**EFFECT OF MATERNAL MORTALITY RATE AMONG FEMALE BETWEEN THE AGE OF 15 – 40 YEARS**

**ABSTRACT**

Maternal mortality has been describe as the death of women while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy. Kutungare village under Igabi Local Government Area is not an exemption to the effect of maternal mortality as research shown that most of the pregnant women suffer from issues related to maternal mortality due to the lack of awareness and high level of illiteracy or exposure to the effect of maternal mortality. Some of the most peculiar problems facing the women in Kutungare which is located out sketch of Kaduna main city are ignorance, poverty, home delivery and inadequate maternal centres which are some of the factors that contribute to maternal death in Kutungare community. However, there is urgent intervention and need for the government to organize sensitization programmes on awareness of the effect of maternal mortality and also to rehabilitate the existing health facility like provision of electricity, deployment of more medical personnel to the community, provision of ambulance for emergency situations. Therefore the further researcher should collectively expand the knowledge on how to minimize the maternal mortality rate not only through this state but also to the nation and worldwide in general.

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**CHAPTER ONE**

**INTRODUCTION**

* 1. **Background of the study**

Maternal mortality, also known a maternal death, continues to be the major cause of death among women of reproductive age in many countries and remains a serious public health issue especially in developing countries (WHO 2007). As explained in Shah and Say (2007), a maternal death is defined as the death of a women while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes. Globally, the estimated number of maternal deaths worldwide in 2005 was 536,000 up from 529,000 in 2000. According to the WHO factsheet (2008) 1500 women die from pregnancy or pregnancy related complication every day. Most of these deaths occur in developing countries and most are avoidable of all the health statistics compiled by the WHO, the largest discrepancy between developed and developing countries occurred in maternal mortality. UJAH et al. (2005) noted that while 25 percent females of reproductive age lived in developed countries. The contributed only 1 percent of maternal deaths worldwide.

Nigeria has been mentioned by the United Nations as having one of the highest rates the top medical causes of maternal mortality in the world. Reducing high maternal mortality ration is not just a technical and medical challenge but largely a political one which requires the attention and commitment of political leaders. Mothers are the key to the provision of health services for children, she has been neglected and exploited by health service, traditionally to serve infants. As Nigeria is till passing through various stages of development many women still deliver at home without attending antenatal clinics, Kaduna State being part of Nigeria also many cases maternal mortality rate. This study is aimed at finding mortality rate occur due to obstetric hemorrhage. Other include infections following childbirth, unsafe abortion, eclampsia and obstructed labor. Experts agree that these causes are largely treatable and preventable. The root causes of high maternal mortality in Nigeria include weak development planning, poverty, illiteracy and low utilization of formal maternal health care services.

In recent years the international safe motherhood conference convened in Kenya raised global awareness of the devastating maternal mortality rates in developing nations and formally established the safe motherhood initiative. The goal was to reduce maternal mortality 50% unity the plight of the pregnant woman. Initially, donors, United Nation (UN) agencies and government focused of on 2 strategies to reduced maternal mortality: increasing antenatal care and training for traditional birth attendants.

Improving the health care system overall is undoubtedly a critical component to reducing maternal mortality and improving the general health of a nation. The current implementation of free health care to pregnant women and under five children seem to be yielding some positive results but Nigeria’s Maternal Mortality Rate (MMR) however, is yet to reach the reduction rates as recommended.

* 1. **STATEMENT OF THE PROBLEM**

In spite of all the policies, declarations and other efforts aimed at reducing maternal death across the globe, only modest gains in maternal mortality reduction appear to have been achieved in many countries in the past 20 years (Shah and Say, 2007).

In Nigerian, The Federal Ministry of Health had set year 2006 as the target year that maternal mortality would have been reduced by 50 percent. However, not only were these targets not achieved but also the maternal health situation in Nigeria is now which worse than in previous years (Ujah et al 2005).

Past efforts to reduce maternal mortality ratio in Nigeria were concentrated on making direct improvements to the health systems. These efforts have not involved enough resources to successfully reduce maternal mortality in the country.

* 1. **OBJECTIVE OF THE STUDY**

The main objective of this study is an appraisal of maternal mortality rate in Kutungare, specific objective includes:

1. To appraise the causes of maternal mortality rate in Kutungare
2. To investigate the effect or maternal mortality rate on the population growth of Kaduna state
3. To investigate the relationship between maternal mortality and the psychological well-being of the children
4. To proffer suggested solution to the identified problem

**1.4 RESEARCH HYPOTHESES**

To aid the completion of the study, the following research hypotheses were formulated by the researcher;

**H0:** there are no causes of maternal mortality rate in Kutungare

**H1:**there are causes of maternal mortality rate in Kutungare

**H02:** maternal mortality rate has no effect on the population growth of Kaduna state

**H2:**maternal mortality rate has effect on the population growth of Kaduna state.

* 1. **SIGNIFICANCE OF THE STUDY**

It is believed that at the completion of the study, the findings will be of great importance to the to the mid-wives and nurses in the general hospital, as the study seek to investigate the proximate causes of maternal mortality rate in the Kaduna state general hospital, the study will also be of great importance to pregnant women as the study seek to ascertain the major cause of maternal mortality rate in Kutungare community and Igabi Local government at large. The study will also be beneficial to researchers who intends to embark on study in similar topic as the study will serve as a guide to their study. Finally the study will be beneficial to academia’s students and the general public.

* 1. **SCOPE AND LIMITATION OF THE STUDY**

The study cover all the precautionary measures towards the effect of maternal mortality rate in Kutungare Igabi West Local Government area of Kaduna State, with the aims and objectives governing the research work to the effective undertaken by the researcher. The study will be delimited to the effect of maternal mortality rate of women of child bearing age between the age of 20 – 40 years in Kutungare Igabi West Local Government area of Kaduna State Nigeria. In the cause of the study, there were some factors which limited the scope of the study;

**(a)Availability of research material:** The research material available to the researcher is insufficient, thereby limiting the study.

**(b)Time**: The time frame allocated to the study does not enhance wider coverage as the researcher has to combine other academic activities and examinations with the study.

**(c)Finance:** The finance available for the research work does not allow for wider coverage as resources are very limited as the researcher has other academic bills to cover.

**1.7 OPERATIONAL DEFINITION OF TERMS**

**Maternal**

Relating to a mother, especially during pregnancy or shortly after childbirth

**Mortality**

Mortality data indicate numbers of deaths by place, time and cause. WHO’s mortality data reflect deaths registered by national civil registration systems of deaths, with the underlying cause of death coded by the national authority.

**Maternal mortality**

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

**Mortality rate**

Mortality rate, or death rate,[[1]](https://en.wikipedia.org/wiki/Mortality_rate%22%20%5Cl%20%22cite_note-Porta-2014-death-rate-1) is a [measure](https://en.wikipedia.org/wiki/Measurement%22%20%5Co%20%22Measurement) of the number of [deaths](https://en.wikipedia.org/wiki/Death%22%20%5Co%20%22Death) (in general, or due to a specific cause) in a particular [population](https://en.wikipedia.org/wiki/Statistical_population%22%20%5Co%20%22Statistical%20population), scaled to the size of that population, per unit of time. Mortality rate is typically expressed in units of deaths per 1,000 individuals per year; thus, a mortality rate of 9.5 (out of 1,000) in a population of 1,000 would mean 9.5 deaths per year in that entire population, or 0.95% out of the total.

**1.8 ORGANIZATION OF THE STUDY**

This research work is organized in five chapters, for easy understanding, as follows. Chapter one is concern with the introduction, which consist of the (background of the study), statement of the problem, objectives of the study, research questions, research hypotheses, significance of the study, scope of the study etc. Chapter two being the review of the related literature presents the theoretical framework, conceptual framework and other areas concerning the subject matter. Chapter three is a research methodology covers deals on the research design and methods adopted in the study. Chapter four concentrate on the data collection and analysis and presentation of finding. Chapter five gives summary, conclusion, and recommendations made of the study.

**CHAPTER TWO**

**REVIEW OF RELATED LITERATURE**

**2.1 Introduction**

Maternal and child health are crucial measures of progress in developing nations especially in the monitoring and evaluation of various developmental agenda such as Millennium Development Goals 4 and 5 (MDG-4 & MDG-5). Poor maternal health remains a major concern in sub-Saharan Africa with Nigeria occupying a position among the countries with the highest maternal and child mortality rates in the world. The influence of working conditions on maternal health in the face of poor provision of amenities and infrastructural decay ravaging developing countries, particularly those of sub-Saharan Africa, have seldom been recognized as important factors in maternal health. Non-Governmental Organizations (NGOs), government health ministries and international organizations such as WHO, have adopted many strategies in an attempt to improve maternal health outcomes around the world. These have mainly been through the provision of maternal and child health (MCH) programmes, aimed at improving primary prevention through education and services, early detection and treatment. Specific programme interventions include emphasizing prenatal attention, clean and safe deliveries, postnatal care, family planning, and essential obstetric care (Fadeyi, 2007; Lubbock & Stephenson, 2008). While these programmes encourage women’s access to maternal health services, women continue to be susceptible to health complications due to some extraneous social and cultural factors. Various studies have increasingly pointed out that urban health conditions are not as rosy as many people may assume (Friel et al, 2011; Takano, 2003). Takano (2003) specifically noted that urbanization triggers new problems and issues bearing on multiple aspects of urban life, including food security, housing, living environment, health of future generations, etc. The conditions of the diverse health determinants in urban areas are becoming increasingly complex especially in developing nations. On the whole, the varied health problems challenging cities are intricately interrelated withthe background of general urban problems. The fast pace of urban growth has affected different groups of people in different ways. Urban life is most fascinating but it is also demanding especially on pregnant women who do not only contend with their own health but also with the life they are foisted to carry for nine months. Such experience is especially daunting for pregnant women in Kaduna state, Nigeria, who are faced with poor provision of social amenities and infrastructural decay. The paper examines the influence of working conditions in Kaduna state, Nigeria. It describes the extent to which urbanism has impacted on maternal health in the face of poor provision of amenities and infrastructural decay ravaging the city of Lagos.

**2.2 MATERNAL HEALTH IN NIGERIA: HISTORICAL PERSPECTIVE**

In the 1940s, the Church Missionary Society, the Native Administration and the colonial government undertook to raise the standard of midwifery work in eastern Nigeria. The effort combined community health education on a massive scale with the setting up of maternity homes manned by trained midwives under rigorous supervision. Affordable fees were charged. By 1949, in the 31 maternity homes that handled 6500 deliveries yearly, the maternal mortality ratio became 46 per 100,000 births, comparable to the standard at that time in England and other countries (Harrison, 2009). Also, beginning in 1945, Katsina province in Northern Nigeria ran a reliable system of compulsorily obtaining and keeping records of all births and deaths.The excellence of the quality of this source of data is attested to by the publication of good papers based on them. Harrison goes on to note that In the Ilesha area of Western Nigeria the Methodist Church of Nigeria introduced the concept of a base hospital with linkages between the base hospital and all the maternity centres in the area at urban and village levels. Close to perfection, it offered a good opportunity for replication in the rest of the country but this did not happen.

**2.3 CONDITIONS OF WORK AND MATERNAL HEALTH**

Endemic maternal health has been a major concern in Nigeria as the country has one of the highest maternal and infant/child mortality rates in the world. Health care facilities and services are concentrated in Lagos, but big hospitals do not necessarily improve people’s health. Maternal mortality rate in Kaduna state was put at 650 per 100,000 live births in 2012 and this high rate is a source of concern to the Kaduna state government. Health care is about identifying the health problems of a population and designing an integrated health policy to improve the challenge (National Mirror, 2012; Radio Lagos 2009). The health of a pregnant woman working in Lagos could be compromised by a wide range of factors. On one hand, economic pressures on the households have led more women to seek paid work. Many households find that two incomes are required in order to sustain a desired lifestyle (Giddens, 2002). Countless women lack access to decent work and work in safe conditions that would enable them to rise above poverty. Many women workers have traditionally been concentrated in poorly paid, routine occupations many of which fall outside traditional legal and social protection systems that safeguard against vulnerability and provide access to health care (ILO, 2010). Regions in which the highest rates of maternal mortality are reported have more than 80 percent of women workers considered to be working in precarious and vulnerable conditions, mainly; either in the informal economy, lacking maternity protection at work, or certain industries that are always predominantly staffed with women. The nature of these jobs is part time and they are such that women work longer hours for less pay. The need to bring in or supplement family income forces women to submit to these conditions and this is nothing but double exploitation (Cheeqitita, 1999; ILO, 2010). The condition of poverty has forced women to increase the number of hours in extra-domestic activities and household task. The International Labour Organization (ILO) has noted that, while most attention to maternal health and mortality has justifiably focused on health services and family planning, mothers are also workers, with particular need of support to protect their health while working and to ensure their economic security during pregnancy and after childbirth (ILO, 2010). Available evidence shows that in many developing countries, women, on the average, work more hours per week than men when unpaid work and household activities are taken into account (United Nations, 1991; Basu, 2001). The problems associated with maternity and child birth are closely linked to poverty, inadequate working conditions and gender inequality (ILO, 2010). For instance, for a woman, work demands more time and the more the time spent at work the less the time available for family life and rest. Where women have paid jobs, and companies are attempting to become more efficient and streamlined, jobs are cut or ‘downsized’, and many employees experience anxiety about the security of their positions (Giddens, 2002). High expectations for job performance (either self-imposed or imposed from above) mean that employees have to work harder and put in longer hours. The stress on the individual behaviour of women tends to create unrealistic expectations for mothers and can result in increased demands on their time. The importance of paid work in the lives of so many makes the quality of working conditions paramount to the reproductive health of women as well as men (ILO, 2010). Hostile working environment affects both men and women workers. However, there are gender specific dangers to which women workers, because of their biological makeup, are exposed. These dangers severely affect their physical and reproductive health. Women work in environments and conditions that threaten pregnancy (Cheeqitita, 1999). Indeed, poor working condition; such as low wage, long working hours and lack of adequate weekly and annual rest; in addition to unhealthy and hazardousworkplaces and lack of social protection, can have negative effects on maternal health. As the International Labour Organization aptly puts it, Working during pregnancy is not in and of itself a risk. But women around the world continue to face considerable maternity related threats to their health and economic security. Work place environments can pose hazards (e.g. exposure to pesticides, solvents and other chemicals); requirement of physically demanding work, and irregular or long working hours; all can have potentially negative effects for the health of pregnant women and their fetuses, including greater risk of preeclamsia and hypertension, complications during pregnancy, miscarriage and stillbirth, foetal growth retardation, premature birth and other problems. Tasks requiring being in one position for long period of time, can adversely affect reproductive health (ILO, 2010. www.2.ohchr.org/englis/issues/women/docs). Oxaal and Baden (1996) have also observed that the last three months of pregnancy should be a time when the mother rests and gains weight. However, many women in developing countries continue with their full workload until the time of labour and resume work shortly after giving birth. This is considered to be extremely detrimental to their health and even the baby. Life style determines health and the environment in which one finds him/herself determines the lifestyle. Most pregnant women in Lagos city do not have a healthy life style. Urban areas are often unhealthy places to live in because they are characterized by heavy traffic, pollution, noise and violence (WHO, 1991). According to the United Nations (1991), women who become pregnant in developing regions face a risk of death due to pregnancy. The reasons are that there are few backup services for pregnancy while malnutrition is endemic among pregnant women. Apart from the fact that many do not seek antenatal care, taking time to rest and eating balanced diet which are essential to safe pregnancy are absent (Lanre-Abass, 2008). The Word Health Organization’s definition of health suggests a holistic interpretation of health linking the complex interrelationships between social, economic, political and cultural health determinants with the natural environment (Rattle and Kwiatkowski, 2003). Thus, it is evident that day-to-day activities in an imperfect environment have the potential to create significant human health impact, especially for pregnant women whom by virtue of pregnancy are already exposed to risk of health complications.

**2.4 KADUNA STATE AND THE ATTENDANT PROBLEMS**

Nigeria is urbanizing rapidly. The country’s population was estimated to be 173.6 million in 2013 by the Population Reference Bureau (PRB, 2013). It was also estimated that the population will be 440.4 million by mid-2050 which will place the country as the third most populous country in the world, behind India and China (PRB, 2013). Although Kaduna state is the smallest state in Nigeria, with an area of 356,861 hectares of which 75,755 hectares are wetlands, it has the highest population, second only to Kano State, according to the National Population Commission (2009), a claim that is highly contested by the Kaduna state Population Commission and has given an estimated figure of 17 million. The difference in population outcome still stands as a bone of contention between the National Population Commission and the Kaduna state government. According to UN estimates, Lagos will be the third largest mega city in the world by year 2015 after Tokyo in Japan and Bombay in India. The rate of population growth is about 600,000 per annum. Over 91 percent of the population in the state lives within the metropolis with a population density of about 20,000 persons per square kilometre (Kaduna state Ministry of Housing, 2010; Alufohai, 2013). With rapid population growth, public and private resources have been stretched as Lagos citizens struggle to get by (Compass, 2009). The issue of livability has become very pressing, especially with the increasing environmental deterioration. According to Morka (2007), this involves not only living conditions but also ease of circulations in the city. There is tremendous pressure of population on limited facilities and this is manifested in the growth of squatter settlement, overcrowded habitation, inadequate water and power supply, bad roads and generally poorenvironmental sanitation. By world standards, Lagos, the largest of Nigeria’s metropolitan centres, is relatively small. But its traffic problems are greater than those of cities many times its size. The traffic situation is already making Lagos almost an unliveable city, apart from gradually raising its level of air pollution (Mabogunje, 1995). In a statement credited to Emdin-Umeh (2011), twenty five thousand (25,000) people from across the world are still moving into Lagos for various reasons on a daily basis, with little or no commensurate infrastructure to match the influx thereby posing more challenges to the health of the population. Even the structure sometimes results in a relative decline in health levels in urban areas, and these health levels are closely related to the quality of urban living environments (Brigida, 2002).

**2.5 CAUSES OF MATERNAL MORTALITY**

The WHO Factsheet (2008) indicates that globally, about 80 percent of maternal deaths are due to four major causes- severe bleeding, infections, hypertensive disorders in pregnancy (eclampsia) and obstructed labour. Complications after unsafe abortion cause 13% of maternal deaths. Among the indirect causes of maternal death are diseases that complicate pregnancy or are aggravated by pregnancy, such as malaria, anaemia, hepatitis, anaesthetic death, meningitis, HIV/AIDS, sickle cell anaemia, anaemia and acute renal failure, which could be a complication of eclampsia. Women also die because of poor health at conception and a lack of adequate care needed for the healthy outcome of the pregnancy for themselves and their babies. Omoruyi (2008) estimated that in Nigeria, more than 70 percent of maternal deaths could be attributed to five major complications: haemorrhage, infection, unsafe abortion, hypertensive disease of pregnancy and obstructed labour. Also, poor access to and utilization of quality reproductive health services contribute significantly to the high maternal mortality level in the country. As explained in Mojekwu (2005) the causes of maternal deaths can be classified into medical factors, health factors, reproductive factors, unwanted pregnancy and socioeconomic factors. According to the author, medical factors include direct obstetric deaths, indirect obstetric deaths and unrelated deaths. Direct obstetric deaths result from complications of pregnancy, delivery or their management. Indirect obstetric deaths result from worsening of some existing conditions (such as hepatitis) by pregnancy. Health service factors include deficient medical treatment, mistaken or inadequate action by medical personnel, lack of essential supplies and trained personnel in medical facilities, lack of access to maternity services and lack of prenatal care. Other risk factors for maternal mortality in Nigeria include maternal age, illiteracy, non-utilisation of antenatal services and grand multiparity( Ujah et al. 2005 As explained in the WHO Factsheet (2008), drugs already exist (oxytocin) which, if administered immediately after childbirth, can reduce the risk of bleeding very effectively. Sepsis – a very severe infection – is the second most frequent cause of maternal death. It can be eliminated if aseptic techniques are respected and if early signs of infection are recognized and treated in a timely manner. The third cause, eclampsia, emerges as pre-eclampsia, a common hypertensive disorder, which can be detected during pregnancy. Although pre-eclampsia cannot be completely cured before the delivery, administering drugs such as magnesium sulfate can lower a woman’s risk of developing convulsions (eclampsia), which can be fatal. Another frequent cause of maternal death is obstructed labour, which occurs when the fetus’ head is too big compared with the mother’s pelvis or if the baby is abnormally positioned. Skilled practitioners can now use the partograph (a simple tool for identifying problems early in labour) to recognize and deal with slow progress before labour becomes obstructed, and, if necessary, ensure that Caesarean section is performed on time to save the mother and the baby. For women to benefit from these cost-effective interventions they must have antenatal care in pregnancy, in childbirth they must be attended by skilled health providers and they need support in the weeks after the delivery (WHO, 2008). Whereas in many developed countries almost all pregnant women receive antenatal and postnatal care and are attended by a midwife and/doctor at childbirth, available data show that less than two thirds receive similar services in developing countries. Many pregnant women in Nigeria do not receive the care they need either because there are no services where they live, or they cannot afford the services because they are too expensive or reaching them is too costly. Some women do not use services because they do not like how care is provided or because the health services are not delivering high-quality care. Further, cultural beliefs or a woman’s low status in society can prevent a pregnant woman from getting the care she needs. To improve maternal health, gaps in the capacity and quality of health systems and barriers to accessing health services must be identified and tackled at all levels, down to the community.

**2.6 LAUNCH OF THE MATERNAL AND CHILD MORTALITY REDUCTION PROGRAMME**.

Although various activities of the MCMR program commence since 2009, The Program was launched officially by His Excellency the Executive Governor of Kaduna state on Thursday 18thOctober, 2012. This date was named the Maternal and Child Mortality Reduction Program Day by His Excellency. During this annual event, the State is expected to give report of all programs aimed at improving the health of mothers, pregnant women and children.

Since the Launch of the MCMR Program in 2010, other interventions have been added to the MCMR program aimed at addressing key needs/gaps identified during the implementation:

1. 1. Family Planning Services:
The Family planning services has increased steadily from 2011 till date. Prior to April 2012, the Federal Government distributed family planning commodities to the State with a cost recovery margin aimed at providing necessary administrative logistics for collection and distribution of the commodities to the State. This was also retailed to the Family planning providers in the Public Health Facilities and subsequently to the end users

In 2012, the Federal Government in an effort to increase utilization of family planning services, and increase the national contraceptive prevalence rate to 36 percent by 2018 removed the cost recovery margin. However, this was not without challenges, as the commodities were not getting to the end users due to logistics costs. To address this, the State Government in 2012 commenced the review and resupply model of distribution of family planning commodities to the family planning service providers in the State. This eliminated the cost of collection and distribution of commodities from the State and the LGA level. Kaduna state is the only state in Nigeria to provide create a budget line and release funds for family planning activities.Since the commencement of the review and resupply model of distribution, family planning utilization has increased by almost 50 percent on a yearly basis.

**2.8 CURRENT EFFORTS TO REDUCE MATERNAL MORTALITY IN NIGERIA**

Although attempts have been made in the past aimed at reducing maternal mortality in Nigeria, such attempts, especially by the Federal and state governments, have generally not proved very successful in achieving the desired results. Some promising results however have recently begun to be recorded through some policy initiatives by a few state governments. In Anambra state, the state house of assembly approved a bill in 2005, guaranteeing free maternal health services to pregnant women (Shiffman and Okonofua, 2007). The state commissioner of health, who is an obstetrician and gynaecologist, played a central role in its development and adoption. In Kano state, the state government included in its budget a line item for free maternal health services. The former state commissioner of health together with a senior obstetrician and gynaecologist, played central roles in creating this positive environment for maternal health. In Jigawastate, state and local budgets have provided funds for the upgrading of obstetric care facilities in hospitals, the recruitment of obstetricians and gynaecologists and the provision of ambulances at the local level to transport pregnant women experiencing delivery complications to health facilities. The former executive secretary for primary health care, who subsequently became state commissioner for health, stood behind these initiatives. A common trend to these initiatives is that they were championed in each case by a state commissioner of health who obtained political commitment from the governor, state assembly and other relevant government officials, thus lending credence to the view that the battle to combat high maternal mortality is not just a medical or technical matter but rather requires high level political commitment. Another thing common to these initiatives is the attempt to introduce free maternal care, usually through user-fee waivers. However, these policies mostly do not seem to be adequately planned for and are consequently unsustainable. The main challenge to the introduction and implementation of user-fee waivers is the provision of adequate number of skilled health care personnel to handle the huge influx of pregnant women who come to avail themselves of the free maternal care services. A second challenge is that large amounts of drugs are used up in very short periods of time. Also, an overwhelming amount of clerical work is required to account for the distribution and use of medicines. Hence there is need for adequate planning before the introduction of user-fee waivers. The Kaduna state Government, in an effort stem the tide of maternal and child deaths recently set up five Maternal and Child Care centres (MCCs) fully equipped and well staffed to provide a wide spectrum of care including family planning, ante- and post- natal care to facilitate safety of women during child delivery. The MCCs are located in surulere, Ikorodu, Isolo, Ifako-Ijaiye, and Ajeromi. Other locations include Alimosho, Ibeju-Lekki, Epe and Kutungare among others (Sunday Punch, 2012). One recent initiative that seems to be successful is the Ondo State Government initiative known as Abiye. This initiative in the rural communities in OndoState, uses mobile phones to save lives of indigent pregnant women. According to the World Bank (2008) 51.6 Percent of Nigerians live in rural areas, most of whom are cut off from modern medical facilities, making pregnant women vulnerable to readily preventable adverse outcomes. Most of these adverse outcomes result from delay in seeking care, getting to health centres when care is sought, receiving care on getting to the health centre, and referring patients to more advanced centres when necessary. In the Ondo State initiative, pregnant women go for antenatal care at primary health care centres where each one is given a mobile phone. The pregnant women are put in government prepaid, caller-user groups and tracked by trained personnel so the pregnancy is monitored. Calls to the healthcare personnel are toll free. The Pilot scheme is in Ifedore Local Government Area of Ondo state (Sunday Punch, 2011). Primarily because the lines are tollfree the delay in seeking care is minimised to almost zero. The programme also takes care of the delay in reaching health centres since ambulances are stationed to bring in the pregnant women when they call. In emergencies, the health personnel go on motorcycle with a First Aid box. If it is something they can’t handle, the women are taken to the general hospital. A major shortcoming of all these efforts is that they are disjointed and uncoordinated, with each state working according to its own dictate and vision. What is required is an integrated approach to replicate successful programmes in other states of the country. The disjointed nature of these efforts is indicative of overall failure in leadership and governance in the healthcare sector and, indeed in other spheres of Nigerian life.The resulting chaos manifests in inconsistent, contradictory, ill-thought-out, and ever changing policies. For instance, one stop-gap initiative introduced to address the issue of low proportion of births attended by skilled health personnel is the Midwives Service Scheme. Under this scheme the three tiers of govt are to share the costs of engaging midwives on a massive scale. It is not clear, however, where the midwives are to come from since the relevant regulatory bodies, the Nursing and Midwifery Council of Nigeria and the Federal Ministry of Health appear determined to drastically restrict the number of midwives and nurses that may graduate each year. As a result of regulations aimed at achieving such ends, many states do not have enough nurses and midwives to effectively meet the basic demand for maternal care, let alone handling things on a massive scale. Not helping matters also is the unwillingness of governments in Nigeria to reveal how they spend money. It is difficult to comprehend the rationale behind the phenomenon of unspent funds whereby funds are usually returned as unspent at the end of each budget period even as 52,000 Nigerian women are consigned to early graves owing to failure of the government to provide facilities to assist in pregnancy and childbirth. A recent report by the Centre for Reproductive Rights (CRR), notes that in 2008 Nigeria gave about 5% of its annual budget to the health sector. This amounts to just one third of what it promised in a regional treaty. And without public access to fiscal information, it is difficult to find out who received the money and how it was spent.

**2.9 POLICIES AND DECLARATIONS ON MATERNAL MORTALITY REDUCTION IN THE PAST**

The issue of maternal deaths emerged as a world health concern through the United Nation's launching of the Safe Motherhood Initiative (SMI) in Kenya in 1987. The Safe Motherhood Initiative, whose target was the reduction of the estimated yearly world maternal mortality figure of 500,000 by 50 percent by the year 2000 was formally launched in Nigeria in 1990. Other international conferences that established similar targets of reducing the 1990 levels of maternal mortality by fifty percent include the Beijing Conference held at the instance of women activists from across the globe back in 1995 (Daily Independent, 2010), the World Summit for Children (WSC) in 1990, the International Conference on Women in 1994, the Fourth Conference on Women in 1995 (Mojekwu, 2005), and the United Nations Millennium Summit in 2000, which developed the Millennium Development Goals (MDGs) to enable the poorest countries improve the quality of life of their citizens, and resolved to achieve these goals by 2015. The fifth MDG requires all member states to improve maternal health and, in order to achieve this goal, a number of targets were set, including reducing maternal mortality by three quarters (75%) between 1990 and 2015 (U.N. 2008). Regional Treaties, Policies and Declarations include the African Charter (O.A.U, 1982), the Maputo Protocol (CRR and WARDC, 2008), and the 2001 Abuja Declaration in which African Union governments pledged to allocate at least 15% of their annual budgets towards improving the health sector (O.A.U, 2001). National Policies and Strategies include the 1988 National Health Policy and Strategy to Achieve Health for all Nigerians, which was Nigeria’s first comprehensive health policy (Federal Ministry of Health, Nigeria 1988). The 2004 Revised National Health Policy replaced the 1988 National Health Policy. Reproductive Health Policies include Nigeria’s National Reproductive Health Policy and Strategy of 2001 (Federal Ministry of Health Abuja, 2008), the Integrated Maternal, Newborn and Child Health Strategy in 2007 (2007 IMNCH Strategy) and the National Millennium Development Goals Report (2004).

**2.10 THEORETICAL AND EMPIRICAL REVIEW**

Different analytical frameworks have been used in studies on maternal mortality. Mojekwu (2005) categorized the causes of maternal deaths into medical factors, health factors, reproductive factors, unwanted pregnancy and socioeconomic factors. Ibe (2008) employed a multistage sampling technique while Okaro et al. (2001) carried out retrospective comparative analysis of maternal deaths for two ten-year periods. Okonofua, Abejide, and Makanjuola (1992) examined the background factors that predisposed women to maternal mortality at the ObafemiAwolowo University hospital in Nigeria. The study investigated their sociodemographic characteristics, their use of prenatal care, and the incidence of delay in clinical management. The results showed that the maternal deaths involved women who were younger and of poorer socioeconomic status than the women in the control group. Both groups showed an equal lack of prenatal care. However, a higher incidence of delayed treatment was found in the management of the cases of maternal deaths. The study also found that maternal mortality in the study population can be reduced through improved transportation and institutional management, and, on a long-term basis, through the adoption of measures to improve the socioeconomic status of women. Ni and Rossignol (1994) in a community-based maternal mortality surveillance study in Sichuan, China assessed the impact of family planning status on maternal mortality. They found that the leading causes of death for both planned and unplanned pregnancies were the same: hemorrhage, postpartum infection, pregnancy-induced hypertension, cardiac diseases, and pulmonary diseases. As among women with "planned" pregnancies, about 40% of maternal deaths among women with "unplanned" pregnancies occurred at home, and 20% occurred en route to a hospital. After controlling for the confounding effects of gravidity and education, with additional control for the effect of prenatal care visits the study indicates that women with "unplanned" pregnancies have a higher risk of maternal death, which is only partially attributed to less prenatal care. Garenne et al. in a 1997 case control study to analyze risk factors for maternal mortality in three leading hospitals in Dakar, Senegal identified the leading causes of death as puerperal sepsis and other infections, haemorrhage, eclampsia, ruptured uterus, and anaemia. Results of the case-control study revealed the major risk factors associated with health system failure as medical equipment failure, late referral, lack of antenatal visit, and lack of available personnel at time of admission. Various indicators of maternal status at time of admission (complications, blood pressure, temperature, oedema, haemoglobin level) and of health history prior to admission (previous complications, previous C-section, lack of treatment) were also strong predictors of survival. Lastly, socio-demographic factors also appeared as correlates of maternal mortality, in particular: first pregnancy, pregnancy of high birth order, rainy season, being unmarried, and low level of education. Okaro et al. (2001) carried out retrospective comparative analysis of maternal deaths at the University of Nigeria Teaching Hospital, Enugu for two ten-year periods (1976-1985 and 1991-2000) in order to evaluate the effect of Safe Motherhood Initiative on maternal mortality in the hospitalThe main finding of the study was that since the launching of the Safe Motherhood Initiative, maternal mortality ratio increased five-fold as a result of institutional delays and deterioration in the living standards of Nigerians. During the period under review, the health sector, like all other sectors, suffered from underfunding, industrial unrest, inconsistent policies, and mass exodus of health care personnel from the public sector to either the private sector or foreign countries. Liljestrand and Pathmanathan (2004) presented a model to guide analyses of national health systems based on evidence from case studies from Sri Lanka and Malaysia and seven other developing countries. The study largely confirms recent recommendations of the major multilateral agencies that improvement of maternal health standards requires focused prioritization, planning and implementation over many years. The study found no visible progress in maternal mortality reduction at the global level. Ujah et al. (2005), in a seventeen-year review of factors contributing to maternal mortality in North-Central Nigeria found a bimodal pattern of maternal deaths occurring at both extremes of the reproductive age range. They found that the greatest risk of maternal death was among early teenagers and older women. They also found that ethnic group of the women was also an important risk factor for maternal mortality. Mojekwu (2005) explained that due to complexity in measuring maternal mortality, even countries with complete vital registration systems find it a daunting task to measure it accurately. Assessing levels of maternal mortality is complex because it requires knowledge about deaths of women of reproductive (15-49) years, the cause of death and also whether or not the women were pregnant at the time of death or had recently been so. Yet, few countries record births and deaths, even fewer register the cause of death and fewer still systematically note pregnancy status on the death form. Misclassification of maternal deaths could arise for a variety of reasons such as underreporting, illiteracy and cultural norms. Where vital registration systems are absent or inadequate, it is possible to estimate maternal mortality using survey techniques. Usually, high mortality counties have neither adequate systems of registration nor the resources to rely on surveys. Shah and Say (2008) recommend careful evaluation of data and periodic measurement by multiple methods in order to obtain accurate estimates. Because of huge variation across countries in sources of data, type and completeness of information available and extent of missing information, the estimates are sometimes based on reconciliation of data from different sources. Some data could be derived from vital registration-with good or poor and uncertain attribution of cause of death; some data from the direct sisterhood methods used in Demographic and Health Surveys of households; some other data could be obtained from Reproductive Age Mortality Studies (RAMOS); and some from disease surveillance, sample registration, censuses or special studies. Lawoyin et al. (2007), carried out a cross-sectional, community-based study to assess men’s perception of maternal mortality in Nigeria and found that efforts were required to improve men’s attitudes and knowledge in order to make them active participants in the fight to reduce maternal mortality. Maternal deaths in this study were blamed on healthcare workers not being skilled enough, financial barriers, failure to use family planning, emergency, antenatal, and delivery care services. Factors associated with knowledge and attitude to preventing maternal mortality are discussed. Healthcare reforms must be coupled with socio-economic improvements and efforts made to improve men's attitudes and knowledge in such a way as to make them active stakeholders, more supportive of preventing maternal mortality. Curiously, this study found that several African countries where facility delivery is quite high show that maternal mortality remains high also, informing that facility delivery alone is not enough to significantly reduce maternal deaths implying that workers had to be trained in emergency care or the benefits of facility delivery will not be appreciated Alves (2007) in a study titled Maternal Mortality in Pernambuco, Brazil: What has changed in ten years? examined changes in levels and patterns of maternal mortality in Pernambuco, Brazil, in 1994 and 2003. The research was carried out in five sub-regions of Pernambuco using the Reproductive Age Mortality Survey (RAMOS) method. The study found that the illegal status of abortion in Brazil remains an important contributory factor for abortion-related deaths. Approximately 94% of the maternal deaths were judged to be avoidable with improvements in health care. Maternal mortality declined by 30% over the ten-year period. Shah and Say (2007), reproductive health researchers with the WHO, produced a paper on Maternal Mortality and maternity care. The authors showed that gains in reducing maternal mortality between 1990 and 2005 have been modest and uneven, and that countries with high maternal mortality ratios shared problems of high fertility and unplanned pregnancies, poor health infrastructure and low availability of health personnel.Shiffman and Okonofua (2007) assessed the state of political priority for maternal mortality reduction in Nigeria and identified the challenges that advocates face in promoting political priority. They found that priority is as yet in its infancy and that advocates need to coalesce into a potent political force in order to be able to push government to take appropriate action to reduce maternal mortality. Abe and Omo-Aghoja (2008) in a ten year retrospective study of maternal mortality at the central hospital in Benin City, Nigeria documented the number and pattern of obstetric deaths at the Central Hospital, Benin City, over a ten year period and identified common causes of maternal deaths. The leading direct causes of maternal deaths were sepsis, hemorrhage, obstructed labor and pre eclampsia/eclampsia, while the major indirect causes are institutional difficulties and anaemia.The study also found that low literacy, high poverty levels, extremes of parity and non-utilization of maternity services were associated with maternal mortality. The overall maternal mortality ratio (MMR) was 518/100,000. MMR was 30 times higher in unbooked as compared to the booked patients, while 60% of maternal deaths occurred within 24 hours of admission. Ibe (2008) conducted a study in Anambra state of Nigeria on care utilization and poor mortality index. A multistage sampling technique was employed in a cross sectional study to assess the use of maternal services in Anambra state and found that the problem of maternal mortality in the country may not necessarily lie with utilization but with the quality of services. This finding tends to support Taiwo et al. in the view that the problem of maternal mortality in Nigeria may not necessarily lie with failure to utilize maternal care but that the health care system probably needs to be repositioned to meet the challenges of modern obstetric care. Mairiga et al. (2008) conducted a population- based qualitative study in two urban and two rural communities in Borno state, Nigeria to find out community's knowledge and perceived implications of maternal mortality and morbidity as well as the community members' perception on ways to prevent the scourge. Through focus group discussions the study demonstrated that maternal mortality and morbidity is common and well known in the communities studied and that the implications are well appreciated. The study found that the communities perceived the causes of maternal death to be medical, cultural and socio-economic but that there were serious misconceptions with dire consequences for maternal mortality. Harrison (2009), argued that attempts to reduce the high maternal mortality ratio in Nigeria have failed. Such attempts had been focussed on transforming the health system by directly applying expertise and resources on high maternal mortality and its surrounding elements. He argues that the complexities and uniqueness of Nigeria’s situation call for a fundamental remedy based on stamping out the chaos in the country by the country getting its politics and governance structures right.

**CHAPTER THREE**

**RESEARCH METHODOLOGY**

* 1. **Introduction**

This chapter deals with the method used in collecting data required in carrying out this research work it explains the procedures that were followed and the instrument used in collecting data.

* 1. **SOURCES OF DATA COLLECTION**

Data were collected from two main sources namely

-Primary source and

secondary source

**primary source:** These are materials of statistical investigation, which were collected by the research for a particular purpose. They can be obtained through a survey, observation questionnaire or as experiment, the researcher has adopted the questionnaire method for this study.

**Secondary data:** These are data from textbook Journal handset etc. they arise as byproducts of the same other purposes. Example administration, various other unpublished works and write ups were also used.

* 1. **POPULATION OF THE STUDY**

Population of a study is a group of persons or aggregate items, things the researcher in interested in getting information from for the study an appraisal of maternal mortality rate in the general hospital Kutungare Kaduna state. 160 staff of general hospital Kutungare were selected randomly as the population of the study.

* 1. **SAMPLE AND SAMPLING PROCEDURE**

Sample is the set people or items which constitute part of a given population sampling. Due to large size of the target population, the researcher used 140 respondents from the ministry of land and housing

**3.5 INSTRUMENT FOR DATA COLLECTION**

The major research instrument used is the questionnaires. This was appropriately moderated. The secretaries were administered with the questionnaires to complete, with or without disclosing their identities. The questionnaire was designed to obtain sufficient and relevant information from the respondents. The primary data contained information extracted from the questionnaires in which the respondents were required to give specific answer to a question by ticking in front of an appropriate answer and administered the same on staff of the two organizations: The questionnaires contained about 16 structured questions which was divided into sections A and B

* 1. **VALIDATION OF THE RESEARCH INSTRUMENT**

The questionnaire used as the research instrument was subjected to face its validation. This research instrument (questionnaire) adopted was adequately checked and validated by the supervisor, his contributions and corrections were included into the final draft of the research instrument used.

* 1. **METHOD OF DATA ANALYSIS**

The data collected was not an end in itself but it served as a means to an end. The end being the use of the required data to understand the various situations it is with a view to making valuable recommendations and contributions. To this end, the data collected has to be analysis for any meaningful interpretation to come out with some results. It is for this reason that the following methods were adopted in the research project for the analysis of the data collected. For a comprehensive analysis of data collected, emphasis was laid on the use of absolute numbers frequencies of responses and percentages. Answers to the research questions were provided through the comparison of the percentage of workers response to each statement in the questionnaire related to any specified question being considered.

Frequency in this study refers to the arrangement of responses in order of magnitude or occurrence while percentage refers to the arrangements of the responses in order of their proportion.

The simple percentage method is believed to be straight forward easy to interpret and understand method . the researcher therefore choose the simple percentage as the method to use. The formula for percentage is shown as.

% = f/N x 100/1

where f = frequency of respondents response

N = Total Number of response of the sample

100 = Consistency in the percentage of respondents for each item contained in questions.

**CHAPTER FOUR**

**PRESENTATION ANALYSIS ANDINTERPRETATION OF DATA**

**4.1 Introduction**

Efforts will be made at this stage to present, analyze and interpret the data collected during the field survey. This presentation will be based on the responses from the completed questionnaires. The result of this exercise will be summarized in tabular forms for easy references and analysis. It will also show answers to questions relating to the research questions for this research study. The researcher employed simple percentage in the analysis.

**DATA ANALYSIS**

The data collected from the respondents were analyzed in tabular form with simple percentage for easy understanding.

A total of 160 (one hundred and sixty) questionnaires were distributed and 140 questionnaires were returned while others were not accounted for due to non availability of the personnel in the office as at the time the questionnaires were retrieved.

However, the researcher considered a return of about 88% not so bad and so decided to settle with the 140 respondent.

TABLE I

Gender distribution of the respondents.

|  |  |  |
| --- | --- | --- |
| Response | Frequency | Percent % |
| Male  | 50 | 35.7 |
| Female | 90 | 64.3 |
| Total  | 140 | 100% |

From the above table it shows that 35.7% of the respondents were male while 64.3% of the respondents were female.

TABLE II

The positions held by respondents

|  |  |  |
| --- | --- | --- |
| Response  | Frequency  | Percentage  |
| Mid-wives | 60 | 42.9 |
| Doctors  | 30 | 21.4 |
| Nurses  | 50 | 35.7 |
| Total  | 140 | 100% |

 The above tables shown that 42.9% of the respondents aremid-wives, 21.4 % are doctors, while 35. 7 % are nurses.

**TEST OF HYPOTHESIS ONE**

There are no causes of maternal mortality rate in Kutungare.

Table III

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variables | Fo | Fe | (Fo-Fe) | (Fo-Fe)2 | (Fo-Fe)2 Fe |
| Yes  | 24 | 46.7 | -22.7 | 515.29 | 11.03 |
| No  | 86 | 46.7 | 39.3 | 1544.49 | 33.07 |
| Undecided  | 30 | 46.7 | -16.7 | 278.89 | 5.97 |
| Total  | 140 |  |  |  | 50.07 |

D/f =(r-1) (C-1)

= (3-1) (2-1) =(2) (1) = 2

Decision rule:

There researcher therefore reject the null hypothesis that state there are no causes of maternal mortality rate in Kutungareas the calculated value of 50.07 is greater than the critical value of 5.99.

Therefore the alternate hypothesis is accepted that state that there are causes of maternal mortality rate in Kutungare

**TEST OF HYPOTHESIS TWO**

Maternal mortality rate has no effect on the population growth of Kaduna stateTable V

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variables | Fo | Fe | (Fo-Fe) | (Fo-Fe)2 | (Fo-Fe)2 Fe |
| Agreed  | 20 | 28 | -8 | 64 | 2.28 |
| Strongly agreed | 36 | 28 | 8 | 64 | 2.28 |
| Disagreed | 20 | 28 | -8 | 64 | 2.28 |
| Strongly disagreed | 28 | 28 | 0 | 0 | 0 |
| Undecided | 8 | 28 | 20 | 400 | 14.28 |
| Total  | 140 |  |  |  | 21.12 |

D/f =(r-1) (C-1)

(5-1) (2-1) = (4) (1) = 4

Decision rule:

There researcher therefore reject the null hypothesis that state that maternal mortality rate has no effect on the population growth of Kaduna stateas the calculated value of 21.12 is greater than the critical value of 9.49

Therefore the alternate hypothesis is accepted that maternal mortality rate has effect on the population growth of Kutungare community, Igabi L.G.A, Kaduna state.

**CHAPTER FIVE**

**SUMMARY, CONCLUSION AND RECOMMENDATION**

**5.1 Introduction**

It is important to ascertain that the objective of this study was on an appraisal of maternal mortality rate in the general hospital Kutungare, Kaduna state.

In the preceding chapter, the relevant data collected for this study were presented, critically analyzed and appropriate interpretation given. In this chapter, certain recommendations made which in the opinion of the researcher will be of benefits in addressing the challenges of controlling maternal mortality rate in the state.

**5.2 Summary**

The fact that adverse working condition is positively related to maternal health complication calls for urgent policy intervention. Employers must realize that they have a social responsibility to address the issue of maternal health complications. In particular, there should be targeted health policies toward maternal wellbeing during pregnancy in the work place. This could be developed in the light of urban poor infrastructure and the double pressure which the body experiences during pregnancy. Policies establishing flexible working hours for pregnant women, such as closing earlier than others to avoid the pressure on the road and to be able to attend to home activities as well as have enough time to prepare and rest for the next day’s activities can be established. This is to enhance protective factors, as well as buffering and moderating risk factors identified in this study.

**5.3 Conclusion**

One of the main factors affecting maternal mortality ratio, as determined by this study, is the availability of skilled professional birth attendants providing care during childbirth. A second important factor is the absence of formal education, especially education of women. The MDG maternal mortality reduction objectives will be achieved only if the governments devote more resources to the training of medical professionals and also make the education of women a national political priority. In Nigeria a network of capable safe motherhood champions exists. However, this network has yet to capitalize on its potential power, and political priority remains low.

**5.4 Recommendations**

Haven completed the study, the researcher therefore put forward the following recommendations:

Husbands should allow their wives to attend antenatal clinic and to deliver in the hospital. Women folk should avoid delay in seeking medical attention, attend antenatal clinic and deliver in hospitals. Parents need to invest in girl child education. Health personnel should desist from harassing their patients and show more concern. Government should assist by providing skilled health professionals, improving healthcare facilities and promoting awareness of the importance of antenatal care. Health workers must be trained and provided the wherewithal for optimal practice. Government and community leaders should inform, educate and sensitize people on maternal health through the mass media. Increased funding of the health sector is absolutely essential. Exemption of pregnant women from paying user fees will also make a world of difference. Equipping primary health centres for essential obstetric care should be of importance. Above all, education must be given top priority and must be properly funded, especially education of women.

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