PROVISION AND UTILIZATION OF MATERNAL AND CHILD HEALTH CARE SERVICES AMONG WOMEN OF CHILD-BEARING AGE IN BENUE STATE

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FEBRUARY, 2014

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M.Ed/EDUC/00808/2008-2009

THESIS SUBMITTED TO THE POSTGRADUATE SCHOOL, AHMADU BELLO UNIVERSITY, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF EDUCATION DEGREE IN HEALTH EDUCATION

DEPARTMENT OF PHYSICAL AND HEALTH EDUCATION, AHMADU BELLO UNIVERSITY, ZARIA

FEBRUARY, 2014

DECLARATION

I declare that the work in this thesis entitled: Provision and Utilization of Maternal and Child Health Care Services Among Women of Child-bearing Age in Benue State has been written and compiled by me in the Department of Physical and Health Education under the supervision of Professor (Mrs.) C.O. Adegbite and Professor K. Venkateswarlu. All sources of information have been appropriately acknowledged in the text and written in the list of references. No part of this thesis was previously presented for another degree at any university.

_____ _____

Inalegwu Kate Emine Date

CERTIFICATION

This thesis entitled: **"Provision and Utilization of Maternal and Child Health Care Services among Women of Child Bearing Age in Benue State"** written by **Kate Emiene Inalegwu** meets the regulations governing the award of the Master's Degree in Health Education of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

_____	_____
Professor C. O. Adegbite Chairperson, Supervisory Committee	Date
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Professor C. E. Dikki Head of Department	Date
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Professor A. A. Joshua Dean, Postgraduate School	Date

DEDICATION

I gladly dedicate this work to my God, my husband and children whose encouragement brought me this far and made this research work possible.

ACKNOWLEDGEMENT

First and foremost, the researcher would like to express her deepest gratitude and appreciation to her supervisors Professor (Mrs.). C.O. Adegbite and K. Venkateswarlu for their unreserved support and enriching comments throughout the research work.

The researcher's special thanks go to Professor (Mrs.) M.A. Suleiman, Dr. E.A. Gunen, Professor C.E. Dikki and all members of staff in the Department of Physical and Health Education for their encouragement and contributions to the success of this research work. Special thanks also go to all who contributed in one way or the other in making this research work a success.

Special appreciation goes to members of the researcher's family: Squadron Leader Abel Inalegwu (rtd), (husband), Alache Julia Inalegwu, Wilson Inalegwu, Ene Inalegwu, Akipu Inalegwu and Ooja Inalegwu (children), for their continuous encouragement, financial and material support throughout this programme.

ABSTRACT

The purpose of this study was to assess the provision and utilization of maternal and child health care (MCH) services among women of child-bearing age in Benue State. The ex-post facto research design was used to study 368 subjects drawn from six Local Government Areas in Benue State. The subjects were drawn through stratified random sampling and convenient sampling techniques. A close-ended questionnaire was used to obtain responses from the subjects. Data collected for this study were analyzed using descriptive statistics of frequency, percentage, mean and standard deviation; and inferential statistics of t-test at 0.05 level of significance was used for all tests of significance. The findings showed that provision of maternal and child health care services to women of child-bearing age in Benue State is not significantly adequate, utilization of maternal and child health care services among women of child-bearing age in Benue State is not significantly influenced by location, by their educational status, by attitude of the health care personnel at service centres, and by cultural belief. Based on the findings, the following recommendations were made: The Primary Health Care authorities should ensure that adequate provision of MCH services is a priority in view of its importance in minimizing maternal and infant morbidity and mortality. Maternal and child health care centres should be located as close as possible to the communities where the people live to encourage women of child-bearing age to go for regular antenatal and postnatal care. Health promotion programmes that centre on women with little or no education should be given at MCH centres/via the mass media with a view to enhancing their use of MCH services. The health care personnel at MCH service centres should improve their social relationship with clients to make the services user-friendly. This will boost mothers' use of the services. The State Ministry of Health and other organizations concerned with health care should intensify their effort in public enlightenment on the importance of MCH services to help overcome existing cultural barriers in the use of the services among women of child bearing age.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF APPENDICES

ABBREVIATIONS

ANC:	Antenatal Care
ARFH:	Association for Reproductive and Family Health
ASRH:	Adolescent Sexual and Reproductive Health
FMOH:	Federal Minis try of Health
HIV:	Human Immunodeficiency Virus
IAR:	Institute for Agricultural Research
ICPD:	International Conference on Population and Development
IMCI:	Integrated Management of Childhood Illness
MCH:	Maternal and Child Health
MDGs:	Millennium Development goals
NEEDS:	National Economic Empowerment and Development Strategy
NPHCDA:	National Primary Health Care Development Agency
PHC:	Primary Health Care
SOGON:	Society for Gyneacology and Obstetrics of Nigeria
STDs:	Sexually Transmitted Diseases
UNFPA:	United Nations Population Fund
UNICEF:	United Nations Children's Education Fund
U.S.	United States
WHO:	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Maternal and child health has emerged as the most important issue that determined global and national wellbeing. This is because every individual, family and community is at some point intimately involved in pregnancy and the success of childbirth (WHO, 2006). Despite the honour bestowed on womanhood and the appreciation of the birth of a new born baby, pregnancy and childbirth is still considered a perilous journey. The situation of maternal and child health in Nigeria is among the worst in Africa and has not improved substantially and in some areas of the country, has worsened over the past decade (Ladipo, 2009). The maternal mortality ratio ranges between 800-15000 per 100,000 live births (Nigeria Demographic and Health Survey, 2003), with marked variation between geo-political zones – 165 in South West compared with 1,549 in the North-East and between urban and rural areas (Ladipo, 2009). Total fertility rate is 5.7 births per woman and it is estimated that approximately 59,000 of maternal deaths take place annually in Nigeria as a result of pregnancy, delivery and post-delivery complications (WHO, UNICEF, UNFPA, 2007).

Research (Ladipo, 2009) indicated close link between the health of the new born with the health of their mothers. About 30-40% of neonatal and infant deaths result from poor maternal health and inadequate care during pregnancy, delivery and the critical immediate postpartum period (Ladipo, 2009). In Nigeria 340,000 infants die every year during delivery and shortly afterwards especially if the mother dies in childbirth (WHO, UNICEF, UNFPA, 2007). The under-five mortality ratio is 200 per

1000 live births (WHO, 2006). These deaths are not unconnected with the poor maternal health services in the country and could be avoided through provision of quality and effective maternal and child health services.

Nigeria is one of the African countries with a rapidly growing population. As a nation with a growing economy, one of the major health challenges facing the country today is the capacity to sustain the increasing infant and maternal health. The most common recorded cause of perinatal deaths are similar to those of other less developed countries, and the common denominators are early childbearing poor maternal health and above all, the lack of appropriate and quality services (Okereke, Kanu, Nwachukwu, Anyanwu, Ehiri & Merick, 2005). Although life-saving practices for most infants have been known for decades, currently one third of the mothers still have no access to health care services during pregnancy and almost half do not have access to health care services during childbirth (Okereke, et al., 2005). In the light of rapid population growth and increased risks of adverse environmental health exposures, maternal and child health prospects could be a serious national public health problem due to factors such as ignorance, apathy, poverty, lack of commitment, illiteracy and corruption (Opara & Ellah, 2007).

The Millennium Development Goal (MDG) 4 and 5 require improvement of maternal and child health. Target 6 of MDG5 specified that between 1990 and 2015, maternal mortality ratio be reduced by three quarters. The chances of attaining this target depend on how policy, plans and int erventions address the comprehensive set of social, economic, cultural as well as medical causes of maternal mortality in Nigeria (Ladipo, 2009).

The 2006 census estimated that there were about 65 million females in Nigeria, out of which 30 million were of reproductive age (15-49 years). Each year about 6 million women become pregnant, 5 million of these pregnancies resulted in child birth (WHO, UNICEF, UNFPA, 2007). Yearly, about 1,080,000-1,620,000 Nigerian women and girls suffer disabilities caused by complications during pregnancy and child birth (HILL, Abouzahr & Wardlaw, 2001). For every one that dies, 20-30 more suffer long term and short term disabilities such as chronic anaemia, maternal exhaustion or physical weakness, vesico-vaginal or recto-vaginal fistulae, stress incontinence, chronic pelvic pain, infertility, ectopic pregnancy, and emotional depression (Ladipo, 2009). Child survival is equally affected too as the chances of survival of a child in the absence of his or her mother is greatly reduced.

Maternal heath and the health of new born children are critical topics in global development. When women are able to access needed quality health care services and protect themselves from the many health risks they face,l ong-term social and economic progress can be achieved. The health and well-being of mother, infants, and young children are of critical importance, both as reflections of the current health status of individuals, local communities and the nation as a whole and as predictors of the health of the next generation (Okereke, et al, 2005). In several key areas of health care, mothers and young children of several communities of developing countries are not receiving the health care services they need, and the result is premature illness and preventable death (Okereke, et al, 2005). The foregoing, prompted the researcher to undertake research study on the provision and utilization of maternal and child health care services among women of child bearing age in Benue State.

1.1 Statement of the Problem

Every minute in a day, somewhere in the world, a woman dies due to complications arising from pregnancy and childbirth (Ladipo, 2009). In Nigeria, 150 of such women die daily; it is the leading cause of death among women of reproductive age. The tragedy is that these women do not die from diseases, but during a normal, life-enhancing process of procreation. Even more tragic, is the fact that these deaths are avoidable if preventive measures are taken and adequate care is available (Ladipo, 2009).

Nigeria has had a very poor record regarding maternal and child health outcomes. Statistics depicting maternal and child health status in Nigeria call for a public health action (Adebayo, 2001). An estimated 53,000 women and 250,000 new born die annually mostly as a result of preventable causes (National Primary Health Care Development Agency, 2006). Over the years, several initiative programmes have been introduced to reduce the rate of mortality among mothers and children in Nigeria. Despite these efforts, poor maternal and child health indices have continued to be one of the most serious development challenges facing the country (NPHCDA, 2006).

In the year 2000, Nigeria and other members of the United Nations agreed on a number of Millennium Development Goals (MDGs) to improve the welfare of the people in their countries in the 21st century. Two of the health related goals concern reducing death among children under 5 years old by two-third (MDG 4, that is, reduction from 230 to 77 per 100,000 live births) and reducing maternal deaths by three-quarter (MDG 5) by the year 2015, when compared with the 1990 figures – from 1000/100,000 live births to 250 (NPHCDA, 2006). One year to 2015, Nigeria still

records a rather appalling maternal, neonatal, and infant mortality rates compared with developed countries. Although many of these deaths are preventable, the coverage and quality of health care services in Nigeria continue to fail women and children. Every single day, Nigeria loses about 2,300 under five year olds and 145 women of child bearing age, which marked the country the second largest contributor to the under-five and maternal mortality rate in the world (Okereke, et al, 2004). Underneath the statistics lies the pain of human tragedy, for thousand of families who have lost their children. Even more devastating is the knowledge that essential interventions reaching women and babies on time would have averted most of these deaths. Although, analysis of recentt rends shows that the country is making progress in cutting down infants and under-five mortality rates, the pace still remains too slow to achieve the millennium development goals of reducing child mortality by a third by 2015. Presently, less than 20 percent of health facilities in Nigeria offer emergency obstetric care and only 34 percent of deliveries are attended by skilled birth attendants (Okereke, et al, 2005). The state of health of Nigerians, and especially of our women, is to say the least, obnoxious and scandalous. Health services in Nigeria have been unable to satisfy the needs, desires, aspirations of the consumers who seek health assistance, counselling and diagnosis. This holds that the consumers of health care services in Nigeria are largely unsatisfied as a result of the poor quality and quantity of health services and their providers as well as financial constraints (Ladipo, 2009).

Despite the efforts in raising MCH services, some women still do not avail themselves of the opportunity even when provided free of charge. It is not uncommon to hear that some women reject modern medical and health care services on the ground

that they are not in consonance with the system the people are already used to. Therefore, this study is designed to assess the provision and utilization of maternal and child health care services among women of child bearing age in Benue State. The study attempted to find answers to the following specific research questions.

1.3 Research Questions

1. Are maternal and child health care services adequately provided to women of child bearing age in Benue State?
2. Does the location of health care facility influence the utilization of maternal and child health care services among women of child-bearing age in Benue State?
3. Does educational status influence utilization of maternal and child health care services among women of child-bearing age in Benue State?
4. Does attitude of health care personnel at maternal and child health care service centres in Benue State significantly influence utilization of the services among women of child bearing age?
5. Does cultural belief influence the utilization of maternal and child health care services among women of child-bearing age in Benue State?

1.4 Purpose of the Study

The primary purpose of this study was to assess the provision and utilization of maternal and child-health care services among women of child bearing age in Benue State. The specific purposes were:

1. To determine the adequacy of maternal and child health care services provided to women of child-bearing age in Benue State.

2. To assess the influence of location of health care facilities on utilization of maternal and child health care services among women of child-bearing age in Benue State.
3. To assess the influence of educational status on utilization of maternal and child health care services among women of child-bearing age in Benue State.
4. To investigate the influence of attitude of health care personnel on utilization of maternal and child health care services among women of child-bearing age in Benue State.
5. To examine the influence of cultural belief on the utilization of maternal and child health care services among women of child-bearing age in Benue State.

1.5 Significance of the Study

The outcome of this study would be significant to women of child-bearing age in Benue State and Nigeria in general in the following ways:

1. The findings of this study would provide information on the adequacy or otherwise of maternal and child health services provided to women of child-bearing age in Benue State with a view to improving the services.
2. The findings of this study would help policy makers to understand problems militating against effective utilization of maternal and child health services among women of child-bearing age in Benue State and the way forward.
3. It would provide a basis for further research to other interested researchers.
4. The findings of this study would contribute to existing knowledge on the provision and utilization of maternal and child health services.

1.6 Hypotheses

In order to achieve the purpose of this study and address the questions raised in the study, the following hypotheses were formulated.

1.6.1 Major Hypothesis

Provision and utilization of maternal and child health care services among women of child-bearing age in Benue State is not significantly influenced by adequacy of health facilities.

1.6.2 Sub-hypotheses

1. Provision of maternal and child healthcare services to women of child-bearing age in Benue State are not significantly adequate.
2. Utilization of maternal and child health care services among women of child-bearing age in Benue State, is not significantly influenced by location of health care facilities.
3. Utilization of maternal and child health care services among women of child-bearing age in Benue State is not significantly influenced by their educational status.
4. Utilization of maternal and child health care services among women of child-bearing age in Benue State is not significantly influenced by attitude of the health care personnel at service centres.
5. Utilization of maternal and child health care services among women of child-bearing age in Benue State is not significantly influenced by cultural belief.

1.7 Basic Assumption

This study was based on the following assumptions:

1. Adequate provision of maternal and child health care services are necessary to protect and promote the health of mothers and children.
2. Place of residence can constitute a strong barrier in the use of maternal and child health care services among women of child-bearing age.
3. Level of education can constitute a strong predictor of maternal and child health care service utilization among women of child-bearing age.
4. The attitude with which health care providers handle consumers of maternal and child health care services in Benue State can affect the subsequent use of the services.
5. Cultural belief can constitute a strong determinant of choice/use of health care services among women of child-bearing age.

1.8 Delimitation of the Study

This study was delimited to the provision and utilization of maternal and child health care services among women of child-bearing age (15-49 years) in six Local Government Areas selected from the three Senatorial Zones in Benue State. They include Katsina-Ala, Vandeikya (Zone A); Gboko, Makurdi (Zone B), and Ogbadibo, Otukpo (Zone C). Specifically, only women of child-bearing age attending antenatal and postnatal clinic at the General Hospitals in the selected Local Government Areas were involved in the study.

1.9 Limitation of the Study

Uncooperative attitude of some of the respondents constituted a limitation in this study as some of the women of child-bearing age did not return their questionnaire. The researcher only made do with responses of the respondents whose questionnaire were correctly completed and returned.

CHAPTER TWO

REVIEW OF RELTED LITERATURE

2.0 Introduction

This study was conducted to assess the provision and utilization of maternal and child health care services among women of child-bearing age in Benue State. The purpose of the study was to ascertain the provision of heath care services to women of child-bearing age and their infants as well as to determine the utilization of the services. To achieve this purpose, all available related literature were critically reviewed and presented under the following sub-titles.

1. The concept of maternal and child health care
2. History of maternal and child health care in Nigeria
3. Components of maternal and child health care services
4. Provision of maternal and child health care services
5. Utilization of maternal and child health care services
6. Summary

2.1 The Concept of Maternal and Child Health Care

Maternal and child health encompasses the health of women of child-bearing age from pre-pregnancy, through pregnancy, labour, and delivery, and the postpartum period and the health of the child prior to birth through adolescence (James, Robert & Jerome, 2008). The World Health Organization (2003) defined maternal and child health care as promotive, preventive, curative and rehabilitative health care for mothers throughout the child bearing period and for children from conception through adolescence. Annet (2004) defined maternal and child health care as the care that aims

at ensuring a healthy mother and baby throughout pregnancy and child birth. According to Annet (2004), it involves the screening of patients, and the treatment of diseases, as well as the identification and management of pregnancy related complications, care of the newborn baby and providing information about family planning and how and when to access medical care when complications arise. Bichi (2007) defined maternal and child health care as the care given to a woman and the child right from conception through infancy and childhood.

Every society, whether developed or developing, recognizes the importance of the health needs and problems of women and their children from birth to adolescence. For this reason both pregnant and lactating mothers and their children are given special status in the society (Bichi, 2007). Around the world people celebrate the birth of a new baby, society expects women to bear children and honour them for their role as mothers. Yet pregnancy and childbirth is a perilous journey. In developing countries, more than half a million mothers die from cases related to this life-giving event each year while several others have other related health problems still during pregnancy, childbirth and lactation (Ransom and Yinger, 2002). Women are the main victims of malnutrition and the additional biological demands during menstruation, pregnancy and lactation have made nutritional deficiencies the most widespread and disabling health problems among them. Therefore, the women folk deserve adequate attention hence maternal and child healthcare service was initiated (Bichi, 2007).

According to Sumithra, et al (2006) maternal and child health (MCH) services are essentially promotive. They provide avenues for the early detection of mothers and infants at high risk of morbidity and mortality. The MCH care services generally begin

with solving the problems of individual mothers and their children and extend to solving the problems of all individual members of the family within the larger community. Therefore, it generally covers the problems of mothering and parenthood. The programme is meant to ensure that every pregnant woman and nursing mother maintains good health, learns the art of child care, has a normal delivery, and bear healthy children, who should grow up in a family unit, with love and security in a healthy environment, well nourished with adequate medical attention and socialization (Bichi, 2007). The objectives of maternal and child health care services as reported by Bamaneh (2004) include:

- Reduction of morbidity and mortality in this vulnerable group.
- Promotion of physical and emotional development of children.
- Ensuring that every mother has access to health services to maintain good health during pregnancy.
- Preparing every mother physically and psychologically to take care of her child.
- Ensuring that every mother goes through professional care delivery.
- Ensuring that every mother bears a healthy child.
- Ensuring that the child grows in a healthy environment.
- Ensuring that the child receives proper nutrition.
- Ensuring adequate protection of the child from diseases.

The vast majority of women who die from or are seriously injured by maternity-related causes are in the prime of life, their illness and deaths have dire social and economic consequences for both families, women's crucial role in household management and the

society at large (Bichi, 2007). Consequently, families that lose mothers are likely to suffer declining nutritional status, and surviving children may have a lower rate of school enrolment (WHO, w003). Maternal disabilities related to pregnancy and children, such as anaemia and malnutrition also influence child health; babies born to malnourished mothers are likely to have lower birth weight, which is associated with developmental delays, disabilities ad early death (WHO, 2003). Researchers have shown that new born whose mothers die are less likely to survive (Bichi, 2007).

Insufficient maternal care during pregnancy and delivery is largely responsible for the estimated one million still births and new born deaths that occur around the world each year. These deaths occur just before or during delivery or within the first week of life (WHO, 2003). The World Health Organization (2003) further noted that the complication of pregnancy and childbirth place a significant burden on the health systems. Death and injuries sustained during pregnancy and childbirth contributes significantly to the total burden of reproductive ill health. Whereas there are numerous factors that affect the health of the child, many reflect or are related to the health status of the mother and her immediate environment. One of the first steps to ensure healthy children is to ensure that pregnant women have access to prenatal care early in a pregnancy and that they receive proper care throughout it (James, et al, 2008).

Maternal and child health care is important to a community for several reasons. First, maternal and child health statistics are regarded as important indicators of the effectiveness of the disease prevention and health promotion services in a community. It is known that unintended pregnancies, lack of prenatal care, poor maternal and child nutrition, maternal drug use, low immunization rates, poverty, limited education, and

insufficient child care combined with lack of access to health care services in a community are precursors to high rates of maternal, infant and childhood morbidity and mortality. Secondly, it is now known that many of the risk factors specified can be reduced or prevented with the early intervention of educational programmes and preventive medical services for women and children. These early community efforts provide a positive environment that supports the physical and emotional needs of the woman, infant and family and reduce the need for more costly medical or social assistance to these same members of society later in their lives (James, et al, 2008).

In maternal and child health care, the areas of most concern are the biological demands of reproduction, growth and development and the special vulnerability (the delicate position of mothers and children). The health care services (MCH) aims at ensuring a healthy mother and baby throughout pregnancy and childbirth (James, et al, 2008).

2.2 History of Maternal and Child Health Care in Nigeria

In 1975 the Nigerian government started utilizing a Primary HealthCare (PHC) approach in the provision of national health care. PHC encompasses basic treatment, maternal and child health (MCH) and family planning services, the prevention and control of infectious diseases and the provision of essential drugs and supplies. Although MCH was an integral part of PHC, high maternal mortality in Nigeria first received international attention through a paper by an obstetrician and gyneacologist,. Kelsey Harrison in the British Journal of Obstetrics and Gynaecology (Ladipo, 2009). Also in 1985 across the Atlantic, Rosenfield and Maine (1985) published a paper titled "Maternal Mortality: A Neglected Tragedy: Where is the M in MCH?" The "M" which

should have stood for maternal health instead often stands for maternal death, missed opportunities, muddled thinking, mistaken priorities and messy orsganization of health services (Ladipo, 2009). This provided the impulsion for convening an international safe motherhood conference in Nairobi, Kenya in 1987 which launched a global safe motherhood movement. Nigeria was committed to achieving the objective of "reduction in the number of maternal deaths by half by the year 2000" as agreed at the conference. A safe motherhood committee was subsequently established by the Federal Minis try of Health and the Society for Gynaecology and Obstetrics of Nigeria (SOGON) intensified efforts to promote maternal mortality reduction. With the creation of National Economic Empowerment and Development Strategy (NEEDS) – a poverty alleviation programme which has developed into a national framework for social change, reduction of maternal mortality was explicitly listed as an objective (Central Bank of Nigeria, 2004).

Also, growing concern among the civil society about the unacceptable levels of maternal mortality in Nigeria has spearheaded efforts to improve maternal and child health. For example, the Association for Reductive and Family Health (ARFH), Planned Parenthood Federation of Nigeria and Pathfinder International Nigeria have worked throughout the decade to expand reproductive health services for Nigerians (Ladipo, 2009).

The Federal Ministry of Health (FMOH) adopted the WHO Africa regional plan of reproductive health and the process was marked with the launching of the population development agenda. All components of reproductive and sexual health services including MCH, Integrated Management of Childhood Illnesses (IMCI), Safe

Motherhood, Adolescent Sexual and Reproductive Health (ASRH), Post abortion care and management of abortion complication were integrated in the guidelines and standing orders for primary healthcare which was developed post-international conference on population and development conference (ICPD). The Federal Ministry of Health (FMOH, 2001) produced a national reproductive health policy in 2001 and national reproductive health strategic framework in 2002 with specific maternal mortality reduction aims (FMOH, 2002). In 2005, the government with support by the World Health Organization adopted a roadmap to attain the maternal and child health MDGS (WHO, 2005). The MDG has been a strong basis for commitment to maternal mortality reduction in Nigeria. The Nigerian road map is an outcome of the one developed by the Regional Reproductive Health Task Force in collaboration with all partners in October 2003 in Dakar, Senegal and February, 2004 in Harare, Zimbabwe. The aim is to focus on the availability of emergency obstetric and neonatal care, skilled attendance during pregnancy, childbirth and family planning as well as provision of essential equipment and supplies that will save the lives of women and newborns at all levels. The implementation is in 2 phases of 5 years each: phase 1 – 2005-2009; phase 2 – 2010-2014 and final reporting year would be 2015 (Ladipo, 2009). The road map is expected to impact on the health and survival of mothers and their new born as a means of attaining the MDGs.

2.3 Components of Maternal and Child Heath Care Services

According to Annet (2004), the elements of maternal and child health care services include antenatal care, delivery care, and post partum care.

2.3.1 Antenatal Care (ANC)

This includes all care given to pregnant women. According to Annet (2004), ANC is an effective health intervention tool for reducing the risk of maternal morbidity and mortality, particularly in places where the genera health status of women is poor. The purpose of antenatal care is to screen for sign of illness or other complications that may occur during pregnancy. For instance, blood pressure measurements and urine analysis done during antenatal care visits can screen pregnant women for hypertensive disorders of pregnancy (including pre-eclampsia and eclampsia) and to seek medical attention when the condition appears (WHO, 2006). It is also an opportunity to treat existing diseases, which may be aggravated by pregnancy such as sexually transmitted diseases, anaemia, hypertension etcetera (UNICEF/WHO, 2004). The provision of iron tablets during pregnancy has been shown to reduce the risk of being anemic, which is an important risk for hemorrhage and cardiac failure during pregnancy (Annet, 2004). It also provides an opportunity to be immunized against tetanus toxoid. Both of these interventions are considered highly effective (WHO, 2006). In late pregnancy, antenatal visits can help identify women at risk for difficult deliveries (including cephalo pelvic disproportion and a breech or transverse presentation) and direct them to appropriate delivery care (UNICEF & WHO, 2001). Antenatal care use has been shown to influence women's use of delivery services; as well, neonatal and infant health has been shown to be significantly affected by women's use of antenatal care (Melkamu, 2005).

According to James, et al, (2008), antenatal care should begin before pregnancy when a couple is considering having a child, and it should continue throughout

pregnancy. The goals include providing the best care for the pregnant woman and the unborn child, as well as preparing the mother-to-be for the delivery of a healthy baby. James, et al, (2008) noted that during antenatal visits tests are performed on both the mother and foetus to assess any potential risks, to treat any maternal or foetal complications, and to monitor the growth and development of the foetus. In addition, counselling and guidance are provided regarding the various aspects of pregnancy, including weight gain, exercise, nutrition and overall health.

Antenatal care is crucial to maternal and infant health. Women who receive early and continuous antenatal health care have better pregnancy outcomes than women who do not; a pregnant woman who receives no antenatal care is three times as likey to give birth to a low-birth-weight infant (one that weighs less than 5.5 pounds or 2500 grams as one who receives the appropriate care, and she is four times as likely to have her baby die in infancy (James, et al, 2008). The World Health Organization recommends that pregnant women should have four antenatal visits for:

a. **Health Promotion:** Advice on nutrition and health care, as well as counselling to alert women to signs of danger and give them a help plan for the birth.

b. **Assessment**: History taking, physical examination and screening tests such as HIV, STDs, chronic and hereditary diseases.

c. **Prevention:** Early detection and management of complications and where needed, prevention of malaria, hook worm and tetanus; and

d. **Treatment:** Management of sexually transmitted diseases, anaemia, or other conditions.

2.3.2 **Delivery Care**: is the care given to a woman during the delivery/ labour period. The aim of delivery (intranatal) care is:

- To conduct delivery under aseptic conditions with minimum injury to mother or foetus. 3CS: Clean hands, Clean surface of delivery and Clean cutting dressing of umbilical cord. 3Cs prevent neonatal tetanus and reduce the incidence of maternal sepsis, reduce morbidity and mortality.
- Ready to manage emergencies
- Care of baby at birth

The World Health Organization recommends a skilled attendant at every birth in order to:

a. Provide good quality care on an ongoing basis and the care should be hygienic, safe and sympathetic;
b. Recognize and manage complications, including life-saving measures for the mother and baby; and
c. Refer the mother promptly and safely when care at higher-level is needed.

2.3.3 **Postnatal Care**

Refers to the care given to a woman six weeks after delivery; the assistance given to a mother and the baby for a period of six weeks from the time of delivery (United Nations, 2002). Postnatal care is regarded as one of the most important maternal health care services for the prevention of impairment and disabilities resulting from childbirth. Its services are primarily comprised of physiotherapy, physical examination, immunization health education and family planning services. Many

women do not receive these essential health care services, yet they need these services following delivery (Annet, 2004).

According to Hoddinott, et al (2002), postnatal services are also among the strategies aimed at preventing the onset of physical and mental impairments among women who have delivered. They noted that the infants too need to be routinely examined for improvement and closely monitored for normal growth and should be immunized against the six killer diseases that could stop them from growing. Therefore, both the mother and the baby need postanatal care. Furthermore, mothers need to understand the changes that occurred in their bodies and how to prevent and manage postnatal complications such as back pain, muscle imbalances and instability of the spine, pelvic pain, postnatal depression, and incontinence, which they often go through after delivery. Hoddinott, et al. (2002) further reported that mothers need to know why they should attend postnatal services in order for them to appreciate these services. Mothers need to periodically undergo examination, attend family planning clinics and also have physiotherapy to enable them regain their original pre-pregnant state as soon as possible after birth. According to Bick and Macarthur (2002), the six week examination is the last routine medical assessment after giving birth, marking the end of the postnatal period and the woman's discharge from maternal services. This examination focuses on the following potential symptoms: anaemia, urinary tract infection, emotional depression, urinary stress incontinence, muscle strength and whether there are abnormalities in the breasts. Furthermore, the abdomen and pelvis are also examined to ensure that involution of the uterus is complete and any traumas sustained during delivery are fully healed in the postnatal period. The mother's

contraceptive needs, methods, nutrition and the immunizations of the baby are also among the issues that are discussed with the mother during the postnatal period (Annet, 2004).

The World Health Organization recommends integrated postnatal care that includes:

a. Identification and management of problems in the mother and the new born;

b. Counselling, information and services for family planning, and

c. Health promotion, for the newborn and women, including immunizations, advice on breastfeeding, and safe sex (Safe Motherhood, 2002).

2.4 Provision of Maternal and Child Healthcare Services to Women of Child-bearing Age

Maternal and child healthcare which aims at ensuring a healthy mother and baby throughout pregnancy and childbirth, involves the screening of patients, the treatment of anaemia, malaria, urinary tract infections and sexually transmitted infections, as well as the identification and management of pregnancy-related complications such as hypertensive disorders, diabetes, abnormal presentations and providing information about family planning and how and when to access medical care when complications arise (Bichi, 2007). The provision of special care for women during pregnancy through the public health services is a relatively late development in modern obstetrics. Not until the late 1930s did the United Kingdom authorities decide that women should be offered regular check ups during pregnancy as an integral part of maternity care. This development was stimulated by the realization that while maternal mortality due to puerperal sepsis, hemorrhage and obstructed labour has decline during the early years of

the 20th century if these eclampsia-related deaths are to be averted, as it is supposed, interventions would be needed early during the pregnancy to measure blood pressure, identify women at risk of eclamptic convulsions and take measures to reduce blood pressure whenever possible (WHO, 2003). According to Sumithra, et al (2006), maternal and child health care services are essentially promotive and preventive. James, et al (2008) noted that prevention measures that reduce maternal an infant mortality and promote the health of all childbearing women and their newborns should start before conception and continue throughout the postpartum period. Some of these prevention measures include the following:

2.4.1 Before Conception

* Screen women for health risks and pre-existing chronic conditions such as diabetes, hypertension, and sexual transmitted diseases.
* Counsel women about contraception and provide access to effective family planning services (to prevent unintended pregnancies and unnecessary abortions).
* Counsel women about the benefits of good nutrition; encourage women especially to consume adequate amounts of folic acid supplements (to prevent neural tube defects) and iron.
* Advise women to avoid alcohol, tobacco, and illicit drugs.
* Advise women about the value of regular physical exercise.

2.4.2 During Pregnancy

* Provide women with early access to high-quality care throughout the phases of pregnancy, labour, and delivery. Such care includes risk appropriate care,

treatment for complications, and use of antenatal corticosteroids when appropriate.

* Monitor and, when appropriate, treat pre-existing chronic conditions.
* Screen for and, when appropriate, treat reproductive tract infections, including bacterial vaginosis, group B streptococcus, and human immunodeficiency virus.
* Vaccinate women against influenza, if appropriate.
* Continue counselling against use of alcohol, tobacco, and illicit drugs.
* Continue counselling about nutrition and physical exercise.
* Educate women about the early signs of pregnancy-related problems.

2.4.3 During Postpartum Period

* Vaccinate newborns at age-appropriate times.
* Provide information about well-baby care and the benefits of breastfeeding.
* Warn parents about exposing infants to second hand smoke.
* Counsel parents about placing infants to sleep on their backs.
* Educate parents about how to protect their infants from exposure to infectious diseases and harmful substances, (James et al, 2008).

2.5 Utilization of Maternal and Child Health Care Services Among Women of Child-bearing Age

The utilization of health services is a complex phenomenon. Rower and Garcia's (2003) investigation showed that the use of health services is related to the availability, the quality and cost of the services. In addition, the social structure, health belief s and personal characteristics of the users are also important. Several studies that investigated the factors associated with utilization of maternal and child health services

(Dunlop, et al, 2000; Sibanda, et al, 2001; Kaufmann, 2002; Chakraborty, et al, 2002) have shown factors such as socio-economic status, knowledge, cultural influences, transport and access to services among others. A number of socio-demographic characteristics of the individuals affect the underlying tendency to seek care. In this regard good examples are maternal age, parity, lower educational attainment and family income, which have been repeatedly examined as determinants of health care utilization (Melkamu, 2005). Based on the purpose of this research study, certain specific factors associated with utilization of maternal and child health care services are highlighted as follows:

2.5.1 Location and Utilization of MCH Services

Physical accessibility of MCH services has been an important determinant of utilization of the health care services in developing countries. According to Hayelom (2008), a study in Jordan found that distance between residence and the service as well as time and cost involved in traveling to services are all significantly associated with use of the antenatal services. The relationship between health unit and place of residence shows that utilization rates decline sharply with increasing distance traveled. The World Health Organization (2006) also reported that distance from MCH services, and the time and the cost involved in traveling to services to be all highly significantly associated not only with ANC use but also with the use of institutional delivery, postnatal and infant care services. According to Annet (2004), a cross sectional descriptive study on a sample of 200 mothers to determine the utilization of antenatal and maternity services in four rural health centres revealed that mothers who were living in a distance less than 5 kilometers to the health facilities utilized the services

better than those who lived in a distance 5 kilometers away and beyond. In developing countries including Nigeria, the effect of distance on service use becomes stronger when combined with the dearth of transportation and poor roads, which contribute to increased cost of visits (Audu, 2009). Availability of the transport, physical distance of the facility and time taken to reach the facility influence the health seeking behaviour and health services utilization among mothers, particularly in rural areas. The factor of distance becomes a strong disincentive in seeking health care especially when mothers need somebody to accompany them (Audu, 2009).

2.5.2 Quality of MCH Services and Utilization

As several studies from developed and developing countries indicated, women's perception of quality of ANC are important factors affecting women's attendance during pregnancy (Hayelom, 2008). Though women's knowledge and experience about child bearing might influence their use of MCH services, if the attitude of the health provider and his/her treatment of the service seeker are deemed poor, the service seeker will be less likely to return and use the services (Hayelom, 2008). The role that quality of care plays in the decision to seek care is related to people's own assessment of service delivery, which largely depends on their own experiences with the health sys tem and those of people they know (WHO, 2003). The two mechanisms through which quality of care affects the decision to seek care are satisfaction or dissatisfaction with the outcome (e.g. effectiveness of the treatment and remedies prescribed), and satisfaction or dissatisfaction with the service received (e.g. staff attitude, long waiting time, hospital procedure, availability of supplies and efficiency) (WHO, 2003). These

factors would act as inhibitors of future utilization which affect the decision to seek care.

Quality of services comprises of client-provider interaction. If the relations between the provider and the client is poor then it will affect the quality of the services and the subsequent use of the service as well. Other factors include: the range of services provided, privacy to the client, respect for the client, service hours, availability of supplies and facilities among others.

Safe Motherhood (2002) contended that poor quality of care is one of the most common reasons why women do not seek care or seek it late. Webster (2001) conducted a survey to examine satisfaction with health care provided and to compare differences in service use in the first four weeks after birth between depressed and non-depressed women who attended bookings in Royal Women's Hospital. The results indicated that 16% of the women were dissatisfied with the health service providers and this contributed to their not utilizing the services. This suggests that for some women to use health services they must be satisfied with the quality of the services and the service providers as well. Therefore, hospitals should strive to improve on the quality of the services they provide to their clients in order to attract the consumers to utilize the services. Ensuring good quality care would also have multiple benefits for both individuals and the health system as well. The benefits include:

a. Cost efficiency and effectiveness: if women use services, more intensive and expensive care can oft en be avoided, saving funds of the health sys tem.

b. Improved health outcomes: When staff work with adequate equipment and supplies, they can manage health problems better, reducing deaths and the need fo emergency interventions and referrals to higher-level care.

c. Improved staff morale: Health workers are likelyto have more positive attitudes towards their work when they have the resources they need to provide care and when the community values the care (Annet, 2004).

2.5.3 Educational Status and Utilization of MCH

Education is a strong predictor of MCH service utilizations but the extent and nature of relationship between the two is not uniform across social settings. For instance, in Peru and Guatemala women with primary level of education were more likely to utilize ANC services than those no schooling women (UNICEF & WHO, 2004). Similarly, In Ethiopia education is a major factor determining utilization of antenatal care services. According to Hayelom (2008), Ethiopian Demographic Health Survey 2005 revealed that about 75% of the women with at least secondary schooling receive antenatal care services, while another study conducted on determinants of antenatal care utilization in Arsi Zone, Central Ethiopia revealed that 71% women with at least secondary schooling receive antenatal care services. A study conducted in Kampala to determine the variables associated with returning for postnatal services identified level of education and adequacy of antenatal services, among other factors, as the variables associated with postnatal services utilization (Annet, 2004). The study also found that the higher the level of education of a mother, the greater the likelihood of returning for post natal services after delivery.

In developing countries most women lack knowledge on risks of pregnancy and childbirth, which in turn influence the felt need for maternal and child health care. In Jamaica, for instance, while most women surveyed were able to name obstetric complication they had experienced themselves, fewer than 10% of them identified any other specific risk, danger or problem of pregnancy and birth (Hayelom, 2008). Not only does women's knowledge of risks affect their use of MCH care, but also does their knowledge of the severity of risks and their feeling of susceptibility to those risks (Hayelom, 2008). According to Melkamu (2005), a household survey in Iraq showed that level of perceived sickness was the most important factor affecting utilization of maternal and child health services. A study in Addis Ababa showed that absence of illness, lack of awareness/knowledge on the danger signs of pregnancy are some of the reasons for non-attendance of antenatal and delivery care.

2.5.4 Cultural Practices and Utilization of MCH Services

Cultural beliefs and practices often lead to self-care, home remedies and consultation with traditional healers in rural communities. These fact ors result in delay in seeking care and are more common among women, not only for their own health but also for children's illness (Audu, 2009). In most developing countries women's powerlessness, their unequal access to material resources and their inability to make informed choices are the fundamental causes of maternal death. In many countries of the world women's power to make decision is limited even matters directly related to their own health. For instance, in Bangladesh it is usually the husband who makes decision to seek (or not to seek) care (Celik, 2000; Novaneetham, 2002). Similarly, in

Pakistan, for example, a study found that 2/3 of women delivered at home because the husbands or other family members forbade hospital delivery (Hayelom, 2008).

In most African rural communities maternal health services co-exist with traditional health care services, therefore, women must choose between the two options. When obstetric complications are seen as the reflection of the "will of God" or the influence of "evil spirits", families often choose traditional healers for care and only take women to health facility as last resort when it may be too late (Kebede, 2002).

2.6 Summary

Maternal and child health encompasses the health of women of childbearing age from pre-pregnancy, through pregnancy, labour and delivery and the postpartum period and the health of the child prior to birth through adolescence. MCH care is promotive, preventive, curative and rehabilitative health care for mothers throughout the child bearing period and for children from conception through adolescence. The health care services involve the screening of patients, and the treatment of diseases, as well as the identification and management of pregnancy related complications, care of the new birth baby and providing information about family planning and how and when to access medical care when complications arise. The aim of MCH services is to ensure a healthy mother and baby throughout pregnancy and childbirth. The services provide avenues for the early detection of mothers and infants at high risk of morbidity and mortality.

Available literature shows that maternal and child health is important to a community for several reasons: first, MCH statistics are regarded as important indicators of the effectiveness of the disease prevention and health promotion services

in a community. It is known that unintended pregnancies, lack of prenatal care, poor maternal and child nutrition, maternal drug use, low immunization rates, poverty, limited education, and insufficient childcare combined with a lack of access to health care services in a community are precursors to high rates of maternal, infant and childhood morbidity and mortality. Second, it is now known that many of the risk factors specified can be reduced or prevented with the early intervention of educational programmes and preventive medical services for women, infants, and children. These early community efforts provide a positive environment that supports the physical and emotional needs of the woman, infant and family and reduce the need for more costly medical or social assistance to these same members of society later in their lives.

The Nigerian government provides maternal and child health care through the primary healthcare (PHC) approach. The Nigerian Road map is an outcome of the one developed by the Regional Reproductive Health Task Force in collaboration with all partners in October, 2003 in Dakar, Senegal and February, 2004 in Harare, Zimbabwe. The aim is to focus on the availability of emergency obstetric and neonatal care, skilled attendance during pregnancy, childbirth and family planning as well as provision of essential equipment and supplies that will save the lives of women and newborns at all levels.

The elements of maternal and child healthcare services include antenatal care, which includes all care given to pregnant women, delivery care, which is the care given to women during the delivery/labour period, and postnatal care, which refers to the care given to a woman six weeks after delivery. Available literature shows that utilization of maternal and child health care services among mothers are related to the availability, the

quality and cost of the services. The social structure, health beliefs and personal characteristics of the users are also important. Factors such as socio-economic status, knowledge, cultural influences, physical access to services, need and perceived morbidity, women's decision-making power, as well as manner and attitude with which services are delivered are strong predictors of service utilization among mothers.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The purpose of this study was to assess the provision and utilization of maternal and child health care services among women of child bearing age in Benue State. The steps followed to achieve this purpose are outlined in this chapter under the following sub-headings:

i. Research design

ii. Population for the study

iii. Sample and sampling techniques

iv. Instrumentation

v. Validity of the instrument

vi. Procedure for data collection

vii. Statistical analysis

3.1 Research Design

Ex-post facto research design was used in this study as the independent variable had already existed. A cross-sectional survey research method was used in this design. According to Bless and Higson-Smith (2000), a cross-sectional survey design offers information about a population at a given point in time. It also allows the collection of information, opinions and perceptions from a relatively large number of subjects to allow generalizations to be made. The research design and method are therefore considered appropriate for this study as it was intended to gain immediate knowledge

and informant on the provision and utilization of maternal and child health care services among women of child-bearing age in Benue State.

3.2 Population of the Study

The study population comprised of women of child bearing age (15-49 years) in Benue State. The estimated population was five hundred and eighteen thousand (518,000) (Census, 2006).

3.3 Sample and Sampling Technique

The total sample used in this study comprised three hundred and eighty four (384) women of child-bearing age from the sampled local government areas. This sample size was determined using the formula for single population proportion (Julie, 2004).

To select the required sample, stratified random sampling and convenience sampling techniques were used. In these techniques, Benue State was stratified into three senatorial zones. From each of these zones, two Local Government Areas were randomly selected. The sampling procedure involved simple random sampling technique using the hat-drawn sampling method to select two Local Government Areas from each of the three senatorial zones in Benue State. These include, Katsina Ala, Vandeikya (Zone A), Gboko, Makurdi (Zone B) and Ogbadibo, Otukpo (Zone C). The names of Local Government Areas in Each Senatorial Zone were written on slips of paper. The slips were then folded and put in a container. Aft er thorough reshuffling, the researcher blindfolded someone outside the study population who then dipped her hand and picked one slip at a time. The slip was unfolded and the Local Government area it contained was recorded. This process was repeated until the required number of

Local Government Areas were drawn in each of the senatorial zones. Table 3.3.1 shows the three senatorial zones in Benue State, the Local Government Areas sampled, and sample size of childbearing women used.

3.4 Instrument for Data Collection

The research instrument used in this study was a questionnaire developed by the researcher. The questionnaire consists of six (6) sections: section A contains two statements on personal data of the respondents, section B contains six statement s on provision of maternal and child health care services, section C contains six statements on the influence of location on utilization of maternal and child health care services, section D contains six statements on the influence of educational status on utilization of maternal and child health care services; section E contains six statements on the influence of attitude of health care personnel on utilization of maternal and child health care services, while section F contains six statements on the influence of cultural beliefs on the utilization of maternal and child health care services.

3.5 Validity of Instrument

In order to ensure face and content validity of the instrument, a draft copy of the researcher-structured questionnaire was submitted to four professionals in the fields of Health Education, Exercise and Sport Science and Community Medicine for vetting. Their comments and suggestions were taken into consideration and reflected in the final questionnaire that was administered on the respondents.

3.6 Procedure for Data Collection

To collect data for this study, a total of three hundred and eight-four (384) copies of the questionnaire were distributed to women of child bearing age attending

antenatal and postnatal clinic at the general hospitals in the six (6) Local Government Areas selected for the study. The researcher and five research assistants (selected from five of the Local Government Areas sampled) visited each of the general hospitals in the Local Government Areas selected for the study on their respective clinic days and administered the questionnaire. With the assistance of the matrons of the respective hospitals, every woman who queued up to be attended to on antenatal and postnatal clinic days was given a copy of the questionnaire one after the other until the desired number of subjects had been served. Those served with the questionnaire were instructed to stay behind after the clinic hours. All the subjects were assembled and oriented on the purpose of the study and instructed on how to complete the questionnaire. Completed copies of the questionnaire were retrieved on the next clinic day. The data analysis was based on responses of 368 respondents whose questionnaire were correctly completed and returned.

3.7 Method of Data Analysis

The statistical techniques that were used in analyzing the data collect ed for this study are:

a. Descriptive statistics of frequencies, percentages, means and standard deviations to analyze personal data of the respondents.

b. Inferential statistics of student t-test to test the hypotheses at 95% confidence interval.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

The purpose of this study was to assess the provision and utilization of maternal and child health care services among women of child bearing age in Benue State. To achieve this purpose the data collected were statistically analyzed at the data processing unit of the Institute for Agricultural Research (IAR) of Ahmadu Bello University, Zaria. The items scores were based on the five points Likert Scale. The relative means for each of the items were calculated. The criterion or acceptance mean of 3.50 was used in making decisions. If the relative mean of an item was equal to or greater than 3.50, it was considered that the respondents are in agreement with the suggested item, while any mean less than 3.50 implies disagreement. The demographic variables are presented in frequencies and percentages while all other items are represented by their mean scores as expressed by the respondents. The corresponding standard deviations for each of the items are also shown in the respective tables. t-test statistical analysis was used to test the hypotheses at 0.05 level of significance and appropriate degrees of freedom. The results are presented and discussed in this chapter according to the hypotheses stated in chapter one.

4.2 Results

Demographic variable considered in this section include higher educational qualification and location of respondents. Table 4.2.1 shows the demographic characteristics of the subjects involved in the study.

Table 4.2.1 Demographic Characteristics of Respondents

Variable	Category	Frequency	Percentage
Higher educational qualification	Primary School Leaving Certificate WASC/GCE/SSCE.TC II NCE/OND B.Sc./B.Ed/B.A.HND Others	48 147 108 63 2	13.0 40.0 29.4 17.1 5
Location	Urban area Rural area	218 150	59.2 40.8
	TOTAL	368	100.0

The educational qualification of the respondents ranged from primary school leaving certificate to B.Sc/B.Ed/B.A/HND and others 48 (13%) of the respondent s had primary school leaving certificate; 147(40%) had O'level certificate which were either WASC, GCE, SSCE or TC II, 108(29.4%) had NCE/OND; 63(17.1%) of the respondents had Bachelors degree which were either B.Sc., B.Ed., B.A. or HND, while 2(5%) had other kinds of degree which were either M.Sc., M.Ed., or M.A.

Out of the 368 subjects, 218(59.2%) were from urban areas while 150(40.8%) were from rural areas.

The responses of the respondents on provision of maternal and child health care services are presented in Table 4.2.2.

Table 4.2.2: Respondents Responses on Provision of Maternal and Child HealthCare Services

S/No.	Provision of maternal and child healthcare services	Mean	Standard Deviation
1	Maternal and child health (MCH) care centre is available in my local government	4.0516	1.14127
2	Mothers are provided access to high-quality care throughout the phases of pregnancy, labour and delivery	3.9565	1.11891
3	Mothers are screened at the MCH centre for health risks to ensure safe pregnancy and delivery of healthy babies.	3.5380	1.11891
4	Mothers are educated at the MCH centre on the following		
I	Proper diet during pregnancy and lactation	3.8043	1.14115
Ii	Benefits of physical exercise	3.6359	1.04034
Iii	Alcohol and drug use	3.2690	1.10284
Iv	Well baby care	3.2065	1.11015
V	Family planning	2.6821	1.32858
5	Mothers are vaccinated against tetanus during antenatal checks-ups	4.3533	1.00689
6	The new born babies are also vaccinated against child killer diseases at age-appropriate times	3.6821	1,32858
7	The MCH centre conducts routine check-ups for identification and management of problems in the new born babies	3.6250	1.07770
8	Infants are closely monitored for normal growth and development	3.1712	1.19515
9	Mothers are educated at the MCH centre about early signs of pregnancy-related problems and precautions	3.0842	1.44130
10	Generally, the MCH services offered are adequate and satisfactory	3.2065	1.42411
	Aggregate mean score	3.52	1.15

The mean scores shown in Table 4.2.2 are based on the five point Likert scale. The table shows that item number 5 had the highest mean score (4.3533) which indicates that the respondents are in agreement with the idea that mothers are vaccinated against tetanus during antenatal check-ups. Next to item 5 is item 1, which had a mean score of 4.0516, which indicates that maternal and child health (MCH) care centre is available in the respondents Local Government Areas. This is followed by item number

2, with a mean score of 3.9565, which indicates that the respondents agreed that mothers are provided access to high-quality care throughout the phases of pregnancy, labour and delivery. Next to item 2 is item 4(i), which had a mean score of 3.8043, which indicates that mothers are educated at the maternal and child health centres on proper diet during pregnancy and lactation. This is followed by item number 6, with a mean score of 3.6821, which indicates that the new born babies are also vaccinated against child killer diseases at age-appropriate times. Closely following item 6 is item number 4(ii) wioth a mean score of 3.6359, which indicates that mothers are educated at the MCH centres on benefits of physical exercise. Next to item 4(ii) is item number 7, with a mean score of 3.6250, which indicates that the MCH centres conduct routine check-up for identification and management of problems in the new born babies. This is followed by item number 3, with a mean score of 3.5380, which indicates that mothers are screened at the MCH centres for health risks to ensure safe pregnancy and delivery of healthy babies.

For all other items, the mean scores were relatively less than 3.50, which imply that the respondents disagreed with the suggested items. Among these were item iii, iv and v, with mean scores of 3.2690, 3.2065, and 2.6821 respectively, indicating that mothers are not educated at the MCH centres on alcohol and drug use, well baby care, and family planning. Item 8, which had a mean score of 3.1712, indicating that infants are not closely monitored for normal growth and development at the MCH centres; item 9, with a mean score of 3.0842, which indicates that mothers are not educated at the MCH centres about early signs of pregnancy-related problems and precautions; and

item 10, which had a mean score of 3.2065, indicating that the MCH services offered are neither adequate nor satisfactory.

The aggregate mean score of 3.52 indicates that Maternal and Child Health (MCH) care services are provided to women of child-bearing age in Benue State.

The responses of the respondents on the influence of location on utilization of maternal and child health care services are presented in Table 4.2.3.

Table 4.2.3: Respondents' Responses on Influence of Location and Utilization of Maternal and Child Health Care Services Among Women of Child-bearing Age

S/No.	Influence of location on utilization of MCH	Mean	Standard Deviation
1	Maternal and child health (MCH) centre is available in my locality	3.8207	1.17207
2	The maternal and child health centre is not too far from my home so I go for antenatal/ postnatal care	3.9076	1.113228
3	There are access road networks to the MCH centre	3.5734	1.01221
4	There is adequate transportation to the MCH centre	3.3533	1.17661
5	Cost of transportation to the MCH centre is affordable	3.2174	1.33758
6	Cost of drugs and services rendered at the MCH centre are affordable	3.2174	1.31912
7	Time when services are offered is convenient to utilize them	3.2174	1.31912
	Aggregate score	3.51	1.20

Table 4.2.3 shows that item number 2 had the highest mean score (3.9076), which indicates that the maternal and child health centres are not too far from the homes of most of the respondents and so they go for antenatal/postnatal care. Next to item 2 is item number 1, with a mean score of 3.8207, indicating that maternal and child health centre is available in the localities of most of the respondents. This is followed by item

number 3, with a mean score of 3.5734, which indicates that there are access road networks to the MCH centers.

It is evident from the table that the mean scores of all other items were relatively less than the criterion or acceptance mean of 3.50, which imply that the respondents disagreed with the suggested items. These include item number 4 which had a mean score of 3.32533. indicating that adequate transportation to the MCH centre is lacking; item 5, with a mean score of 3.2174, which indicates that cost of transportation to the MCH centres is not affordable; item 6, which had a mean score of 3.4728, indicating that cost of drugs and services rendered at the MCH centres are not affordable, and item number 7, with a mean score of 3.2174, which indicates that time when MCH services are offered is not convenient to utilize them. The aggregate mean score of 3.51 indicates that location influences utilization of maternal and child health care services among women of child-bearing age in Benue State.

The responses of the respondents on influence of educational status on utilization of maternal and child health care services are presented in Table 4.2.4.

Table 4.2.4: Respondents' Responses on Influence of Educational Status on Utilization of Maternal and Child Health Care Services Among Women of Child-bearing Age

S/No.	Influence of educational status on utilization of MCH services	Mean	Standard Deviation
1	Educational status is highly associated with health seeking behavior in pregnancy and child birth	3.5924	1.26239
2	Utilization of maternal and child health care is much higher among women with higher education compared to those with no education	3,9212	1.18657
3	Mothers educational status affect their knowledge on risks of pregnancy and child birth which in turn influence the felt need of MCH care	3.4918	1.05693
4	Lack of awareness on the danger sign of pregnancy due to one's level of education affect rate of turn out for antenatal and delivery care	3.2500	1.18229
5	Education leads to more decision making power for the mother and improves her use of MCH services	3.0489	1.34622
6	Educated mothers are more informed about the importance of MCH services and so are not influenced by cultural belief	3.2201	1.34425
	Aggregate mean score	3.43	1.23

With regard to the influence of educational status on utilization of maternal and child health care services, Table 4.2.4 shows that item number 2 had the highest mean score (3.9212), which indicates that the respondents agreed that utilization of maternal and child health care services is much higher among women with higher education compared to those with no education. Next to item 2 is item number 1, which had a mean score of 3.5924, indicating that the respondents are of the opinion that educational status is highly associated with health seeking behavior in pregnancy and child birth. For all other items, the mean score were relatively less than the criterion or acceptance mean of 3.50, which imply that the respondents disagreed with the suggested items. Among these were item 3, with a mean score of 3.4918, indicating that mothers'

educational status do not affect their knowledge on risks of pregnancy and child birth and felt need for MCH care. Item number 4, which had a mean score of 3.2500, indicating that lack of awareness on the danger sign of pregnancy due to level of education does not affect rate of turn out for antenatal and delivery care; item 5 with a mean score of 3.0489, which indicates that education neither leads to more decision making power for the mother nor improves her use of MCH services, and item number 6, which had a mean score of 3.2201, indicating that educated mothers are also influenced by cultural belief in their use of MCH services.

The aggregate mean score of 3.42 indicates that utilization of maternal and child health care services among most of the respondents is not influenced by their educational status.

The responses of the respondents on influence of attitude of health care providers on utilization of maternal and child health care services are presented in Table 4.2.5.

Table 4.2.5: Respondents' Responses on Influence of Attitude of Health Care Providers on Utilization of Maternal and Child Health Care Services Among Women of Child-bearing Age

S/No.	Influence of attitude of health care providers on utilization of MCH services	Mean	Standard Deviation
1	Health personnel at the maternal and child health center are always present and attend to their duties	3.7038	1.20480
2	Patients are not kept for a long time before they receive attention by the health care personnel	3.9022	1.12014
3	Mothers are given equal treatment at the MCH centre regardless of their socio-economic status	3.5217	.98742
4	The health care personnel have respect for their clients	3.0924	1.30066
5	The health care personnel are friendly, helpful and considerate	3.0136	1.38593
6	The maternal and child health services offered are of high quality	3.0136	1.38593
	Aggregate mean score	3.43	1.194

With regard to influence of attitude of health care providers on utilization of maternal and child healthcare services among women of child-bearingage, Table 4.2.5 shows that item number 2 had the highest mean score (3.9022), which indicates that the respondents agreed that patients are not kept for a long time at the MCH centres before they receive attention by the health care personnel. Next to item 2 is item number 1, which had a mean score of 3.7038, indicating that the respondents agreed that health personnel at the maternal and child health centres are always present and attend to their duties. Item 1 is followed by item number 3, with a mean score of 3.5217, which indicates that mothers are given equal treatment at the MCH centres regardless of their socio-economic status. For all other items, the mean scores were relatively less than the criterion or acceptance mean of 3.50 which imply that the respondents disagreed with the suggested items. These include item number 4, which had a mean score of 3.3342,

indicating that the health care personnel at the MCH centres do not have respect for their clients, item 5, with a mean score of 3.0924, which indicates that the health care personnel are neither friendly, helpful nor considerate, and item 6, which had a mean score of 3.0136, indicating that the maternal and child health care services offered are not of high quality.

The aggregate mean score of 3.43 indicates that attitude of the health care providers does not influence utilization of MCH services among most of the respondents.

The responses of the respondents on influence of cultural belief on utilization of maternal and child health care services are presented in Table 4.2.6.

Table 4.2.6: Respondents' Responses on Influence of Cultural Belief on Utilization of Maternal and Child Health Care Services Among Women of Child-bearing Age.

S/No.	Statement	Mean	Standard Deviation
1	I prefer remedies and consultation with traditional healers to modern maternal health services due to cultural belief	3.9837	1.22852
2	I deliver at home because my husband forbade hospital delivery due to tradition	3.8587	1.08074
3	Decision to seek care during pregnancy and delivery is usually made by my husband	3.5545	1.06327
4	Complications in pregnancy and labour reflect the will of God or the influence of evil spirits	3.2174	1.17491
5	My culture permits modern maternity care as last resort	3.1168	1.32053
6	Males participation in maternal and child health services prevent my use of the services	3.0842	1.39324
	Aggregate mean score	3.47	1.21

Table 4.2.6 shows that item number 1,had the highest mean score (3.9837), which indicates that the respondents agreed that they prefer remedies and consultation with traditional healers to modern maternal health services due to cultural belief.

Furthermore, the Table 4.7 indicates a mean score of 3.8587 which reveals that the respondents agree that they deliver at home because their husbands forbade hospital delivery due to tradition. Also looking at the table reveals a mean score of 3.5543, which indicates that decision to seek care during pregnancy and delivery is usually made by the respondents' husbands. It is evident from the table that the mean scores of all other items were relatively less than the criterion or acceptance mean of 3.50, which imply that the respondents disagreed with the suggested items. Among these were item 4, with a mean score of 3.2174, which indicates that complications in pregnancy and labour neither reflect the will of God nor the influence of evil spirits; item number 5, which had a mean score of 3.1168, indicating that the respondents' culture permits modern maternity care; and item 6 with a mean score of 3.0842, which indicates that males' participation in maternal and child health care services does not prevent the respondents' use of the services.

The aggregate mean score of 3.47 indicates that cultural belief does not influence utilization of maternal and child health care services among most of the respondents.

4.3 Test of Hypotheses

This study has one major hypothesis and five sub-hypotheses on the provision and utilization of maternal and child health care services. The t-test statistical technique was used to test them at 0.05 alpha level and relevant degrees of freedom. The results are presented according to each of the hypothesis stated.

Major Hypothesis

Provision and utilization of maternal and child health care services among women of child bearing age in Benue State are not significantly influenced by adequacy of health care facilities.

4.3.1 Sub-hypothesis 1

Provision of maternal and child health care services to women of child-bearing age in Benue State are not significantly adequate.

Table 4.3.1: t-test Results on Adequacy of maternal and child health care services provided to women of child bearing age in Benue State

Variable	Location	Mean	Std dev.	Std Error	t-value	df	P	t-crit
Provision of MCH services child bearing woman	Urban area	3.6193	.45961	.03113	.060	366	952	1.96
	Rural area	3.6160	.58172	.04750				

t(366) = 1.96 > 0.05 Not significant

Information on Table 4.3.1 above shows that from the results of t-test conducted, a calculated value of .060 was obtained. This value is found to be insignificant at 0.05alpha level. This result is an indication that maternal and child health care services are not adequately provided to women of child-bearing age in Benue State (t > 0.05). The observed t-calculated (.060) is less than the critical value (1.96). The null hypothesis is therefore retained.

4.3.2 Sub-hypothesis 2

Utilization of maternal and child health care services among women of child-bearing age in Benue State is not significantly influenced by location of health care facility.

Table 4.3.2: t-test Results of Influence of Lactation on Utilization of Maternal and Child Health Care Services Among Child-bearing Women in Benue State.

Variable	Location	Mean	Std dev.	Std Error	t-value	df	P	t-crit
Influence of location on utilization of MCH services	Urban area	3.4845	.49343	.03342	.978	366	.329	1.96
	Rural area	3.4305	.55779	04554				

t(366) = 1.96 > 0.05 Not significant

Examination of Table 4.3.2 indicates that utilization of maternal and child health care services among women of child-bearing age in Benue State is not significantly influenced by location. This is because the observed t-calculated (.978) is less than the critical value (1.96). The null hypothesis is therefore upheld.

4.3.3 Sub-hypothesis 3

Utilization of maternal and child health care services among women of child-bearing age in Benue State is not significantly influenced by their educational status.

Table 4.3.3: t-test Results of Influence of Educational Status on Utilization of Maternal and Child Health Care Services Among Women of Child-bearing Age in Benue State.

Variable	Mean	Std dev.	Std Error	t-value	df	P	t-crit
Influence of educational status on utilization of MCH services	3.4624	.66759	.03480	-1.080	366	.281	1.96

t(366) = 1.96 > 0.05 Not significant

The result as indicated in Table 4.3.3 shows that utilization of maternal and child health care services among women of child-bearing age in Benue State is not significantly influenced by their educational status (1 > 0.05). The observed t-calculated (-1. 080) is less than the critical value (1.96). The null hypothesis is therefore upheld.

4.3.4 Sub-hypothesis 4

Utilization of maternal and child health care services among women of child-bearing age in Benue State is not significantly influenced by attitude of the health care personnel at service centers.

Table 4.3.4: t-test Results of Influence of Attitude of Health Care Personnel on Utilization of Maternal and Child Health Care Services among Women of Child-bearing Age in Benue State

Variable	Mean	Std dev.	Std Error	t-value	df	P	t-crit
Influence of attitude of health care personnel on utilization of MCH services	3.4361	.63949	.03334	-1.916	366	.56	1.96

t(366) = 1.96 > 0.05 Not significant

The result as indicated in Table 4.3.4 shows that utilization of maternal and child health care services among women of child-bearing age in Benue State is not significantly influenced by attitude of the health care personnel at service centres (t > 0.05). The observed t-calculated (-1.916) is less than the critical value (1.96). The null hypothesis is therefore upheld.

4.3.5 Sub-hypothesis 5

Utilization of maternal and child health care services among women of child-bearing age in Benue State is not significantly influenced by cultural belief.

Table 4.3.6: t-test Result of Influence of Cultural Belief on Utilization of Women of Child-bearing Age in Benue State

Variable	Mean	Std dev.	Std Error	t-value	df	P	t-crit
Influence of cultural belief on utilization of MCH services	3.4674	.66473	.03465	-.941	366	.347	1.96

t(366) = 1.96 > 0.05 Not significant

Information on Table 4.3.6 shows that from the result of t-test conducted, a calculated value of -.941 was obtained. This value is found to be insignificant at 0.05 alpha level. This result indicates that utilization of maternal and child health care services among women of child-bearing age in Benue State is not significantly influenced by cultural belief (t >0.05), The observed t-calculated (- .941) is less than the critical value (1.96). The null hypothesis is therefore upheld.

4.4 Discussion

The findings of this study showed that maternal and child health care services are not adequately provided to women of child-bearing age in Benue State. Every society, whether developed or developing, recognizes the importance of the health needs and problems of women and their children from birth to adolescence (Bichi, 2007). For this reason both pregnant and lactating mothers and their children are given special status in the society. James, et al (2008) noted that lack of adequate prenatal care, poor maternal and child nutrition, maternal drug use, low immunization rates, and insufficient child care-combined with lack of access to health care services in a community are precursors to high rates of maternal, infant and childhood morbidity and mortality. They noted that many of these risk factors can be reduced or prevented with the early intervention of educational programmes and preventive medical services for women and children. These early community efforts provide a positive environment that supports the physical and emotional needs of the woman, infant, and family and reduce the need for more costly medical or social assistance to these same members of society later in their lives (James, et al, 2008).

In the words of Bichi (2007), women are the main victims of malnutrition and the additional biological demands during menstruation, pregnancy and lactation have made nutritional deficiencies the most widespread and disabling health problems among them. Therefore, the women folk deserve adequate attention hence maternal and child health care service was initiated. WHO (2003) noted that insufficient maternal care during pregnancy and delivery is largely responsible for the estimated one million still births and newborn deaths that occur around the world each year. These deaths occur

just before or during delivery or within the first week of life. The complication of pregnancy and childbirth place a significant burden on the health systems.

The results of this study also revealed that utilization of maternal and child health care services among women of child-bearing age in Benue State is not significantly influenced by location of health care facility. Physical accessibility/location of MCH services has been an important determinant of utilization of the health care services in developing countries. According to Hayelom (2008), distance between residence and the service as well as time and cost involved in traveling to services are associated with use of antenatal care, institutional delivery, postnatal and infant care services. Utilization rates decline sharply with increasing distance traveled.

In developing countries, including Nigeria, the effect of location on service becomes stronger when combined with the dearth of transportation and poor roads which contribute to increased cost of visits (Audu, 2009). According to Audu (2009), availability of transport, physical distance of the facility and time taken to reach the facility influence the health seeking behaviour and health services utilization among mothers, particularly in rural areas. The factor of location becomes a strong disincentive in seeking health care specially when mothers need somebody to accompany them.

The outcome of this study revealed that utilization of maternal and child health care services among women of child-bearing age in Benue State is not significantly influenced by their educational status. UNICEF and WHO 2004) noted that education is a strong predictor of MCH service utilization but the extent and nature of relationship between the two is not uniform across social settings. For instance, in Bangladesh and

Thailand women with primary education did not differ from women with no schooling in antenatal care utilization. In Paris and Guatemala women with primary level of education were more likely to utilize ANC services than those without primary education (UNICEF & WHO, 2004). Annet (2004) reported that a study conducted in Kampala to determine the variables associated with returning for postnatal services identified level of education and adequacy of antenatal services among other factors. He noted that though women's knowledge and experience about child-bearing might influence their use of MCH services, if the services rendered are deemed inadequate, the service seeker will be less likely to return and use the services. The role that adequacy of care plays in the decision to seek care is related to people's own assessment of service delivery, which largely depends on their own experiences with the health system and those of people they know (WHO, 2003).

The result of this study also revealed that utilization of maternal and child health care services among women of child-bearing age in Benue State is not significantly influenced by attitude of the health care personnel at service centres. Client-provider interaction plays a significant role in the use of health care services. The relations between the provider and the client influence the quality of the services and the subsequent use of the service as well (Hayelom, 2008). According to Fatimi and Avan (2002), one of the determinant s of maternal and child health care use is the manner and attitude with which health care providers handle consumers of care at health care centres. If the attitude of the health care provider and his/her treatment of the service seeker are deemed poor, it affects the subsequent use of services.

The findings of this study showed that utilization of maternal and child health care services among women of child bearing age in Benue State is not significantly influenced by cultural belief. Utilization of health care services is said to be a complex behaviour determined by a wide range of interacting socio-cultural, organizational, consumer related and provider related factors all of which are hardly dissociated. Most studies on utilization of health care services generally agree on determinants of utilization but often differ on the relationships between these determinants and utilization behaviour (Helman, 2001). Culture has been a barrier in maintaining, giving and obtaining health care in many minority ethnic communities in many countries (Swendson & Winsor, 2004). Cultural background in the form of beliefs, behaviour, perceptions, attitude to illness, pain and other forms of misfortune have either positive or negative consequences for health and health care delivery (Helman, 2001). Consequently, the influence of cultural belief on utilization of health care services is not consistent (Helman, 2001).

CHAPTER FIVE

SUMMARY, CONCLUSIN AND RECOMMENDATIONS

5.1 Summary

The purpose of this study was to assess the provision and utilization of maternal and child health care services among women of child bearing age in Benue State. The variables assessed were provision and utilization of MCH services. To achieve the purpose of the study, five research questions were raised; one major hypothesis and five sub-hypotheses were formulated. They were aimed at identifying adequacy of maternal and child health care services provided to women of child-bearing age in Benue State; and the influence of location, educational status, attitude of the health care personnel at service centres, and cultural belief on utilization of maternal and child health care services among women of child-bearing age in Benue State. Six Local Government Areas were randomly selected for this study from the three senatorial zones in Benue State. Three hundred and eighty four child-bearing women purposefully selected from the six Local government Areas sampled were involved in the study. A researcher-structured questionnaire was the instrument used for this study. The statistical techniques used in analyzing the data collected for this study were descriptive statistics of frequencies, percentages, means and standard deviations, and inferential statistics of t-test was used to test the hypotheses. Major findings of the study revealed that:

1. Provision of maternal and child health care services to women of child-bearing age in Benue State are not significantly adequate.

2. Utilization of maternal and child health care services among women of child-bearing age n Benue State is not significantly influenced by location of health care facility.
3. Utilization of maternal and child health care services among women of child-bearing age in Benue State is not significantly influenced by their educational status.
4. Utilization of maternal and child health care services among women of child-bearing age in Benue State is not significantly influenced by attitude of the health care personnel at service centres.
5. Utilization of maternal and child health care services among women of child-bearing age in Benue State is not significantly influenced by cultural belief.

5.2 Conclusion

On the basis of the findings of this study, the following conclusions have been drawn about the provision ad utilization of maternal and child health care services among women of child-bearing age in Benue State:

1. Provision of maternal and child health care services to women of child-bearing age in Benue Stat e are not significantly adequate.
2. Location of health care facility does not significantly influence the utilization of maternal and child health care services among women of child-bearing age in Benue Stat e.
3. Educational status of women of child-bearing age in Benue St ate does not significantly influence their utilization of maternal and child health care services in the state.

4. Attitude of health care personnel at maternal and child health care service centre in Benue State does not significantly influence utilization of the services among women of child-bearing age in the State.
5. Cultural belief does not significantly influence the utilization of maternal and child health care services among women of child-bearing age in Benue State.

5.3 Recommendations

In light of the findings of this study, the following recommendations are made:

1. The primary health care authorities should make adequate provision of MCH services a priority in view of its importance in minimizing maternal and infant morbidity and mortality.
2. MCH centers should be located as close as possible to the communities where the people live to encourage women of child-bearing age to go for regular antenatal and postnatal care.
3. Health promotion programmes that center on women with little or no education should be given at MCH centers/via the mass media with a view to enhancing their use of MCH services.
4. The health care personnel at MCH service centers should improve their social relationship with clients to make the services user-friendly. This will boost mother's use of the services.
5. The State Ministry of Health and other organizations concerned with health care should intensify their effort in public enlightenment on the importance of MCH services to help overcome existing cultural barriers in the use of the service among women of child-bearing age.

5.4 Suggestion for Further Studies

It is suggested that a study be carried out on perceptions of child-bearing women on maternal and child health care services in Benue State. This will enable the redefining of policy and plans of operation where necessary in accordance with women's needs.

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APPENDIX I

QUESTIONNAIRE FOR CHILD-BEARING WOMEN
DEPARTMENT OF PHYSICAL ANDHEALTH EDUCATION
AHMADUBELLO UNIVERSITY, ZARIA

The researcher is a postgraduate student of the above department. In partial fulfillment of the requirements for the award of Master of Education Degree in Health Education, she is conducting a research on "Provision and Utilization of Maternal and Child Health (MCF) Care Services Among Women of Child-bearing Age in Benue St ate.

She seeks your cooperation to honestly respond to the statements. All information obtained would only be used for the purpose of this study and will therefore be held confidential.

SECTION A: PERSONAL DATA

Please tick (√) the column that is most appropriate to you.

1. Age: (a) 15-21 years [ ] (b) 22-28 years [ ] (c) 29-35 years [ ]

   (d) 36-42 years [ ] (e) 43-49 years [ ]

2. Higher Educational qualification:

   (a) Primary School Leaving Certificate [ ]

   (b) WASC/GCE/SSCE/T II [ ]

   (c) NCE/OND [ ]

   (d) B.Sc/B,A,/HND [ ]

   Others (please specify) …….

3. Location (a) Urban Area [ ] (b) Rural Area [ ]

SECTION B: PROVISION OF MATERNAL AND CHILD HEALTH CARE SERVICES

Please tick (√) the column that is most appropriate to you against each column. Your responses will be treated as confidential.

1	Maternal and child health (MCH) care centre is available in my local government	SA	A	U	D	SD
2	Mothers are provided access to high-quality care throughout the phases of pregnancy labour and delivery					
3	Mothers are screened at the MCH centre for health risks to ensure safe pregnancy and delivery of healthy babies					
4	Mothers are educated at the MCH centre on the following: i. Proper diet during pregnancy and lactation ii. Benefits of physical exercise iii. Alcohol and drug use iv. Well baby care v. Family planning					
5	Mothers are vaccinated against tetanus during antenatal check-ups					
6	The newborn babies are also vaccinat ed against child killer diseases atage appropriate times					
7	The MCH centre conducts routine check-up for identification and management of problems in the newborn babies					
8	Infants are closely monitored for normal growth and development					
9	Mothers are educated at the MCH centre about early signs of pregnancy-relat ed problems and precautions					
10	Generally, the MCH services offered are adequate and satisfactory					

SECTION C: INFLUENCE OF LOCATION ON UTILIZATION OF MATERNAL AND CHILD HEALTH CARE SERVICES AMONG CHILD-BEARING WOMEN

Please tick (√) the column that is most appropriate to you

1	Maternal and child health (MCH) care centre is available in my locality	SA	A	U	D	SD
2	The maternal and child health cent re is not too far from my home so I go for antenatal/postnatal care					
3	There are access road networks to the MCH centre					
4	There is adequate transportation to the MCH centre					
5	Cost of transportation to the MCH centre is affordable					
6	Cost of drugs and services rendered at the MCH centre are affordable.					
7	Time when services are offered is convenient to utilize them					

SECTION D: INFLUENCE OF EDUCATIONAL STATUS ON UTILIZATION OF MATERNAL AND CHILD HEALTH CARE SERVICES AMONG WOMEN OF CHILD-BEARING AGE

1	Educational status is highly associated with health seeking behavious in pregnancy and child birth	SA	A	U	D	SD
2	Utilization of maternal and child health care is much higher among women with higher education compared to those with no education					
3	Mothers educational status affect their knowledge on risks of pregnancy and childbirth which in turn influence the felt need for MCH care					
4	Lack of awareness on the danger sign of pregnancy due to one's level of education affect rate of turn out for antenatal and delivery care					
5	Education leads to more decision making power for the mother and improves her use of MCH services					
6	Educated mothers are more informed about the importance of MCH services and so are not influenced by cultural belief					

SECTION E: INFLUENCE OF ATTITUDE OF HEZALTH CARE PROVIDERS ON UTILIZATION OF MATERNAL AND CHILD HEALTH CARE SERVICES AMONG CHILD-BEARING WOMEN

1	Health personnel at the maternal and child health centre are always present and att end to their duties	SA	A	U	D	SD
2	Patients are not kept for a long time before they receive attention by the health care personnel					
3	Mothers are given equal treatment at the MCH centre regardless of their socio-economic status					
4	The health care personnel have respect for their clients					
5	The health care personnel are friendly helpful and considerate					
6	The maternal and child health services offered are of high quality					

SECTION F: INFLUENCE OF CULTURAL BELIEF ON UTILIZATON OF MATERNAL AND CHILD HEALTH CARE SERVICES AMONG WOMEN OF CHILD-BEARING AGE

1	I prefer remedies and consultation with traditional healers to modern maternal health services due to cultural belief	SA	A	U	D	SD
2	I deliver at home because my husband forbade hospital delivery due to tradition					
3	Decision to seek care during pregnancy and deliveryis usually made by my husband					
4	Complications in pregnancy and labour reflect the will of God or the influence of evil spirits					
5	My culture permits modern maternity care as last resort					
6	Males participation in maternal and child health services prevent my use of the services					

APPENDIX II

Department of Physical and Health Education
Ahmadu Bello University
Zaria

13th October, 2011

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Dear Sir/Madam,

REQUEST TO VET QUESTIONNAIRE ON ":PROVISION AND UTILIZATION OF MATERNAL AND CHILD HEALTH CARE SERVICES AMONG WOMEN OF CHILD-BEARING AGE IN BENUE

Inalegwu Kate Emiene is a Postgraduate student of this Department. She is developing an instrument on provision and utilization of maternal and child health care services among women of child bearing age in Benue St ate to be used in her research. She has prepared a number of statement reflecting provision and factors of utilization of MCH services, and has been asked to submit the list of statements to you for your critical evaluation and necessary suggestions. The Department would be grateful if you could extend your fullest cooperation to her.

Thank you.

Yours sincerely,

Professor (Mrs.).C.O. Adegbite
Supervisor

APPENDIX III

DETERMINING SAMPLE SIZE FOR SINGLE POPULATION PROPORTION (JULIE, 2004)

$$N = \frac{P(1-p)\,(z\alpha/2)^2}{c}$$

Where

n is the size of the sample

p is the estimated proportion of an attribute that is present in the population.

$Z\alpha$ is the standard normal value corresponding to the desired level of confidence

e error of precision

Assumptions:

1. In the absence of previous data on the population under study, and to obtain the maximum sample size, p is assumed to be – 0.5.
2. Margin of error e – 5%
3. A confidence interval of 95% is assumed ($z\alpha/2 = 1.96$)

$$n = \frac{0.5(1-0.5)\,(1.96)^2}{(0.05)} = 384$$

APPENDIX IV

THE THREE SENATORIAL ZONES IN BENUE STATE, LOCAL GOVERNMENT AREAS SAMPLED, AND SAMPLE SIZE OF CHILD BEARING MOTHERS USED.

S/No.	Senatorial Zone	Local Government Areas	Local Governments Sampled	Sample Size of Mothers Used
1	Zone A	Katsina-Ala, Konshisha Kwande Logo Ukum Ushongo Vandeikya	Katsina Ala Vandeikya	64 64
3	Zone B	Buruku, Gboko, Guma, Gwer East, Gwer West, Makurdi,Tarka	Gboko Makurdi	64 64
3	Zone C	Ado, Agatu, Apa, Obi, Obadibo, Ohimini, Oju, Okpokwu, Otukpo	Ogbadibo Otukpo	64 64
	Total	23	6	384