DEMOGRAPHIC AND FERTILITY RELATED CORRELATES OF UPTAKE OF FAMILY PLANNING SERVICES AMONG WOMEN OF REPRODUCTIVE AGE(IS-49) YEAR IN NIGERIA

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A PROJECT WORK SUBMITTED TO THE UNIVERSITY OF IBADAN IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF SCIENCE

DEGREE (M.Sc) IN EPIDEMIOLOGY.

APRIL, 2014.

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CERTIFICATION

This is to certify that Agbebi Clement Adeyemi carried out this project in the Department of Epidemiology and Medical Statistics, Faculty of Public Health, College of Medicine, University oflbadan.

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Dr. M.D. DAIRO

(MB; BS, MSc, FMCPH)

DEDICATION

This work is dedicated to the memory of my late father, Mr T.K. Agbebi, who during the course of this program answered the call to glory.

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ABBREVIATIONS

WHO	World Health Organization
MDGs	Millennium Development Goals
UNICEF	United Nations Children's Fund
MBC	Modem Birth Control Measure
UN	United Nation
NDHS	Nigeria Demographic and Health Survey
TFR	Total Fertility Rate
UNFPA	United Nation Funds for Population

ABSTRACT

INTRODUCTION:

Tue issue of family planning all over the world has attracted attention due to its importance in decision making about population growth development issues. The low rates of contraceptive in Nigeria culminate/result in high fertility rates, particularly in the rural area and the northern part of the country. This high fertility rate accounts for Nigeria's high maternal, infant and neonatal mortalities. There have been several studies on family planning in Nigeria, more work need to be done to unravel the most significant factors that can directly inform pub_lic policy. This research identifies the demographic and fertility related correlates of uptake of family planning service use among women ofreproductive age (15-49) years in Nigeria.

METHODS:

This study involved a re-analysis of 2008 Nigeria demogrp hic and health survey (NDHS) data set. This is national surveys and the design used was a cross-sectional population based study design. For this study, demographic and fertility-related correlate of uptake of family planning services among women ofreproductive age (15-49) years in Nigeria were determined using 2008 NDHS. A stratified two- stage cluster sampling technique was used in the selection of the respondents. The primary data obtained from the survey were collected with interviewer administered questionnaires. Data was summarized as proportion and graphs were use in representing trends in knowledge, use and choice of contraceptives, A Chi square for trend was use to assess association between variables. Level of significant was set at 5%.

RESULT:

The total numbers of respondents studied were 13,678. Result show that only 14.7% of the respondent were currently using a method, majority of the respondents (40.5%) were between the age group 25-34, 70.6% were current!)' working, 47.4% had no formal education, majority 52.6% were Muslims, larger proportion were rural dweller 70.2%, are from North east 24.2% , are in monogamous union 87.4%, married at age (15-19) 43.2%. The following characteristics ofrespondents were found to be associated with contraceptive uptake: being 25 and above years [O.R = 2.25; 95%C.I=l.94-2.61] and [OR= 2.50; 95%C.1=2.15-2.90] for women aged 25-34 and

35-49 respectively, being a Muslim [O.R= 0.25; 95%C.I= 0.22-0.27], being in polygamous union [OR=0.43; 95%C.I=0.36-0.52], having at least a form of formal education [OR= 4.96; 95% C.I= 4.24-5.79], [OR= 8.47; 95% C.I= 7.32-9.81] and [OR=13.53; 95%C.1=1 L37-16. 11] for primary, secondary and tertiary education respectively, working [OR= 2.42; 95% C.I= 2.14-2. 74], being a rural dweller [OR= 0.3; 95% C.I= 0.27-0.33], being from south west region [OR= 2.37;95% C.I= 2.07-2.72], being married at the age 14 and below [OR= 0.23; 95% C.I= 0.20-0.27], having at least a child [OR= 5.17; 95% C.I= 3.82-7.01] and [OR= 5.12; 95% C.I= 3.80-6.89] for respondents having 5^{+} children and 1-4 children respectively, perceiving at least a child as ideal number of children [OR= 42.5; 95% C.I= 5.93-305.20] and [OR= 13.92; 95% C.I= 1.15-1.70] for women who perceived 1-4 and 5^{+} respectively, wanting fewer children than the husband [OR= 0.33; 95% CJ= 0.30-0.37], having partner 25^{+} years [OR= 3.17; 95% C.I= 2.04-4.95] and (OR= 2.33; 95% C.I= 1.48-3.66) for partners aged 35^{+} and 25-34 respectively, being 16+ years younger than the partner [OR= 0.49; 95% 0.42-0.58].

CONCLUSION:

High proportions of sexually active women aged 15-49 years in Nigeria are currently not using a method of contraceptive despite widespread of the knowledge of the services. There is an urgent need to address this through improved political will, giving priority to community health education, door step service delivery, promotion of girl child education, empowerment of female and male involvement in family planning so as to achieve millennium development goals.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

The issue of family planning all over the world has attracted attentions due to its importance in decision making about population growth and development issues. Family planning basically refers to the practices that help individuals or couples to avoid unwanted births, bring about wanted birth, regulate the intervals between pregnancies, control the time at which birth occur in relation to the age of parents and determines the numbers of children in the family (Onokerhoraye, 1997).

Family planning has always been widely practiced, women and men have wanted to be able to decide when and whether to have a child, contraceptives have been used in one form or another for thousands of years throughout human history and even prehistory (UNFPA, 2006).

Nigeria which has a population of 175 million and an annual growth rate of 3.2 % (CIA, 2013) is the most populous country in Africa accounting for approximately one-sixth of the whole African population. Nigeria, according to Khurfeld (2006), is already facing a population explosion with the resultant effect that food production cannot match the growing population. The Total Fertility Rate in Nigeria according to 2013 World fact book (5.5%), is more than the world's average (2.45%) (CIA, 2013). Contraceptive Prevalence Rate (CPR) is still embarrassingly low in Nigeria (15%), according to the report released by the Nigeria Demographic and Health Survey (NDHS, 2008) the CPR among married women aged 15-49 years was 9.7% for modern methods. and 14.62% for all methods. Like many other developing nations, majority of Nigeria's population (about 70%) live in the rural communities, these rural communities have very high fertility rate and the CPR is also considerably lower in rural areas with CPR of 8% as compared with 18% in the urban areas in Nigeria (Olugbenga-Bello, Abodunrin and Adeomi, 2011). Many rural women are reportedly reluctant to accept any artificial method of contraception. (Gaur & Goel, 2008) Several studies also revealed that rural women who were unwilling to accept family planning methods were concerned about child survival and viewed children as a source of support in old age. (Kartikeyan & Chaturvedi, 1995).

Adopting modern birth control measure (MBC) is a very complex sociological issue in Africa, and African woml?n draw on a complex social repertoire in making contraceptive choices (Johnson-Hanks, 2002).

Decision-making concerning fertility control is, for many people, a deeply personal and sensitive issue, often involving religious or philosophical convictions (Burkman, 2002).

Studies carried out in Nigeria have shown that lack of adequate information and ignorance are key factors militating against uptake of family planning services in Nigeria (Moronkola, Ojediran & Amosun, 2006).

The socio-economic characteristics of women, notably educational levels have been argued to explain differences in reproductive behavior and contraceptive choices (Kazi & Sathar, 2001). The perceptions and the behavior related to reproduction have also been said to be strongly determined by prevailing cultural and religious values (Srikanthan and Reid, 2008).

The introduction and acceptance of modern birth control measure are therefore crucial in controlling the population growth and access to effective family planning methods, would prevent 23 million unplanned births, 22 million abortions, 1.4 million infant deaths, 142,000 pregnancy related deaths and 505,000 children losing their mothers due to pregnancy related deaths.

12 STATEMENT OF PROBLEM

Many authors raised the alarm that a stage would be reached in the world when food supply would not match population growth (Braddocks, 1977; Malthus, 1798; Moor, 1976). While most of the developed countries have managed to overcome this, the issue of population growth and consequent food shortage in developing countries is overwhelming (Jones, 2004; Nwachukwu & Obasi, 2008). This expansive population growth rate has been attributed to some factors, of which low contraceptive usage is an important factor (Osheba, 1992).

In industrialized countries, virtually all married women resort to contraception at some time in their reproductive period. In contrast, the proportion reporting such use in developing countries is extremely low (Kamel &Youssef, 1996). Family planning services fall well short of needs in developing countries including Nigeria with unmet need of (20.2%) as against the worlq's average of (15%). An estimated 215 million women who want to avoid a pregnancy are not using an effective method of contraception. Despite increases in use in recent years; only about one-half of the 123 million women who give birth each year receive antenatal, delivery and newborn care (including routine care and care for complications), and many who

get care do not receive all the components of care they need; and about 20 million women have unsafe abortions each year, and three million of the estimated 8.5 million who need care for subsequent health complications do not receive it (WHO, 2008).

The low rate of contraceptive use in Nigeria results in high fertility rates, particularly in the rural areas and the northern part of the country. This high fertility rate accounts for Nigeria's high maternal, infant, and neonatal mortalities.

1.3 JUSTIFICATION.

Because of these far-reaching benefits, increased investment in family planning services could accelerate progress toward achieving the Millennium Development Goals (MDGs), which were set in 2000 with targets for 2015. These services for women are highly cost-effective, because the health of mothers and of their babies is intertwined. A continuum of care is needed to help individuals and couples plan their pregnancies and to provide timely antenatal, delivery and postpartum services, including urgent care for complications that arise among women and newborns. (WHO, 2003).

In 2008, one in four people in developing countries (1.4 billion) were women ofreproductive age (15-49). More than half of these women (818 million) wanted to avoid a pregnancy and therefore required effective, ongoing contraception (WHO, 2008). Two-thirds of women who want to avoid a pregnancy want no more children while one-third wants to delay having a child. In poorer countries, and especially in Sub-Saharan Africa, where large families are still the norm, more women who need effective contraceptives want to postpone (or space) a future birth than to stop childbearing. An estimated 215 million women who want to avoid a pregnancy are not using an effective method of contraception, despite increases in use in recent years (WHO, 2008).

Greater use of condoms for contraception would reduce the transmission of HIV and other sexually transmitted infections, thereby helping to curb the AIDS pandemic. Reducing unplanned births and family size would save on public-sector spending for health, water, sanitation and social services and reduce pressure on scarce natural resources, making social and economic development goals easier to achieve.

Reducing unintended pregnancies, particularly among adolescents, would improve educational and employment opportunities for women, which would in tum contribute to improving the status of women, increasing family savings, reducing poverty and spurring

economic growth (U.N, 2009). Reducing unintended pregnancies by meeting the need for family planning would save $5.1 billion that would otherwise be required in order to provide the recommended care to pregnant women and newborns. Providing modem family planning services brings a wide range of benefits for women, their families and society. It improves women's health and enhances their status and rights; at the same time, it protects the health of infants and young children and improves the well-being of families. However, a substantial proportion of women who want to avoid a pregnancy-whether to postpone or to stop childbearing are not using modern contraceptives.

There is international consensus that individuals and couples should have informed and voluntary choice in using family planning and choosing the most appropriate methods. Scenarios that present all women in need using modern methods (based on the mix of modern methods among couples (WHO, 2007)

There have been several studies on family planning in Nigeria; with emphasis on the unmet need for family planning and barriers to this unmet need among women of reproductive ages (15-49 years) in Nigeria, more work need to be done to unravel the most significant factors that can directly inform public policy and to bridge the health service gap between rural and urban areas in Nigeria.

This research was carried out to study the current status of contraceptive use, the important predictors of its uptake, and the difference in the uptake between rural and urban dwellers.

This research identifies the demographic and fertility related correlates of the uptake of family planning service use among women ofreproductive age (15-49) in Nigeria.

It focuses on identifying the characteristics of women who report different types of barriers to using family planning services. Gaining a better understanding of the types of women who are likely to experience particular barriers has the potential to inform social policy which aims to address barriers to family planning service use with a view to increasing contraceptive use.

14 OBJECTIVES OF THE STUDY

General Objective

To determine the demographic and fertility related correlates of uptake of Family Planning services among women ofreproductive age in Nigeria.

Specific Objectives

1. To assess the influence of couples'age disparity on uptake of contraceptive services among women ofreproductive age (15-49 years) in Nigeria.
2. To·detennine the association between the age of women at first marriage and uptake of contraceptive services among women ofreproductive age (15-49 years) in Nigeria.
3. To determine the association between husband-wife fertility preference and uptake of contraceptive services among women of reproductive age.

1.5 Research Questions

1. Do couples' age disparity influences uptake of contraceptive services?
2. What is the influence of age of women at first marriage on uptake of contraceptive services?
3. What is the influence of couple fertility preferences on uptake of contraceptive services?

1.6 Research Hypothesis

1. There is a statistically si$_{g\,n}$ificant association between couples age disparity and uptake of contraceptive services.
2. There is a statistically significant association between age at first marriage and uptake of contraceptive services.
3. There is a statistically si$_{g\,n}$ificant association between couples' fertility preference and uptake of contraceptive services.

CHAPTER TWO

LITERATURE REVIEW

21 FAMILY PLANNING AND CONTRACEPTIVE USE

Modern family planning services include information and counseling by health personnel about modem contraceptive methods, provision of these methods or prescriptions, and related surgical procedures (for example, IUD insertion or sterilization); they also include screening and testing for reproductive tract infections, STis (including HIV), cervical and breast cancer, and other gynecologic and urologic conditions.

Modern contraceptive methods include all hormonal methods (i.e., the pill, injectables and implants), IUDs, male and female sterilization, condoms and modern vaginal methods (e.g., the diaphragm and spermicides).

Women with unmet need for modem contraceptives are those who want to avoid a pregnancy but are not using a modern contraceptive method. Women using traditional methods are often refer to as having unmet need for family planning services, because traditional methods such as periodic abstinence and withdrawal, are much more likely to fail than are modem methods.

Family planning has been proven to save and enhance the lives of women, children, and families. It reduces the number ofunintended, unwanted, and mistimed pregnancies.

Women who control their fertility have fewer unsafe abortions, thereby saving mothers' lives. Family planning allows women to space births, and longer birth intervals reduce maternal and infant mortality rates (Rutstein, 2005; Conde-Agudelo & Balizan, 2000).

Family planning and birth spacing also reduce unwanted pregnancy among HIV positive women, which limits the number of infants born with HIV (Gillespie, 2004). Yet, family planning as a health and development strategy has not been promoted consistently everywhere. Low rates of contraceptive use and high fertility rates persist in most countries of sub-Saharan Africa (Ross, Abel, Abel, 2004; WHO, 2005).

In addition to large differences in use of family planning across sub-regions of Africa, wide variation exists within countries. In particular, sub-Saharan Africans living in rural areas tend to use fewer contraceptives and have more children than their urban _counterparts (Kirk D, Pillet, 1998). A recent study concluded that the rural-urban differential in fertility is an

inequity, reflecting an inability of poor, rural women to achieve their desired fertility, rather than an inequality in which rural women simply want large families (Gillespie *et al,* 2007)

2.2 FAMILY PLANNING METHODS

2.2.1. Natural Methods (Abstinence)

Total Abstinence

This is the complete avoidance of sexual intercourse. Abstinence is the most effective method of family planning if strictly practiced, but it calls for self-discipline and determination. It has also no side effect and no complications.

Periodic Abstinence (Rhythm or Safe Period)

This implies the avoidance of sexual intercourse during the time the woman may be fertile in the month cycle. Rhythm or safe period can be practiced in three different ways based on the knowledge of the physiology of the female reproductive system, including menstruation, conception and changes in the quality of vaginal secretion. The rhythm method is not suitable for women with irregular menses and the failure rate is about 14-50 per 100 women years.

2.2.2. Modern methods

Contraception

This is the interruption of conception at any level achieved by interfering in the function of the organs of reproduction (e.g. hormonal conception), or by preventing a normal healthy spermatozoa from reaching and fertilizing a normal healthy female egg (e.g. coitus interruptus, condom, diaphragm, cervical cap). There are different methods of contraception and they include the following:

(n Coitus Interruptus (Withdrawal)

lrrusing this method the man withdraws his penis from the virginal before he ejaculates. This method costs nothing and if properly carried out is effective. However, it needs lot of self-control and discipline from the man and sometimes the woman. Continuation of intercourse after ejaculation is not possible in view of the residual spermatozoa which can be reintroduced into the vagina.

(II) Barrier Methods

Condom

The condom, a rubber-like balloon is worn over the man's erect penis before intercourse to collect the· seinen and prevent its entering into the vagina. It acts as a mechanical barrier between the penis and the vagina and also protect against sexually transmitted diseases. If well used, a condom can be highly effective in preventing pregnancy. The disadvantages of condom are that its use may interrupt foreplay and complain of reduced sensation. There are rare cases of allergy to the rubber.

Diaphragm and Cervical cap (Dutch cap)

There are like condom conceptive barriers, but unlike condom, they are used by women. Diaphragm is the most commonly used. It is made of soft dome - shaped rubber resembling a cup with flexible rim. It is inserted into the vagina before intercourse and acts as mechanical barriers to the cervix by preventing semen from entering the cervical canal. The addition of spermicidal cream or jelly to a diaphragm before use enhances its effectiveness.

Chemical Substances (Spermicides)

These are chemical substances inserted into the vaginal shortly before sex'Ual intercourse to inactivate the spermatozoa and also prevent them entering the uterus. Spermicides may be in form of foams, creams, jellies, tablets or pessaries. Apart from having a high failure rate, sperrnicides have a short lasting effect and require a short waiting time of about 10 minutes between insertion and sexual intercourse. Some couples also consider spermicides messy. It is otherwise easy to use and has no serious side effects.

(III) Intra Uterine Contraceptive Device (IUCD)

These are plastic or metal (silver or copper) devices inserted into the uterus to prevent pregnancy. There are different types ofIUCDs and include the lippes 'loop' (the coil), copper 'T', copper 250, 375, 380 and multi-load. The mode of action ofIUCDs is not confirmed but it is believed that their presence in the uterus interferes with conception either by immobilizing or inactivating the spermatoz.oa, interfering with the eggs or acting as local foreign body to prevent implantation of the ovum.

IUCDs are very effective and do not interfere with intercourse. They are easily reversible. Disadvantages include inflammatory diseases and rarely uterine perforation. Because of the

risk of pelvic inflammatory disease and attendant infertility, IUCD is not advisable for nulliparous women and also for women with multiple sexual partners. Ideally IUCDs should be inserted at the time of menstruation, so as to ensure the woman is not pregnant or immediately post-partum.

(IV) Hormonal Contraceptives

Pills

The oral contraceptive consists of two types of females, the oestrogen and progesterone. The hormones suppress ovulation by interacting with the hormonal changes occurring in the menstrual cycle. They also cause some changes in the endometrium lining of the uterus making it become thinner, thus preventing implantation and pregnancy. In addition progestin itself alters the mucus in the cervix and makes it thick and impregnable to the spermatozoa.

Oral contraceptives are available as combined preparations (combined pills) progestagen-only pills (Mini-pills). There are also sequential preparations containing oesto gen taken 14 - 16 days followed by tablets containing both oestrogen and progestin taken 5 or 7 days. Combined oestrogen and progestin pills are taken for twenty-one days each month followed by seven days and rest during which bleeding usually occurs. They are easy to take and very effective and reliable if taken regularly as instructed.

Injectable Contraceptive

These are injections of long-acting progestins, the most commonly used being medroh-y-progesterone acetate (Depo provera) and norethindrone enanthate (NET) given every two to three months. Like progesterone in combined pills, they stimulate pregnancy by suppressing ovulation in many cycles and changing the cervical mucus to become impermeable to spermatozoa and thinning the endometrium. The use of injectables is popular in many African countries due to its effectiveness and convenience and privacy afforded by the method.

Implant (Norplant)

This involves the use of implans of a progestagen contained in capsules under the skin of the upper arm or elsewhere. The mode of action and other effects are similar to the pills and injectables. The effect of implant lasts for about five years after which a new one can be inserted under the skin once again. There is return of fertility immediately after removal of the implant.

Post-coital Contraception (Morning-after pills)

This is contraception administered after unprotected sexual intercourse, usually in cases of emergency such as burst condom or catastrophe such as rape. Such emergency contraceptive protection can be given within 72 hours after the act of intercourse at a dosage of two tablets of combined oral contraceptive containing 0.25mg levonorgestrel and 50 microgram of ethinyl oestradiol followed by two more. tablets 72 hours later. Side effects of nausea and vomiting can be controlled with anti-emetics such as metoclopramide (maxalon). Alternatively, a five day course of diethylstilbestrol can be used but this has quite severe side effects of nausea and vomiting.

Up to five dars after an unprotected intercourse a copper-bearing IUD can be inserted to give protection against pregnancy. This should be reviewed after a month (Obionu, 2007).

2.2.3. Sterilization (Surgical Contraception)

This is safe and often permanent contraception of either a female (tuba! ligation) or a male (vasectomy).

Tubal ligation

In woman the sterilization operation involves blocking or cutting both fallopian tubules to prevent the passage of ova and spermatowa. The operation must be voluntary and after proper counseling and can be performed just after delivery or abortion or at any point between pregnancies. The operation has no effect on feminity, menstruation, sexual relationship or health of the woman.

Vasectomy

This is a similar operation and involves the cutting and trying of the vas deferens- a thin tube responsible for the transportation of the spermatowa from the testes to the penis during intercourse. Like tubal ligation, vasectomy does not affect the man's health, potency, sex'Ual drive or masculinity. Sterilization is highly effective but due to its irreversibility, it is not recommended for couples under 30 years of age with less than three children (Obionu, 2007).

2.2.4. Breastfeeding as a Contraceptive ethod

Ovulation and therefore contraception is unlikely to occur for about five to six weeks after delivery, but after this time pregnancy is possible. To avoid such pregnancies, contraception

may need to be started about five weeks post-partum or the length of lactational amenorrhoea prolonged by prolonged breastfeeding. This is because frequent stimulation from suckling of the baby is sufficient to prevent ovulation. The suckling baby on the mother's nipple sends messages back to the pituitary gland that prevents the production of gonadotrophine, follicle stimulating and lactating hormones and so stop ovulation.

In parts of the world where frequent breastfeeding continues for two years or more, the woman is likely to have no menstrual period for a longer period, say one year, during which period she will have a very effective natural form of contraception.

Breastfeeding as an effective contraceptive method is possible only if demand feeding is practiced by a woman, as only frequent and repeated suckling on the nipple is sufficient to suppress ovulation (Obionu, 2007).

2.2.5. Birth control vaccine

This involves immunization with a vaccine prepared from beta sub-unit of human chorionic gonadotropin (hCG), a hormone produced in early pregnancy. Immunization with hCG would block continuation of the pregnancy. Antibodies appeared in about 4-6 weeks and reached maximum after about 5 months and slowly decline reaching zero levels after a period ranging from 6-11 months. The immunity can be boosted by a second injection (Park, 20 I I).

2.3. THE NEED FOR FAMILY PLANNING

Family planning is one of the most cost effective public health interventions that exist today impacting not just on the health and wellbeing of women, but also on families, communities and nations leading to its widespread use (Murphy, 2004). Countries investing in family planning stands to gain tremendous and lifesaving benefits, environmental benefits and investment savings in the health and education sectors which can extend to generations unborn (PRB, 2009). The achievement of a better reproductive health status in women and the aver all development of communities and nations therefore depend on the promotion of family planning of which contraceptive use is essential making this a reality.

2.3.1. Health Benefits

The health benefits of family planning to women, couples and their children are numerous. Family planning helps to prevent maternal and morbidity by enabling women to avoid unintended pregnancies and abortions, space births and stop childbearing when they have

attained their desired family size (Collumbien, 2004). The positive effects of family planning on children result when mothers are able to delay their next pregnancy for at least two years and so reduce infant and child morbidities and mortalities associated with inadequate child spacing (Geneva: WHO, 2007). Teenage pregnancies are high-risk pregnancies associated with health risk to the babies and the young mothers. Accessibility and utilization of family planning services can play a role in helping these young women avoid having children during this high-risk period and also reduce the need for unsafe abortion (Susheela Singh *et al.,* 2003). Family planning also plays a role in HIV- positive women and couples who desire to avoid becoming pregnant. By averting these unintended pregnancies, mother-to-child transmission of HIV is prevented and consequently, the number of aids orphans (Stover *et al.,* 2003)

2.3.2. Economic benefits

Researches have consistently shown that family planning is one of the most cost-effective health interventions ever developed and provides immense economic and developmental benefits to nations and regions of the world (Washington DC: The World Bank, 2003). Family planning is a powerful tool in combating uncontrolled population growth which has been associated with poverty, hunger, poor standard of living. In a study done in Bangladesh, long term follow-up revealed that women with improved access to family planning had better economic outcomes (Improved earning and assets) compared to women who did not.

At the community level, enhanced economic growth and an increase in number of \\'Omen participating in paid labour was observed (Canning and Schultz, 2012). In a study carried out in fourteen countries to demonstrate the economic gains of investing in family planning, the results showed that the average cost of providing family planning was $4 million, while the savings accrued from not needing treatment for the prevention of mother-to-child transmission of HIV or support for orphans averaged $7 million (Stover *et al.,* 2006).

1.3.3. Social benefits

Adolescent pregnancies are associated with many consequences for the adolescent as an individual and the family. The inability to attain the desirable education level as a result of dropping out of school as well as the shame and stigma are major social .consequences of not utilizing family planning services. For married women, large family sizes prevent them from taking advantage of available employment opportunities as they are burdened with the excessive load of caring for and raising these children and are also likely to be unhealthy as a

result of inadequate spacing of pregnancies. By averting unintended births and controlling population growth, family planning also helps to reduce the demand on social services (e.g. health care, housing, transportation, and education, environment, agriculture, water and sanitation thereby enabling nations to attain their national and international development goals (UNFPA, 2004).

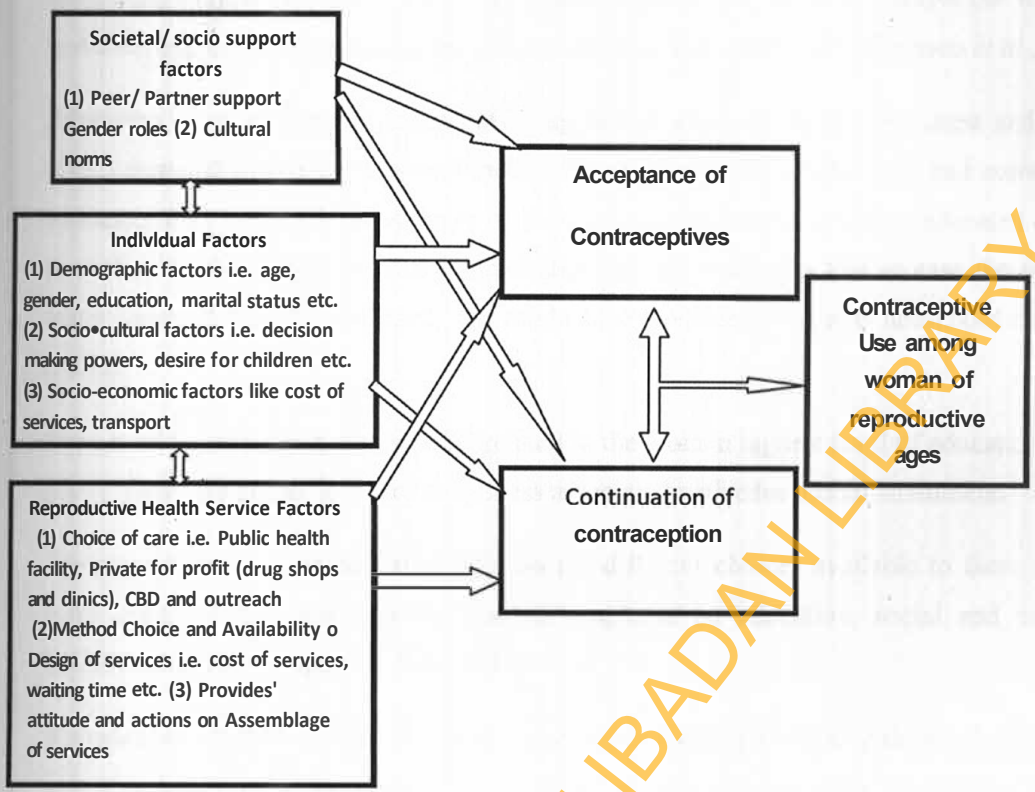
2.4. CONTRACEPTIVE UPTAKE AND PREVALENCES

The prevalence of contraceptive use has increased worldwide due to the development and introduction of modern contraceptives and the establishment of organized family planning programs. The contraceptive prevalence rate in many developing countries rose from 9% in the 1960 to 60% in 1997 (Nalwadda *et al.,* 2005) and this has helped in reducing the total fertility rate of some developing countries (the lifetime average number of children per woman) from 6.0 in 1960 to 3.1 in 1997. The proportion of Nigerian women using modern contraceptive methods rose from 10.9% in 1990 to 14.7% in 2008. The use of modem contraceptive methods has been reported to be very limited in the northern part of Nigeria, only 3% of women from the northeast and the northwest reported using a modem method, compared with 23% in the southwest. These data correlate well with the high fertility rate in the northern part of the country. According to the 2008 Nigeria Demographic and Health Survey, the country's overall fertility rate was 7.2 children per woman in the northeast and 7.3 children per woman in the northwest, compared with only 4.5 in the southwest This survey have shown that there is still a large unmet need for contraceptive use in Nigeria (NDHS, 2008).

2.5 CONCEPTUAL FRAME WORK OF FACTORS INFLUENCING CONTRACEPTIVE UPTAKE

Contraceptive uptake is believed to be influenced by a complex interaction of many factors at individual, social and reproductive health service delivery levels. Individually, age, parity, education and knowledge about contraception do influence uptake of modern contraceptives. Socially; cultural norms, marital status, partner/family support, designated gender roles and the demand for bigger families influence the individual's conception choices. In addition, peer pressure; religious teachings and policy influence freedom of choice of a contraceptive method. Also, reproductive health service delivery factors such as attitudes and skills of the providers, method specific side effects, availability of methods, ease of use and access of contraceptive method do act directly or indirectly to influence uptake of contraceptives (Susan, 2013).

Diagrammatic Representation of the Conceptual Frame Work



Susan B.K. (2013

2.6. BARRIER AND FACTORS INFLUENCING CONTRACEPTIVE UPTAKE

Several studies have been done in the different countries in the past to find out the factors that affect individual's use or non-use of contraceptives. Literature shows an interaction of individual, societal and reproductive health service factors affecting young people's ability to access contraception. Individual factors include: demographic, socio- economic, Socio-cultural factors while reproductive and sexual health services factors include: the characteristics of the facilities, the design of services, and providers' attitudes and actions.

2.6.1. Individual Factors

Demographic Factors: The demographic characteristics such as age, gender, educational status, ethnicity and marital status play an important role in determining the use of contraception. In addition, these factors shape clients' experiences with family planning and reproductive health services. In some cultures, women may be unwilling to receive care from

male providers, or husbands may object to having their wives see male providers, so a shortage of female provide!S may limit women's access to services. According to Velasco and colleagues, women in Bolivia, who were often too shy to discuss contraceptive use with their husbands, expressed even greater fear about talking to a male provider (Velasco ***et al.,*** 2001).

Education: also influences contraceptive uptake. A study in Kenya by Lasee and Becker (1997) revealed that if the husband lacked formal education but the wife had some higher education, they were 4.3 times likely to use contraceptive compared to uneducated couples. According to the researcher, one interpretation of this result was that in case the wife was better educated than her husband, she might have considerably more household decisions-making.

The use of contraception is positively related to the woman highest level of education (Blum, 2007). There are higher levels of awareness associated with educational attainment.

The population must be educated fully on the different choices available to them so as to make informed decisions. Given such an emphasis on education, social and economic benefits could.be anticipated (Blum, 2007).

Knowledge: The low uptake of family planning methods, particularly those of a temporary nature, is compounded by a gross lack of accurate, generally available mformation. Lack of knowledge is an important factor in non-use. Lack of knowledge covers women who have never heard of a method to others who may not know how to use them or where to obtain them (World Bank 2007).

Inadequate knowledge about contraception brings fears, rumours, and myths about family planning methods and can prevent young people from seeking contraception. In one sr vey in Uganda, some participants gave reasons why they would fail to use contraceptives even if they did not intend to get pregnant. Many participants, both male and female distrusted male condoms, the contraceptive used most frequently by young people. They believed that it was potentially be dangerous to use condoms because it could get stuck in the vagina where it would get rotten and cause damage. Likewise there were rumours that the pill could cause deformed babies, inability to get pregnant in the future as well as cancer of the cervix and the breasts (Eva-Britta Rassjo and Robert Kiwanuka, 2010). Rumours and myths about family planning may raise potential clients' concerns about the side effects, safety, and effectiveness of different methods.

Cultural Factors

Cultural beliefs: Family planning methods sometimes challenge bio-cultural beliefs. For example, women in some societies believe it is healthy to menstruate monthly, and therefore refuse to use injectable contraceptives that often result in irregular bleeding, spotting, or aroonorrhea (no monthly bleeding). Understanding clients' beliefs can help providers align their services with these ideas or, when necessary, address local misconceptions. Providers can also bridge such gaps by expressing respect for the clients' beliefs and drawing connections between these beliefs and medical models of health (Obermeyer, and Potter, 1991).

Son **preference:** Ideal family size in Nigeria has decreased over the years, with an ideal of four children per family, but the total fertility rate remains at 5.5 (CIA, 2013). Knowledge of family planning methods is extremely high with 69.4% of currently married women being able to name at least one method, but only 28.7% of women having ever used a modern method (NDHS, 2008).

Why is the contraceptive prevalence rate so low when knowledge is high and the desire for a small family is widespread? One part of the answer may lie in the historical, cultural, social and religious background of Nigeria which places a higher value on sons than it does on daughters.

In some communities sons are highly prized; the birth of a son is an occasion for celebration, whereas a new daughter is almost a cause for condolences (Nnadi, 2013). It is believed that sons have an obligation to provide for their parents by offering them security in their old age and by performing religious rituals at their deaths and death anniversaries. Daughters are only around to give emotional support to parents but nothing material (Latifat and Clifford, 2011; Nnadi, 2013).

Direct and Indirect Cost of Family Planning Services: have been shown to be of greater importance than demographic factors in influencing the of use health services. In fact, fees for transportation, services, and supplies, can be a major barrier to contraceptives for many young people. Even free or low-cost reproductive and other health care involves costs, including the opportunity cost of time away from income-generating activities (Abouzahr *et al.,* 1996). In addition, competing demands on women's time can also make it difficult for women to use services, particularly when facilities are far away. Child care, food preparation,

household sanitation, maintaiuing fuel and water supplies, and income-generating work outside the home can make seeking health care seem like a luxury.

2.6.2. Reproductive Health Service Factors

Surveys reveal that young people do not want to run into family members and neighbours when entering, utilizing, or leaving reproductive health facilities.

Other facilities-related barriers include: a lack of privacy; no area set aside where young people can wait to be seen; and setting that is overly clinical, too adult, and or welcoming only to women and not also to men.

Privacy and Confidentiality: Clients feel more comfortable if providers respect their privacy dr ing counselling sessions, examinations, and procedures; particularly those who obtain services in secret report higher satisfaction with providers who keep their needs and personal information confidential (Andrea, 1996). Lack of privacy can violate women's sense of modesty and make it more difficult for them to participate actively in selecting a contraceptive method. In a few places, obtaining and using contraceptives can be a difficult and risky decision that can lead to abandonment, violence, ostracism, or divorce. In such situations, women need assurance of absolute confidentiality.

Availability and Accessibility of Method of Choice: Clients want a variety of services. Providing a wide range of contraceptive methods can help clients find those that match their health circumstances, lifestyle, and preferences (John, R. 2002). In an assessment of nine countries, the percentage of women who said that they would rather be using a different method ranged from 11 percent (Mauritius) to 48 percent (Costa Rica). Respondents cited several reasons, including the cost of their preferred methods, difficulty obtaining their current methods, medical ineligibility for other methods, and family disapproval of certain methods. Supply shortages can lead to dissatisfaction; as a result, some clients may discontinue using family planning altogether.

There is a strong positive association with the availability and accessibility of family planning methods, uptake and use (UNPFA). It is known that for each additional method that becomes widely available in a country, the contraceptive prevalence rate will increase by 3.3% . The provision of a wide range of contraceptive methods increases the opportuniy for individuals to obtain a method that best suits their needs (Susan, 2013)

The Design of Services: Research identifies several features in the design of services that may actively discourage youth's using the services. Design obstacles include: cost, crowded waiting rooms, counselling spaces that do not afford privacy, appointment times that do not accommodate young women's work and school schedules, little or no accommodation for walk-in patients, and limited contraceptive supplies and options. Hearing about these obstacles may prevent young people from making a first visit. Encountering these obstacles may discourage them from returning (Susan, 2013).

Information and Counselling: Information is one of the most powerful tools for behaviour change (Stanback *et al.,* 2007). Clients want to receive information that is relevant to their needs, desires, and lifestyles. Because clients differ in their reproductive intentions, attitudes about family planning, ability to make decisions, and other factors that affect contraceptive choice, they need information that is tailored to their individual needs. In a study in Kenya, women were not satisfied with the information provided; they wanted to hear about a larger number of methods so that they could make an informed choice. Over 40 percent of the women in one Indonesian study wanted more information on side effects, and over 26 percent wanted to know more about how contraceptives work (Lewis, 1995).

In Nigeria about 70% of women do know of at least one method of contraception (NDHS, 2008), but even then the fact that women are aware that methods do exist is not enough. Many women do not take up contraception because they do not know enough about it, and those that do take it up discontinue its use because they have not been counselled properly about side effects. Continuation and satisfaction with the method used are higher among those women who received counselling about the potential side effects either at the time of acceptance or during a follow up visit.

Affordability of Services: Clients are generally more likely to use low-cost services. In a study carried out in Kenya, clients said that low costs and proximity of services were the two most important factors that attracted them to services (John, 2002).

Providers' Attitude and Actions: Provider attitudes, opinions, and biases about contraceptives represent what providers truly believe, including their support or opposition to provision, and opinions potentially affecting distribution practices. Research shows that some family planning providers still restrict access to contraceptives based on age or marital status (Speizer *et al.,* 2000).

Furthermore, service providers sometimes deny access to a family planning method as a resulst of their own prejudices about the method or its delivery system. Provider bias, which occurs when service providers believe that they are in a better position to choose the most appropriate method for the client, or are biased toward certain methods, may preclude women from using a method appropriate to their circumstances and needs

In addition to the abo ve, studies have shown that women are more likely to seeks out and continue using family planning services if they receive respectful and friendly treatment (Williams, 2000)

2.7. FERTILITY PREFERENCES IN NIGERIA

Fertility studies in Nigeria date back to decades and have examined a wide range of topics on fertility though mostly at local geographical areas. These include trends (Van De Walle, 1965 among others), determinants and differentials, adolescents' reproductive health (Adeboyejo & Onyeonoru, 2003), family planning, abortion, poverty and fertility dynamics (Odusola, 2002); the relationship between child labour and fertility preferences of parents (Togunde and Newman, 2005) and a host of others.

Fertility trend studies have shown estimates of total fertility rate (TFR) in Nigeria for the years 1965, 1970, 1971-73 and 1975 to be 6.6, 6.5, 7.3 and 7.0 respectively. This generally implies a rise between 1965 and 1975. The 1990, 1999, 2003 and 2008 NDHS put the estimates at 6.01, 5.2, 5.7 and 5.45 respectively (NDHS, 2008; Feyisetan & Bankole, 2002), while 2013 estimate of the world fact book puts TFR in Nigeria to 5.5 (CIA, 2013).

It is evident that the TFR has followed a downward trend after the 1970s if one ignores the figure given by the 1999 NDHS, which was reported to have been affected by under-reporting of births (NDHS, 2003). Some favourable indicators for future fertility decline in Nigeria have also been alluded too; These include: decline in wanted fertility; increase in age at mapiage; increase in contraceptive use, increase in the rate of abortion; erosion of social values placed on child bearing; increase in female emolment at all levels of education as well as increasing pat icipation of women in the labour force (Feyisetan & Bankole, 2002).

The studies that have examined the determinants of fertility at the national level show that postpartum infecundability accounts for most of the reduction in total fecundity. This is followed by marriage delay and contraceptive use. There are however considerable regional and socio-economic variations in the country (Isiugo-Abanihe, 1996). This variation is clearly

manifested in a study of the proximate determinants of fertility of a Nigerian ethnic group, the Igbo, by Odimegwu & Zerai (1996). While the factors that have the most inhibiting effect on fertility in this ethnic group remain basically the same as those at the national level, their importance is somehow reversed. For this sub group, the main fertility-inhibiting factors are marriage, use of contraception and post partum infecundability due to post-partum amenorrhea, in that order. Another example of these variations is the one found within unions. The inhibiting effect of marriage was found to differ by type and stability of marriage (Isiugo-Abanil1e, 1999).

Although fertility preference studies have been limited in Nigeria, it is rich in content and diversity (in terms of coverage and study population). The 1987 study by McCarthy & Oni examined the determinants of desired family size among urban women in a South-Western city of Nigeria; Bankole (1995) studied couples preferences and their subsequent fertility also in the South Western part of the country while Isiugo-Abanihe (1994) examined the reproductive motivation and family size preferences among Nigerian men.

Questions on fertility preferences are often responded to with non-numeric answers. This is rooted in cultural and religious beliefs as people are expected to leave their destiny wholly in the hands of their creator. This was the focus of the study by McCarthy & Oni (1987), where they examined the determinants of desired family size between women who express numerical and those who ex-pressed non-numerical responses. Non-numeric responses were found to be common among young women, women with fewer children, women residing in low socio-economic area, women in polygamous marriages, Muslim women and women with no education.

Bankole (1995) in his own study brought forth the strong influence of men on fertility decisions, which cannot be ignored or captured by proxy information from the wives. He found that fertility desires of both marriage partners are important predictors of the couple's fertility and that the desires of both spouses have equal effects on fertility behaviour. The husband's desire is however dominant in predicting couple's behaviour when the number of living children is small while the wife's desires become more important during the later stages of marriage. This in effect means that family size governs which spouse's fertility preference prevails (Hollander, 1996).

The Isiugo-Abanihe (1994) study however shows that preference for large family is very strong among Nigerian men (who generally decide and dictate what happens within and

around the family) although there are considerable ethnic and religious variations. For example, average number of children desired is 4.90 among the Yoruba and the lgbo while it is 6.09 and 7.34 among the Hausa/Fulani and the Ishan respectively. Similarly, average number of children desired is 6.20 for the Muslims, 5.45 for the Catholics, 4.97 for the Protestants and 6.04 among the people who hold indigenous belief

CHAPTER THREE

METHODOLOGY

3.1 Study Design

Data for this study was obtained from the 2008 Nigerian Demographic and Health Survey (NDHS), as a secondary data. Analysis was done to to achieve the objectives of this study. The Nigerian demographic health surveys were conducted in Nigeria as part of the demographic and health surveys (OHS) programme in furtherance of the national population commission's (NPC) responsibility of collecting, collating, analysing and disseminating population census and survey data at all levels that contribute to policy formulation and coordination of population activities in the country. This survey utilized a cross sectional population based study design. For this study, contraceptive use among sexually active women aged (15-49 years) in Nigeria were compared using the 2008 NDHS.

3.2 Study Area

The three rounds of NDHS were conducted in the all states of Nigeria that existed during these periods including the federal capital territory (FCT). At present, Nigeria is made up of 36 states and a federal capital territory (FCT), grouped into six geopolitical zones: North Centra North East, North West, South East, South- South, and South West. There are 774 constitutionally recognized local government areas (LGA's) in the country and about 374 identifiable ethnic groups, with the lgbos, Hausas, and Yorubas as the major groups. The 2006 National population census puts Nigeria's population at 140,431,790, with a national growth rate estimated at 3.2 percent per annum and population density of 150pop/sq.km. This makes Nigeria the most populous country in Africa.

3.3 Study Population

Women aged 15-49 years and men aged 15-59 years were the target group in the 2008 NDHS. Samples from these target groups were collected from randomly selected households across Nigeria and interviewed during the surveys.

For the purpose of this study, Fecund and sexually active women ofreproductive ages (15-49 years) in Nigeria who had fecund partners made up the target population. The study population for the study was obtained as sub- samples from the sample of women interviewed in the years under review.

The unit of enquiry in this study was fecund and sexually active women of reproductive age 15-49 years who had fecund partners obtained from the households sampled in the 2008 NDHS.

Eligibility criteria:

Inclusion criteria: Fecund and sexually active women within the reproductive age 15-49 years who had fecund partner were eligible to be used in the study.

Exclusion criteria:

1. Women aged 15- 49 years who were not sexually active at the time of the study were excluded from the study.
2. Women aged 15-49 years whose partners are no fecund were also excluded from the study.

3.4 Sample Size Estimation

This was performed using the following formula as stated by NDHS;

Pli: wA

Where,

a: is the number of cluster to be selected in a given state.

A: is the total number of clusters in a given state.

In each selected cluster, a complete household listing operation was carried out and households were selected to achieve a fixed sample take per cluster. However, since the 2008 NDHS sample was unbalance among residence area and state, a final weighing adjustment procedure to provide estimates at every other domain of study was required.

In a given state, if c is the fixed number of households selected out of the total households

(Li) found in the 2008 listing process for the ith cluster, then, the household probability in the selected ith cluster can be expressed as:

P2i =(c/Li)

The final households overall probability in the ith cluster could be calculated as:

Fi =pli*p2i

And the sampling design weight for the ith cluster is given as:

1/Fi = 1/(pli*p2i)

3.5 Sampling Frame

Each state in Nigeria is subdivided into local government areas (LGAs), and each LGA is divided into localities. The sample frame for these surveys was the list of enumeration areas (EAs) developed for the 1991 population census. Administratively, as the time the survey was planned, Nigeria was divided into 36 states and the federal capital territory (FCT) of Abuja. Each state was subdivided into local government area (LGA) wiit and each LGA was divided into localities. In addition to these administrative units, for implementation of the 1991 population census, each locality was subdivided into enumeration areas (EAs). The list of approximately 212,080 EAS, with household and population information (from the 199lcensus) for each EA, was evaluated as a potential sampling frame for the 2008 NDHS. The EAs are grouped by states, by LGAs within a state, and by localities within an LGA, stratified separately by urban and rural areas. In addition to these administrative units, during the last 2006 population census, each locality was implemented; the list of EAs did not have census information for households and the population because the census frame is wider segmentation revision. Therefore, no household or population information was available at the EA level. The need for sampling planning and selection of such information on urban/rural was quite important; therefore, each EA was approximately classified as urban or rural. The available cartographic material demarcated for each EA was useful in the EA location and its identification; hence the sample frame for this survey is the list of EAs used in the last censuses and used as the sampling frames.

3.6 Sampling Technique

The sampling technique used was a stratified two-stage cluster design. The primary sampling unit (PSU) also known as cluster was defined on the basis of enumeration areas, EAs from the census frames.

3.7 Stratification

In the current preliminary census frame, the EAs are grouped by states, by LGAs within a state, and by localities within a LGA. The EAs are stratified separately by urban and rural

areas. Any locality with less than 20,000 populations in each LGA constitutes a rural area in the LGA, conversely, any locality with greater than 20,000 populations constitutes an urban area in the LGA.

3.8 Data Collection Procedures

The primary data obtained from the survey were collected by visiting households and conducting face-to-face interviews and with the use of questionnaires to obtain information on demographic characteristics, socio-economic characteristic etc.

3.9 Data processing procedures

The data collected during the 2008 of NDHS underwent initial data processing, which consisted of office editing, coding of open-ended questions, data entry and editing computer-identified errors.

For this particular study, SPSS version 17.0 Statistical software was used in the analysis of data frequency tables were used to show the distribution of respondents by the key variable. Values were e>..l)ressed as absolute numbers, percentages and diagrams for variables of interest.

The differences in the age of couples with respect to regional and geo-political zones, variation of age of women at first marriage, variation of women and men fertility intentions across region and geo-political zones, important factors associated with contraceptive use (uptake), current contraceptive use over the study period; were described using graphs.

A Chi-square/ bivariate and multivariate analyses were used to asses if there were any association between the independent variables and current use of contraceptives. All variables with a p value >0.05 were considered statistically significant and described as having influenced the uptake of family planning services.

3.10 Ethical Consideration

Ethical approval was from a reputable Ethical Review Committee (ERC) for the surveys. The respondents were assured that all information and discussion would remain confidential and that no personal identifier would be recorded. Also, participation was voluntary. For this study, approval to use the NDHS data was requested for from Measure DHS and this was granted.

3.11 Definition of Variables

The variables of interest are defined below using standard OHS definitions.

Contraceptive Knowledge: all survey respondents were asked about their knowledge of specific contraceptive methods. For each contraceptive, she was asked if she has ever heard of the method (i.e. the method was reported spontaneously or after probing). A woman is considered to have knowledge of contraceptives if she knows at least one contraceptive method.

Current **use of Contraception:** women were asked if they were currently using any contraceptive method to delay or avoid getting pregnant at or about the time of the survey. Women using any modern or traditional method are defined as current users of contraception. In the case of concurrent method use (women reporting use of more than one method), the most effective method is considered.

Choice of Contraceptive types: women who were currently using contraceptives were asked the type (e.g. pills IUD, etc.) being used. In the case of concurrent method use (women reporting use of more than one method), the most effective type is considered.

Spousal Age Differences: this was derived by subtracting women's age from their partners'.

Variables included in the analysis are:

Dependent variable: The dependent variable is current use of contraceptives

Independent variables: The independent variables are: Socio-demographic characteristics {Age, Age at first marriage, Place of residence, Geopolitical region, Religion, Highest level of education, Occupation, Marital status and Type of union}, Fertility-related characteristics {Number of living children, Husband-Wife fertility preference and Ideal numbers of children} and Characteristics ofrespondents' partner {Partners' age,

Couples' age difference - This is obtained by subtracting women's age from their partners', Partners' level of education and Partners' fertility preference}.

Limitations

As with most secondary data analysis, there were some inherent limitations because of potential non-representativeness of the study population. Also issues of not asking enough questions that might enrich this work and fulfil all the criteria for unravelling all the issues

relating to actual contraceptive practice among women of reproductive age group cannot be overlooked. However, data could still be assumed as being rich enough to provide the necessary benchmark for meeting the objectives of this study.

CHAPTER FOUR

RESULTS

This study involved analysis of NDHS 2008 data set for fecund and se>...-ually active women of reproductive ages (15-49 years) who had fecund partners. The total numbers ofrespondents studied were 13678.

4.1. Socio-Demographic Characteristics of Respondents.

Table 1 shows the socio-demographic characteristics of respondents and their corresponding partners. The mean age of the respondents was 31.09±8.59 years. Highest proportion of the respondents (40.5%) in the study groups were of age group 25-34 years followed by (36.3%) age group 35 and more years and the least (23.2%) age group 15-24years. Higher proportions of the respondents were rural dwellers (70.2%) compared to urban (29. 8%). Majority of the respondents had no formal education (47.4%) followed by those that had ·secondary education (23.7%) and primary education (20.9%); least proportion of the respondents had tertiary education (8.0%). The mean age at first marriage of the respondents was 17.86±4.73 years; highest proportion of the respondents (43.2%) married early between ages 15-19 years. Other socio-demographic characteristics are depicted in the table below.

TABLE!: Socio-Demographic Characteristics of Respondents.

Socio-Demographic Characteristics	Frequency (N= 13678)	Percentage (%)
Ace groups		
15-24	3117	23.2
25-34	5535	40.5
35 and Above	4966	36.3
Total	13678	100.0
Occupation		
None	4020	29.4
Working	9658	70.6
Total	13678	100.0
Educational Status (Wife)		
No-formal education	6477	47.4
Primary	2861	20.9
Secondary	3239	23.7
Tertiary	1101	8.0
Total	13678	100.0
ReUgion		
Christian	6294	46.0
Islam	7110	52.0
Others	274	2.0
Total	13678	100.0
Types of Place of Residence		
Urban	4072	29.8
Rural	9606	70.2
Total	13678	100.0

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Total	13678	100.0
Types of Place of Residence		
Urban	4072	29.8
Rural	9606	70.2
Total	13678	100.0

Region		
North central	2508	18.3
North east	3307	24.2
North west	2941	21.5
South east	1378	10.1
South south	1483	10.8
South west	2061	15.1
Total	13678	100.0
Type of Unions		
Monogamy	11959	87.4
Polygamy	1719	12.6
Total	13678	100.0
Age at First Marriage		
14 and below	3593	26.3
15-19	5903	43.2
20 and above	4182	30.6
Total	13678	100.0
Current use		
No	11663	85.3
Yes	2015	14.7
Total	13678	100.0

4.2. Fertility-Related Characteristics of Respondents.

Table 2 shows the fertility-related characteristics of the respondents. Highest proportion of the respondents (63.4%) bad between 1-4 children followed by 5 and more children (27.0%) and then no child (9.7%).

Majority of the respondents (75.7%) perceived 5 and more as the ideal number of living children followed by those that perceived 1-4 children (23.5%) and no child (0.8%).

Highest proportion of the respondents (61.0%) and (65.2%) perceived 1-4 as the ideal number of boys and girls respectively.

About half of the respondents (50.1%) want the same number of children as their partners followed by (45.6%) who want fewer children than their partner and then (4.3%) who want more children than their partner.

TABLE 2: Fertility-Related Characteristics of Respondents

Fertility-Related Characteristics	Frequency N= 13678	Percentage (%)
Husband-Wife Fertility Preference		
Both want same number of children	6857	50.1
Husband wants more	6234	45.6
Husband wants fewer	587	4.3
Total	13678	100.0
Ideal Number of Children		
0	114	0.8
1-4	3213	23.5
5 and above	10351	75.7
Total	13678	100.0
Ideal Number of Boys		
0	2240	16.4
1-4	8348	61.0
5 and above	3090	22.6
Total	13678	100.0
Ideal Number of Girls		
0	2295	16.8
1-4	8922	65.2
Sand above	2461	18.0
Total	13678	100.0

4.3. Characteristics of Respondents' Partners

The partners' related characteristics of the respondents (Partners' educational status, partners' age and Couples' age difference) are depicted in table 3. The mean age of the respondents' partner was 41.39±11.32. A significantly higher proportion of the respondents' partners were 35 and more years (71.7%) followed by 25-34 years (25.6%) and 15-24 years (2.7%). Majority of the respondents' partners had no formal education (38.8%) followed by secondary education (26.6%) followed by primary education (20.6%) and least tertiary education (13.9%). The mean couples' age difference was 10.30±7.62, _higher proportion of the respondents' partners were 6-10 years older than the respondents (34.2%) followed by those that were 5 and less years older (28.3%) and least by those that are 16 and more years older (17.8%).

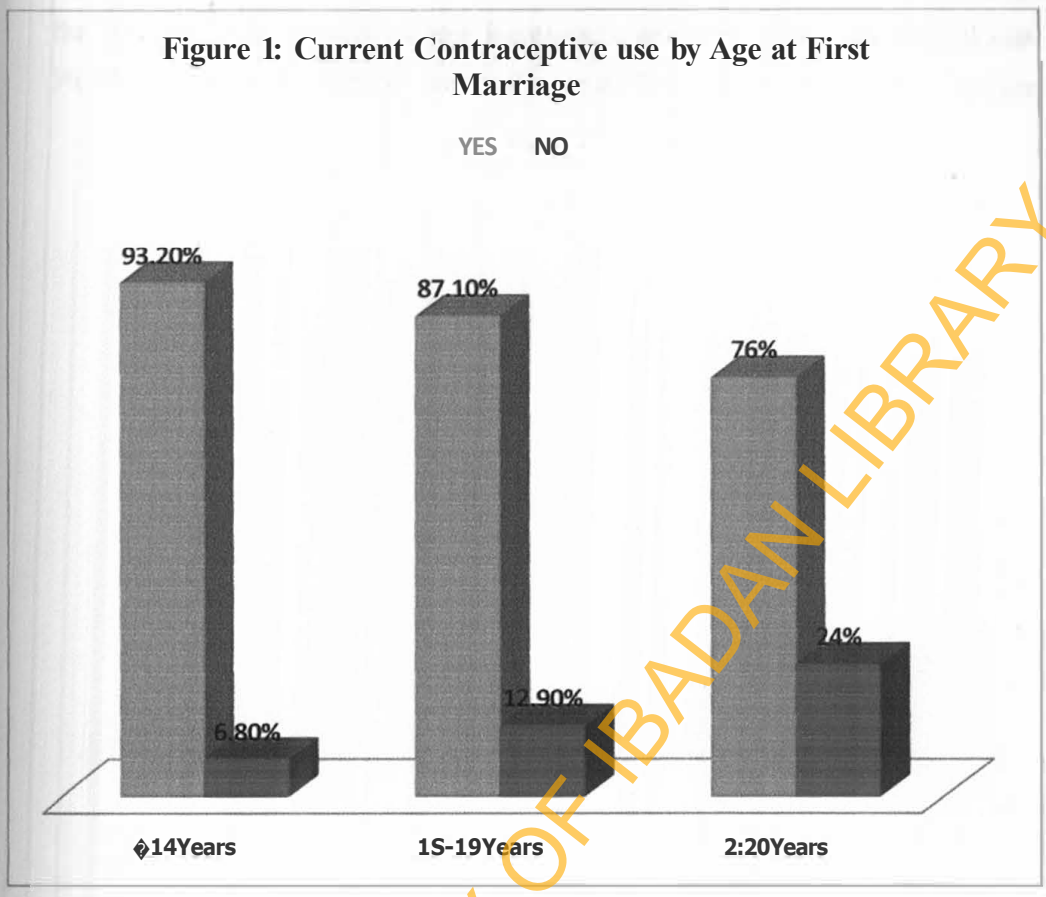
TableJ: Characteristics of Respondents' Partners

Characteristics of Respondents' Partners	Frequency N= 13678	Percentage (%)
Education Status (Husband)		
No formal education	5311	38.8
Primary	2821	20.6
Secondary	3644	26.6
Higher	1902	13.9
Total	13678	100.0
Partners' Age		
15-24	372	2.7
24-34	3504	25.6
35 and above	9802	71.7
Total	13678	100.0
Couples' Age Difference		
5 and below	3875	28.3
6-10	4674	34.2
11-1 S	2701	19.7.
16 and above	2428	17.8
Total	13678	100.0

4.4 Current use of Contraceptives by Respondents' Age at First Marriage.

The key dependent variable in this study was current use of contraceptives among the respondents. Figure 1 below highlights the proportion of respondents at each age at first marriage reporting current use and non-use of contraceptives. From the diagram; it was observed that contraceptives use rises with increasing age at first marriage while contraceptive non-use decreases with high age at first marriage.

Figure 1: Current Contraceptive use by Age at First Marriage

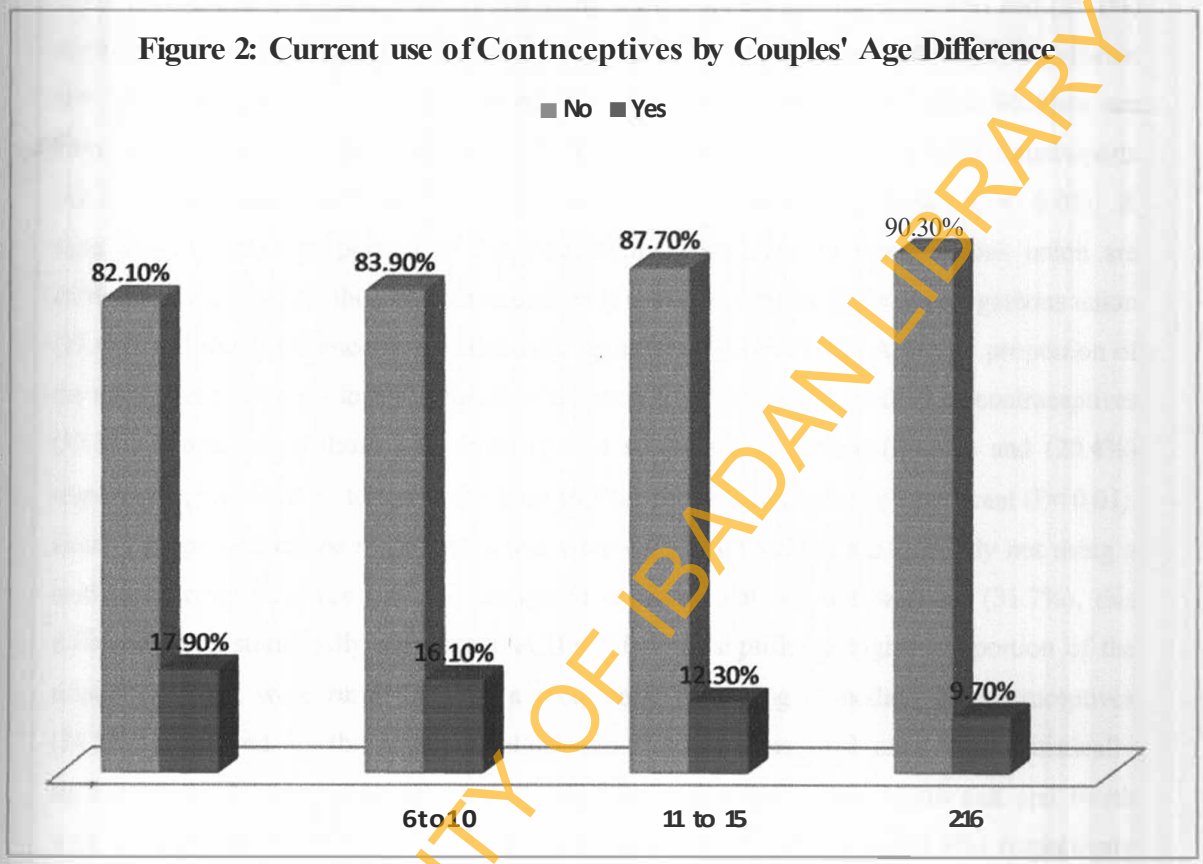


Age at First Marriage

4.5 Current use of Contraceptives by Couples' Age Difference.

Figure 2 below shows a gradual decrease in current use of contraceptives (17.9%-9.7%) as the age difference between couple increases, conversely, there was gradual rise (82.1%-90.3%) in non-use of contraceptives as the age difference between the couple increases.

Figure 2: Current use of Contnceptives by Couples' Age Difference



4.6 Association between Current use of Contraceptives and Socio-Demographic Characteristics of Respondents.

Table 4 below shows the cross tabulation of current use of contraceptives and socio-demographic characteristics of the respondents. Greater proportion of the respondents aged 25-34 and 35 and more are currently not using a contraceptive method (39.8%) and (35. 1%) respectively compared to those aged 15-24 years (25. 1%) and this was statistically significant (P< 0.01). A significantly higher proportion of the respondents who were Muslims are currently not using contraceptives (56.7%) as compared to their Christian counterparts (41.2%) and least traditional (2.1%), this was statistically significant {P< 0.01). A significantly higher proportion of the respondents who were in monogamous union are currently not using a method of contraceptives (86.4%) as against those in polygamous union (13.6%) and this difference was statisticaJly significant at {P< 0.01). A higher proportion of the respondents with no formal education are currently not using a method of contraceptives (53.3%) compared to those with primary and secondary education (20.3%) and (20.4%) respectively, and least by tertiary education (6.0%), this was statistically significant (P< 0.01). Greater proportion of the respondents that were currently working are currently not using a method of contraceptives (68.3%) compared to those that are not working (31.7%), this difference was statistically significant at (P< 0.01). A significant higher proportion of the respondents that were rural dwellers are currently not using a method of contraceptives (74.3%) compared to the urban dwellers (25.7%) and this difference was statistically significant at (P< 0.01). Greater proportion of the respondents from North east and North west are currently not using a method of contraceptives (27.2%) and (24.4%) respectively followed by respondents from North central (17.8%) followed by respondents from South west (1 1.8%) and the least were respondents from South south and South east (9.4%) and (9.3%) respectively, this was statistically significant at (P< 0.01).

TABLE 4: Association between Current use of Contraceptives and Socio-Demographic Characteristics of Respondents.

Socio-demographic Characteristics	Current use of contraceptives Yes(%)	No(%)	Total(%)_	(Chi-square)	P-valuc
Age groups (Years)					
15-24	250 (12.4)	2927(25.1)	3177 (23,2)	159.62	<0.01
25-34	892 (44.3)	4643 (39.8)	5535 (40.5)		
35 and above	874 (43.3)	4093 (35.1)	4966 (36.3)		
Religion					
Christian	1487 (73.8)	4807 (41.2)	6294 (46.0)	735.43	<0.01
Muslim	502 (24.9)	6608 (56.7)	7110 (52.0)		
Traditional	26 (1.3)	248 (2.1)	274 (2.0)		
Types of Union					
Monogamy	1886 (93.6)	10073 (86.4)	11959 (87.4)	81.76	<0.01
Polygamy	129 (6.4)	1590 (13.6)	1719 (12.6)		
Educational Status (Wife)					
No fonnal education	263 (13.1)	6214 (53.3)	6477 (47.4)	1365.84	<0.01
Primary	496 (24.6)	2365 (20.3)	2861 (20.9)		
Secondary	855 (42.4)	2384 (20.40	3239 (23.7)		
Tertiary	401 (19.9)	700 (6.0)	1 IOI (8.0)		
Occupation					
None	324 (16.1)	3696 (31.7)	4020 (29.4)	201.76	<0.01
Working	1691 (83.9)	7967 (68.3)	9658 (70.6)		
Place of **Residence**					
Urban	1076 (53.4)	2996 (25.7)	4072 (29.8)	631.07	<0.01
Rural	937 (46.6)	8667 (74.3)	9606 (70.2)		
Region					
North central	435 (21.6)	2073 (17.8)	2508 918.3)	1391.37	<0.01
North east	131 (6.5)	3176 (27.2)	3307 (24.2)		

North west	90 (4.5)	2851 (24:4)-	2941 (21.5Y		
South cast	289 (14.3)	1089 (9.3)	1378 (10.1)		
South south	385 (19.1)	1098 (9.4)	1483 (10.8)		
South west	685 (34.0)	1376 (11.8)	2061 (15.1)		
Age at first marriage					
14 and below	246 (12.2)	3347 (28.7)	3593 (26.3)	480.82	<0.01
15-19	764 (37.9)	5139 (44.1)	5903 (43.2)		
20 and above	1005 (49.9)	3177 (27.2)	4182 (30.6)		

4.7 **Association between Current use of Contraceptives and Fertility Related Characteristics of Respondents.**

Greater proportions of the respondents with 1-4 living children are currently not using contraceptivs (62.5%) followed by those with 5 children and above (26.5%) and least by those with no child (10.9%), this was statistically significant (P< 0.01). Greater proportion of the respondents whose husband want more children are currently not using a method of contraceptive (49.3%) followed by those who wants same number of children as their husband (47.0%) and least by those who wants more children than their husband (3.7%, this was statistically significant (P< 0.01).

TABLE 5: Association between Current use of Contraceptives and Fertility Related Characteristics of Respondents

Fertility-related Characteristics	Current use of contraceptives Yes(%)	No(%)	Total(%)	x^2	P-valuc
Parity					
0	47 (2.3)	1274 (10.9)	1321 (9.7)	145.38	<0.01
1-4	1377 (68.3)	7293 (62.50	8670 (63.4)		
5 and above	591 (29.3)	3096(26.50	3687 (27.0)		
Husband-Wife fertility preference					
Both want same number of children	1379 (68.4)	5478 (47.0)	6857 (50.1)	460.03	<0.01
Husband wants more	483 (24.0)	5751 (49.3)	6234 (45.6)		
Wife wants more	153 (7.6)	434 (3.7)	587 (4.3)		
Ideal **number of children**					
0	1 (.0)	113 (1.0)	114 (0.80	542.08	<0.01
1-4	879 (43.6)	2334 (20.0)	3213 (23.5)		
5 and above	1135 (56.3)	9216 (79.0)	10351 (75.5)		
Ideal number of boys					
0	243 (12.1)	1997 (17.1)	2240 (16.4)	420.57	<0.01
1-4	1625 (80.6)	6723 (57.6)	8348 (61.0)		
5 and above	147 (7.3)	2943 (25.2)	3090 (22.6)		
Ideal number of girls					
0	250 (12.4)	2045 (17.50	2295 (16.8)	357.28	<0.01
1-4	1664 (82.6)	7258 (62.2)	8922 (65.2)		
5 and above	101 (5.0)	2360 (20.2)	2461 (18.0)		

4.8 Association between Current use of Contraceptives and Partners' Related Characteristics.

Table 6 shows cross tabulations of respondents' partners' characteristic and current use of contraceptives. Greater proportion of the respondents' partners aged 35 and above years are currently not using a method of contraceptive (70.6%) compared to those aged 25-34years (26.4%) and the least 15-24 years (3.0%), this was statistically significant (P< 0.01). Greater proportion of the respondents with couples' age difference 6-10 years are currently not using a method of contraceptives (33.6%), followed by those with couples' age difference 5 and below years (27.3%), followed by couples' age difference 11-15 years (20.3%), and least by couples' age difference 16 and above (18.8%); this was statistically significant (P< 0.02). A highly significant proportion of the respondents' partners with no formal education are currently not using a method of contraceptives (43.7%), compared to those with secondary and primary education (24.6%) and (20.1%) respectively, and the least tertiary education (11.6%).

TABLE 6: Association between Current use of Contraceptives and Partners' Related Characteristics.

Partners' Related Characteristics	Current use of Contraceptives				
	Yes(%)	No(%)	Total(%)	x2	P-value
Education Status (Husband)					
No formal education	216 (10.7)	5095 (43.7)	5311 (38.8)	918.91	<0.01
Primary	471 (23.4)	2350 (20.1)	2821 (20.6)		
Secondary	780 (38.7)	2864 (24.6)	3644 (26.6)		
Tertiary	548 (27.2)	1354 (11.6)	1902 (13.9)		
Partners' age					
15-24	21 (1.0)	351 (3)	372 (2.7)	53.62	<0.01
25-34	429 (21.3)	3075 (26.4)	3504 (25.6)		
35 and above	1565 (77.7)	8237 (70.6)	9802 (71.70		
Partners' age difference					
5and above	695 (34.5)	3180 (27.3)	3875 (28.3)	99.27	<0.01
6-10	751 (37.3)	3923 (33.6)	4674 (34.2)		
11-15	333 (16.5)	2368 (20.3)	2701 (19.7)		
16 and above	236 (11.7)	2192 (18.8)	2428 (17.8)		

4.9 Association between Current Contraceptive use and Socio-Demographic Characteristics of Respondents.

Logistic regression analysis revealing the association between Socio-demographic characteristics ofrespondents and current use of contraceptives are shown in table 7 below.

Age:

Logistic regression (Table 7) revealed that there was significant increase in contraceptive uptake with age. However, older women (25 years) were more likely to report contraceptive use compared to younger women (<25 years) [O.R= 2.25 (95% C.I= 1.94-2.61) and 2.50 (95% C.I= 2.15-2.90) for women aged 25-34 and 35-49 respectively].

Religion:

After adjusting for other variables, logistic regression analysis revealed that there was statistical significant association between religion and uptake of contraceptive services. Respondents who were Muslims were four (4) times more likely not to use contraceptives [O.R= 0.25; 95% C.I= 0.22-0.27] as compared to their Christian counterparts. Also respondents that practice traditional religion were about three (3) times more likely not to use contraceptives [O.R= 0.34; 95% C.I= 0.23-0.51] as compared to their Christian counterparts.

Types of union:

Logistic regression revealed that types of union of the respondents had a statistical significance with use of contraceptives. Being in polygamous union was associated with less use of contraceptives [O.R= 0.43; 95% C.I= 0.36-0.52] compared to being in monogamous union.

Education status:

Respondent's education status was found to significantly influence the uptake of contraceptives. Increase in uptake was observed with corresponding increase in education status; respondents having tertiary education were about fourteen (14) times more likely to use contraceptives [O.R= 13.53; 95% C.I= 11.37-16.11] compared to not having formal education. Also respondents having primary education were about five (5) times more likely to use contraceptives [O.R= 4.95; 95% C.I= 4.24-5.97] compared to not having formal education.

Occupation:

It was observed that respondents who were working were more than two times more likely to use contraceptives [O.R= 2.42; 95% C.I= 2.14-2.72] than those not working.

Place of residence:

A statistical significant association was observed between the lype of place of residence and uptake of contraceptives. Rural dwellers were more than three (3) times less likely to use contraceptives [O.R= 0.3; 95% C.I= 0.27-0.33] than urban dwellers.

Region:

Contraceptive use varies across the geo-political regions, highest and least uptake was observed in the Southwest and Northwest respectively. There was low contraceptive uptake associated with the Northern region of Nigeria. Respondents who were from the South west region were about two (2) times more likely to use contraceptives [O.R= 2.37; 95% C.I= 2.07-2.72] than their counterparts from North central.

Age at first marriage :

Logistic regression analysis revealed that there was statistically significant association between ages at first marriage of the respondents and current use of contraceptives. Low age at first marriage was found to be negatively associated with uptake of contraceptives. Being married at the age group 14 and below was associated with less use of contraceptives [O.R= 0.23; 95% C.I= 0.20-0.27] compared to being married at the age 20 and above.

TABLE 7: Association between Current use of Contraceptives and Socio-Demographic Characteristics of Respondents.

Socio-Demographic Characteristics	OR [95% C.I]	P-vulue
Age Groups (Years)		
15-24 (ref)	I	
25-34	2.25 [I.94-2.6]	<0.01
35 and above	2.50 [2.15-2.90]	<0.01
Religion		
Christianity (ref)	1	
Islamic	0.25 [0.22-0.27]	<0.01
Traditional	0.34 [0.23-0.51]	<0.01
Types of Union		
Monogamy (Ref)	1	
Polygamy	0.43 [0.36-0.52]	<0.01
Educational Status		
No formal education (Ref)	I	
Primary	4.95 (4.24-5.79]	<0.01
Secondary	8.47 [7.32-9.81]	<0.01
Tertiary	13.53 [11.37-16.11]	<0.01
Occupation		
None (Ref)	I	
Working	2.45 [2.14-2.74]	<0.01
Place of Residence		
Urban (Ref)	I	
Rural	0.30 (0.27-0.33)	<0.01
Region		
North central (Ref)	1	
North east	0.20 (0. 16-0.24]	<0.01
North v,e;t	0.15 [0.12-0.19)	<0.01
South east	1.27 (1.07-1.49)	<0.01
South south	1.67 (1.43- I.95)	<0.01
South west	2.37 [2.07-2.72)	<0.01
Age at first Marriage		
14 and below (Ref)	I	
15-19	2.02 [1.74-2.35]	<0.01
20 and above	4.30 [3.71-4.99]	<0.01

4.10 Association between Current Contraceptive use and Fertility Related Characteristics of Respondents.

Logistic regression analysis revealing the association between fertility related characteristics of respondents and current use of contraceptives are shown in the table 8 below.

Parity: Having at least a child was found to be statistically significantly associated with uptake of contraceptive services. Respondents with 5 and more children and 1-4 children were about five times more likely to use contraceptives (O.R= 5.17; 95% C.I= 3.82-7.01] and [O.R= 5.12; 95% C.I= 3.80-6.89] respectively, compared to those with no child.

Ideal number of children: Logistic regression analysis showed that there was association between respondents' perception of ideal number of children and uptake of contraceptive services. Respondents who perceived at least a child as the ideal number of children are much more likely to report contraceptive use compared to those that perceived no child (OR= 42.56 (95% C.I= 5.93-305.20) and 13.92 (95% C.I= 1.15-1.70) for women who perceived 1-4 and 5 and above respectively].

Husband-wife fertility preference: Logistic regression analysis revealed that differences in husband-wife fertility preferences influences uptake of contraceptive services. Respondents whose husband wanted more children were three (3) times more likely not to use contraceptives [O.R= 0.33; 95% C.I= 0.30-0.37] compared to those who wanted the same number of children as their husband; also, wanting more children than the husband, though does not have strong association with the uptake of contraceptives, it increases the probability ofusing it by about 40% [O.R= 1.40; 95% C.I= 1.15-1.70].

TABLE 8: Ass ciation between Current Contraceptive use and Fertility Related Characteristics of Respondents

Fertility Related Characteristics	OR (95% C.I]	P-value
Parity		
0 (Ref)	1	
1-4	5.12 [3.80-6.89]	<0.01
5 and above	5.17 [3.82-7.01]	<0.01
Husband-Wife Fertility Preference		
Both want same no of children (Ref)	1	
Husband wants more	0.33 [0.30-0.37]	<0.01
Wife wants more	1.40 [1.15-1.70]	<0.01
Ideal Number of Children		
0 (Ref)	1	
1-4	42.56 [5.93-305.20]	<0.01
5 and above	13.92 [1.15-1.70]	<0.01
Ideal Number of Boys		
0 (Ref)	1	
1-4	1.99 [1.72-2.29]	<0.01
5 and above	0.41 [0.33-0.51]	<0.01
Ideal Number of Girls		
0 (Ref)	1	
1-4	1.88 [1.63-2.16]	<0.01
5 and above	0.35 [0.28-0.44]	<0.01

4.11 Association between Respondents' Contraceptive Practice and Partners' Related Characteristics.

Logistic regression analysis revealing the association between partners'- related characteristics of respondents and current use of contraceptives are shown in the table 9 below.

Partners' education status:

Respondent partners' education status was found to be significantly associated with contraceptive uptake. Increase in uptake was observed with increase in education status. Respondents having husband with tertiary education were more than nine (9) times more likely to use contraceptives [O.R= 9.55; 95% C.I= 8.07-11.30] compared to their counterparts having husbands with no formal education. Also, having primary education increases uptake of contraceptives by almost five times [O.R= 4.73; 95% C.I= 3.99-5.59] compared to no formal education.

Partners' age:

Logistic regression showed that partners' age was positively associated with the uptake of contraceptive services. Respondents with partner 35 and above years are about three (3) times more likely to use contraceptives [O.R= 3.17; 95% C.I= 2.04-4.95] compared to having partner (15-24) years; also, those having partner (25-34) years are more than two (2) times more likely to use contraceptives [O.R= 2.33; 95% C.I= 1.48-3.66] compared to having partner (15-24).

Partners age difference:

There was negative association between partners' age difference and uptake of contraceptives. Couples with large age difference 16 and more were two (2) times more likely not to use contraceptives [OR= 0.49; 95% C.I= 0.42-0.58] compared to their counterparts with age difference 5 and less years; also, couples with age difference (11-15) years were about two (2) times more likely not to use contraceptives [0.R= 0.64; 95% C.I= 0.56-0.74} and these were statistically significant. Though there's no statistically significant association between couple's age difference (6-10) and non use of contraceptives, it reduces the probability ofosing contraceptives by about 13% [O.R= 0.88; 95% C.I"'.' 0.78-0.98].

TABLE 9: Association between Respondents' Contraceptive Practice and Partner-Characteristics of Respondents

Partners' Related Characteristics	OR [95% C.I)	P-value
Education Status (Husband)		
No formal education (Ref)	1	
Primary	4.96 [3.99-5.99]	<0.01
Secondary	8.47 [5.49-7.52]	<0.01
Tertiary	13.54 [8.07-11.30]	<0.01
Partners' Age		
15-24 (Ref)	1	
25-34	2.33 [1.48-3.66]	<0.01
35 and above	3.17 [2.04-4.95]	<0.01
Partners' Age Difference		
5 and bellow (Ref)	1	
6-10	0.88 [0.78-0.98]	0.02
11-15	0.64 [0.56-0.74]	<0.01
16 and above	0.49 [0.42-0.58]	<0.01

CHAPTER FIVE

DISCUSSION

This study assessed the Demographic and fertility related correlates of uptake of contraceptive services among sexually fecund women of reproductive ages (15-49) years in Nigeria 2008. It also assessed the socio-demographic characteristics and other characteristics of the respondents that are associated with contraceptive uptake. The results showed that only 14.7% of the respondents reported currently using a method and this percentage is embarrassingly low and should be of a great public health concern. In Nigeria like other sub-Saharan African country where total fertility rate is high: 6.8, 6.9 and 7.2 in Mali Uganda and Niger respectively (MeasureDHS, 2008). In Nigeria low contraceptive uptake puts women at high risk of births and hence an increase in population. Nigeria which has a population of 175 million, total fertility rate 5.5% (more than the Worlds average 2.45%, CIA, 2013) and an annual growth rate of 3.2% (NPC 2007) is the most populous country in Africa currently faced with population explosion. Low contraceptives uptake (14.7% for all methods) puts women at high risk of births which results to population ex-plosion.

Demographic and Fertility Related Correlates of uptake of Family Planning Services.

Findings from this study showed that respondents (15-24years) are significantly more likely not to use contraceptives compared to their counterparts (35 and above years). This study is in agreement with studies from other nation in which the currently use was lowest among women aged 15-24years (Kenya DHS 2003, Egypt DHS 2003 and Columbia DHS 2005), also study carried out by Rhoune *et al.,* showed that older women (20 and above years) were more likely to report contraceptive use compared to younger women (less than 20 years). Findings from this study suggest that the quality of contraceptive services provided to youths is low. Low quality of services could be indicative of the difficulties youth experience in receiving modem contraceptives and also reason for low uptake of contraceptive services among youths despite conducive policy environment (Ministry of Health Uganda). Evidence from various settings suggests that receiving good quality contraceptive services encourages acceptance or continuation of contraceptive use. Similar research carried out in Nigeria by (Olowu, 1998) showed that adolescents (15-24 years) ex-perienced negative and judgmental attitudes and were sometimes counseled on moral matters rather than contraceptive methods when trying to access family planning services. However, this study contradicted the findings of (Sedgh *et al.,* 2007) who stated that the older the woman (ages 35 and above), the more likely she is to

report fear of side effects, health concerns and inconvenience as a reason for not using contraception compared with women between the ages of 15-24 years old. Additionally, women aged j5 and above believed they are at lower risk of pregnancy because they are not as fertile anymore, and based on this inaccurate self-risk assessment the women do not use contraception (Sedgb ***et al.,*** 2007).

Results from this study showed that religion of the respondents significantly influenced uptake of contraceptive services, respondents that are Muslim are four (4) times more likely not to use contraceptives compared to their Christian counterparts. This study is in correlation with that of Gaur ***et al.,*** 2008 which have recognized religion as an important factor to uptake of contraceptive services. This might indicate that family planning was still a sensitive issue in Islam despite the increase campaign to improve contraceptive practices.

In this study, fecund and sexually active women residing in rural areas are three (3) times more likely npt to use contraceptive services compared to their counterparts in the urban areas. This finding is in agreement with results from other studies which also showed lower contraceptive prevalence rates among rural dwellers (Rahayu ***et al.,*** 2009 and Bogale ***et al.,*** 2011).

Access to contraceptives similarly varies between rural and urban communities. Information and health services are more available in urban centers than in rural communities. A recent cross-sectional survey of women in South Ethiopia found that 42.2% of women in urban areas reported contraceptive use, compared to just 10.7% of women in rural areas (Ko ***et al.,*** 2010). Women who are able to access health services are 50-80% more likely to practice a family planning method that lowers their overall life time child parity (Hogan and Biratu 2004).

Results from this study showed a significant increase in contraceptive use with increasing educational level of respondents. This corroborates previous studies which reported that increasing educational levels have been associated with a corresponding increase in contraceptive practices due to their better decision making and greater motivation to practice contraception (Khan and Khan, 2007; Hogan ***et al.,*** 2009 and Sadat ***et al.,*** 2007).

Across sub-Saharan Africa, women's education has proven to be a powerful correlate to both contraceptive uptake and fertility decline (Cleland ***et al.,*** 2011). Education allows women greater independence and economic empowerment, minimizing the effect of gender inequalities that reduces women's reproductive decision-making power. Another possible

explanation could be better receptiveness and acceptance of family planning programs and messages e'"-pressed by this group as a result of being more empowered and able to take better decisions.

Previous studies have shown that use of contraceptives increases with parity (Ali ***et al.,*** 2004; Rahayu ***et al.,*** 2009). Possible explanation to this could be the need for these women to stop child bearing and resort into contraception after attaining desired family size. Findings from this study are in correlation as respondents with at least a child were significantly more likely to use contraceptives compared to their counterparts with no child.

Findings from this study showed that there was significant association between contraceptive use and geo-political zones of respondents. Respondents from the Southern part of Nigeria were more likely to use contraceptives than their counterparts from the Northern parts. Previous studies in Bangladesh and Ethiopia has also found the region of residence as an important correlate of contraceptive use (Kamal 2011 and Hogan & Biratu 2004).

Cultural and religion diversity poses a challenge to the widespread promotion of family planning and contraceptive use. National heterogeneity creates disparate communities with a range of beliefs and behaviors, and the way that contraceptive use is perceived varies greatly among many sub-populations. For instance where multiple cultural groups interact with a single community, this can enhance the spread of contraceptive practices as women from one culture are exposed to the contraceptive 'innovations' of another (Hogan & Biratu, 2004). However, in communities where one cultural groups forms the majority, existing behavioral norms will be reinforced and fertility rate will remain high (Hogan & Biratu, 2004). The prevailing value systems of purdah and izzat among the northern Muslims in Nigeria which encourages the segregation of the sexes and confinement of women to the family home, reducing women's mobility and access to services (Obermeyer 1994). The ambiguity of the Koran towards family planning means that attitudes towards family planning in Muslims communities are often shaped by local consensus of opinion (Amin, Diamond and Steele 1997). Hence women's use of the family planning services is often shaped by the prevailing religious attitudes and those in their community. Therefore, family planning services may be physically accessible in the local community, but cultural influences may mean that they may not be socially accessible.

Influence of Couples' Age Disparity on Uptake of Contraceptive Services

Previous studies have shown that spousal age difference is an important correlate in the uptake of contraceptive services. Large spousal age differences often indicate a greater power inequity within the relationship, associated with less communication on reproductive and contraceptive use decisions (Hogan & Biratu, 2004). Findings from this study showed a similar pattern as couples with large age difference are significantly more likely not to use contraceptives compared to their counterparts with low couples' age difference (Latifat, 2011).

Association between Age of Women at First Marriage and Uptake of Contraceptive Services

Previous studies have shown that the age at first marriage affects fertility preferences that inform contraceptive use. Early marriage lowers the age at first child bearing, increasing the total lifetime exposure women have to the risk of conception and hence lowers contraceptive use (Hogan & Biratu 2004). Findings from this study showed a similar pattern as women with lower age at first marriage (14 and less years) and (15-19 years) are significantly more likely not to use contraceptives [OR= 0.23, 95% C.I= 0.200-0.269] and [OR= 0.47, 95% CJ= 0.424-0.521] respectively, compared to their counterparts (20 and above years). Age is associated with a woman's reproductive goals in relation to birth intervals between children and her desired family size as well as her fear of contraceptive methods. The younger the woman, the more likely she is to have short interval between births and desire more children, compared with older women who have already reached their reproductive goals (Yohannes *et al.,* 2011).

Association between Husband-Wife Fertility Preference and Uptake of Contraceptive Services

Findings from this study showed that contraceptive use is three times less likely if husband wants more children than their wife compared to when both wanted the same number of children. Possible explanation to this could be that husband's fertility preferences are stronger than their wives. Similar study have documented that spousal opposition posses a major barrier to family planning and contraceptive uptake (Bogale, Wondafrash & Gima, 2011). However, this finding contradicted Pakistan's where it was documented that women's fertility preferences are stronger than their husbands (Zaidi *et al.,* 2011).

CONCLUSION

Findings from this study show that a high proportion of fecund and sexually active women aged 15-49 years in Nigeria are currently not using a method of contraceptive despite widespread of the knowledge of the services. Major barriers to uptake of contraceptive services as identified by this study were (Couples' age difference, difference in husband-wife fertility preferences, respondents' age at first marriage, religion, geo-political zones of the respondents, parity, respondents' education status etc). Negative association was found between large couples' age difference and uptake of contraceptive services. Uptake of this service varies across the geo-political zones in Nigeria.

RECOMMENDATIONS

Based on the low uptake of contraceptive services among fecund and sexually active women resulting from different barriers identified in this study, it is therefore recommended that:

- Community health education be implemented to reduce misconceptions about side effects of modem contraceptives.
- Advocacy be done at all levels to policy makers so that there can be increased political prioritization and commitment towards the promotion of family planning services as a national development tool.
- Efforts should be made to enhance home visitation of family planning workers and door-step delivery services should be formulated targeting the poor and backwards regions of the country.
- Greater effort should be made to influence the husband awareness of the attitude towards family planning services as husbands plays a decisive role in the wives' reproductive choices and behavior in the patriarchal society like Nigeria most especially the northern region.
- Men should be inspired to confer opportunities to their wives to participate in decision-making process including fertility regulation.
- There is need to strengthen girl-child education and women empowerment programs.
- There is need for involvement of Islamic clerics in the promotion of family planning so that religious beliefs would not deter the uptake of contraceptive services.

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The files you will download are in zipped format and must be unzipped before analysis. Following are some guidelines:

After unzipping, print the file with the .DOC extension (found in the Individual/Male Recode Zips). This file contains useful information on country specific variables and differences in the Standard Recode definition.

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The OHS Recode Manual contains the documentation and map for use with the data. The Documentation file contains a general description of the recode file, including the rationale for recoding; coding standards; description of variables etc. The Map file contains a listing of the standard dictionary with basic information relating to each variable.

It is essential that you consult the questionnaire for a country, when using the data files. Questionnaires are in the appendices of each survey's final report: http://measuredhs.com/publications/publications-by-type.cfm.

We also recommend that you make use of the Data Tools and Manuals: http://www.measuredhs.com/accesssurveys/technical_assistance.cfm.

OHS statistics can also be obtained using the STATcompiler tool: 1,ttp://•,;;-r,;.i,t.,tx-!:,p,;- r.,·•.)m. This tool allows users to select countries and indicators to create customized tables. It accesses nearly all of the indicators that are published in the final reports. Authorization is not needed to use the STATcompiler.

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