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CORRELATES OF CONTRACEPTIVE NON-USE AMONG MARRIED WOMEN IN NIGERIA.

POPOOLA TITILOPE FISAYO

STUDENT NUMBER: 687912

A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF SOCIAL SCIENCES, UNIVERSITY OF WITWATERSRAND, JOHANNESBURG,

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN THE FIELD OF DEMOGRAPHY AND POPULATION STUDIES

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SUPERVISOR: DR. LATIFAT IBISOMI

DECLARATION

I **Popoola Titilope Fisayo;** declare that this research report is my own work. It is submitted for the degree of Master of Arts in Demography and Population Studies at the University of the Witwatersrand, Johannesburg. To the best of my knowledge, it has not been submitted before for any other degree or examination in any other university.

…….... [Signature of candidate]

..……day of .....…..... 20…...

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DEDICATION

This work is dedicated to Almighty God and my parents Prof Afolabi and Dr (Mrs) Abiodun A.Popoola.

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LIST OF ABBREVIATIONS

MDGs - Millennium Development Goals

OR - Odds Ratios

UN - United Nations

NDHS - Nigeria Demographic and Health Survey

WHO - World Health Organization

TFR - Total Fertility Rate

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Abstract

Contraceptive non-use by women has been linked to negative reproductive health outcomes such as obstetric complications, abortions, and maternal morbidity and mortality. These poor outcomes mostly arise from unintended pregnancies. With focus on married women non-users, this study examined the factors influencing non-use of contraception in Nigeria. The research identified a number of important characteristics which could predispose married women in Nigeria to non-use of contraceptive.

Data from the 2008 Nigeria Demographic and Health Survey (NDHS) was utilized. The target population comprised all females aged 15-49 years who were interviewed and responded to questions on contraceptive use. The sample size was 23,954 which were made up of all married women in the country except for infecund, pregnant and sterilized women. The outcome variable was measured using current contraceptive use which was dichotomized: not using contraceptive coded as (1) and using contraceptive coded as (0). Logistic regression was used for the analysis.

20,983 married women (88% of the study population) reported that they are contraceptive non-users. Of these, the following characteristics of married women had higher odds of contraceptive non-use. Women who want more children within 2years, unsure of timing and undecided had higher odds (2.17) of contraceptive non-use, women who are 35 years and above (1.80), women who are from North West, North East and North Central (5.35, 2.95, 1.64, respectively), women who are Muslims (1.43) had higher odds of contraceptive non-use in Nigeria. The association remained statistically significant for women's wealth index, number of living children, occupation, and place of residence, partner's education and educational level of women. And all these were also observed to have effect on the non-use of contraceptive.

Non-use of contraceptive among married women in Nigeria differs between women possibly because of region, religion, fertility intention, and age difference. These findings indicate areas that reproductive health policies and programmes should focus on in order to increase contraceptive uptake among married women in Nigeria.

Key words: Contraceptive Non-Use, Married Women, Nigeria, Reproductive Health, Contraceptive Uptake.

CHAPTER ONE

1.1 Background

Contraceptive non-use contributes to rapid increase of fertility rates (NPC and ICF MACRO, 2009). In Nigeria, fertility rates have increased the proportion of maternal deaths (Aliyu et al., 2012). These deaths are due to complications of unsafe abortions, and these abortions are responses to unwanted pregnancies that could have been prevented by effective contraceptive programming (Aghoja et al., 2009).

As defined by the World Health Organization (WHO) (2010), contraceptive non-use relates to the percentage of women who are currently not using or whose sexual partner is currently not using, at least one method of contraception. It usually applies to women of reproductive ages 15 to 49 years (WHO, 2010). Contraceptive use is seen as pivotal to protecting women's health and rights, impacting upon fertility and population growth as it reduces unwanted pregnancies and maternal deaths (Bankole, 2006). Access to contraceptive use empowers women and girls and as a result it promotes economic development, particularly in developing countries (Susheela et al., 2006). Its non-use thus has consequences on the health and well-being of all (Bankole and Singh, 2006). Contraceptive use varies among women across the world (Bloom et al, 2010). The United Nations in 2011 reported that about 70% of married women or women in union who reside in the developed regions (such as Northern America, Eastern and Western Europe) use at least one contraceptive method. Conversely, about 50% of women in union who reside in less developed regions (such as Asia, and Africa) use at least one contraceptive method, while 20% of women in least developing regions, such as Togo, Rwanda, Uganda, and Malawi use at least one method of contraceptive (United Nations, 2011).

Contraceptive non-use has been identified with various negative reproductive health outcomes on women's health. These include obstetric complications and unsafe abortions, maternal morbidity and mortality that are associated with unintended pregnancies (Bankole et al., 2006). For example, a report from the WHO (2002) revealed that worldwide contraceptive non-use has led to about 90% of unwanted births, the remainder being due to contraceptive method failure. In addition, non-use has been reported to have amounted to 17% of maternal disease burden and 89% of unsafe abortions (WHO, 2002). Martine et al., (2004), showed that throughout the world,

lack of contraceptive use among women has caused about 149,000 (0.3%) maternal deaths and 8.8 million (0.6%) Disability Adjusted Life Years (that is, the sum of years of potential life lost due to premature mortality and the years of productive life lost due to disability).

In most sub-Saharan Africa countries, Total Fertility Rate (TFR) is still high, at an average of 6.0-6.5 births per woman (Cohen, 1993). The great number of married women in their reproductive age not using contraceptive has contributed greatly to these high rates of births in sub-Saharan Africa countries (Bankole, 1995). In Nigeria, the Nigeria Demographic and Health Survey (NDHS) 2008 results indicates that the TFR has remained consistently high over the last 17 years with an insignificant decline, from 5.9 births per woman in 1991 to 5.7 births per woman in 2008 (NPC and ICF MACRO, 2009).

According to Hamilton (1997), there have been improvements in the global average for contraceptive use among married women, from 57% in 1990 to 62% in 1997. However, on the aggregate, between the mid-1960s and 1990s the percentage of couples in the developing world using contraceptive went up from an average of 9% to 53% (UNFPA, 2001). With an improvement in the contraceptive use among married women around the world, global health has also improved considerably over the last four decades (Creanga, 2011). Yet in Africa, contraceptive use still lags far behind with 27% prevalence (UN, 2006). According to Ross et al .(2002), the average contraceptive prevalence for sub-Saharan Africa as a whole is estimated at about 20%. Currently the percentage of married women who are not using contraceptive is still very high, particularly in countries like Mali (92%), Mauritania (92%) and Nigeria (87%) (NPC & ICF MACRO, 2004) and less studies have been conducted to find out correlates of contraceptive non-use, focusing on these married women.

Hence, this study is focused on women that are currently married between the age of 15-49 years who are not using any method of contraceptive in Nigeria. It is aimed at examining the factors associated with non-user of contraceptive among married women in Nigeria.

1.2 Problem Statement

Nigeria is the most populous country in Africa, with an estimated population of 170 million and a growth rate of 3.2% per annum (Population Reference Bureau, 2012). Over the past two decades total fertility rate (TFR) in Nigeria remained at a high level: from 5.1 children per woman in 1990 to 5.7children per woman in 2008 (NPC and ICF MACRO, 2009). Studies showed that contraceptive non-use among married women is a factor contributing to the increasing spread of sexually transmitted infections, increasing number of unwanted pregnancies, and high abortion rate in Nigeria (Okekearu, 2004; Juarez and LeGrand, 2005). Further study conducted in Oleh Nigeria indicated that there are 20,000 deaths a year due to abortion related problems (Awusi and Okeleke, 2010) and the contribution of induced abortion to overall maternal mortality is high, ranging between 6% in Ibadan and 50% in Lagos (Robert, 1991). Contraceptive use offers feasible means to address the burden of high fertility, unsafe abortions, and sexually transmittable infections in Nigeria. However, most of married women in Nigeria do not use any method of contraceptive (NPC and ICF MACRO, 2009). Difference in women characteristics was revealed to be one of the main reasons why disparities in contraceptive use exist among women. For example, in a study conducted in Edo state in Nigeria, it was revealed that women who are educated are more likely to use contraceptive than those who are not educated (Osayiosemwekha, 2009). While the use of any contraceptive method among women in Nigeria has increased in the past decade from 6% in 1990 to 15% in 2008 (NPC and ICF MACRO, 2009), disparities remain among married women in Nigeria (Adedimeji et al., 2012).

Contraceptive non-use is still very high, at about 86%, among married women in Nigeria (NPC &MACRO ICF, 2009).The overwhelming percentage of women who are not using any contraceptive method is unexpected, given the availability of a wide range of contraceptive methods in the country (such as condoms for males, IUD, injectibles, implants and condoms for females). Despite that large numbers of these married women in Nigeria (68%) are aware of different methods of contraceptive 20% of married women still have unmet need for contraception in the country (NPC and MACRO ICF, 2009), and this pose to be a challenge as to why married women are non-users. Further, maternal mortality ratio is still high in Nigeria, and one of the highest in the world, with approximately 610, 000 abortions performed in Nigeria

annually, 60% of which are unsafe, resulting in an abortion mortality rate of 120 deaths per 100,000 live births (Ndifon and Etuk, 2006). An estimated 54,000 women die yearly from pregnancy-related complications, and 840 maternal deaths per 100,000 live births occur in Nigeria (WHO, 2011). Non-use of contraceptive among married women could lead to extremely high rates of maternal mortality and pregnancy-related disabilities in Nigeria (Godwin, 2008). Contraceptive non-use among married women has social and economic consequences on individual families, societies and the country as a whole (Stephenson and Tsui, 2003). Often times these problems drive families into poverty, put children at risk of malnutrition and illness, and cause marital problems (Stephenson and Tsui, 2003). According to Bankole et al. (2006), at both individual and national levels combined, the burdens of public health outcomes attributable to contraceptive non-use include obstetric complications, abortion, and related morbidity and mortality associated with unintended pregnancies (i.e. unwanted and mistimed). The obstetric complications include maternal hemorrhage, sepsis, hypertensive disorders of pregnancy, obstructed labor and other maternal conditions (Bankole et al., 2006). The burden of these obstetric complications attributable to non-use of contraceptive was assumed to be proportional to the percentage of unwanted births among all births (Martine et al., 2004). Each year, contraceptive non-use is noted to cause nearly one million unintended pregnancies (United Nations, 2002). Consequently, if the problem of contraceptive non-use among married women in Nigeria is not further addressed; unintended pregnancies would continue to rise, and so will the numbers of poor women and child health outcomes. Negative child health outcomes have been associated with mothers' limited time to recover and regain nutritional balance to feed new births due to unintended pregnancies (Bloom et al. (2008); Joshi and Schultz, 2007). Among others, contraceptive non-use also has consequences on child health (USAID, 2011). Reports from United Nations, (2011) indicates that 2,300 children aged under-five years old and 145 women of child-bearing age die daily and this makes Nigeria the second largest contributor to the under–five years-old and maternal mortality in the world .

Additionally, United Nations (2011) reports that children who are left without their mothers are more likely to suffer from malnutrition, illness and are at higher risk of early death. Furthermore, contraceptive non-use among married women can be related to unmet need for contraception. According to Westoff (2012) 25% of women of reproductive ages 15 to 49 years in Nigeria had

an unmet need for modern contraception. Although awareness creation about Family Planning Programme (FPP) and services started over two decades ago in Nigeria, not much has been achieved on the unmet need for contraception among women in the country (Adam, 2006). According to Ibisomi et al., (2009) unmet need among urban women in Nigeria was 20.5% in 1990 and 16.9% in 2003. This is an indication that unmet need for contraceptives among women in Nigeria might partly account for contraceptive non-use among married women in Nigeria.

Despite the recent national campaigns conducted in Nigeria to improve awareness on the use of contraceptive, about 71% of currently married women in the country still do not intend to use contraceptive (NPC and ICF MACRO, 2008). United Nations (2003) reported a negative relationship between contraceptive prevalence and fertility. Contraceptive non-use could cause high fertility rates and the use could cause low fertility rates (United Nations, 2003). There is an evidence of this challenge in Nigeria, with the country being the most populous in Africa (World Bank, 2013).This high fertility rate will be a threat in the long run to capital accumulation, and a cause for environmental concerns (Mohai, 2005).

The large proportion of married women who are not using contraceptives is a reproductive health concern in Nigeria. This issue could possibly lead to increasing maternal mortality (MM), and already maternal mortality is high (NPC and ICF MACRO, 2008). There are about1000 maternal deaths per 100,000 live births in Nigeria (UNICEF, 2009).Therefore, this study aimed to examine factors that are associated with the non-use of contraceptive among currently married women in Nigeria.

1.3. Research Question

What are the factors associated with contraceptive non-use among currently married women in Nigeria?

1.4. Research Objectives

1.4.1General Objective

To examine the factors associated with contraceptive non-use among married women in Nigeria.

1.4.2 *Specific Objectives*

1. To examine the pattern of contraceptive non-use by selected characteristics among married women in Nigeria.

2. To examine the independent effect of each selected characteristics of married women by contraceptives non-use among married women in Nigeria.

3. To identify factors associated with contraceptive non-use among married women in Nigeria while controlling variables.

1.5 Justification of the study

Studies have examined women who are using contraceptive in Nigeria (Ankomah et al., 2013; Lang et al., 2012; Cadmus and Owoaje, 2009). There are few or no studies conducted on identifying those married women who are not using any methods of contraceptive in Nigeria. However, millions of contraceptive non-users among married women in Africa and elsewhere in the world are sole contributors to slow and decreasing economic development (UNFPA, 2012).

In Nigeria, non-use of contraceptive among married women has been an issue of concern to government and policy makers, yet there are few studies conducted on women who are not using contraceptive in the country. The problem of non-use of contraceptive also contributes to the currently high fertility rates in Nigeria (Bongaarts, 2000). This is mainly because married women who are not using contraceptive also contribute to the increasing number of unintended pregnancies and unwanted births. The National Population Commission (2008) has reported that despite the implementation of the four children per woman policy in Nigeria, the country's population continues to increase rapidly. This means that the policy of four children per woman is not being adhered to, thus having negative effects on the overall socioeconomic development of the country. As a result, the high level of contraceptive non-use among married women is having a negative impact on Nigeria's economy, given the evidence that over the years most women are having up to 6 children in Nigeria (NPC and ICF MACRO, 2009).

Due to the several negative effects associated with non-use of contraceptive among married women in Nigeria, this study intends to identify the factors that are associated with non-use among currently married women. The findings of this research will help to inform both policy and programme intervention. The study will contribute further valuable information for the development and implementation of effective policies and reproductive health programmes.

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CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

Contraceptive non-use has been least explored in the available body of literature. Consequently, the literature review in this chapter focused generally on contraceptive use and non-use in order to explain the selected variables that are used in this study.

2.2 Contraceptive use

The widespread of contraceptive use in the world today has contributed greatly to low fertility rates (Gakidou and Vayena, 2007). Total fertility rate has reduced drastically from 5 children per woman in the 1950s to 2.6 children per woman in recent years (United Nations, 2011). In developing countries the increased numbers of women in reproductive ages using contraceptives has decreased total fertility rates (Bongaarts, 1997). According to Creanga (2011), (62%) of women in recent years are using contraceptive in developing countries, compared to just (9%) of women who use contraceptive in the past years. Yet in Nigeria, modern contraceptive and other forms of contraceptive methods are still used inconsistently among married women (ICF and NPC MACRO, 2008). The wide gap between the highest and lowest quantiles has been reported to be associated with contraceptive non-use in less developed countries (United Nations, 2011). The gap between the rich (52%) and poor (35%) in the use of contraceptive has persisted despite the fact that there are general global improvements in socio-economic status and increased family planning services in the world (Gakidou and Vayena, 2007). However, socio-economic status among married women in Nigeria remains a challenge on contraceptive non-use.

Examining current contraceptive use among married women is important. This is so because they are more at risk of unintended and unwanted pregnancies, due to their exposure to frequent sexual intercourse (Jocelyn, 2012). The high numbers of contraceptive non-users among married women are challenging. According to Finlay (2012), contraceptive non-use increases the risk of unintended conception among married women in the United States. Additionally, another study reports contraceptive use to have gradually reduced the burden of high fertility and high HIV

prevalence in some part of sub-Saharan Africa countries (John et al., 2010). Hence, it is vital to know how and why high proportions of married women are not using contraceptive in Nigeria. Different variables are discussed below, with the use of related literatures conducted on contraceptive use.

2.2.1 Age

Age is a factor to be considered in a study on contraceptive non-use. According to UNFPA (2005), the relationship between age and contraceptive non-use is important in identifying high-risk groups among married women. Married women under the age of 18 and over age of 34 years have an increased risk of maternal complications (UNFPA, 2005).

However, there are mixed evidences on the association between married women's age and contraceptive non-use. In a study conducted on women of reproductive ages by Glei in 1999, women aged 17 years and younger whose current partners are more than three years older are significantly less likely to practice contraception than their peers whose partner is closer in age. On the contrary, results from the survey on family planning in the Philippines in 1997 gave the information that age group cannot only vary by contraceptive use, but can also dictate contraceptive choice. For example, modern contraceptive use was found to be high among women aged 35-39 years and low at age 15-19 years, notwithstanding range of partner's age (National Statistical Office, 2001; Njogu, 1991).

Interestingly, a study was conducted in Laopdr in the Philippines by Khouangvichit in 2002, examining factors affecting contraceptive use among married women in reproductive age in Laopdr. It found that older women may be less likely to use contraceptive because they believed that they are not likely to get pregnant or they follow existing tradition of society and therefore, do not want to try new ideas. However, Stephenson et al., (2007) found that in three countries in Africa, namely; Kenya, Malawi, and Tanzania, women with increasing age were less likely to use modern contraception, while a study by Mahmood and Ringheim in 1996 found a non-linear relationship between women's rise in age and contraceptive use in Pakistan. However, similar to the study conducted in the Philippines, Njogu (1991), in his study on similar patterns in Nigeria, found increased levels of contraceptive use with increasing age, which suggested that contraception was used to limit childbearing among married women who had attained their

desired family size. With that, it means number of living children and contraceptive non-use are also related.

2.2.2 Educational Level.

It has been proposed that the autonomy of women is one of the mechanisms of how education influences contraceptive use in developing countries (Salem and Bobak, 2005). Additionally, education has long been associated with declining fertility and increasing contraceptive use since the publication of the results of the first World Fertility Survey in the mid-1970s (Gordon, 2011). Findings from across the developing world also show that the better educated a women is, the more likely she is to use contraception (Ainsworth et al., 2011; Rutenburg et al., 2010). Similarly, in Ethiopia, Beekle and McCabe (2006) and Korra (2002) found strong associations between women's education and contraceptive use, whereas Hogan et al.,(1999), found an association between literacy levels and modern contraceptive use in southern Ethiopia.

Baale (2011), posits that educated wives attempt to prolong the interval between births by the use of modern contraceptive. However, a study conducted on Women's Education and Modern Contraceptive Use in Ethiopia by Gordon in 2011 revealed that low education is associated with non-use of contraceptive. This study will thus examine the association between married women's education and contraceptive non-use in Nigeria.

2.2.3 Fertility Intentions

Studies have shown that fertility intention of women is a good predictor of their contraceptive use behavior (Dodoo, 2001; Cochrane and Guilkey, 1995). For example, in Ghana, the wife's attitude toward contraception is strongly influenced by her desire for more children most especially because of her husband's attitudes towards wanting male children (Ezeh, 2010). Similarly among the Yoruba tribe of Nigeria, the fertility desires of both marriage partners are important predictors of the couple's contraceptive use (Dodoo, 2001). For instance, men in Nigeria want many children for farming and for future security, and as such women tend not to use contraceptives because they want more children because of their husband's desire for more

children (Fadeyibi, 2013). Fertility intentions may play an important role in decision-making regarding contraceptive non-use among married women in Nigeria.

2.2.4 Number of Living Children

The association between the number of living children and contraceptive non-use in Africa is crucial. For example, according to Caldwell and Caldwell (2000), in developing countries children are considered as income services and consumption unit in the family, most especially in rural areas. This means that the higher the number of children, the higher the means of income in the family**.** However, Bankole (2004) observed that the number of living children a person has is likely to affect the use of contraceptive method because the desire for additional children decreases with the increasing number of living children.

Similar to Caldwell and Caldwell's findings, Harirah (2007), substantiated in his study that the patterns of use of contraceptive are low at lower parities while contraceptive use increases with an increase in the number of living children. He thus concludes that there is an association between the number of living children and contraceptive use (Harirah, 2007). Another study suggests that where the socio-economic condition totally depends on agriculture and the low level of education, it is not surprising that the number of children would not affect contraceptive non-use because children in this respect are valued highly for family contribution (Degraff, 1991). Therefore, it is pertinent to this study to investigate if there is an association between the number of living children a woman has and contraceptive non-use in Nigeria.

2.2.5 Occupation

Although the association between occupation and contraceptive use is arguably more discussed in different studies, in a review by Chudasama et al (2009) based on the factors determining contraceptive use among married women in India, it was found that occupation was not associated with oral contraceptive use. According to Hogan et al (1994), occupation is a revenue generator depending on one's occupational status. It was revealed that the higher the level of occupational status, the higher the use of contraceptives. In other words, women who do not work or who are not gainfully employed may not have the means to access contraceptive use (Balk, 1994). To buttress this point, one of such studies is a Nigerian study by Bankole et al

(1995), which reveals that desired fertility is lower for women married to husbands employed outside agriculture, compared to those in the agricultural sector, and this in turn affects contraceptive non-use. Some researchers also argued that working class women, especially those who earn cash income, are presumed to have power and control over household decisions, increased involvement outside home, and consequently can control their reproductive decisions (Gage, 1995; Mason, 1987). Similarly, paid work can provide alternative satisfaction for women who may compete with bearing and rearing children and may lead to contraceptive use (Hogan et al, 1999). A study by Balk (1994), suggests that women's participation in household decision making process shows an increase in their adoption of contraceptive use, and as such conclude that both self-employed women and employees have a distinctly higher wealth and predicted probability of contraceptive use than those who are not employed (Balk, 1994).

2.2.6 Partner's Educational Level

Generally, husbands with a good education can get a good job and get the high income for family and also have access to various sources of mass media, which can influence their attitude and behavior, including reproductive behavior. In many developing countries, men are known to be the main decision-maker on household and reproductive health of even their partners (Bankole, 2010). Therefore, the effect of education can be adequately measured from the husband's perspective. A study by Martin (1995), explained that schooling is not solely to transmit knowledge, but also stimulates the acquisition of additional information from other medium which raises the awareness of individuals. As such, education increases people's exposure to mass media. Most results from studies indicated that partners' education is often associated with women's reproductive behavior (Tawiah, 1997). That is, women's contraceptive use or non-use depends on the level of education of both the women and the partners'. For instance, Shah et al. (1998); and Ezeh (1993) found that husband's education was a significant predictor of current use of contraception.

From the study by Shah et al. (2007), it is found that women whose husbands had a secondary school or higher education were 3.5 times likely to use contraceptives as compared to those women whose husbands were illiterate. Similarly, Cochrane (1994) in his research on determinant of contraceptive use in Zimbabwe found that both women's education and

husbands' education has an effect on contraceptive use. Hence, this study will examine if the husband's education is a related to contraceptive non-use among married women in Nigeria

2.2.7 Region

Several studies have found variations and similarities in contraceptive use according to region. For example, a study conducted by Alkema et al., (2013) on examining the national regional trends in contraceptive prevalence between 1990 and 2015 revealed that almost all sub-regions, except those where contraceptive prevalence was already high in 1990, had an increase in contraceptive prevalence. However, a study conducted by Wang in 2013 on four different countries, namely Kenya, Uganda, Rwanda and Tanzania revealed that modern contraceptive use of women depends on the supply and service of the environment. This can be explained to mean that contraceptive use varies according to the supply in a `region.

Further, evidence from studies on contraceptive use revealed that women of reproductive ages 15-49 years from the Northern region of Nigeria are less likely to use contraceptives compared to women from the Western region (Augustine et al., 2011). Women from the Western region have been revealed to be more educated, compared to married women from the Northern and Eastern regions (Feyisetan 1996). Most especially, Northern females have been reported to be given out in marriage at younger ages compared to females from other regions. They are given out by parents or guardians at ages as young as 14-18years (Population Council, 2009). These women tend to have less autonomous power because of their lower educational attainment (National Population Council, 2009). Their husbands are the main decision-makers and often deny them access to contraceptive use. As such, this study is set to examine the relationship between region and contraceptive non-use among married women in Nigeria.

2.2.8 Religion

Evidence exists which demonstrates that the use of contraceptive is associated with religion and beliefs of people (Coale, 1986; Lesthaeghe, 1980). According to Warwick (2005), religious values create an important barrier for family planning practices. Similarly, a study by Jones and Dreweke (2011), reports that some individuals view the use of contraceptives as unacceptable due to their religious belief. In other settings, contraceptive use is strongly opposed by the

Catholic leadership and some other socially conservative religious organizations including Islamic fundamentalist (Jones and Dreweke, 2011).

However, there have been mixed results on how religion affects contraceptive non-use in a population, depending on the religious composition of that particular population. For instance, Catholics were found to have higher fertility rates than Jews and Protestants, while Muslims tend to have higher fertility rates than non-Muslims (Lucas and Meyer, 2004). Similarly, a study conducted by (Boniface et al., 2006) in Nigeria found that the Catholic religion is associated with having higher numbers of children as compared to other Christians. Likewise, Muslim religion is associated with higher numbers of children compared to adherent religion (Isiugo-Abanihe, 1994). Though the study did not explain why the difference exists, it is worthwhile to ascertain the influence of religion on contraceptive non-use among married women in Nigeria, where husbands have been reported to be dominant decision-makers (Boniface et al., 2006).

2.2.9 Place of residence

Place of residence is often used to explain variation of factors in demographic studies because, depending on whether a woman's place of residence is rural or urban, this could determine accessibility to family planning services. This is because the fact that infrastructures are not evenly distributed across space may affect the accessibility to family planning services and opportunities, which in turn may influence the way of life of the people. For instance, according to Singh and Casterline (1998), urban areas in many developing countries are often associated with high education, better access to medical care and family planning and other social services. In relation to non contraceptive use, Islam et al (1995) also found that the place of residence has a substantial effect on fertility and contraceptive use by women in Bangladesh. It was further explained in the study that the differences may be partly attributed to educational attainment and access to modern ways of communication by urban dwellers, such as radio, televisions and newspapers, which provides exposure to modern ideas and enlightenment on family planning. Consequently, the rates of contraceptive use are expected to be high in an urban area than in a rural area (Tuladhar, 2011).

Thus, this study will examine the association between place of residence and contraceptive non-use. This is so because the majority of the population in Nigeria resides in rural areas, which are disadvantaged than urban areas in terms of the social amenities and other economic

opportunities. Moreover, with the entrenchment of cultural practices in rural areas compared to urban areas, it is expected therefore that rural areas would have higher non-use of contraceptive among married women in Nigeria.

2.2.10 Wealth Index

Wealth could be a vital factor for contraceptive non-use. Studies have shown that contraceptive use is associated with wealth. (Shah, 1998; Stephenson and Tsui, 2003) One of the assumptions is that an individual's wealth may have an effect on affordability of contraceptives. According to Creanga et al (2011), in his study women in poor wealth quintile were more likely than those in the rich quintile to be non-users of contraceptive.

Additionally, as reported by the Urban Health Initiative (UHI) in 2010, contraceptive use is strongly associated with wealth. It was revealed that modern method use is more than twice as high among the wealthiest women as it is among the poorest (UHI, 2010). This study will seek to examine the association between wealth status and contraceptive non-use among married women in Nigeria.

2.3 Conceptual Framework.

The theoretical approach acknowledges the fact that individual contraception behaviour takes place within a particular socio-economic and demographic context. In other words, decisions on contraceptive- non use are viewed as a function of the determinants that affect socio-economic and demographic variables (Anker et al, 1982; Billsborow, 1985 and Casterline, 1985). In explaining this theory, women socio-economic and demographic variables determine their contraceptive non-use. Therefore, adoption of the use of contraception is being influenced by these (socio-economic and demographic characteristics of women) comparing the individual women. These variables include educational attainment of women, region, residence, partners educational level, religion, fertility intention, women's age, occupation and number of living children. These variables help to enhance the frequency of discussion among married women, which helps to facilitate women's use of contraceptives.

A Conceptual Framework adopted from Bongaarts 1978 framework.

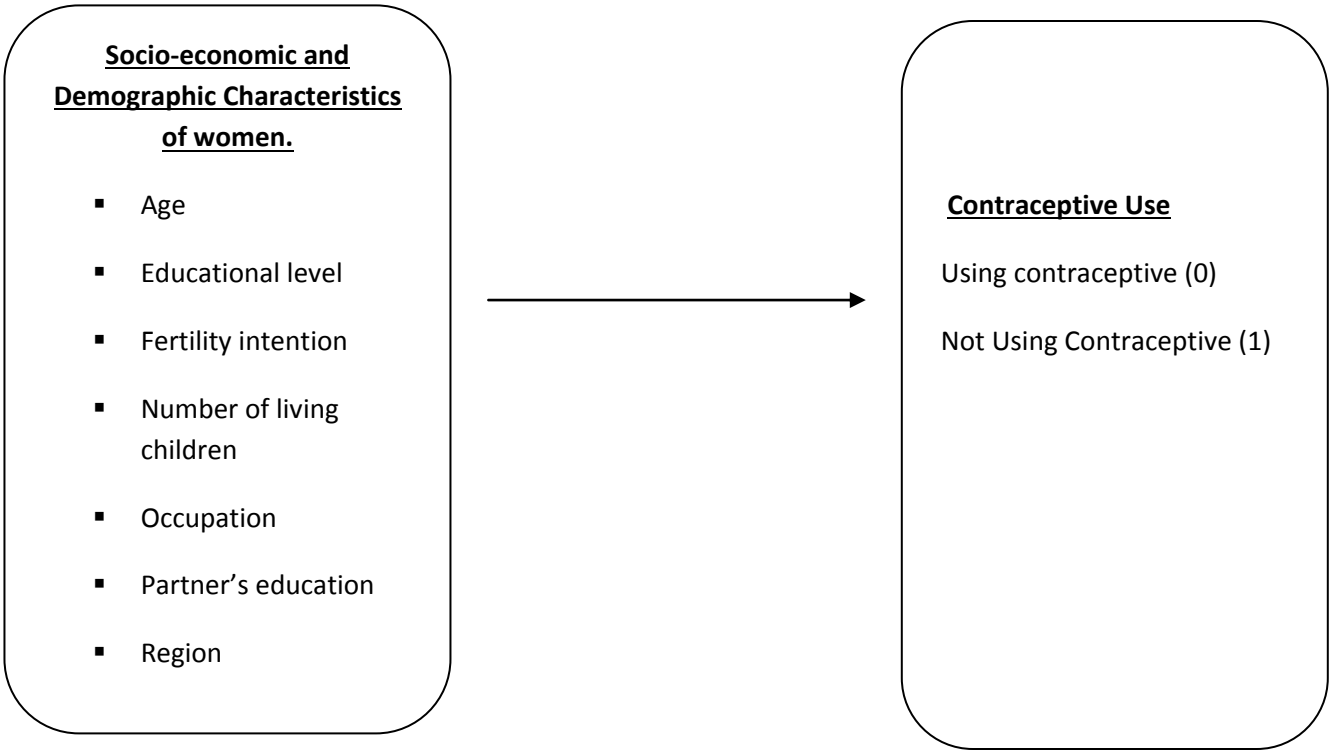

Figure 1: Framework designed by author showing the model for factors affecting contraceptive non-use among married women in Nigeria.

2.4 Hypothesis

H_O: Less educated women are not likely to be contraceptive non-users among married women in Nigeria.

H_A : Less educated women are more likely to be contraceptive non-users among married women in Nigeria.

H_O: There is no difference in contraceptive use between married women from rural and urban in Nigeria.

H_A: There is difference in contraceptive use between married women from rural and urban in Nigeria.

H_O: There is no difference in contraceptive use between married women from rich and poor households in Nigeria.

H_A: There is difference in contraceptive use between married women from rich and poor households in Nigeria

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter discusses the method used in this study. The source of data, study population, and sample design are all presented in this chapter. Additionally, the Data management was also highlighted and this chapter concludes with data analysis plan and the limitation of study.

3.2 Data Source

Quantitative data which is secondary in nature was used in this study. Individual women dataset from the 2008 Nigerian Demographic and Health Survey (NDHS) was utilized in this study.

3.3 Sample Size

This study was based on female ages 15 to 49 years who responded to question on contraceptive use. There are 33,385 females respondents, while infecund, pregnant and sterilized women were dropped, a sample size of 23,594 currently married women were selected as the study sample.

3.4 Study Design

Main variables used for this study.

Table 1

Main variables used in this study and study population Definitions:

VARIABLE	VARIABLE LABEL	CATEGORIES	HOW IT IS CODED IN THIS STUDY
DEPENDENT VARIABLE (DP)	Current Contraceptive Use	No method (0) Folkloric method (1) Traditional method (2) Modern method (3)	Folkloric, traditional, and modern methods (0) No method (1)
INDEPENDENT VARIABLES (IV) **Independent Variable**	Age	15-19 (1) 20-24 (2) 25-29 (3) 30-34 (4) 35-39 (5) 40-44 (6) 45-49 (7)	15-24 (0) 25-34 (1) 35+ (2)
Independent Variable	Educational Level	No education =0	No education (0)

		Primary =1 Secondary =2 higher=3	Primary (1) Secondary and higher(2)
Independent Variable	Fertility Intentions	Wants within 2 years (1) Wants after 2+ years (2) Wants, unsure timing (3) Undecided (4) Wants no more (5) Sterilized (6) Declared infecund (7)	Wants no more (1) Wants within 2 years, wants unsure timing and undecided (2) Wants after 2+ years (3) Sterilized and infecund (dropped because they do not fit into the categories of married women that can predict contraceptive non-use).
Independent Variable	Number of Living children	(continuous variable) 0-15	0-15 (the mean will be used to determine the relationship between number of living children and contraceptive non use. This is because the independent variable is a continuous variable.)
Independent Variable	Occupation	Not working (0) Prof, tech, manager (1) Clerical (2) Sales (3) Agric-employee(5) Services (7) Skilled manual (8) Unskilled manual(9) Don't know (98)	Not working and don't know (0) Professional (1) Clerical/ service and Manual skilled (2) unskilled/Sales/Agric employee (3)
Independent Variable	Partner's Education	No education (0) Primary (1) Secondary (2) Higher (3) Don't know (8)	No education/don't know (0) Primary education (1) Secondary and Higher (2)
Independent Variable	Place of residence	Urban (1) Rural (2)	Rural (1) Urban (2)
Independent Variable	Religion	Catholic (1) Other Christians(2) Islam (3) Traditionalist (4) Others (96)	Catholic (0) Muslim (1) Other Christian (2) Traditionalist and Others (3)
Independent Variable	Region	North central (1) North east (2) North west(3) South east(4) South south(5) South west(6)	South west (1) North east (2) North west(3) South east(4) South south(5) North central (6)
Independent Variable	Wealth Status	Poorest (1) Poorer (2) Middle (3)	Poor (i.e. poorest and poorer) (0) Middle (1)

		Richer (4) Richest (5)	Rich (i.e. richer and richest) (2)

3.5 Data Management

The 2008 NDHS data was downloaded from the Measure DHS website. The data was presented in Stata format and Stata version 12 was used for the analysis. Women that were currently not married at the time of survey were all dropped. The final analytical sample consisted of 23,954 women that were married as at the time of the survey.

Additionally, the dependent variable used in this study was current contraceptive use and it is dichotomous. Not using method was coded as (1), and using methods which includes folkloric, traditional, and modern was coded as (0). It was coded that way because currently married women that are not using contraceptives as at the time of the survey is the focus of the study.

The independent variables are measured using the various demographic and socio-economic characteristics of married women. Of these, the variable number of children which is a continuous variable was left as continuous in this study as well. Age a categorized variable was re-categorized into 3 groups. Women with no children are coded as (0), 1-2 children as (1), 3-4 children as (2), and more than 5 children as (3). Further, Married women's educational level was re-categorized by combining secondary and higher education together. Married women with no education were coded as (0), primary education as (1), and secondary or higher as (3). In like manner, partner's educational level were coded and combined accordingly. Variable place of residence was coded as rural (1) and urban as (2). Wealth index of married women was re-categorized by combining poorest and poorer to mean "poor" and this was coded as (1), middle as (2) and richer and richest were combined to mean "rich" and was coded as (3).

Additionally, respondents' occupation was re-categorized by combining not working and don't know -coded as (0), while professional, technical, managerial, clerical and services were coded as (1), sales and manual skilled coded as(2), and lastly unskilled manual and agric employees were coded as (3). Region also was re-categorized and South west was coded as (1). This is because people in South West region are usually known to have higher educational attainment than other regions in Nigeria and as such might have the higher chance of using contraceptive

(Omonona, 2005). South South coded as (2), South East as (3), North West as (4), North East as (5) and North Central as (6).

Regarding fertility intentions of women who wanted no more children was coded as (1) women who wanted within 2 years, women unsure of timing, and undecided were combined and coded as (2), those who wanted after 2years was coded as (3). Meanwhile those sterilized and infecund were dropped from the analysis as they do not fit into the categories of married women that can predict contraceptive non-use.

Dichotomous outcome variable was predicted by adopting Multivariate logistic method and the binomial logistic regression was done using Stata 12.

3.6 Data Analysis

- For the first objective which was to examine the pattern of contraceptive non-use by selected characteristics among married women in Nigeria, bivariate descriptive analysis was done. It was used to show the frequency distribution of selected characteristics of the study population by contraceptive use and non-use in the study population.
- Second objective which was to identify factors associated with contraceptive non-use among married women in Nigeria. Binomial logistic regression modeling was done to identify the significant associated factors.

The logistic regression model is specified thus,

$\ln (p / 1-p)= \beta o + \beta_1 X_1 + \beta_2 X_2 ..... \beta_k X_k + e.$ (Schneider, 2009)

Where βo is the constant, which indicates the probability of rejecting the hypothesis being tested and the Xi are the set of explanatory variables. The analysis of all data was done using Stata statistical software version 12. All tests were done at 5% significance level and at a confidence interval of 95%.

3.7 Limitation of the study.

Since this study is cross sectional in nature, it cannot infer that the selected independent variables cause women to be contraceptive non-users. Rather, the study can only infer whether the selected independent variables are associated with contraceptive non- use in the study sample.

Another limitation encountered in this study was that the quality of reporting of the data, especially contraceptive non-use may not be accurately reported in setting where women resort to covert use because of resistance from husband or religious prohibition or any forms of prohibition.

The data used in this study was collected in 2008 and this research is 2014. Therefore, it would have been better if a data collected in 2014 is available for used compared to the one of 2008 which might not generate a recent information that will be of use for policy makers .

In the Nigeria Demographic and Health Survey (NDHS) 2008 were self reported responses and as such there could have been some biases responses in the data.

3.8 Ethical Issues

With regards to this study, there is no risk of breaching interviewee confidentiality or associated considerations as the study makes use of annonymised secondary data of the 2008 Nigeria Demographic and Health Survey (NDHS).

CHARPTER FOUR

RESULTS

4.1 Introduction

This chapter presents the results of the analysis that was carried out in this study. It begins with percentage distribution of current contraceptive non-use among respondents women by selected characteristics. This was followed by unadjusted and adjusted analysis to examine the association between fertility intention and other selected characteristics of respondents and contraceptive non-use in Nigeria.

4.2 Descriptive analysis

4.2.1 Sample Characteristics of married women in Nigeria.

The percentage distribution of the socio-economic and demographic characteristics of the sampled married women is presented below in Table 2. The total sample of 23,954 currently married women was observed and 2,971 (12%) are users while 20,983 (88%) are non-users.

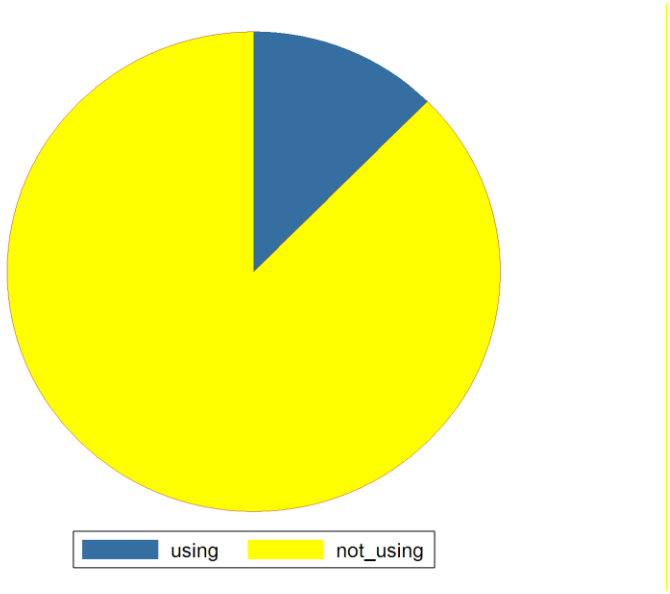

Figure 2. Pie chart showing the distribution of contraceptive use.

Further, 63.12% are less than 35 years of age. Women aged 25-34 years old have the highest proportion (38%) of contraceptive non-use, and in total 34% of women in all age groups are not using any methods contraceptive among married women in Nigeria.

Half of married women respondents in Nigeria have no formal education (51%). (27%) of married women have only secondary or higher educational attainment. About (57%) of currently married women who are not using any method of contraceptive has no educational attainment. Surprisingly, women with primary educational level have lower percentage (21%) of non-users compared to women with secondary or higher education (23%). Similar to women's educational level, women whose partners have no formal education account for the highest proportion (47%) of non-users in the population.

From Table 2 fertility intention among women revealed that 16% of women who want no more children are not using contraceptive. Further, women who want children within 2 years, who want more children but are unsure of the timing and are undecided, have the highest proportion (49%) of contraceptive non-users among married women in the country. And (34%) of women who wanted more children after two years are not using contraceptive.

Additionally, the non-users accounted for mean value of 3.2 out of the total mean value of 6.9 of the population of women with 0-15 children in Nigeria.

More than half (52%) of respondents are unskilled and agric workers while 13% of currently married women are clerical and manual skilled workers. Among non-users in Nigeria, 52% of women that are unskilled, sales and agric workers have the highest percentage of contraceptive non-use in the country compared to just 3% of women that are professionals. Additionally, 33% of the respondents who are not working are contraceptive non-users in Nigeria. And about 13% of women who are clerical and manual skilled workers are not using contraceptive.

Women whose partners have secondary or higher educational level had 33% of contraceptive non-users in the country. And 47% of women whose partners had no formal educational attainment have the highest proportion of contraceptive non-use use compared 20% of those whose partners had primary, secondary or higher education attainment.

Further, variations in contraceptive use exist among regions in Nigeria. It is revealed in Table 2 that most married women in Nigeria are from the North West region (28%), while a lower proportion (8%) are from South East. Overall, contraceptive non-use among married women from North West is the highest (31%), and women from the North East region have the second

highest (24%) proportion of non-users. In contrast, women from South East have the lowest proportion (7%) of contraceptive non-use in Nigeria.

Among currently married women in Nigeria, (56%) are Islam worshippers and most of them are contraceptive non-users. Additionally, (29%) of married women who belong to other Christian religions are contraceptive non-users compared to Catholic married women (8%) in Nigeria. About (60%) of currently married women who are other Christians are using contraceptive compared to (60%) of currently married women who are Muslims and are contraceptive non-users. Generally, traditionalist women have the lowest population of (2.7%) of contraceptive use. In which about (2%) are contraceptive non-users.

Most married women residing in the rural areas are contraceptive non-users (76%), and (25%) among married women living in the urban areas are also non-users. Half (50%) of women living in urban areas are using any method of contraceptive in Nigeria.

Close to half of the total number of married women in Nigeria are poor (49%). Only (32%) of the total population are rich. However, a higher proportion of non-users among married women in Nigeria belong to poor class (54%), while there is an interesting difference between the middle and the rich class. Women who belong to the middle class have a lower percentage (19%) of non-users compared to the rich (27%). In addition, there is a noticeable similarity between the poor and the middle class among those who are contraceptive users. In both classes of wealth index, that is the poor and the middle class, 16% of currently married women in each class of wealth use contraceptive. However, of contraceptive users, women who belong to the rich class have the highest proportion (67.55%) of users in the country.

In sum, the descriptive results revealed that about (88%) of married women in Nigeria are contraceptive non-users. The bivariate descriptive results further revealed that this high percentage (88%) of non-use varies markedly by the socio-economic and demographic characteristics of the women, with negative association between respondents' age, education, household wealth, number of living children and partner's education. The higher the levels or values of these factors, the less likely the women are non-users. The women that wanted to space or limit childbearing were also less likely to be non-users.

Table 2;

Bivariate Descriptive analysis results showing the percentage distribution of socio-economic and demographic characteristics by contraceptive use / non-use of married women in Nigeria.

Dependent Variable Contraceptive use	**Non-user** N= 20,983	**Users** N= 2,971	**Total** 23,954
Independent Variables	**%**	**%**	**%**
Age			
15-24	25.68	12.96	24.10
25-34	38.39	43.52	39.02
35+	35.93	43.52	36.87
Educational Level			
No education	56.56	14.17	51.30
Primary education	20.61	26.42	21.33
Secondary and higher	22.83	59.41	27.37
Fertility Intention			
Wants within 2yrs and Wants, unsure timing & undecided	59.09	48.14	58.06
Wants after 2+years	40.91	51.86	41.94
Number of Living Children			
0-15	Mean= 3.2	Mean=3.7	6.9
Occupation			
Not working	32.61	16.70	30.64
Professionals	2.84	10.64	3.80
Clerical/service&manualskilled	12.65	16.33	13.10
Unskilled /sales/agric	51.91	56.33	52.46
Partners Education			
No education	47.04	11.33	42.61
Primary education	19.88	24.53	20.46
Secondary and higher	33.07	64.13	36.93
Region			
South West	10.78	31.50	13.35
North Central	18.22	20.77	18.54
North East	23.56	6.87	21.49
North West	30.62	5.76	27.54
South East	7.26	13.03	7.98
South South	9.56	22.08	11.11
Religion			
Catholic	7.78	13.23	8.46
Muslim	60.12	25.11	55.78

Other Christian Traditionalist others	29.30 2.80	59.74 1.92	33.08 2.69
Residence Rural Urban	 75.74 24.26	 49.68 50.32	 72.51 27.49
Wealth index Poor Middle Rich	 53.72 19.17 27.10	 16.19 16.26 67.55	 49.07 18.81 32.12

4.3 Bivariate analysis of the factors associated with Contraceptive non-use among married women in Nigeria.

This section discusses the relationship that exists between selected demographic and socio-economic characteristics with the current contraceptive non-use among married women in Nigeria.

The First model of Table 3 presents the result from the unadjusted logistic regression of factors that are associated with contraceptive non-use. Findings indicated that married women between the age of 25-34 years and 35 years and above have lesser odds (0.44, and 0.42), respectively of not using contraceptive compared to women between ages 15-24 years.

With education, the results revealed that married women who have primary educational level have lower likelihood (odds ratio: 0.2) of contraceptive non-use compared to women with no education in Nigeria. Similarly, women who have secondary or higher education were less likely (Odds ratio: 0.10) to be contraceptive non-users compared to women with no education.

Further, for the number of living children the result revealed that with additional child a woman has , the odds of non-use decreases by 8% although this is not statistically significant.

The binomial logistic regression in Table 3 further showed that women who want more children after 2 years plus are 3 times more likely (Odds ratio: 3.8) to be contraceptive non-users compared to women who want no more children. Also, women who want more children after two years are 2 times more likely (Odds ratio: 2.4) to be contraceptive non-users compared to women who want no more children. The fact that these women who want within two years,

wants unsure timing and undecided, and women who wants after two years are more likely to be non-users could be because of unmet need of contraception in Nigeria.

Occupation variable in table 3 reveals that women who are professional, manager, clerical and service workers are less likely to be contraceptive non-users with the (Odds ratio: 0.14) compared to women that are not working. Additionally, married women that are sales and manual skilled are also less likely (Odds ratio: 0.40) to be contraceptive non-users compared to married women that are not working also unskilled and agric employee married women are less likely (Odds ratio: 0.47) to be contraceptive non-users compared with women that are not working. The p-values indicated that all are statistically significant.

Similar to women's education, women whose partners have primary education and whose partners have secondary or higher education were less likely (Odds ratio: 0.20, and 0.12), respectively to be contraceptive non-users compared to women whose partners have no education.

Married women urban residents are less likely (Odds ratio: 0.32) to be contraceptive non-users compared to women who reside in the rural areas in Nigeria and this is statistically significant.

In addition, married women from North West are more likely (Odds ratio: 15.6) to be contraceptive non-users compared to women in South West region. Similarly, married women who are from North East also are 10 times more likely (Odds ratio: 10.03) to be non-users compared to women in the South West. Married women from North central are 2 times more likely (Odds ratio: 2.56) to be contraceptive non-users compared to women from south west region. Similarly, women from the South South, and South East are more likely (Odds ratio: 1.26, 1.63), respectively to be contraceptive non-users compared to women from South West region of Nigeria.

Results of religion variable in table 3 below indicates that married women in Nigeria who are Muslim are more likely (Odds ratio: 4.07) to be contraceptive non-users compared to married women who are Catholics. However, women who are other Christians are less likely (Odds ratio: 0.83) to be non-users compared to women who are catholic. Women who are traditionalist and others are twice as likely (Odds ratio: 2.48) to be non-users compared to women who are catholic in Nigeria.

All the odds of wealth index are statistically significant. Married women who belong to the middle class and rich class were less likely (Odds ratio: 0.36, 0.12), respectively to be contraceptive non-users compared to women from the poor class in Nigeria.

Table 3;

Odds ratios of association of selected socio-economic and demographic characteristics with contraceptive non-use among married women in Nigeria.

Dependent Variable	**Model 1 Unadjusted result**		**Model 2 Adjusted result**	
	Odds Ratio (OR)	(95% CI)	Odds Ratio (OR)	(95% CI)
Age				
15-24 (RC)	1.00		1.00	
25-34	0.44*	0.40 – 0.50	1.00	0.87- 1.16
35+	0.42*	0.37 – 0.47	1.80*	1.46- 2.19
Educational level				
No education (RC)	1.00		1.00	
Primary education	0.20	0.17 – 0.22	0.55	0.44- 0.67
Secondary/higher education	0.10	0.09 – 0.11	0.38	0.30- 47
Fertility Intention				
Want no more (RC)	1.00		1.00	
Wants within 2years, wants, unsure timing and undecided	3.77	3.41 - 4.16	2.17	0.84 - 0.89
Wants after 2+ years	2.42	2.20 - 2.67	1.49	1.91 – 2.46
Number of living children				
0-15	0.92	0.91-0.94	0.80	0.77-0.8
Occupation				
Not working (RC)	1.00		1.00	
Prof,tech,	0.14	0.12 – 0.16	0.65	0.51 – 0.82
manager,clerical,services	0.40	0.35 – 0.45	0.83	0.70 – 0.99
Sales/manual skilled	0.47	0.42 – 0.52	0.84	0.73 – 0.97
Unskilled manual/Agric employee				
Partners education				
No education (RC)	1.00		1.00	
Primary education	0.20	0.17 – 0.22	0.78*	0.62 – 0.97
Secondary/higher education	0.12	0.11 – 0.14	0.77*	0.62 – 0.95
Place of residence				
Rural (RC)	1.00		1.00	
Urban	0.32	0.29 – 0.34	0.77	0.68 – 0.88
Region				
South West (RC)	1.00		1.00	
South South	1.26	1.13-1.42	1.09	0.93- 1.29
South East	1.63	1.42-1.87	1.59	1.30- 1.94
North Central	2.56	2.29-2.87	1.64	1.39- 1.94
North East	10.03*	8.55-11.76	2.95	2.35- 3.70
North West	15.55*	13.12-18.42	5.35	4.11- 6.94

Religion				
Catholic (RC)	1.00		1.00	
Other Christians	0.83	0.74-0.94	1.06	0.81 – 1.09
Muslim	4.07	3.56-4.65	1.43	1.07 – 1.54
Traditionalist and others	2.48	1.85-3.32	0.81	0.59 – 1.26
Wealth index				
Poor (RC)	1.00		1.00	
Middle	0.36	0.31 – 0.41	0.69	0.57- 0.83
Rich	0.12	0.11 – 0.13	0.39	0.33- 0.47

All the independent variables in Table 3 were tested at 95% confidence of interval. The model 1 above represents the impact of each independent variable on the outcome variable, while the model 2 represents the impact of all significant variables on the outcome variable.

4.4 Multivariate Results

This section discusses how the selected demographic and socio-economic characteristics of respondents are associated with contraceptive non-use.

The second model from Table 3 revealed that women aged 25-34 years have the same likelihood of contraceptive non use compared to women aged 15-24 years old. Additionally, women aged 35 and above were more likely (Odds ratio: 1.80) to be contraceptive non-users as compared to women aged 15-24 years.

The rich and educated women were less likely to be contraceptive non-users compared to the poor and uneducated women in Nigeria. This is because the multivariate analysis revealed that married women who have primary education, secondary or higher are less likely (Odds ratio: 0.55, 0.38), respectively to be non-users compared to those with no education.

women who want within two years, women who are unsure of timing and women who are undecided are 2 times more likely (Odds ratio: 2.17) to be contraceptive non-users compared to women who want more children. And at 95% confidence of interval it was revealed that women's educational level is significant with a p-value of 0.000 for each groups of women's education. Women who want more children after two years are more likely (Odds ratio: 1.50) to be contraceptive non-users compared to women who want no more children. This is shocking because women who are unsure of timing and undecided on if they want more children are expected to be using at least one method of contraceptive.

Further, results showed that for each additional child a woman has odds of non-use decreased by 20%. This is a clear indication that in Nigeria, women who have higher number of living children are less likely to be contraceptive non-users.

Unskilled manual and agric workers among married women have less likelihood (Odds ratio: 0.84) of contraceptive non-use compared to women who are not working. Similarly, among married women in Nigeria, those who are professional, technical, manager, clerical, those who render services and sales and manual skilled workers are less likely (Odds ratio: 0.65, 0.83), respectively to be contraceptive non-users compared to women who are not working.

Similar to results in panel 1, the panel 2 results revealed that women whose partners' have primary education, and secondary and higher are less likely (Odds ratio: 0.78, 0.77), respectively to be contraceptive non-users compared to women whose partners' have no education.

Moreover, women living in the urban areas are more of contraceptive users as compared to women living in the rural areas. Women who are urban residents are less likely (Odds ratio: 0.77) compared to women who reside in the rural.

Regional differences in contraceptive non-use widely exist in Nigeria. At the second panel result below, it is revealed that Married women in all regions in Nigeria, except the South West are likely to be contraceptive non-users. Women who are from the South South and South East are more likely (Odds ratio: 1.09, 1.59), respectively to be contraceptive non-users compared to women in the South West. Likewise, women who are from the North Central, East and West are more likely (Odds ratio: 1.64, 2.95, 5.35), respectively to be non-users compared to women from South West.

Women who practice other religion other than Catholic except the traditionalist are more likely to be contraceptive non-users. This is shocking because it is expected that women who practice Catholics as religion are expected to be more non-users because of their doctrine. It is revealed in table 3 below that women who belong to other Christians, and Muslims are more likely (Odds ratio: 1.06, 1.43), respectively compared to women who belong to Catholic. However, women who are Traditionalist are less likely to be contraceptive non-users (Odds ratio: 0.81) compared to women who are Catholic. The less likelihood of Traditionalist being contraceptive non-users could be as a result of low population of women who practice such religion.

Further, women who belong to the middle and class rich class are less likely (Odds ratio: 0.69, 0.39), respectively to be contraceptive non-users compared to women who belong to the poor class.

Women who were likely to be non-users are those that were Muslims (Odds ratio: 1.43); from other regions except the South West, especially, from the North East (Odds ratio: 2.95) or West (Odds ratio: 5.35); unemployed women (Odds ratio: 1.00); young women (Odds ratio: 1.00), women older than 35 years (Odds ratio: 1.80); women with no education (1.00); women from poor households (Odds ratio: 1.00); women from rural areas (Odds ratio: 1.00); women with no living children and women who wanted to have birth soon and undecided of unsure of timing (Odds ratio: 2.17). These results indicate areas that policies and programmes should focus to increase contraceptive uptake among married women in Nigeria towards reducing the maternal morbidity and mortality burden that plagues that country.

CHAPTER FIVE:

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Discussion

This study examined the correlates of contraceptive non-use among married women in Nigeria. The percentage of women, who were not using any contraceptive methods, was (88%). It suggests that ongoing efforts to increase awareness on contraceptive use will be advantageous if targeted at married women in Nigeria. It is worth noting that very low use of contraceptive exists among married women from the North West and North East. This is because they are 5 times more likely to be contraceptive non-users compared to women in South West. This explains why a high percentage of women living in the Northern part of the country usually have more than 5 children (Tzugbara et al., 2010).

The findings in this study imply that women who wanted more children later have higher chances of being contraceptive non-users despite the fact that they still do not intend to have more children soon, and yet they are not using any method of contraceptive. This finding is similar to a study conducted by Adebowale et al. (2013), where the use of modern contraceptive is not adequately utilized by women who had no intention to bear more children in Nigeria. It is clearly indicated and understood that the role of contraceptive in child spacing is still lagging far behind among married women in Nigeria. Additionally, it is an indication that there is an unmet need among married women in Nigeria.

Non-uptake of any contraceptive methods found in this study was also due to religion and wealth. Other studies conducted on contraceptive use have indicated that religion is a factor that influences the use of contraceptive (Rachel et al., 2011; Amirrtha, 2008). It is said that some religion believes that contraceptive is against their doctrine and as such they will never practice the use of contraception (Agadjanian, 2013). This is another important issue for programme and policy makers to look into, because if there are no proper awareness programmes to enlighten and broaden people's view about contraceptive use. It may also continue to exaggerate the fear that people already have about contraceptive methods most especially modern method. For awareness to translate into effective high-level uptake therefore the need exists to prioritize programmes that will provide holistic knowledge (including appropriate method choice, correct

use and the benefits of use) of contraceptive methods among Nigerian women in general, taking into consideration the country's diversities.

Higher likelihood of contraceptive non-use was found occurring among Muslim married women who were from the Northern part of Nigeria. This is in line with the study conducted by Dakar in 2011, which revealed that women who were predominantly Muslim and live in the northern part of Nigeria are contraceptive non-users compared to women from other region in Nigeria. He further revealed that contraception among those women is regarded as taboo.

Additionally, women from poor households were more likely to be non-users compared to women from the middle and rich class in Nigeria. This is an indication that women from poor households usually find it difficult to access contraceptive services. As reported by the United Nations in 2011, in Nigeria, contraceptives are not free and not affordable to the poor, therefore, those from lower wealth quantiles might be unable to use contraceptives due to financial constraints. Similarly, Adebowale found in his study in 2011 that women in the rich quantiles were more likely to be contraceptive users compared to those from lower wealth quantile.

Further, this study also found that educational level is negatively associated with contraceptive non-use. That is the higher the educational level, the lower the contraceptive non-use and the lower the level of education, the higher the level of contraceptive non-use among married women in Nigeria. Lopez et al (2010) similarly found a negative relationship between education, income and contraceptive use among never married women in Nigeria.

The varied effect of wealth on contraceptive non-use among married women, and that of religion; and the general stronger effect of educational level, and regional differences in contraceptive use seem to confirm anecdotal suggestions of differences that exist in contraceptive non-use among married women. These suggest the part of the population that policies and programmes need to target for the achievement of sustainable reproductive health programme particularly northern Nigeria.

In addition, there are important health policy and reproductive health programme implications for the results of this study. Although married women in Nigeria have high knowledge about contraceptive methods, most especially modern methods, the awareness of the benefits attached with the use of contraceptive methods is still very low with the evidence of 88% that were non-

users among married women. Women with partners who have primary education have higher likelihood of contraceptive non-use compared to those with partners who have higher education in Nigeria.

Due to disparities between women's educational level and their partners' educational level in relation to contraceptive non-use, there is need for intervention programmes that can help enlighten and encourage the use of contraceptive among every woman regardless of their status. If these issues are left unchecked, they may lead to unfettered childbearing and may further continue to cause an increase in population growth in the country.

Number of living children is also a factor that influences the use of contraceptive. Among respondents in Nigeria, those who have higher number of living children were more likely to be contraceptive non-users compared to women who have lower number of living children.

Although intention to have more children remains one of the major reasons for contraceptive non-use, the other reasons relating to general disapproval provide avenues for meaningful programme design to address the issues. Different means of creating awareness such as the use of different types of social media to communicate information that can help encourage uptake of contraceptive could lead to huge gains in improving overall levels of contraceptive use among married women in Nigeria. Efforts should also be made in getting those who approve the use of contraceptives to practice and to get those who do not approve to do so and even practice.

5.2 Conclusion

Non-use of contraceptive among married women in Nigeria differs. Based on the findings of this study, it was revealed that the pattern of contraceptive non-use by selected characteristics of married women indicated that women who were not educated, whose partners' were not educated, women who were Muslims and resides in the Northern part of the country, women who belong to the poor quantile, women who want more children after and within two years were all contraceptive non-users.

Findings from the bivariate analysis indicated that respondents from the North West and North East are more of non-users compared to women who were from the South West in Nigeria. Further, the results revealed that the independent effect of Religion was noticed among women

who are Muslim and Traditionalist. This implies that those respondents that are catholic and who belong to other Christian were more of contraceptive users in Nigeria. After variables have been controlled, the Multivariate results indicated that respondents who were from the North West and North East are still more of non-users compared to those from the South West. After all adjustment had been made, it was further realized that respondents who were Muslims and women who were Other Christians are contraceptive non-users compared to women who were Catholic.

The negative effect of partners' education, residence, and region on contraceptive non-use in general and variation in the effect of women's education, wealth and religion on the outcome variable showed the varied impact of socio-economic and demographic factors among married women in Nigeria.

Therefore this research suggests the population area that is in dire need of intervention and what could be done to improve their attitudes and behavior on issues of contraception. Addressing the issue of low educational attainment and poverty is therefore important for a sustained progress in contraceptive and reproductive health outcomes especially in core North, Nigeria. Based on the findings in this research, partners' educational level is a factor that influences non-use of contraceptive among married women in Nigeria. The diversity of socio-economic and demographic characteristics regarding partner's educational level seems to be pertinent to those whose partners have primary educational. The most plausible explanation for the observed differences could be that most married women whose partners are educated will likely be contraceptive users because of their educational attainment.

In sum, it was found that women who are likely to be non-users were those that were non-Catholic and those that were Muslim; from other regions except the South West, especially, from the North East or West; unemployed women; young women; women with no education; women from poor households; women from rural areas; women with no living children and women who wanted to have a birth soon.

5.3 Recommendations

Having found that there is an association between socio-economic status and demographic factors and contraceptive non-use among married women in Nigeria, there are various issues that could aid future study around this discussion. Therefore, it is recommended that:

- Greater effort on family planning programmes and media efforts should be directed at educating married women who are from the core North, uneducated, whose partners' are uneducated, Muslims and other Christians, women who are not working and from the rural areas on the use of contraceptive in order to increase the numbers of women who are using contraceptive in the country.
- Awareness programmes led by NGOs and complementing government's efforts should be focused on women who are poor and who are rural residents because they are likely not to be able to afford contraceptive or be open to family planning services. Also focus should be on all married women as they are more exposed to frequent sexual intercourse. In addition, it is important to educate married women about the importance and benefit of small family size as a tool to health and socio-economic independence.

5.4 Study Limitation

Having examined correlates of contraceptive non-use among married women in Nigeria by the use of women's socio economic and demographic characteristics in this study, it is important to note that the socio-economic and demographic factors as variables used in this study as determinants of contraceptive non-use among married women in Nigeria are likely not to be the only factors that can influence contraceptive non-use. Therefore, more studies are needed to probe into other factors that can inform married women's intention of not using any method of contraceptive apart from using women's socio-economic and demographic characteristics.

However, the results in this study indicate areas that policies and programmes should focus on to increase contraceptive uptake among married women in Nigeria in order to reduce the level of maternal death in the country.

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APPENDICES

Appendix I: