providers to communicate better with patients. They also prescribed that there should be community education which should

emphasize on the need to register early for antenatal care so that women could maximize the benefits from the services. Also Women should be encouraged to have at least education to universal level such as attending secondary school education. Woman's economic status should also be improved through empowering them and giving them employment opportunities. They also recommended that men who have knowledge on maternal health and how the use of maternal healthcare and obstetric services could be improved to reduce maternal mortality should be included in the strategies to reduce maternal deaths in the community.

Uthman, S.G *et al* (2013) carried out a study in Maiduguri the Northern Nigeria to identify some demographic factors that affects postpartum hemorrhages prevention in Maiduguri, Nigeria. The study was a prospective, comparative and muticentered study which started in September, 2007 and was completed in March, 2009. The study took place in three Health institutions in the Metropolitan area of Maiduguri. These were; the University of Maiduguri Teaching Hospital (UMTH), the Maiduguri Specialist Hospital, and Yerwa Maternal and Child Health Care Centre. Women that had uncomplicated vaginal delivery and were administered with a prophylactic dose of either oxytocin injection (10 IU) or oral misoprostol (3 × 200 µg) as permitted by the ethics of practice in the various Centre were enrolled for the study. The exclusion criteria used in this study included known allergy to either of the drugs. The study was completed with a total sample size of 1865 orally consenting (some written) enrollees. About, 46 of the administered questionnaire were invalidated leaving a total of 1819 valid questionnaires (912 for oxy- toxin and 907 for misoprostol). The data was further reduced to 1800 through a process called computer randomization in order to have equal study population in the two medication groups: oxytocin group (900 subjects) and mi- soprostol group (900 subjects). Each patient used in the study was observed for a period of 24 hours for blood loss which was quantified using calibrated kidney dishes of various sizes (100 - 1500 ml) and measured to the nearest milliliters. Clinical measures were administered by a clinician based on patients' needs. The minimum sample size for the study was calculated using the Taylors' formula at 95% confidence taking prevalence of PPH to be 50%. The findings from the study show that tribal affiliations, educational back-

ground, and employment play a role in PPH, although the contribution of tribal affiliation was significantly higher than that of education and employment

Bankole, A, *et al* (2009) carried out a survey in Nigeria to identify the barriers to safe motherhood in Nigeria. Their report was based on data from the 1990 and 2003 Nigeria Demographic and Health survey and these surveys are part of worldwide project designed to collect and disseminate data on fertility, family planning, maternal and child health, HIV/AIDS and are sponsored by mainly by the US Agency for International Development. The samples were nationally representative and large enough to permit estimates for the Nigerian six geographical zones. Most of the variables were standardize across the surveys making it possible to compare their findings. The 1990 survey interviewed 8,781 women aged from15 to 49 and the 2003 survey interviewed 7,620 women of the same age. They used the standard DHS measures to calculate the proportion of women having unmet need for effective contraceptives. The also reviewed both published and unpublished reports including the publication of Government and Non-Governmental Organizations in Nigeria.

Their findings agreed with some previous studies in Nigeria that same factors that contribute to poor level of maternal healthcare access in Nigeria especially widespread poverty, rural residence and low level of female education in some part of the country are also linked to the condition that contribute to elevated levels of high risk pregnancy, cultural expectation of very early marriage and motherhood, lack of access to contraceptive services and women powerlessness to seek reproductive healthcare by themselves. Also high level of unwanted pregnancy is a direct outcome of low level of use of effective contraceptives and these results to high level of unsafe abortion and this is the reason why a number of Nigeria women die each year during pregnancy and child bearing.

Doctor, H.V *et al* (2009) carried out a baseline survey in three Northern states, namely Katsina, Yobe and Zamfara. They interviewed a total 6, 809 women with age range between 19 to 49 years old. The essence of the baseline data was to assess the impact of the program on health outcomes and survival rates and thereby contributing to achievement of national health related MDGs. They also administered a modified DHS type of questionnaire which included translation of

key concepts and terms in the local languages so that the respondents can understand. The sample was structured to enable comparison per state of areas with interventions and those without interventions.

Findings from their studies reveal that having delivery Non skilled birth attendants (NSBAs) was associated with young adult age and state of residence.

They recommended that in order to reduce maternal mortality and neonatal rates, more emphasis should be made to strengthen delivery of quality, reliable and affordable reproductive and maternal health services including basic and emergency basic obstetric care at the time of delivery. Government should make the healthcare service for maternal women free at the point of entry of delivery and treat complications free of charge. Government should strengthen the referral systems through emergency transport system aimed at evacuating women in labour to healthcare facilities. Government should make adequate publicity and campaigns about the dangers of Non skilled birth attendants through the radio, messages, and educational sessions. They should also provide formal education to maternal women to enable them understand the information given to the better.

Onasoga, Olayinka A. *et al,* (2012) conducted a study in Ife central, Osun State, Nigeria to determine the factors influencing the utilization of antenatal clinic among pregnant women in Ife central, Ile Ife. They used descriptive research design with stratified sampling technique to select 102 women in Ile Ife central local government area. They collected data using questionnaires and utilize both descriptive and inferential statistics to analyze the data they got from the respondents setting a level of significance at 5% (0.05).

Findings from their studies reveal that majority of respondent, 47.1% first heard of ANC in the hospital. 85% of the respondent knew that the service was available in the hospital. 57% of respondent attended ANC regularly.

The study showed that majority of the respondent opined that affordability of antenatal services, schedule of ANC, and lack of knowledge about existing services in ANC and husbands acceptance of the services rendered as a major factor prohibiting them from using the services.

Their findings reveal that there is also significant association between knowledge, distance, marital status, religion and level of education of respond-

ent under the study and their utilization of ANC services with p <0.05 but no association was found between parity and occupation of respondent under the study and their utilization of ANC services with p> 0.05.

Gazali, W.A. *et al,* (2010) conducted a study in Maiduguri, Borno State, to identify the barriers to utilization of maternal healthcare facilities among pregnant and non-pregnant women of child bearing age in Maiduguri Metropolitan council and Jere LGAS. They used survey method to collect data for the study. They administered seventy eight questionnaires and six in-depth interviews plus four sessions of focus group discussion. They conducted three sessions in each of the two local government areas.

Findings from their studies reveal that socio cultural factors affect the use of maternal healthcare services in the LGAs under study. These factors are associated with the tradition, norms and values of people that affect the way and manner in which they seek medical help although this study could not be generalized due to some limitations. In their study also, they found that socio demographic factors also play important role in how sickness and illness are acted upon and the pattern of utilization of healthcare services. Although some factors may be individual others are institutional based.

Conclusively, the study revealed that poverty, socio-cultural beliefs and practices, attitude of health workers and availability of facility and quality service. Others are cost, distance, time, lack of drugs, equipment and qualified health personnel, etc. consequently; there is low utilization of the maternal health care facility in the study areas.

Akanbiemu ,FA, *et al,* (2013)carried out a descriptive cross sectional community based studies among women of reproductive age between 15 to 49 years old in some selected rural and semi urban communities of in Okitipupa local government area ,Ondo State using a pre-tested structured interviewer administered questionnaire to collect relevant data from respondents. They used multistage sampling procedure to select eligible respondent.

They use descriptive statistics such as percentages and proportion to describe the quantitative and categorical variables, Chi square test for bivariate analysis

and multivariate analysis using multiple logistic regression model and p- value less than0.05 were considered to be statistically significant.

Findings from the study showed that free health care services for pregnant women in Ondo State were the main determinant of utilization of Public antenatal care ANC in Okitipupa LGA while previous safe delivery of a healthy baby was the main reason for utilization of any ANC facility whether public or private. The women also accepted that they had good knowledge of ANC and its purposes and services.

They recommended that the Ondo state Government should sub stain the free health service program for pregnant women. They should also employ and motivate more midwives, doctors and nurses to ensure effective delivery of ANC.

4.1   Synthesis of the findings from the articles.

The importance of the synthesis of findings is to compare the individual studies and reports in an unbiased way.

The grade working group (Working group, 2004) is of the opinion that for grading the quality of evidence for each important outcome, the reviewer should consider four key elements.

1. Study design which refers to the basic study design which can be categorized as observational studies and randomized trials
2. Study quality which is taken as the detailed study methods and execution. The reviewer should use appropriate criteria to access study quality for each important outcome
3. Consistency means that there should similarity of estimates of effects across studies
4. Directness is the extent to which the people, intervention, and outcomes measures are similar to those of interest.

The quality of the articles reviewed in this study examined five major criteria which include, design, methods of subject selection, variables measures, instrument used, and appropriateness of statistical analysis.

For the purpose of comparing and grading the articles used in this study, I will assign grade score of + or – indicating (+ present or good) and - indicating (not present or bad) .Below is the details of the grading criteria.

1. Design :   Controlled experiment = +
                      Uncontrolled experiment or descriptive survey = -

2. Method of Subject selection: Probability = +

                      Non probability = -

3. Variables measured: process and outcome = +
                      Outcome or process alone = -

4. Instrument used: Validated or pretested instrument = +
                      Non Validated /pretested instrument = -

Statistical analysis: appropriate (involve modeling, factorial analysis) = +
                      Inappropriate (only descriptive statistics) = -

The total + will indicate the quality score and it could be 4,3,2,1 or zero. Using the criteria, quality ranks were assigned as follows.

Scores and quality ranking scheme for empiric articles

Score	Rank
Less than 2+	Low
2-3+	Moderate
4-5	High

Please see appendix .2 (Summary/comparison comparison/synthesis of articles). By using the Grade working group criteria for quality ranking above, I think most of the studies and articles reviewed met the criteria for quality ranking and in terms of how the purpose was described, importance of the study, study objectives, the study samples and how they were selected, analyzed and the statistical package that was used. The study of Uthman, SG *et al*, 2013, Maiduguri could be judged as a high in terms of quality compared to other studies. The studies that could be judged as moderate in terms of quality in this review based on the Working group criteria include the following Babalola,S and Adesegun,F,2009, Dairo,MD and Owoyokun KE, 2010, Ajaegbu O.O, Ibadan, Nigeria May, 2012 , Yar 'Zever ,I.S *et al*, Kano ,Nigeria, 2013, Marchie,CL. Edo South,2012,Ononokpono,DN, *et al,* Nigeria, 2013,Bankole,A *et al,* Nigeria,2009, Doctor, H.V et al, 2010, Northern Nigeria, Onasoga ,O A. *et al,* 2012, Ife Central

,Osun State, Nigeria , Idris, SH *et al,* Northern, Nigeria, 2013,Ugal, D.B *et al*, Cross River State Nigeria, 2012).Whereas Gazali,W.A.*et al*, 2010 could be regarded as low based on working group criteria.

Some studies utilized questionnaires and interviews. In my own view, I think using interviews in studies give participants the opportunity to express their own views about the research topic. It also helps to touch on other issues which the researcher may not have considered important as the researcher probed to get more information from the respondent/subjects.

The study and findings by I.S Yar' zever *et al* (Knowledge and Barriers in Utilization of Maternal healthcare services, in Kano, Northern Nigeria could be considered as high quality study from my own perspective. The researcher used the behavioral model proposed by Anderson that seeks to account for and predict the use of health services by individuals. Anderson proposes that the relevant factors can be grouped into three main categories, an individual predisposition to use of medical services, enabling or impeding circumstances such as infrastructure and the need for health care (Anderson 1995). The study by I.S Yar' zever et al tried to examine how patterns of maternal health care utilization and inequalities in access to health care are products of accumulated disposition. The study was a descriptive cross sectional study which utilized questionnaire, focused group discussion and in-depth interview .The population used for this study was homogeneous in terms of culture, language and religion. The sample size of 1000 thousand subjects was drawn both from the Urban and Rural areas and in my own opinion I will agree with the researchers that the sample size was adequate because of the homogeneous nature of the population that was studied. The study made use of both qualitative and quantitative data. The research assistants were all indigents of the area which means that the y knew and understood the area properly. The instrument that was used in the study was validated by experts in demographic studies and public health. Reliability was established. Ethical approval was obtained from the ministry of health Kano. Data was properly analyzed

5   Results of empirical studies

5.1   Socio-cultural factors to access

Maternal care is made up of antenatal care (ANC), and delivery care (DC). The antenatal care remains one of the most important factors of the safe motherhood initiative and the main strategy in the Millennium Development goals of preventing child mortality and improving maternal health. The importance of antenatal care is to maintain the mother and the baby at the early stage by identifying problems and also offering appropriate solution to those problems. Antenatal care educates the mother and her spouse about pregnancy and labour and removes fears and ignorance from both the mother and husband. Antenatal care is the only trusted and reliable process of screening for impaired fatal growth, malformation, anemia, pre eclampsia and other disorders. Antenatal care creates a friendly avenue and establishes relationship between the mother and the healthcare facility. Antenatal and skilled obstetric care are important strategies for improving maternal and newborn health but unfortunately, many women in developing Nations continue to go through pregnancy and delivery without using the services. It is important to treat all women with watchful expectancy during pregnancy and at the point of delivery and also to make all emergency obstetric care within reach for all pregnant women since there is no other reliable means to predict whether a pregnant woman will develop complications during pregnancy. Antenatal care offers the benefit of dictating any abnormality and complications that could affect both the mother and the baby at the early stage of pregnancy thereby making it possible for the appropriate treatment and intervention to be given. Antenatal care helps in preventing adverse pregnancy outcomes when it is sought earlier. Maternity care whether it is Antenatal or Delivery care can only achieve the purpose of reducing maternal mortality and mobility if it is provided by a qualified professional and in a health and safe environment adequately equipped with the relevant facilities needed for quality maternal care. The rate of non-use of maternal health care services in Nigeria is higher in the rural areas compared to suburban and urban area.

Poverty limits access to healthcare services. It influences negatively the ability of women to use modern healthcare facilities and this leads to high maternal mortality especially among the poor. Poverty also limits access to food and balanced diets resulting to hunger and malnutrition.

From the studies, the state of use of maternal healthcare seems to be worse in the rural areas probably because of low socio-economic status.

Cost is also seen as an important factor contributing to non-access to maternal healthcare facility in Nigeria. Although a few women indicated cost consideration as a reason for the choice of ANC facility, findings from the studies suggest that high income is associated with good obstetric behavior. All the women who earned more than N20, 000 ($148) per month received ANC, had more frequent antenatal visits, were more likely to use orthodox facilities for delivery and none of them delivered at home (Iyaniwura, C.A et al 2009) .

It is believed that with influence of education and income suggest that with adequate education and improvement of economic status of women in the community near universal use of orthodox maternity may be achieved.

For women seeking care, cost include those for facilities and services and involves both formal and informal fees, the cost of drugs and equipment, transport to a hospital or clinic and the opportunity cost of getting to the healthcare facility and receiving care (Ensor T, and Cooper S. 2004, Ensor T, and Ronoh J. 2005, McNamee P, Ternent L, and Hussein J. 2009.)

In the studies also it was found that young women who were 20 years or younger were less likely to use ANC facilities than older women. Young women may be unmarried and may lack social support. They may be unable to use the maternal healthcare facility due to the circumstances surrounding their pregnancy. It is unfortunate that the women who are at higher risk such the young and uneducated and poor women are less likely to access the appropriate maternal healthcare facility.

Women who are educated received ANC during pregnancy. They had more frequent visits and used health facility for delivery. This was seen more in among women who had at least secondary school education. The effect of education is associated with better exposure to information and higher income. A well-educated woman may have a good job and earn more money which improves economic access and reinforces the effect of adequate information. Also in order to receive antenatal care from a qualified healthcare practitioner means that you must have enough money to take care of the cost of the services and since education could be associated to financial status of an individual, money

could be seen as major factor that restrict uneducated women from having access to antenatal care from qualified healthcare practitioners.

Maternal education was also found as to have strong relationship with utilization of maternal healthcare services in both the Northern and Southern part of Nigeria. This is consistent with the findings of other studies in Nigeria (Babalola & Fatusi, 2009).Women who are educated are more likely to shun traditional practices and use modern healthcare services to enhance their lives.

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

Perceived quality of service is also another factor that influences people's decision to use a maternal healthcare facility in Nigeria. The main reason given in the studies for the non-utilization of government services for delivery by those who use other facilities were linked to quality of care.

Also the long waiting time in most of the government facilities were a major factor seen in the study deterring women from having access/utilizing the healthcare facility. Mothers often complained of long waiting queues, provider behaviors/attitudes and lack of healthcare workers as major barriers hindering them from receiving maternal care. Government facilities are always associated with long waiting times and poor attitude of workers and these discourage women from seeking maternal healthcare from the facility.

Distance to the healthcare facilities was seen as a major factor hindering mothers from having access to maternal healthcare services, this is a problem especially because of the poor road network and lack of transportation. Some pregnant mothers will prefer to visit a near by traditional birth attendant rather than walking many miles to a healthcare facility which she does not have trust on. Also most rural areas in Nigeria lack health care facilities and because of these women have to go long distance through bad roads to the city in order to ac-

cess maternal healthcare. For those women who live in the rural areas who do not want to go through this stress of going to long distance through dilapidated road to the city to seek maternal healthcare, they resort to use of local remedies.

Religion is also seen as a major factor. Religion is found to influence the choice of place of delivery by women. The traditional worshipers were more likely to deliver with traditional birth attendants (TBAs). This is because the traditional worshippers may be less educated than the Christians and the less educated are likely to use the non-health institution. Also some religious practices and beliefs reject some medical procedures for example certain religions do not encourage blood transfusion and this leads to death of the mother most times after child bearing.

The Islamic custom of Purdah which means the seclusion of women from the sight of men is practiced in the Northern part of Nigeria which comprises mainly Muslims. Purdah generally applies to married women and girls who have reached puberty. Purdah takes various forms but in essence it prohibits women from interaction with strangers' inside and outside their homes. The women are required to seek permission from their husbands when they need to seek medical assistance. This practice deprives women of their rights to freedom of movement and association and also their access to education and social services. It impedes their contribution to the family income and their ability to care for their families.

Child hood marriage was also seen as a barrier to access to maternal healthcare services. This is because in Nigeria, marriage age and sexual activity is determined by culture. In the Northern part of Nigeria, the average age of marriage and sexual activity is 15 years old where as in the Southern part of Nigeria, the age is put at 18 and 20 years respectively. According to section 18 of marriage act of Nigeria, at the federal level recognizes a person less than 21 years as a minor but allows minor to marry with the consent of the parents.

There are many implication of childhood marriage. It makes young girls to loose autonomy and control over their bodies and prevents them from taking their own independent decision on their reproductive health. Early marriage denies young girls the right to universal education. It exposes the young mother to harmful effects of child pregnancy. Early pregnancy in the Northern part of Nigeria has

been attributed to high incidences of maternal mortality and some conditions like vesico-vaginal fistula (VVF) which is as a result of the pelvic bones not developed enough to cope with child birth.

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

Some women tend to stick strongly to culturally defined norms with regards to health seeking during pregnancy and child birth. For instance, even where formal healthcare services are present, they are often bypassed for traditional providers.

5.2 Consequences/ Adverse of effects of Lack of access to maternal healthcare facilities

Insufficient access to maternal health care/utilization in Nigeria has serious economic and social consequences to the nation. It leads to high rate of maternal mortality. Women continue to die during pregnancy or after child birth as a result of not having access to the needed healthcare.

Maternal mortality is a serious consequence of not having access to healthcare/utilization of maternal healthcare services in Nigeria. Maternal Mortality ratio in Nigeria is said to be the second highest in the world and an estimated 54,000 women die every year from pregnancy related complications. Maternal mortality occurs most among adolescents and those who are poor uneducated or rural dwellers. This is because these populations have no access to health care and lack knowledge about modern contraceptives but generally have high fertility rates. The population in need otherwise referred to as the risk

population has no access to quality antenatal care, obstetric and postpartum care. This manifest as loss of productivity leading the affected families into poverty and thereby affecting the nation's economic growth adversely

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

All these manifest as loss of productivity leading the affected families into poverty and thereby affecting the nation's economic growth adversely.

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

5.2.1 Intensity of the problem

In Nigeria, the Health of Women is extremely poor and the rate of maternal mortality in Nigeria is among the highest in the world. The maternal mortality ratio is 840 per 100,000 live births, which is the second highest maternal mortality ratio in the world (UNICEF at a glance). Nigeria must join hands with other nations in the world on the steps they have taken to curbing these problems. It is displeasing to hear that while maternal mortality ratios continue to decline globally, the reverse is the case in Nigeria. The ratio still remains high in Nigeria and continues to increase. In addition to the estimated 54, 000 women who die each year from pregnancy related complication, another 1,080,000 to 1,620,000 women suffer disabilities related to pregnancy and childbirth that leave them unable to live healthy productive (UNICEF at a glance, Nigeria)

5.2.2 Population that is affected

High maternal mortality is seen most in the population that has little access to healthcare. This population lack knowledge about family and obstetric care because of poverty, no education and their place of residence. Nigeria poorest women receive about 6.5 times less access to skilled care during child birth than their richest counterpart (UNICEF: At a Glance: Nigeria) Poor women are refused access to healthcare in Nigeria because they cannot pay the user fees imposed by the hospital or cannot pay for the blood that is required for transfusion in the case of complication or hemorrhage. Lack of access to healthcare is seen mainly in rural areas in the Northern part of Nigeria. Women in the rural area have a maternal mortality ratio that is 2.4 times higher than that of women in the urban areas (USAID. Maternal and Child Health Nigeria) and are 2.7 times less likely to use modern contraceptives. Thus nearly 70 percent of our births take place in areas where access is limited (USAID. Maternal and Child Health, Nigeria).Uneducated women as well are far less likely than their educated counterparts to receive antenatal care.

5.2.3 Risk Factors

Some of the risk factors associated with poor maternal health are poverty, rural living, little or no access to family planning and contraception, high fertility rate, inadequate access to obstetric care and poor quality of care. The fertility rate in Nigeria stand at 5.7 children per family, this figure is high enough and does not appear to go down. Many women hack access to modern contraceptives even where they have access to it many of them cannot afford it. Prevalence of contraception is low in Nigeria. Some barriers to contraceptives use in Nigeria include affordability and awareness.

In the rural areas, 43.8% percent consider condoms to be affordable (USAID Maternal and Child Health). There is little or no awareness on contraceptive use and this constitute a major problem as 1/3 of women incorrectly believe that family planning can lead to infertility. The rate of fertility of adolescents is high, at 124 per 1000 women. Efforts should be made to reduce the high fertility rate in Nigeria because in each pregnancy a woman has multiple chances of dying from pregnancy or child bearing related complications. The major causes of maternal mortality in Nigeria include hemorrhage, unsafe abortion and obstructed

labor can all be treated effectively in a well-staffed fully equipped health centers (UNICEF at Glance: Nigeria)   Women in Nigeria experience three major delays in having access to the necessary obstetric care, delay in seeking care, delay in reaching appropriate care, and delay in receiving treatments. These delays are related to access to care. Also some women decide not to seek obstetric, pre-natal, or postpartum care because they are not aware of the importance or they are unable to afford it. Some women in some cases who wish to seek care are often physically unable to reach health centers due to lack of transportation. In rural areas only 27 percent of births are assisted by a midwife or other skilled birthing attendant (USAID, Maternal and Child Health; Nigeria). The other delay is related to poor quality of care in the health centers which includes insufficient skilled attendants and lack of medical equipment.

5.2.4 Social and Economic Consequences:

Lack of access to maternal health care/utilization has serious consequences to the nation. It leads to high rate of maternal mortality**.**

The high mortality rates and pregnancy related disabilities in Nigeria have long lasting social and economic consequences on both individual families and our nation at large Children who are left without their mothers are more likely to suf-fer from illness or malnutrition and are at an increased risk for early death (UN-FPA. Maternal Morbidity).Also women who are able to survive severe complica-tions from pregnancy and childbirth usually face long recovery times, and this in turns leads to loss of productivity may have social and economic consequences within their families and society. Some health problems such as obstetric fistula, anemia, and uterine prolapsed can limit a woman's mobility and her ability to contribute to the household. These problems push families into poverty, put children at risk of malnutrition and illness, and break marriages.

5.3 Summary of Findings

From the review it was found that the following barriers restrict Nigerian mothers from having direct access to maternal healthcare facilities in Nigeria.

1. Poverty is a major factors hindering women from seeking maternal healthcare in Nigeria and also responsible for high maternal mortality rate in Nigeria.

2. Education is also another important factor hindering mothers especially in the rural areas .Some mothers are not educated and have no orientation or knowledge about the western medicine and these mothers rely more on traditional birth attendants (TBAs)

3. Poor healthcare facilities and also poor quality of healthcare services by the healthcare staffs were also seen as a major factor hindering women from having access to maternal healthcare facilities. Mothers often complain being attended to by unskilled health care personnel.

4. Poor infrastructural facilities, there are no good roads to the travel to where most of the healthcare facilities are located and this makes the distance and travelling times so long and unsafe for mothers.

5. Socio cultural factors is another reason responsible for non utilization of maternal healthcare services and high mortality rate as well. Some cultures still rely on traditional birth attendants. In some cultures as well women must get permission from their husbands in order to seek maternal healthcare. Religion also play a role in women access and utilization to healthcare as some religious beliefs do not allow the women to accept certain medical procedures like blood transfusion etc.

6. From the studies, the state of use of maternal healthcare seems to be worse in the rural areas probably because of low socio-economic status

5.4   Validity and Reliability of the Study

Validity is the extent to which a test measures what it claims to measure. It is vital for a test to be valid in order for the results to be accurately applied and interpreted.

Internal Validity: An instrument is assigned validity after it has been satisfactorily tested repeatedly in the population for which it was designed.

External Validity: This refers to the generalizability of the research findings to the wider populations of interest (Bowling, 1997).

Reliability is concerned with the accuracy of the actual measuring instrument or procedure. There are some limitations to this. Since most of the studies reviewed were questionnaire based, it is possible that the responses may not

have reflected the true opinions of all the respondents. Also the fact that some of the subjects were not educated , there might have been varied understanding of the questions by such subjects following interpretations to the local language by the interviewers. Some results may also be biased as a result of potential misreporting by the respondents and the ability to establish causation between any of the variables and outcomes. The fact that most of the study was done through questionnaire and not interview did not give women more opportunity to contribute for more puzzling findings. The investigators may have failed to probe in a way that may have revealed respondent true feelings and knowledge attainment. The study may not be representative of the whole of Nigeria with its diverse socio-cultural and demographic settings. The search strategy might not have identified all the papers that are relevant to this study due to practical constraints. Some of the instruments used in the study did not undergo formal psychometric evaluations but was based on existing widely used instruments.

5.5 Business implication of this thesis

Maternal health is a national issue because the prospects of any nation depend on mothers. Maternal health reduces both economic and social burden to the families. Any investment in maternal health makes the health system stronger and increase cost effectiveness of resources. It is very important for the Government to invest in maternal health as failure will lead to counter productiveness and undermine both national growth and development. It is wise to invest in maternal health and maternal health should be the priority of every Government. Maternal healthcare investment should be made political and social imperative. In order to save more lives, there should be improved coordination of healthcare efforts by various bodies involved and development of partners in the private sector and civil society.

Feedback systems should be established that can collate, analyze, and synthesize information from various sources and then feed to decision makers. This will in turn enable the appropriate ministries to get the required data on time so that program implementation will be faster and more effective.

Customer relationship management (CRM) should be established in all the healthcare facilities. It should comprise of dedicated teams in all the units with the right attitudes, skills and good frame of mind to achieve positive results.

6   Conclusion/Recommendation

The review answered the research questions.

From the review, different factors affect maternal healthcare services at various levels. These factors could be individual, household, community or state.

Intervention measures should target the underlying individual , household, community, state and policy level factors and interventions should also reflects the roles of the various underlying factors. The findings from the review show that Women in the southern part of Nigeria seem to have more access to maternal healthcare use than women in the Northern part of Nigeria due to regional differences in educational attainment religion, mother's age, educational level, place of residence and religion ,availability of prenatal care and quality and professional care at delivery

Educational level, employment, mothers age, (i.e. early marriage), religion, cultural beliefs, distance to health care facilities and place of residence were also seen as a major factors that determine the utilization of maternal healthcare services in the northern region of Nigeria. It is pertinent to note that programs that are targeted towards improving access and utilization of maternal healthcare services especially for women with low level of education and those that come from a very low economic background will be of high benefits to women in both the Northern and Southern region of Nigeria. For women living in the rural areas, it is also necessary to develop a more reliable means of improving availability and accessibility to maternal healthcare services since reducing maternal mortality and complication arising from childbirth is dependent on detecting and improving the services that are necessary to the reproductive health of women in Nigeria.

6.1   Recommendations

1. Reducing the cost of care and improving the quality of maternal health care especially for the poor and rural dwellers: In one of the studies conducted in Okitipupa LGA, Ondo State, findings from the study showed that free health care services for pregnant women in Ondo State were the main determinant of utilization of Public antenatal care, ANC in Okitipupa LGA while previous safe delivery of a healthy baby was the

main reason for utilization of any ANC facility whether public or private in the area. Based on these findings I will strongly recommend that strategies like elimination of user's fees and offering incentives to pregnant women be adopted as this will motivate them to seeking the appropriate care they need. Eliminating "user fees" from health centers would also encourage women to seek medical care rather than attempt in-home delivery or unsafe abortions. Quality of care should also be improved by hiring and training more midwives , nurses and doctors on new techniques and advances in maternity care so that they can take care of the needs of this women. The health centers should be equipped with appropriate facilities need for both diagnosis and treatment of any maternal condition. The services should be made available to the poor in the rural and remote communities through partnering with private sector providers so that the poor and risk population can receive the care they need. We should train and engage community based providers in the different communities

2. Women empowerment: I also advocate the need for women empowerment through   education, increasing employment opportunities   for women and young girls, establishing and supporting programs that will provide sustainable income generation for women as these will help to eliminate structural barriers to access to maternal healthcare caused by poverty and gender inequality, reduce maternal mortality in Nigeria and improve maternal and wellbeing of women. I recommend policies that will increase the opportunity for women to have more years of education as this would have effective impact on utilization of healthcare in terms of number of antenatal visits. Continuing education professional development and safe delivery procedure should be organized periodically for mothers. Safe motherhood initiatives should be propagated and made accessible to all mothers of child bearing age. Mothers should be educated on the factors responsible for both infant and maternal mortality and ways to prevent them.

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7 Appendices

7.1 Table Summary of reviewed articles

Author/year/Study area	Aim of study	Type of Study design	Sample size	Data collection method	Findings
1.Babalola,Sand Adesegun,F,2009, Nigeria,	To determine the factors affecting the use of maternal health services in Nigeria	multilevel analytic methods	2148 women who had a baby during the five years preceding the survey	An interviewer-administered nationally representative survey	Education , socio-economic level ,ethnicity, Urban residence, mothers age, approval of family planning
2. Dairo,MD and Owoyokun KE, 2010, Ibadan , Nigeria	To determine factors affecting the utilization of antenatal care services in Ibadan, Nigeria	A cross-sectional study	400 women	pretested questionnaire	Religion, Urban area, Age,
3. Azuh, Dominic Ogun State, Nigeria, 2011,	1. To examine major factors challenging maternal access to health care services during	The study used face-to-face struc-	On the whole, 260 female respondents were randomly se-	Structured interviews and focus	Education attainment of respondent was low , Distance

	Pregnancy and childbirth. 2. To proffer intervention strategies from the results of the study, for improving the current low utilization of health care facilities by pregnant mothers by policy makers	tured interview and focus group discussion (FGD) with a two-level analytical approach in data analysis	lected aged between 15 to 49 years old	group discussion	to the facility was far, The low status of women, Cost
4. Ajaegbu O.O, Ibadan, Nigeria May, 2012	To determine Perceived Challenges of Using Maternal Healthcare Services in Nigeria	Data was analyzed using percentage table	Sample of 33,385 women age 15-49, who had given birth in the five years preceding the survey.	Questionnaires	Lack of money to access maternal healthcare, Education, Transportation and distance to the health facility
5. Yar'Zever, I. S *et al,* Kano, Nigeria, 2013	To determine knowledge and barrier in utilization of maternal healthcare services in Kano State, Northern Nigeria	A descriptive cross-sectional study	A sample of one thousand (1,000) married respondents was drawn from both rural and urban are-	Questionnaires	low social status and the fact that many of them are influenced by cultural and religion

			as.		misconceptions
6.Ugal, D.B *et al,* Cross River State Nigeria, 20.2	To determine utilization of facilities and maternal health outcome among Urban dwellers of Obudu and Ogoja Local Government areas of Cross River State , Nigeria	The study adopted both descriptive and correlation designs	Not stated but there was a collection of data from a part or sub-set of a population whose analyses are generalizable on the entire population	Questionnaire	The findings agree with several other studies that have shown the various factors including education, health facilities contribute to poor birth out come
7. Marchie, CL. Edo South, 2012	To investigate the socio-cultural factors that contribute to Maternal Mortality in Edo South Senatorial District	Descriptive survey method	2157 married women of reproductive age (15-49)	Question-naires	Lack of education, socio-cultural factors
8. Idris, SH *et al,* Northern , Nigeria, 2013	To determine Barriers to utilization of maternal health services in a semi-urban community in northern Nigeria	A cross-sectional study	150 mothers, selected through multi-stage technique	structured interviewer-administered questionnaire	Poor quality of healthcare services, Poor communication/information, Negative attitude of

					healthcare provid-ers
9. Ononokpono, D N, *et al*, Nigeria, 2013	To determine the contextual de-terminants of maternal health Care Service utilization in Nigeria	Multilevel models	16,005 women aged 15-49 years who had had their last delivery in the five years pre-ceding the survey	Survey	Poverty, Level of education,
10.Ibor, UW.*et al*, Oyo State , Nigeria, 2012	To examine utilization of antena-tal care in Ibadan north local gov-ernment area, Oyo State, Nigeria	multi-stage sampling technique involving three steps	two hundred and thirty-one copies of questionnaire to child bearing women	Question-naires	Education, Culture. Religion Income , Marital status, Oc-cupation
11. Butawa, NN *e tal,* Zaria, Kaduna State, 2010	To explored knowledge and per-ceptions of maternal health and awareness of health services among women and men of repro-ductive age in rural communities in Zaria, Kaduna state Nigeria	Cross-sectional descriptive study	326 women who had delivered within the past two years and 321 adult male heads of household.	Closed-ended question-naires	Low level of educa-tion, Socio-economic barriers, Poor quality of health facility.
12.Iyaniwura,CA,an dYussuf,Q, Saga-	To determine the utilization of antenatal care and delivery ser-	Descriptive cross sec-	392 women who had carried at least one	Question-naires	Higher level of ed-ucation and in-

mu, South-Western, Nigeria, 2009,	vices in Sagamu, South Western Nigeria	tional study	pregnancy to term in Sagamu, South-Western Nigeria		come affected the use of health facility positively. Low quality of care affected the use of health facility negatively
13.Uthman, SG *et al*,2013, Maiduguri, Nigeria	To identify some demographic factors that affects postpartum hemorrhages prevention in Maiduguri, Nigeria	Prospective ,comparative, and multicenter study	1819 valid questionnaires	Questionaire	Tribal affiliation, Educational background, occupation
14.Bankole,A *et al,* Nigeria,2009	To determine barriers to safe motherhood in Nigeria.	Retrospective study	The 1990 survey interviewed 8,781 women aged 15–49, and the 2003 survey interviewed 7,620 women this age	Survey	Widespread poverty, rural residence, low level of women education in some part of the country, cultural expectation, of men's powerlessness to seek re-

					productive health
15.Doctor, H.V *et al,* 2010, Northern Nigeria	To determine the level of utilization of Non skilled birth attendants in the Northern , Nigeria	Baseline survey	6,809 Women aged between 19 to 49 years	Surveys/Questionnaires	No/Less education, rural residence, Poor/Low socio economic status, Poor communication, young adult age
16. Onasoga ,O A. *et al,* 2012, Ife Central , Osun State, Nigeria	To Identify factors influencing utilization of antenatal care services among pregnant women in Ife Central LGA, Osun State Nigeria	A descriptive research design with stratified sampling technique	102 pregnant women	Questionnaires	Cost of service, knowledge, religion, distance ,marital status, level of education, husbands acceptance of services
17.Gazali, W.A *et al,* 2012,Borno State, Nigeria	To identify barriers to utilization of maternal health care facilities among pregnant and non-pregnant women of child	Survey method	78 Questionnaire and 6 in-depth interview and four session of focus group	Questionnaire	Cultural factors, Socio demographic factors

	bearing age in Maiduguri metropolitan council (mmc) and Jere LGA's of Borno state		discussion		
18. Akanbiemu, FA *et al*, 2013, Ondo State, Nigeria.	To determine the effects of perception of free maternal healthcare services on antenatal care facility utilization in selected rural communities and selected semi-urban communities in Ondo State	Cross sectional study	450 women aged between 15 to 49 years	Semi structured interviewer questionaire	Free healthcare services for pregnant women in Ondo state were the main determinant of utilization of ANC in Okitipupa LGA and previous safe delivery of babies was the main reason for utilization of ANC

7.2   Appendix 2:

Table showing summary of classification, synthesis and comparison of articles in terms of quality rankings

Author	Study Setting	Study design	Instrument used	Subject selection
1.Babalola,Sand Ade-segun,F,2009, Nigeria	2005 National HIV/AIDS and Reproductive Health Survey (NARHS) in Nige-ria	Multilevel analytic methods	An interviewer – administered nationally representative survey (+)	multi-stage probabil-ity sampling meth-od(+)
2. Dairo,MD and Owoyokun KE, 2010, Iba-dan , Nigeria	Two selected local Gov-ernment area in Ibadan	Cross sectional study(-)	Pretested questionnaire was administered to 400 women(+)	A two multistage sampling technique was used(+)
3. Azuh, Dominic Ogun State, Nigeria, 2011	Five rural wards of Ado – Odo/Ota Local Govern-ment in Ogun State, Nige-ria.	A two level analyt-ic approach was used in data anal-ysis(-)	Face to face structured interview(+)	The study used a stratified sampling technique(+)
4. Ajaegbu O.O, Ibadan, Nigeria May, 2012	The data came from the 2008 Nigeria Demographic and Health Survey	Data was analyzed using percentage table. Descriptive sur-	Questionnaires was admin-istered(+)	Information for the study was collected from a Nationally representative sam-

		vey(-)		ple of 33,385 women aged 15 to 49 who have given birth five years preceding the survey(+)
5. Yar 'Zever ,I.S *et al,* Kano ,Nigeria, 2013	The population of study consists of Hausa married Women with age range between 18 to 49 years.	Descriptive cross-sectional study (-)	Pretested questionnaire (+)	Cluster ,simple random and systematic sampling method (+)
6.Ugal, D.B *et al*, Cross River State Nigeria, 2012	Urban areas of Obudu and Ogoja Local Government area of Cross River State ,Nigeria	Descriptive correlation study(-)	Quantitative instrument(+)	Multistage sampling technique(+)
7.Marchie,CL. Edo South, 2012	The study population was made up of women of reproductive age. A total number of 2157 urban and rural married women formed the sample for the	Descriptive survey methods(-)	A structured and validated questionnaire with reliability of 0.82, Focus group and in-depth interview was used (+)	A multistage random sampling technique was used(+)

	study.			
8. Idris, SH *et al*, Northern , Nigeria, 2013	The study was carried out in Giwa, a semi Urban community with population of 58,875 based on 2006 census	Cross-sectional study(-)	Structure interviewer-administered question-naire(+)	Selection of subjects was through multi-stage technique(+)
9. Ononokpono, D N, *et al,* Nigeria, 2013	Nigeria, Data was drawn from 2008 Nigeria Demo-graphic and health survey among 16,005 women	Survey(-)	Interview/Questionnaires(+)	Multilevel models(+)
10.Ibor, UW.*et al*, Oyo State , Nigeria, 2012	The study was carried out in Ibadan North LGA through administration of 231 questionnaires	Survey(-)	Questionnaires(+)	The study employed multistage sampling technique involving three stages(+)
11. Butawa, NN *et al*, Za-ria, Kaduna State, 2010	Rural communities in Zaria Kaduna State with a sam-ple of 647 respondent	Cross-sectional descriptive sur-vey(-)	Close ended question-naire(+)	Subjects were ran-domly selected(+)
12.Iyaniwura,CA,andYussuf, Q, Sagamu,South-Western, Nigeria, 2009	Sagamu town	Descriptive cross sectional study(-)	Pretested Structured Ques-tionnaires was used(+)	Subjects/Participants were randomly selected(+)

13.Uthman, SG *et al*,2013, Maiduguri, Nigeria	The study was conducted in three health centers in Maiduguri with a sample size of 1865	prospective, comparative and multi-centred(+)	Administered question-naire(+)	Computer randomi-zation(+)
14.Bankole,A *et al*, Nigeria,2009	The study setting was Ni-geria, based on data from the 1990 and 2003 Nigeria Demographic and health survey	Survey(-)	Interviews(+)	The samples were nationally repre-sentative and large enough(+)
15.Doctor, H.V *et al*, 2010, Northern Nigeria	Three Northern State,Katsina, Yobe and Zamfara with a total sub-jects of 6,809 women	Baseline Survey(-)	They administered modi-fied type of DHS question-naires which translated concepts and local lan-guages to respondents(+)	Structured sampling to enable compari-son of interven-tion(+)
16. Onasoga,O A. *et al*, 2012, Ife Central , Osun State, Nigeria	The study setting was Ile Ife Central Osun State, Nigeria	Descriptive re-search design(-)	They collected data using questionnaire and using descriptive and inferential statistic to analyze data(+)	Stratified sampling technique to select subjects(+)
17.Gazali, W.A *et al*, 2012,Borno State, Nigeria	Maiduguri Metropolitan Council and Jere LGA of	Survey Method(-)	Questionnaires, in depth interviews and focus group	The research fo-cused on married

	Borno State , Nigeria		discussion(+)	pregnant women and nursing mothers who are the benefi-ciaries of maternal healthcare services and not women who are not married and this limited the study(-)
18. Akanbiemu, FA et al, 2013, Ondo State, Nigeria	The study setting was some selected rural and semi urban communities of in Okitipupa local govern-ment area ,Ondo State, Nigeria	Descriptive cross sectional Study(-)	Pre-tested structured inter-viewer administered ques-tionnaire(+)	Multistage sampling procedure(+)