DETERMINANTS OF NON USE OF CONTRACEPTIVES AMONG CURRENTLY MARRIED WOMEN IN KENYA

BY

KIRUI GRACE JEMUTAI

Q50/81611/2012

A Research Project submitted to the Population Studies and Research Institute in partial fulfillment of the requirements for the Degree of Master of Arts in Population Studies, University Of Nairobi

October 2016

DECLARATION

This research project is my original work and has never been presented before to any other examination body. No part of this work should be reproduced without my consent or that of University of Nairobi.

Sign……..……..... Date…….…….....

Kirui Grace Jemutai

Q50/81611/2012

This research project has been submitted for examination with our approval as the University of Nairobi supervisors.

Sign……..……..... Date…….…….....

Prof. Lawrence Ikamari

Sign……..……..... Date…….…….....

Dr.Wanjiru Gichuhi

ACKNOWLEDGEMENT

This research project would not have been possible without the guidance and help of several people who in one way or another contributed and extended their valuable assistance in preparation of the study

First and foremost, I extend my utmost gratitude to my lecturers and supervisors, Professor Lawrence Ikamari and Dr.Wanjiru Gichuhi for their technical guidance and encouragement which has seen the completion of the project.

I would also like to express my gratitude to other members of the PSRI teaching staff: Dr.Wakibi, Professor Alfred Agwanda, Professor John Oucho, Mr.Ben Obonyo, Dr., Anne Khasakala, Dr.George Odipo and Professor Murungaru who offered guidance and support during my coursework.

Finally, I would like to express my gratitude to my colleagues at PSRI Hilbert Omamo, Godwin Ekisa, Hilda Kinyanyi and Laura Lunani who provided a good environment and company for academic endeavor.

ABSTRACT

The study set out to establish the factors associated with non use of contraceptives among sexually active married women of reproductive age in Kenya. The study used data drawn from the 2008-09 Kenya Demographic and Health Survey (KDHS). The study was based on a sample of 1,751 women who were married, not pregnant or breastfeeding and were sexually active. The study adopted the framework developed by Casterline et al., (2001) which focused on a constellation of factors that act as obstacles to contraceptive use. Descriptive statistics cross tabulations and chi-square and logistic regression analysis were used to analyze the data.

The findings show that there is a significant association between selected demographic factors(age, parity and desire for children), socio-economic factors (region, wealth status and education),socio cultural(religion),programmatic factors(exposure to family planning messages via mass media and contact with health professionals) with non use of contraceptives among married women in Kenya. Logistic regression results indicate that age, parity, woman's level of education, region of residence, wealth status, contact with health professionals and informed of family planning and desire for more children significantly affect non use of contraceptives among married women in Kenya. Non use of contraceptives declines with increase and with parity. The more educated a woman is the less likely the woman is a non user of contraceptives. The findings show women with primary education and those with secondary education were less likely to be non users of contraceptives compared to women who had no education. The same pattern is observed for with respect to household wealth status. Women who had contact with health professionals and informed of family planning were less likely to be non users of contraceptives compared to those who had not had contact with health professionals.

The main policy implications that can be drawn from this study are that there is a need for more emphasis on the education of women in order to reduce the non use of contraceptives among married women. The findings of this study show that household wealth status significantly affects non use of contraceptives therefore there is need to integrate economic empowerment aspects in FP programmes in Kenya especially targeting women from poor wealth quintiles. There is need for further research on the influence of the husbands or partners on the non use of contraceptives

TABLE OF CONTENTS

DECLARATION..... i

ACKNOWLEDGEMENT..... ii

ABSTRACT..... iii

TABLE OF CONTENTS iv

LIST OF TABLES……..viii

LIST OF FIGURES viii

CHAPTER ONE:INTRODUCTION..... 1

1.1 Background..... 1

1.2 Problem Statement..... 3

1.3 Research Question 3

1.4 Objectives of the Study..... 4

1.4.1 Specific Objectives 4

1.5 Justification..... 4

1.6 Scope and limitations of the study..... 5

CHAPTER TWO:LITERATURE REVIEW..... 6

2.1 Introduction..... 6

2.2 Theoretical background 6

2.3 Empirical Review..... 7

2.3.1 Demographic Factors..... 8

2.3.2 Socio-Economic Factors..... 9

2.3.3 Socio-Cultural Factors 11

2.3.4 Programmatic Factors..... 12

2.4 Conceptual Framework 12
2.5 Variable description and measurement 15
2.6 Operational Hypotheses 17
CHAPTER THREE:METHODOLOGY 18
3.1 Introduction 18
3.2 Sources of Data 18
3.3 Study Sample 18
3.4 Data Analysis 18
CHAPTER FOUR:RESULTS ON NON USE OF CONTRACEPTIVES 21
4.1 Introduction 21
4.2 Characteristics of the study population 21
4.3 Differentials in Non Use of Contraceptives 24
4.4 Determinants of Non Use of Contraceptives 29
4.4.1 Age of the women 29
4.4.2 Parity 29
4.4.3 Woman's education 32
4.4.4 Region 32
4.4.5 Household Wealth status 32
4.4.6 Exposure to FP messages via Radio 33
4.4.7 Contact with health care professionals and informed of FP 33
4.4.8 Desire for more children 33
4.5 Discussion 33
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS 36
5.1 Introduction 36

5.2 Summary 36

5.3 Conclusion 38

5.4 Recommendations 38

5.5 Recommendation for future research 39

REFERENCES 40

LIST OF TABLES

Table 2.1 Description of study variables 15

Table 4.1 Background Characteristics of the study population 22

Table 4.2 Differentials in Non Use of Contraceptives according to the selected characteristics of the study population 28

Table 4.3 Multivariate analysis on background characteristics used in the study 30

LIST OF FIGURES

Figure 2.1 Conceptual Framework 14

Figure 2.2 Operational Framework 15

CHAPTER ONE:
INTRODUCTION

1.1 Background

Contraception refers to methods or devices used to prevent pregnancy. Contraceptive use in developing countries has cut the number of maternal death by 44 percent in 2008 but could prevent 73 percent if the full demand for birth control were met (Black et al., 2012). By lengthening the time between pregnancies, birth control can also improve adult women's delivery outcomes and survival of their children (Tsui et al., 2012). Contraceptives prevent pregnancies by preventing fertilization of the female egg by the male sperm or by preventing implantation of the fertilized egg. Throughout the world various factors have been identified as affecting both contraceptive use and choice. These factors include political, religion, culture, social, economic, education and attitude (UNFPA, 1994).

High fertility rate and high population growth rate are among the major economic and social problems facing developing countries including Kenya. Furthermore, high fertility rate has been associated with poor child and maternal health status as well as increased risk of maternal mortality (UNFPA, 2008; Chipeta et al., 2010; Woldemicael and Beaujot, 2011; Mathe et al., 2011). Kenya was one of the first sub Saharan African countries to recognize the importance of family planning (FP) as a core element in economic and social development. Faced with an annual population growth rate of over 3 percent, the Government of Kenya incorporated the family planning program into the country's overall development policy in 1965. The objective of these programmes were to increase contraceptive uptake in order to meet individual fertility desires; births can be delayed, spaced or limited more effectively. As a result, over the past three decades, Kenya has had an impressive record of success in providing family planning services which led decline in fertility from late 1980s to late 1990s from a total fertility rate (TFR) of 8.1 to 4.7 children per woman in 1998.

This success has been attributed in part to increased contraceptive uptake due to vigorous National and international support for Family Planning (FP) programmes (Blacker, 2002; Kizito et al., 1991).There was steady increase in contraceptive use between 1977/78 and 1998 largely driven by modern contraceptive methods. The sustained increase in the use FP has been

identified as the main driving force behind fertility decline in Kenya (Ajayi and Kekovole, 1998).

Despite the government efforts, Kenya witnessed a stall in total fertility rate from 4.7 in 1998 to 4.9 children per woman in 2003 and a stall in the contraceptive prevalence rate (CPR) at 39 percent. This was partially attributed to a decline in support for FP programmes at international and national levels between 1990s and 2000 as the focused shifted to HIV and AIDS (Askew et al., 2009). This adversely affected the Community Based Distribution (CBD) programmes that facilitated low-cost contraceptive provision together with Information Education and Communication (IEC) advocating for small families and use of contraception (Askew et al., 2009).

Between 1998 and 2008, the contraceptive prevalence rate increased from 39 percent to 46 percent. Although Kenya has made significant progress in its efforts to increase the contraceptive prevalence rate, the level is still below target as envisioned in the 2000 National Population Policy for Sustainable Development which targeted to increase contraceptive prevalence rate to 53 percent by 2005 and 62 percent by 2010. The total fertility rate has also remained below the target set by the policy. Although the National Reproductive Health Policy 2007 emphasized the need for reduction of unmet need for family planning, unplanned births and socio-economic disparities, the contraceptive prevalence rate and the level of unmet need is still high. It is reported that about one-quarter of currently married women do not have access to safe and effective contraceptive methods (NCPD, 2011). The fairly high level of non-use and unmet need for family planning indicates that the existing reproductive health and family planning programmes in the country have not been very effective in enabling the majority of Kenyan women to realize their fertility preferences.

Despite investments in FP Programmes and increased use in FP, there still exists a high level of unmet need. According to the 2008 Kenya Demographic and Health Survey (KDHS), a quarter of women of reproductive age still reported unmet need for family planning, and the total wanted fertility rate for Kenya is 3.4, more than one child less than the actual total fertility rate of 4.6 Hence, there is room for improvement in meeting women's family planning needs and

considerable potential for further increases in contraceptive use. Better understanding of factors associated withHB non-use of family planning in the country is vital.

1.2 Problem Statement

Family planning is acknowledged in most developing countries to be an effective way of improving the health of mothers and children and plays a leading role in mortality and fertility transitions (Cleland et al., 2006). In Kenya family planning services began during the 1960s but did not begin in earnest until the 1980s (Chimbwete et al., 2003). Although there has been a steady increase in contraceptive use between 1977/78 and 2008 largely driven by modern contraceptive methods, contraceptive utilization rate is still low as less than half (46%) of currently married women are using contraceptives despite higher (93%) levels of knowledge of contraceptives (Ajayi and Kekovole, 1998).

Furthermore, the level of unmet need has also remained high as indicated by NCAPD (2011), approximately 1.1 million currently married women would like to delay or stop childbearing but are not using any contraception and another 1.8 million currently married women have unplanned births each year. Its' satisfaction could avert a significant number of maternal deaths which currently stands at 488 deaths per 100,000 live births which is below the MDG target of 147 live births per 100,000 (NCPD et al.,2010). Previous studies have identified a number of socio-economic and demographic factors such as educational attainment, socio-economic status, place of residence, age, number of living children, and availability/accessibility of services as important in the use or non-use of contraceptives in sub-Saharan Africa (Kiragu and Zabin 1995; Kyalo 1996; Tuoane 1999, Muhenje 2002).This study builds on this research by focusing on contraceptive nonuse among the currently married women in the backdrop of high level of knowledge on contraceptives. A comprehensive understanding of who the non-users in specific settings are and factors associated with non-use is important in helping family planning programs identify the appropriate target groups.

1.3 Research Question

What are the effects of various demographic, socioeconomic and programmatic factors on non-use of contraceptives among currently married women of reproductive age in Kenya?

1.4 Objectives of the Study

The overall objective of the study is to determine the factors associated with non use of contraceptives among currently married women of reproductive age in Kenya.

1.4.1 Specific Objectives

The specific objectives of the study are:

i. To establish the effects of demographic factors on non use of contraceptives among currently married women of reproductive age.
ii. To establish if socio-economic factors are associated with non use of contraceptives among currently married women
iii. To establish the socio-cultural factors that affect non use of contraceptives among currently married women of reproductive age
iv. To determine programmatic factors associated with non use of contraceptives among currently married women of reproductive age

1.5 Justification

Family planning is acknowledged in most developing countries to be an effective way of improving the health of mothers and children and plays a leading role in mortality and fertility transitions (Cleland et al., 2006). Even though contraception is an important strategy to improve maternal and child health among married women, the contraceptive prevalence rate (CPR) among this target group is below average (46%) therefore the improvement of CPR among this target groups is therefore essential for improvement of both maternal and child health. Therefore, to achieve this goal, the factors that influence and affect the nonuse of contraceptives need to be studied in order to inform future implementation of FP programmes.

The findings of the ways in which aspects of the individual and household factors influence a woman's use or non use of contraception can be used by family planning programmes to shape the development of family planning provision and promotion programs. Further the findings resulting from the study may be used in advocacy and sensitization of family planning and the need for responsive family planning programmes. Furthermore, the findings of this study may yield information that would add to the existing knowledge in academia and

research in the field of contraceptive use and related issues. The study will act as a basis for more in depth studies or research.

1.6 Scope and limitations of the study

The study set to explore the determinants of contraceptive nonuse among currently married women in Kenya utilizing data drawn from the 2008-09 KDHS. This study relied solely on quantitative data and as such didn't explore, in depth the specific socio cultural contexts that might underlie the effects of variables such as ethnicity and religion on non use of contraceptives. The study relied solely on the views of women thus excluded information from the male partners whose characteristics, attitudes and preferences that may affect women's patterns of non use of contraceptives.

The study was limited to women of reproductive age who were currently married from the whole country from whom information on their use or non use of contraception had been obtained. The study was also limited to the use or nonuse of contraceptives and therefore did not look at the reasons for the use or non use of contraceptives.

CHAPTER TWO:
LITERATURE REVIEW

2.1 Introduction

This chapter reviews studies on non use of contraceptives. This literature review draws evidence from previous studies on what is known about the effects and also on the conclusions and findings on similar studies. This chapter is organized as follows: the first section provides a review of the theoretical background to the study; second section gives an empirical review of the factors associated with non use of contraceptives. The final section of the chapter outlines the conceptual and operational framework and hypotheses to be tested.

2.2 Theoretical background

Micro-economic theories apply the theory of consumer behaviour to the analysis of fertility where children are seen as a consumer good. Demand theories such as "New Home Economics" (NHE) proposed by Becker (1960) focus on changes in the economic costs and benefits of children which reduce the demand for children and drives fertility change. The household is viewed as a production and a consumption unit: there is demand for children because they provide utility for parents, including the contribution to household production.

Within the context of a resource-constrained utility-maximization model, the optimal number of children in a household is determined by the combined effects of four factors: the costs of children and other goods and services, the benefits of children and the income and preferences of children versus other goods and services (Degraff, 1997).

The Easterlin Framework expands the NHE demand model by explicitly looking at the effects of supply side factors on fertility behaviour. Most micro level demographic and economic studies of determinants of contraceptive use or choice of method are guided by Easterlin's micro-economic model of fertility decision making (Easterlin 1975, 1978). The Easterlin's model sees fertility decisions as determined by the joint effects of the supply of children, the demand of children and the costs of fertility regulation (Bulatoa and Lee, 1983).

Demand factors include the standard socio-economic determinants of fertility from demographic transition theory. Supply factors are environmental and cultural factors that constrain fertility. The costs of fertility regulation include the time, resources and psychic factors

associated with use of contraception. If a couple is able to produce more children than desired, then there is a potential of excess in the supply of children, which provides motivation for fertility control. This motivation, along with the costs of fertility regulation determines contraceptive behavior (Kirk, 1996). Costs of fertility regulation include not only the direct resource and opportunity costs of acquiring the contraceptive knowledge and supplies but also the loss of utility associated with adopting behaviour that is unfamiliar, have negative side effects or go against social norms (Degraff, 1997).

These effects are generally referred to as psychic costs (Bogue, 1983; Hermalin, 1983). Psychic costs of contraceptive use are the psychological displeasure associated with the idea or practice of contraceptive use or of specific techniques. Easterlin's model predicts that the lower the psychic and market costs of contraceptive use and the greater the motivation for contraceptive use, the more likely that contraception will actually be used. The level of psychic costs of contraceptive use depends upon the attitudes (approval or disapproval) in society toward the general notion of fertility control and toward specific techniques. The market costs of contraception depend upon the degree of access to fertility control, in terms of both the availability of information and the range of specific techniques and their prices (Easterlin, 1975).

2.3 Empirical Review

This section reviews the literature on the factors associated with the non use of contraceptive especially in developing countries. The aim is to develop a framework that will be used to guide the analysis that follows. The framework used for this study is based on the understanding that determinants of non use of contraceptive extend from the characteristics of the individual (such as age and education) through to the resources of the household (such as income/wealth) as well as through socio-cultural factors including religion. These factors are interrelated and vary from one society to another. These factors have been grouped into three main categories demographic and socio-economic and socio-cultural and programmatic factors.

2.3.1 Demographic Factors

Different studies have identified age of women, number of living children, desired family size and experience of child death as major factors that influence non use of contraceptive (Rutstein et al., 1992).

Age of women

Contraceptive use is lowest among young women. It said to reach its peak among women in their thirties and declines among older women (Rutstein et al., 1992). This is indicative of a high desire for childbearing among young women, and a high growing interest of spacing births among women in their thirties. Percentage of users declines at older ages of reproduction due to the fact that older women are not at a high risk of pregnancy (Palamuleni, 2013). Analysis of the surveys conducted in Africa show that the use of modern contraceptive increases, then decreases with the age (Bertrand et al., 1993). Older women stop using contraception believing that they are no longer at risk of getting pregnant (Rutstein et al., 1992). A study in Ethiopia on factors that influence contraceptive use among married women found that age had an inverse association with use of modern contraceptive methods. Older married women had lower odds of using contraceptive methods than young married women (Dibaba, 2008).

Woman's Desire for children

Desired family size can take many forms. Thomson (2001) refers to desired family size as 'the number of children wanted in one's lifetime' and can be viewed as the demand for children. Mclelland (1983) defines desired family size as 'the number of children parents would have if there were no subjective or economic problems involved in regulating fertility.

A strong individual-level relationship between fertility preferences and contraceptive behavior is well documented (Westoff and Bankole, 1995). The desire for having more children is more complex and interrelated with various cultural norms particularly in communities with gender preferences especially where sons' preferences are highly prevalent (De Seliva, 1993; Bairagi, 2001). It influences women's contraceptive behaviour where women desire additional children the probabilities of using modern contraceptive are very low.

Number of living children

The existing number of living children has a significant effect on the non use of contraceptives. Mostly it is related with the ideal family size, gender preference,and level of

development of the societies (Bairagi, 2001). Different findings have shown various results about the relationships of the number of children and the use of contraceptives. At times, when women have reached their ideal family size, they are more likely to have a positive attitude toward contraceptive use. In Vietnam, for instance, couples with three or more children were found to be more likely to use contraceptive method than women with fewer children (Dang, 1995). If ideal family size is reached, their trends of using contraceptives increase.

Dang (1995) further explained that there is no difference in contraceptive use among couples until the third child is born. But after they have reached this level, they are more likely to choose contraceptive methods. This implies that women with no or few children may not use contraceptive as compared to women with more children. As a result, contraceptive behaviours were found to be positively link to existing number of children and determine the probability of women's to be using or not using contraceptives (Bogue et al, 1978).

2.3.2 Socio-Economic Factors

Woman's Education

In terms of socio-economic factors, the most consistently found determinant of reproductive health service utilization is a woman's level of educational attainment (Addai, 1998; Bhatia and Cleland, 1995; Magadi, et al., 2000; Nuwaha and Amooti-kaguna 1999; Obermeyer, 1993). Education provides people with the knowledge and skills they need to live better lives. One extra year of schooling may increase an individual's earnings by up to 10% (UNESCO, 2011). Education of women is one of the key factors driving fertility reduction. Women with higher levels of education are more likely to delay and space their pregnancies and to seek health care and support (UNESCO, 2011).

Education is also closely linked to the use of contraceptives: more educated women are more likely to use Family Planning (Kasarda et al., 1986, Robey et al., 1992, Saleem and Bobak, 2005; Ainsworth et al., 1996; Rutenburg et al., 1991 Bertand 1993). A major pathway by which education influences women's contraceptive use is through increasing their level of knowledge (Hemmings et al., 2008).

Husband/Partner's Education

Besides individual education, also the educational level of the context in which one lives is important (Kravdal, 2002). The education level of other people in the community may play a

role through social learning and other indirect effects (Bongaarts & Watkins, 1996; Kohler et al., 2001; Montgomery and Casterline, 1996).

Husbands play a major role in their wives' contraceptive decisions thus it is necessary to examine how their education influences contraceptive nonuse. Dang (1995) found that husbands' education levels have an even greater influence on contraceptive use than women's education levels. A study done by Ezeh (1993) on influence of spouses on contraceptive attitudes based on the 1988 Ghana DHS found that a man's education significantly affects his contraceptive attitude. An educated husband is more likely to approve of family planning than an uneducated husband.

Type of place of residence

The availability and accessibility of basic services such as educational services, maternal health services including Family Planning information and services are more prevalent in urban settings than distant rural areas. McDevitt et al., (1996) further showed that urban women have better access to educational, job opportunities, health facilities, contraceptives information and services, and also face lower social and financial costs of getting contraceptives.

This shows that the geographical distance of women's residences may influence their access to contraceptive information and services. The place where women live could exacerbate the variation and has significant role particularly in developing countries. Due to this, geographical residence is considered as one of the factors influencing non use of contraceptive (Islam and Mahmud, 1995).

Many studies have demonstrated the effects of residence on contraceptive practice in different countries. For instance, Dang (1995) found that rural women in Vietnam are less likely to use contraceptives than their urban counterparts due to variation in availability and accessibility of contraceptive supplies in rural areas. As a result, urban women were found more likely to practice contraception than their rural counterparts. Similarly, urban and educated women were found to be slightly higher contraceptive use and were less likely to be non user of contraceptive than in other places (Malhotra and Thap, 1991).

Wealth Status

Generally, wealth status has been found to have an influence on contraceptive use in that those who are wealthier have high chances of using contraceptive. The use of modern methods of

family planning increases as household wealth increases. A study by Dibaba (2008) revealed that household socio-economic status (Wealth Quintile) is an important variable associated with women's intention to limit childbearing. According to the study, the odds of the desire to stop childbearing increased as wealth increased. Women from households in the richest wealth quintile were two and half times more likely to desire to limit childbearing than women of the poorest wealth category.

Wealth may indicate a greater exposure of people to new ideas and commodities, and may thus influence fertility intentions of people (Dibaba, 2008). Freedman (1982) revealed that high-income couples have greater ability to plan effectively for lower fertility than lower income people. Survey data from developing countries in Asia, Africa, and Latin America have also consistently showed that rural women with low-income resources have low level of contraceptive use (Nazar et al., 1999).

2.3.3 Socio-Cultural Factors

Religion

The adoption of contraception is a cultural process that depends on access to and acceptability of information as well as contraceptives (Agadjanian, 2005). Previous research studies on the relationship between religion and contraceptive use in South Saharan Africa (SSA) have reached different on conclusions. For instance, research in Ghana found that denominational differences in rural women's contraceptive use were entirely accounted for by differences in socioeconomic and demographic characteristics (Addai, 1999). In contrast, other studies have found a more essential role for religion. For example, in rural Zimbabwe, Gregson et al (1999) found that the prohibitions against modern medicine and modern contraceptive use by strict apostolic churches were significantly more salient than those from the Catholic Church, leading to lower contraception and higher fertility among strict Apostolic.

In a study of the contraceptive use among women of reproductive age in city slums, Oketch et al., (2011) found that religion was a key determinant of contraceptive use. Their findings established a significant difference in the use of FP services between Catholics and other religions. Women who were Catholics had a lower probability of using contraceptives compared to other Protestants and Muslims. This is because catholic faith discourages its faithful

from using contraceptives as birth control measures. Faithful are instead encouraged to rely more on traditional methods of contraception**.**

2.3.4 Programmatic Factors

Exposure to family planning messages

There is evidence that Family Planning messages through media may play an important role in increasing the knowledge of Family Planning methods and through this increased knowledge also their acceptance and use, especially in those areas where the literacy level is low (Easterlin and Crimmins, 1985; Saluja et al., 2011; Fikree et al., 2001). Several empirical studies have shown that mass media campaigns may lead to behavioural changes and in this way reduce fertility (Olaleye and Bankole, 1994; Jato et al., 1999; Agha and Van Rossem, 2002; Das Gupta et al., 2003, Islam and Kabir, 2000; Cheng 2011, Rabbi, 2012). Cheng (2011) found that in Taiwan mass media and social networks played important roles in disseminating contraceptive knowledge and that women transformed this knowledge into contraceptive practice.

Contact with family planning worker or health care professionals

Contact with a family planning field worker or health care professional plays an important role in increasing contraceptive use as they enhance awareness on contraceptive methods. Kabir et al., (2013) found that women who had contact with field workers were 2.57 times more likely to be current contraceptive-users compared to women having no contact. A study on contraceptive use dynamics in Philippines found that contact with fieldworkers and health care professional during visits to health facilities tend to promote greater use of modern contraception (Laguna et al., 2000).

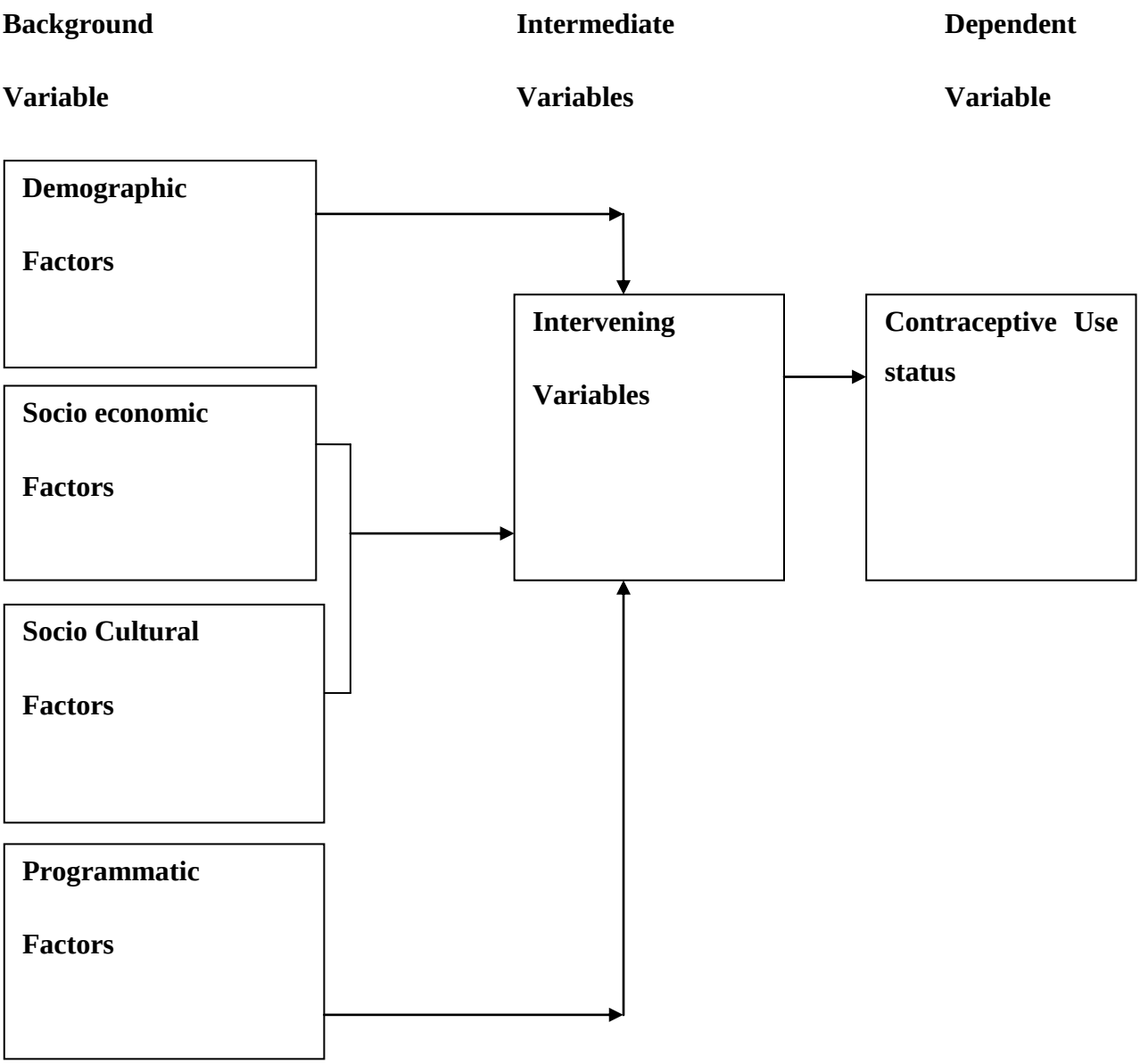
2.4 Conceptual Framework

This study investigates factors associated with non use of contraceptive among married women at individual level. The theory of fertility decision-making propounded by Easterlin is applied as a conceptual framework in this research. This application borrows from previous studies on contraceptive practices among married women particularly from a study by Casterline et al., (2001) on the obstacles to contraceptive use in Pakistan.

The framework has adopted four domains demographic, socioeconomic and sociocultural and programmatic factors. This conceptual framework assumes that these domains could have an

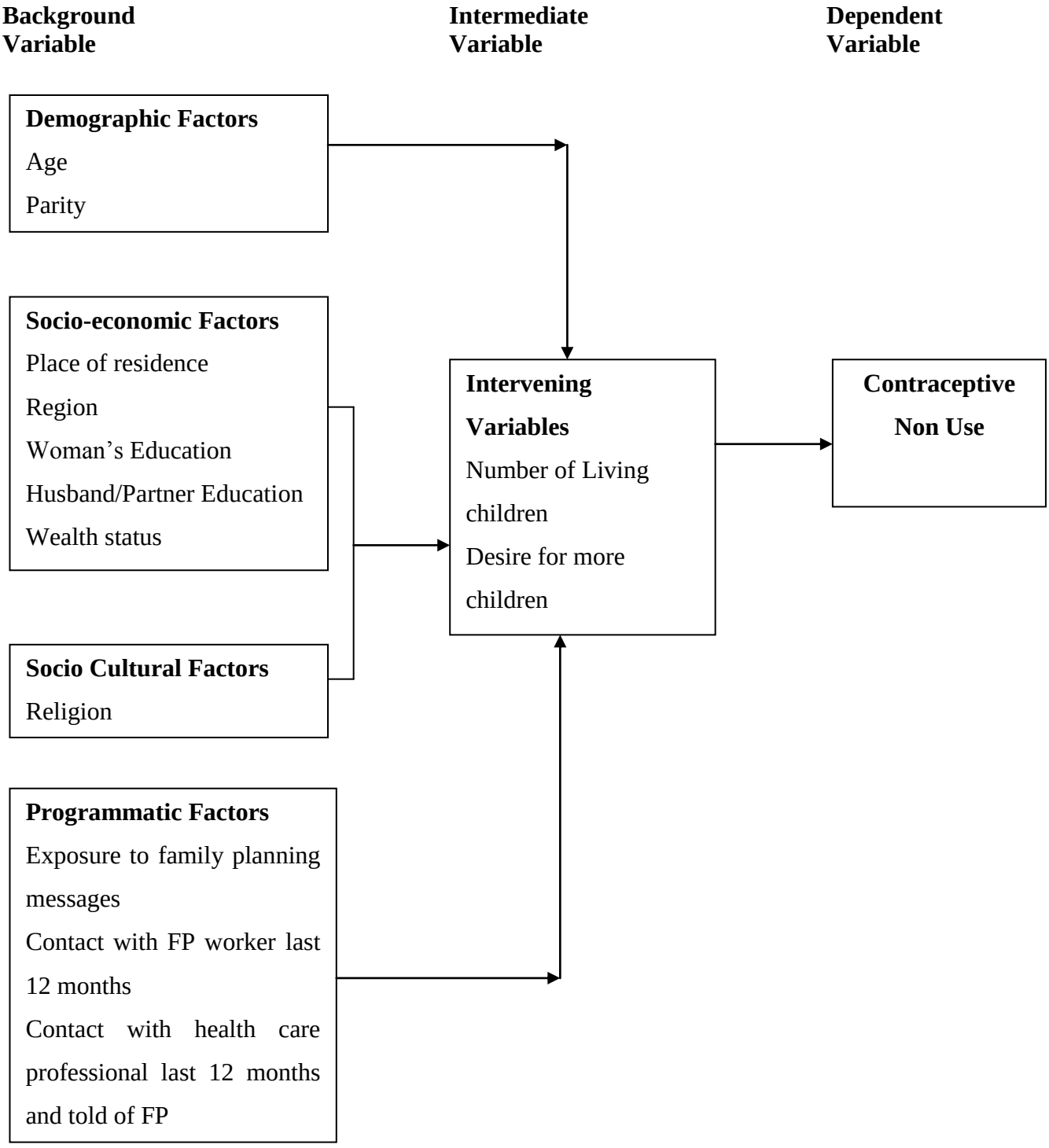
effect on married women to be users or non users of contraceptives. The arrows within the conceptual framework show the relationships between independent and dependent variables.

Figure 2.1 Conceptual Framework



Source: Casterline et al., (2001)

Figure 2.2 Operational Framework



2.5 Variable description and measurement

The dependent variable in this study is non use of contraceptives. The independent variables are as described in the table below;

Table 2.1 Description of Study Variables

Variable	Description	Coding
Non use of contraceptives	Currently not using any method to avoid pregnancy	1=Not using 0=Using
Age	Current age of the respondent	1=15-24 2=25-34 3=35-44 4=45+
Parity	Number of Children ever born	0=No child 1=1-3 children 2=4-5 children 3=>5
Woman's education	Woman's highest education level	0=No education 1=Primary Education 2=Secondary Education 3=Higher
Husband's education	Husband's/Partner's highest education level	0=No education 1=Primary Education 2=Secondary Education 3=Higher
Type of place of residence	Type of place where the respondent's resided at the time of the surveys	1=Rural 2=Urban
Region	This is the usual region or province of residence of the respondent	1=Nairobi 2=Central 3=Coast 4=Eastern 5=Nyanza 6=Rift Valley 7=Western 8=North Eastern

Table 2.1 Description of Study Variables Continued

Variable	Description	Coding
Household Wealth Status	Economic status of respondent's household	1=Poor 2=Middle 3=Rich
Religion	Respondent's religion	1=Roman Catholic 2=Protestants 3=Muslim 4=Other
Exposure to FP messages via Radio	Respondent's who have heard FP messages on the radio	0=Has not Heard of FP messages via Radio 1=Heard of FP messages via radio
Exposure to FP messages via TV	Respondent's who have heard FP messages on the TV	0=Has not Heard of FP messages via TV 1=Heard of FP messages via TV
Exposure to FP messages via Newspapers	Respondent's who have heard FP messages in the newspapers	0=Has not read FP messages via Newspapers 1= Has read FP messages via Newspapers
Contact with FP Field worker	Respondent's contact with FP workers or health care professionals to discuss FP 12 months before survey	0=No contact 1=Contact with FP Worker
Contact with health professionals and informed of FP	Respondent's contact with health care professionals to discuss FP 12 months before survey	0=No contact 1=Contact with health professionals and told of FP
Number of children	Number of living children	0=No child 1=1-3 children 2=4-5 children 3=>5 children
Fertility preference	Desire for more children	1=Wants more children 2=Wants no more children 3=Undecided

2.6 Operational Hypotheses

The following hypotheses were developed based on conceptual considerations above,

i. Older married women are less likely to be non users of contraceptives compared to younger women.
ii. Married women with lower level of education are likely to be non users of contraceptives.
iii. Husbands/partners level of education is negatively associated with non use of contraceptives among married women.
iv. Married women who live in urban areas are less likely to be non users of contraceptives than women who live in the rural areas.
v. There is a negative association between wealth status and non use of contraceptives among married women.
vi. Married women who desire more children are more likely not to use contraceptives.
vii. Married women who have been exposed to FP messages via mass media are less likely to be non users of contraceptives.

CHAPTER THREE:
METHODOLOGY

3.1 Introduction

This section presents data and methods that were used for the analysis of the study, description and measurement of the independent and dependent variables used in the study. The first part describes the source of data used for the study, study sample and description of the variables and their measurements. The second part describes the methods of data analysis.

3.2 Sources of Data

The study utilized data drawn from the 2008-9 KDHS which was carried out as part of the worldwide Demographic Health Survey programme that uses a cross section of nationally representative sample of household . The study collected data on fertility, marriage, sexual activity, malaria, HIV&STIs, use of mosquito nets, domestic violence, fertility preference, family planning, maternal child health and marriage among others.

3.3 Study Sample

The study focused only on married women age 15-49 years who were sexually active four weeks before the survey and who were not pregnant, breastfeeding or infecund. The sample comprised a total of 1751 women.

3.4 Data Analysis

The study used descriptive statistics and logistic regression analysis. These are described in the following subsections.

Descriptive statistics

Descriptive statistics were used to describe the characteristics of the study population. This mainly entailed the use of frequencies to profile the study population and the cross tabulations to show differentials.

Cross tabulation was employed to establish the association between each of the explanatory variables and the dependent variable. This involved the use of cross tabulations to show the magnitude and differentials non use of contraceptives according to the background characteristics.

Logistic Regression Analysis

Since the main dependent variable in this study is dichotomous, logistic regression was the most appropriate method to analyze the effects of the various explanatory variables included in the study. Logistic regression is a modeling approach used when the dependent variable is dichotomous. This model allows one to predict outcomes, from a set of variables that may be continuous, discrete, dichotomous, or a mix of any of these (Hosmer and Lemeshow, 2000). The relationship between the predictor and response variables is not a linear function in logistic regression; instead, the logistic regression function, which is the logit transformation of the success probability, is used (Agresti, 1996). Consider a collection of k explanatory variables denoted by the vector X' = (X1, X2,…,Xk). Let the conditional probability that the outcome is present be denoted by P(Y = 1|X) = p.

$$P=\frac{exp\ (\beta_0+ \beta_{11}X_1+..... \beta_{1k}X_k)}{1+exp\ (\beta_{10}+ \beta_1X_1+..... \beta_{1k}X_k)}$$

where β_0 is a constant of the equation and, $\beta_1,\ldots,\beta_k$ are the coefficients of the predictor variables. The estimated logistic coefficient β_j's is interpreted as the change in the log-odds for every unit increase/decrease (depending on the variable change in x_i) holding other predictors constant (Agresti, 1996).

The odds ratio is defined as the ratio of the probability of non occurrence over the probability of occurrence. The coefficient βj estimated by the logistic regression, models the single effect of the j-th explanatory variable on the response variable. A value $\beta = 0$ is equivalent to exp (β) = 1 and to Pi = Pj, that is, the independent variable has no effect on the probability of contraceptive non use (Teferi, 2009).

A value $\beta > 0$ implies that the dependent variables becomes more likely as the independent variable increases; $\beta<0$ implies that the dependent variables then becomes less likely (Teferi, 2009).

In this study, non use of contraceptives takes a value of one if the respondent reported not using contraceptives at the time of the survey and zero if the respondent reported using contraceptives at the time of the survey. The reference category of each measured independent variable has a value of one and the values for other categories are compared to that of the

reference category. A value less than one implies that individuals in that category have a lower probability of reporting non use of contraceptives than individuals in the reference category.

The explanatory variables that showed a significant association in the analysis were assessed in the logistic regression analysis. The variables whose effects showed a statistically significant relationship with non use of contraceptives were considered as the determinants of non use of contraceptives among the married women.

CHAPTER FOUR:
RESULTS ON NON USE OF CONTRACEPTIVES

4.1 Introduction

This chapter presents the results of the analysis of the data. The first section describes the characteristics of the study population. The second section presents the results of a cross tabulation which describe the associations between each of the independent variables and non use of contraceptives. The third section presents the results of logistic regression analysis.

4.2 Characteristics of the study population

Table 4.1 presents the basic characteristics of the study population and show that 38 per cent of the women were non users of contraceptives while 62 per cent were users of contraceptives. The distribution of the respondents according to age shows that 18 per cent of them are in the 15-24 age group, 39 percent of women are in age 25-34. Thirty three per cent of the women were between the ages of 35-44 years while 10 per cent of the women were aged 45 years and above.

Eight percent of the women had no children while 53 per cent had between 1-3 children. Twenty one percent of the women had between 4-5 children while 18 per cent had more than 5 children. Majority of the women reside in rural areas (64 per cent) compared to 36 per cent in the rural areas in the urban areas. Nineteen per cent of women were Roman Catholic while 67 per cent of the women were protestant. Twelve per cent of the women were of Muslim faith while 2 per cent of the women belonged to other religions.

Central province has the largest proportion of women (17 per cent), and the North Eastern province has the smallest proportion of women at 3 per cent. Nairobi, Nyanza and Rift valley had an equal number of women at 14 percent. Coast and eastern regions also had an equal number of women at 13 per cent while western province had 12 per cent. As shown in Table 4.1, 9 per cent of the women have no education with the majority having primary education (53 per cent) while 26 per cent having completed secondary education and 12 per cent had higher education.

Table 4.1 Background Characteristics of the study population

Variable	***Percent***
Contraceptive Use	
Non users	38
Yes	62
Age	
15-24	18
25-34	39
35- 44	33
45+	10
Parity	
No child	8
1-3 children	53
4-5 children	21
More than 5 children	18
Type of residence	
Rural	64
Urban	36
Region	
Nairobi	14
Central	17
Coast	13
Eastern	13
Nyanza	14
Rift Valley	14
Western	12
North Eastern	3
Religion	
Roman Catholic	19
Protestant	67
Muslim	12
Other	2
Woman's education	
No education	9
Primary	53
Secondary	26
Higher	12

Table 4.1 Background Characteristics of the Study Population Continued

Variable	***Percent***
Husbands/Partners education	
No education	6
Primary	41
Secondary	36
Higher	17
Household Wealth Status	
Poor	23
Middle	19
Rich	58
Exposure to FP messages on Radio	
Yes	77
No	23
Exposure to FP messages on TV	
Yes	47
No	53
Exposure to FP messages via newspaper	
Yes	39
No	61
Contact with FP workers	
Yes	49
No	51
Contact with health professionals and informed of FP	
Yes	15
No	85
Number of living children	
No child	9
1-3 children	56
4-5 children	21
More than 5 children	14
Desire for more children	
Wants more children	45
Wants no more children	45
Undecided	10

Six per cent of the women had husbands/partners with no education. 41 per cent of the respondent's husbands/partners had primary education while 36 per cent had secondary education. Seventeen per cent of the women had husbands/partners who had higher education. In terms of the household wealth quintiles, twenty three per cent of the women belonged to the poor quintile while 19 per cent were in the middle quintile. Over half of the women (58 per cent) belonged to the rich quintile. Seventy seven per cent of the women had been exposed to FP messages on radio while 23 per cent of the women had not been exposed. Forty seven per cent of the women had been exposed to FP messages on TV while 53 per cent of the women had not been exposed. Thirty nine per cent of the women had been exposed to FP messages via the newspaper while 61 per cent of the women had not been exposed via the newspaper.

Forty nine per cent of the women had been visited by an FP worker while 51 per cent had not received a visit from an FP worker. Fifty two per cent of the women had visited a health facility while 48 per cent had never visited a health facility. Twenty nine per cent of the women had visited a health facility and have been informed about FP while 71 percent had not been informed of FP at the health facility.

In terms of the number of living children, 9 per cent of the women had no children while 56 per cent of the women had between 1-3 children. Twenty one per cent of the women had between 4-5 children while 14 per cent of the women had more than 5 children. Forty five per cent of the respondents desired for more children while 45 per cent desired no more children. Ten percent of the women remained undecided of whether they desired more children.

4.3. Differentials in Non Use of Contraceptives

This section presents the results of cross tabulation used to show the differentials in non use of contraceptives. The results of this analysis are presented in Table 4.2 below. The results show that demographic, socio-economic, socio cultural and programmatic factors are associated with non use of contraceptives.

Non use of contraceptives was significantly associated with age of the woman. Non use of contraception declines with increase in the woman's age. These results do support our study hypothesis which stated older married women are less likely to be non users of contraceptives compared to younger women. This hypothesis is therefore accepted and the alternate rejected.

Women with higher parities are more likely to use contraceptives compared to women with lower parities. According to the results, 35 percent of women with 1-3 children were non users of contraceptives compared to 76 percent for women with no children.

Region of residence of the respondent was to found to be associated with the non use of contraceptives. Women from Central Province had the lowest percentage of non users of contraceptives compared to the women from other regions. Women from North Eastern had the highest percentage of non users of contraceptives. With regards to religion, Muslim women had the highest percentage of non users of contraceptives at 70 percent compared to women from Roman Catholic and Protestant at 34 percent.

The findings revealed that the type of place of residence had no significant association with the non use of contraceptives therefore null hypothesis which stated that women who live in the urban areas are less likely to be non users of contraceptives than women who live in the rural areas is rejected and the alternate accepted.

The level of education of the woman was found to be associated with the non use of contraceptives .Non use of contraceptives declines with an increase in the level of education as a higher percentage (81 percent) of women who were non users of contraceptives have no education while a lower percentage of women with higher education (24 percent) were non users of contraceptives. The null hypothesis which stated that education is negatively associated with non use of contraceptives is accepted. Furthermore, the findings indicate that the husband/partner's level of education is significantly associated with non use of contraceptives.

There were fewer women who were non users of contraceptives among husbands/partners who had higher level of education as compared to those with primary or no education. Thirty two percent of women whose husband/partner's had secondary education were found to be non users of contraceptives compared to 77 percent for women whose husband/partner had no education. The null hypothesis which stated that husbands/partners level of education is negatively associated with non use of contraceptives among married women was therefore accepted.

Table 4.2 Differentials in Non Use of Contraceptives according to the selected characteristics of the study population

Variable	***Not Using %***
Age	
15-24	56
25-34	33
35- 44	34
45+	41
X^{2-}53.248,***df***-3, ***Signif***.0.000***	
Parity	
No child	76
1-3 children	35
4-5 children	30
More than 5 children	42
X^{2-}100.00,***df***-3,***Signif***.0.000***	
Type of residence	
Rural	40
Urban	37
X^{2-}1.391,***df***-1,***Signif***.0.238	
Region	
Nairobi	27
Central	24
Coast	53
Eastern	31
Nyanza	46
Rift Valley	40
Western	41
North Eastern	87
X^{2-}132.4,***df***-7,***Signif***.0.000***	
Religion	
Roman Catholic	34
Protestant	34
Muslim	70
Other	34
Woman's education	
No education	81

Table 4.2 Differentials in Non Use of Contraceptives according to the selected characteristics of the study population Continued

Variable	***Not using %***
Primary	41
Secondary	26
Higher	24
X^{2-}165.9,***df***-3,***Signif***.0.000***	
Husbands/Partners education	
No education	77
Primary	42
Secondary	32
Higher	28
X^{2-}97.425,***df***-3,***Signif***.0.000***	
Household Wealth status	
Poor	55
Middle	34
Rich	33
X^{2-}60.615,***df***-2,***Signif***.0.000***	
Number of living children	
No child	73
1-3 children	36
4-5 children	29
More than 5 children	42
X^{2-}96.077,***df***-3,***Signif***.0.000***	
Desire for children	
Wants more children	55
Wants no more children	28
Undecided	10
X^{2-}191.4,***df***-2,***Signif***.0.000***	
Exposure to FP ,messages via Radio	
Yes	33
No	56
X^{2-}72.121,***df***-1,***Signif***.0.000***	
Exposure to FP ,messages via TV	
Yes	31
No	45
X^{2-}40.688,***df***-1,***Signif***.0.000***	

Table 4.2 Differentials in Non Use of Contraceptives according to the selected characteristics of the study population Continued

Variable	*Not using %*
Exposure to FP via messages via newspapers	
Yes	30
No	44
X^{2}-34.045,***df***-1,***Signif***.0.000***	
Contact with FP workers	
Yes	37
No	39
X^{2}-0.154,***df***-1,***Signif***.0.654	
Contact with health professionals and informed of FP	
Yes	34
No	43
X^{2}-19.872,***df***-1,***Signif***.0.000***	

P-value =< 0.05; ** P-Value = < 0.01: ******* P-Value =< 0.001

The results also indicate that wealth status was significantly associated with non use of contraceptives whereby non use of contraceptives declined with increase in wealth status of the woman. Fifty five percent of women in the poor quintile were found to be non users of contraceptives compared to women in middle and rich quintile who were at 34 and 33 percent respectively. Therefore the null hypothesis which stated that there is a negative association between wealth status and non use of contraceptives was accepted.

The woman's desire for more children was found to be significantly associated with non use of contraceptives. The non use of contraceptives was higher among women who desired for more children at 55 percent compared to those who did not want any more children at 28 percent or were undecided on having more children at 10 percent. The null hypothesis which stated that women who desired for more children are more likely to be non users of contraceptive was therefore accepted.

Exposure to FP message via mass media was found to be significantly associated with non use of contraceptives. The non use of contraceptives was higher amongst women who had not been exposed to messages via mass media as compared to women who had been exposed to FP messages via mass media. Therefore the hypothesis that women who have been exposed to FP messages via mass media are less likely to be non users of contraceptives was accepted.

Non use of contraceptives was higher among women who had not had a contact with health professionals and informed of FP compared to those who had been in contact with health professionals and informed of FP.

4.4 Determinants of Non Use of contraceptives

In this section, results of logistic regression analysis are presented and discussed. The results of this analysis are shown in the Table 4.3 below. The results show that that age, parity, region, woman's education, wealth status, contact with health professionals and informed of FP and woman's desire for children had significant effects on non use of contraceptives among the study population.

4.4.1 Age of the women

The age of the woman was found to have a significant effect on non use of contraceptives among married women in Kenya controlling for other factors. Age was found to be negatively related with non use of contraceptives. For every increase in age the likelihood of non use of contraceptives declines. The findings show that women aged between 25-34 years were 0.315 times likely to be non users of contraceptives compared to women aged between 15-24 years while women aged between 35-44 years were 0.301 times likely to be non users of contraceptives compared to women aged between 15-24 years.

4.4.2 Parity

Parity was found to have a significant effect on non use of contraceptives controlling for other factors. The study findings show that the odds ratio decline with an increasing number of children indicating that non use of contraceptives declines with increase in parity. Women with between 1-3 children were 6.016 times likely to be non users of contraceptives compared to women with no children. Women with between 4-5 children and those with more than 5 children were 1.224 and 0.912 times likely to be non users of contraceptives compared to women with no children.

Table 4.3 Logistic regression results on the effects of study variables on non use of contraceptives

Study variables	**Exp(B)**
Age	
15-24(RC)	1.000
25-34	.315***
35-44	.301***
45+	.672*
Parity	
No Child(RC)	1.00
1-3 Children(1)	6.016*
4-5 Children(2)	1.224
More than 5+(3)	.912
Woman Education	
No education (RC)	1.00
Primary(1)	7.282***
Secondary(2)	2.837**
Higher(3)	1.470
Husband/Partner Education	
No education (RC)	1.00
Primary(1)	1.539
Secondary(2)	1.237
Higher(3)	1.069
Region	
Nairobi (RC)	1.00
Central(1)	.311*
Coast(2)	.243**
Eastern(3)	.593

Table 4.3 Logistic regression results on the effects of study variables on non use of contraceptives Continued

Study variables	**Exp(B)**
Nyanza(4)	.302*
Rift Valley(5)	.665
Western(6)	.433
North Eastern(7)	.426
Household Wealth Status	
Poor(RC)	1.00
Middle(1)	1.373**
Rich(2)	.959
Religion	
Roman Catholic (RC)	1.00
Protestant(1)	1.458
Muslim(2)	1.379
Other(3)	1.963
Exposure to FP message via Radio	
No (RC)	1.00
Yes(1)	1.563**
No (RC)	1.00
Yes(1)	1.053
Exposure to FP message via newspapers	
No (RC)	1.00
Yes(1)	.890
Contact with health professionals and informed of FP	
No (RC)	1.00
Yes(1)	1.775***
Number of living children	
No child(RC)	1.00
1-3 children(1)	.586
4-5 children(2)	1.116
More than 5children (3)	.952

Table 4.3 Logistic regression results on the effects of study variables on non use of contraceptives Continued

Study variables	**Exp(B)**
4-5 children(2)	1.116
More than 5children (3)	.952
Desire for more children	
Wants more children(RC)	1.00
Wants no more children(1)	4.173***
Undecided (2)	4.288***

* P-value =< 0.05; ** P-Value = < 0.01: *** P-Value =< 0.001; RC; Reference Category

4.4.3 Woman's education

The level of education of the woman was found be significantly associated with non use of contraceptives controlling for other factors. The results show that the odds ratio decline as education level of the women increases indicating that the likelihood of not using contraceptives decreases as the educational level increases. Women with primary education were 7.282 times likely to be non users of contraceptives than women who had no education whereas women with secondary education were 2.837 times likely to be non users of contraceptives compared to women with no education.

4.4.4 Region

The results indicate that the region of residence of the woman significantly affects non use of contraceptive controlling for other factors. Women from Central region were 0.311 times likely to be non users compared to women from Nairobi region while women from the Nyanza region were 0.302 times likely to be non users of contraceptives compared to women from Nairobi region.

4.4.5 Household Wealth status

The results indicate that household wealth status had a significant effect on non use of contraceptives. The odds ratio decline as the woman’s wealth status increases. Women in the middle wealth quintile were 1.373 times likely to be non users of contraceptives compared to

women in the poor wealth quintile .On the other hand, women in the rich quintile were 0.979 times likely to be non users of contraceptives compared to women in the poor wealth quintile.

4.4.6 Exposure to FP messages via Radio

The findings show that exposure to FP messages via radio significantly affects non use of contraception among married women. Women who had been exposed to these messages were times less likely to be non users compared to women who had not heard messages through the radio.

4.4.7 Contact with health care professionals and informed of FP

The results indicate that contact with health professionals and informed of FP significantly affects non use of contraceptives. Women who visited the facility and informed on FP were 1.775 times likely to be non users of contraceptives compared to those who did not.

4.4.8 Desire for more children

Desire for more children significantly affects non use of contraception according to the results. Women who did not desire for more children were less likely to be non users of contraceptives compared women who desired more children. The findings indicate that women who did not desire more children were 4.173 times likely to be non users of contraceptives whereas women were undecided on whether they desired more children were 4.288 times likely to be non users of contraceptives compared to women who wanted more children.

4.5 Discussion

From the results of the analysis, the age of the woman, parity, region of residence, woman's level of education, wealth status, visit to health facility and informed of FP and desire for more children have a significant effect on the non use of contraceptives among married women. As noted earlier, one of the objectives of this study was to establish how demographic factors affect the non use of contraceptives. The results indicate that age of the woman and parity were found to significantly affect the non use of contraceptives. The age of the woman was found to be negatively related with non use of contraceptives whereby the non use of contraceptives declines with increase in age. Women aged between 25-34 years were less likely

to be non users of contraceptives compared to women aged between 15-24 years. This therefore means that as the women age there is a lesser likelihood of them being non users of contraceptives. These findings are consistent with other results (Bertand et al., 1993; Magadi, 2003, Stephenson et al., 2007; Dibaba, 2008; Palamuleni, 2013).

Parity was also found to be related to the non use of contraceptives. Women with between 1-3 children were less likely to be non users of contraceptives compared to women with no children. Women with between 4-5 children and those with more than 5 children were less likely to be non users of contraceptives compared women with no children. The non use of contraceptives was found to decline with increase in parity. The findings are similar to Magadi, (2003) who found that increasing parity is related with increasing use of contraceptives. Elfstrom, (2011) also revealed that parity was negatively associated with contraceptive use implying that women with higher parity are less likely to be non users of contraceptives. Aynekulu et.al (2013) also noted that couples who had a child were more likely to practice family planning method than those couples who did not have a child. This implies women with no children were less likely to use contraceptives.

The study also found that desire for more children significantly affects non use of contraceptives. Women who desired more children were less likely to be non users of contraceptives compared to women who did not desire more children. These findings are consistent with other results, Bairagi, (2001) which reported that women fertility preferences influences women's contraceptive behaviour with women desire additional children the probabilities of using modern contraceptive are very low.

The second objective of the study was to establish the socio-economic factors that affected the non use of contraceptives. The results indicate that women's education, region and wealth status were found to significantly affect the non use of contraceptives. The non use of contraceptives was found to decline with increase in the level of education of the women whereby women with primary and secondary education were less likely to be non users of contraceptives compared to women who had no education. These results are similar to Magadi (2003) which revealed that women who have attained higher levels of education are more likely than others to practice contraception. Tawiah (1997) reports that currently married women who have higher education were more likely to be current contraceptive users. Okezie et.al (2010)

reveal that female education appears to be an important determinant of current contraceptive use, perhaps because more educated women are more likely to appreciate the advantages of having fewer, better educated children. Murungaru et.al (2013) reports that contraceptive use is higher among married women with secondary and above education compared with those with none/primary level of education.

The wealth status of the women was found to affect the non use of contraceptives. Women from the middle and rich wealth quintile were found to be less likely to be non users of contraceptives compared to women from the poor wealth quintile. This was similar to study by Dibaba (2008) which indicated that that household socio-economic status (Wealth Quintile) is an important variable associated with women's intention to limit childbearing. According to the study, the odds of the desire to stop childbearing increased as wealth increased. The region of residence was also found to have a significant effect on non use of contraceptives. Non use of contraceptives was found to vary across regions in Kenya. This is also similar to the study by Murungaru et al., (2013) that found that there was a higher level of modern contraceptive use in Central Province compared to Coast and Nyanza provinces.

The third objective of the study was to establish the socio cultural factors that affect the non use of contraceptives. The study found that religion was associated with non use of contraceptives however the religion did not significantly affect non use of contraceptive.

The final objective of the study was to establish the programmatic factors that affect non use of contraceptives. The study found that visiting a health facility and being informed on FP significantly affected non use of contraceptives. This is similar to study by Laguna et al., (2000) that found that contact with fieldworkers and health care professional during visits to health facilities tend to promote greater use of modern contraception. Exposure to FP messages via radio was also found to affect non use of contraceptive among the women. This was also similar to other studies: (Olaleye and Bankole, 1994; Jato et al., 1999; Agha and Van Rossem, 2002; Das Gupta et al., 2003, Islam and Kabir, 2000; Cheng 2011, Rabbi, 2012) which showed that mass media campaigns may lead to behavioral changes and in this way reduce fertility.

CHAPTER FIVE:
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This section presents a summary of the study findings; conclusion and recommendations. The first section summarizes the study design and its implementation. The second section presents a summary of the key findings and conclusions drawn from the key findings and last section discusses recommendations for both policy and research.

5.2 Summary

This study set out to establish the factors associated with non use of contraceptives among married women aged 15-49 years in Kenya using data drawn from the 2008-09 KDHS. The study used a sample of 1751 currently married women who were sexually active, not pregnant, breastfeeding or infecund at the time of the survey. The main objective of the study was to determine the factors associated with non use of contraceptives among currently married women of reproductive age in Kenya. The conceptual framework used for this study was based on the framework Casterline et.al (2001) used in a study on the obstacles to contraceptive use in Pakistan.

The study used frequency distributions, cross tabulations and logistic regression analysis. The results of the analysis showed that non use of contraceptives was significantly associated with age, parity, level of education of the woman and her partner, region of residence, wealth status, religion, exposure to family planning messages via mass media, number of living children and desire for more children.

Non use of contraceptives was significantly associated with age of the woman at $p<0.05$.Non use of contraceptives among women aged 25-34 and 35-44 were 33 and 34 percent respectively compared to 56 percent for women aged 15-24.This findings show that the non use of contraceptives declines with increase in age. Additionally, women with higher parities are more likely to use contraceptives compared to women with lower parities according to the results.

Region of residence of the respondent was also to found to be significantly associated with the non use of contraceptives. Women from central province had the lowest percentage of non users of contraceptives while women from north eastern had the highest percentage of non users of contraceptives. The level of education of the woman was found to be significantly associated with the non use of contraceptives. Non use of contraceptives declines with an increase in the level of education. The results also indicate that household wealth status is significantly associated with non use of contraceptives whereby non use of contraceptives declines with increase in household wealth status.

Exposure to FP message via mass media was found to be significantly associated with non use of contraceptives .The non use of contraceptives was higher among women who had not been exposed to messages via mass media as compared to women who had been exposed to FP messages via mass media. The woman's desire for more children was also found to be significantly associated with non use of contraceptives .The non use of contraceptives was higher among women who desired for more children compared to those who were undecided on whether they wanted more children.

The results of logistic regression analysis found that age, parity, region, woman's education, household wealth status, exposure to FP messages via radio, contact with health professionals and informed on FP and desire for more children have significant net effects on non use of contraceptives. Age had a negative effect with the non use of contraceptives and parity other factors controlled. Non use of contraceptives declines with increase in age of the woman. Women aged between 25-44 years were less likely to be non users of contraceptives compared to women aged between 15-24 years. Non use of contraceptives declines with increase in parity. Women with between 1-3 children were 6.016 times likely to be non users of contraceptives compared to women with no children. Women with between 4-5 children and those with more than 5 children were 1.224 and 0.912 times likely to be non users of contraceptives compared to women with no children

Women with primary and secondary education were less likely be non users of contraceptives compared to women who had no education. Women with primary education were 7.282 times likely to be non users of contraceptives than women who had no education whereas women with secondary education were 2.837 times likely to be non users of contraceptives

compared to women with no education. Contact with health professional at health facility and informed on FP reduces the likelihood of non use of contraceptives by the women. Women who had been in contact with health professionals and informed of FP by the health workers were less likely to be non users of contraceptives as compared to women who had not been informed of FP. The study also found that women exposed to FP messages via radio were less likely to be non users of contraceptives than those who had not been exposed. The wealth status of the women was found to affect the non use of contraceptives. Women from the middle and rich wealth quintile were found to be less likely to be non users of contraceptives compared to women from the poor wealth quintile.

The study also found that desire for more children significantly affects non use of contraceptives. Women who desired more children were more likely to be non users of contraceptives compared to women who did not desire more children or those who were undecided of whether they wanted more children.

5.3 Conclusion

Family planning is acknowledged in most developing countries to be an effective way of improving the health of mothers and children and plays leading roles in mortality and fertility transition (Cleland, 2006).Utilization of contraceptives has been the concern of not only the government but also other stakeholders including researchers. In this study, it has been established that not all married women use contraceptives yet are at a higher risk of getting pregnant.

It has further been established that various demographic, socio-economic, socio cultural and programmatic factors affect non use of contraceptives among married women in Kenya. These include age, parity, desire for more children, wealth status, and contact with health professional health facility. Therefore, there is need to consider these factors in efforts to increase the use of family planning among married women in Kenya.

5.4 Recommendations

The determinants of non use of contraceptives among married women in Kenya, as presented in this study, have policy and programme implications for Kenya and for other African countries with similar social, cultural and economic conditions.

Strategies that make family planning services available, affordable and accessible for women will have a greater impact on reducing non use of contraceptive among married women. These include investing FP workers and health professionals at the health facilities in order to enhance information sharing on FP. Deliberate efforts should also be made to intensify information education and communication campaigns using mass media on benefits of contraception

The findings of this study show that wealth status is significantly associated with non use of contraceptives therefore there is need to integrate economic empowerment aspects in FP programmes in Kenya especially targeting women from poor households.

From the findings of this study, there is a need for more emphasis on the education of women in order to reduce non use of contraceptive.

5.5 Recommendation for future research

There should also be further research on the reasons why some women choose not to use contraception especially with regards to age and also the education of the woman since women aged between 15-24 years and women with no education were most likely to be non users of contraceptives.

This study has only used currently married women, there should be further research on the influence of the husband or partner on non use of contraceptives since the husband or partner perspectives are also critical for the success of FP programmes as they play a role in the non use of contraceptives by the women. This may include research on the characteristics of the husband, attitudes and preferences which may affect women's patterns of non use contraceptives

REFERENCES

Addai, I. (1998). *Demographic and sociocultural factors influencing use of maternal health service in Ghana,* African Journal of Reproductive Health, 2(1):73–80

Addai, I. (1999), *Does religion matter in contraceptive use among Ghanaian women*? Review of Religious Research 40(3): 259-277.

Agadjanian, V. (2005) *Gender, religious involvement, and HIV/AIDS prevention in Mozambique*. Social Science & Medicine; 61:1529–1539

Agresti, A. (1996). *An Introduction to Categorical data Analysis*. John Wiley and Sons, Inc., New York.

Agha, S. and R. Van Rossem (2002). "*Impact of mass media campaigns on intentions to use the female condom in Tanzania."* International Family Planning Perspectives 28(3): 151-158.

Ainsworth, M., Beegle, K., & Nyamete, A. (1996). *The impact of women's schooling on fertility and contraceptive use: A study of fourteen sub-Saharan African countries.* World Bank Economic Review, 10, 85–122.

Ajayi,A. and J.Kekovole (1998), "*Kenya's Population Policy*: from apathy to effectiveness."In Anrudh Jain(ed.),Do population policies matter?Fertility and Politics in Egypt,India,Kenya and Mexico,New York:Population Council

Asiimwe, JB, P Ndugga, and John Mushomi(2001*)."Socio-demographic factors associated with contraceptive use among young women in comparision with older women in Uganda*.."

Askew,I.,A.Ezeh,.J.Boongarts,J.Townsend.(2009). *Kenyas' Fertility Transistion: Trends, Determinants and Implications for Policy and Programmes*. Population Council.Nairobi.

Aynekulu,Weyzer& Gerezgiher Buruh.(2013). *Measuring Fertility Intention, Family Planning Utilization and Associated Factors among Married Couples in Mekelle City, Tigray, Ethiopia*. International Journal of Pharmaceutical and Biological Sciences Fundamentals, Vol. 06, Issue 01

Bairagi, R. (2001). *Effects of son preferences on contraceptive use, Abortion and Fertility in Maltab, Bangladesh*. International Family Planning Perspectives, 27(3): 137-142

Becker,.G (1960), ”*An Economic Analysis of Fertility*.” Pp 209-40 in Demography and Economic Change in Developing Countries.New York.National Bureau of Economic Research

Bertrand, J, Bauni E, Lesthaeghe R, Montgomery M, Tambashe O, Wawer, M. (1993).*Factors Affecting Contraceptive Use in Sub-Saharan Africa*. Washington, DC: National Research Council, National Academy Press.

Bhatia, J and Cleland J.(1995) *Determinants of maternal care in a region of South India*, Health Transition Review.5(2):127–142

Black, A. Y.;Fleming, N. A.; Rome, E. S. (2012). "Pregnancy in adolescents". Adolescent medicine: state of the art reviews 23 (1): 123–138, xi. PMID 22764559.

Blacker,J. (2002), *Kenya's Fertility Transition*: Expert Group Meeting Completing Fertility Transistion. Population Division, Department Of Economic and Social Affairs, UN Sectratariat. New York.UN/PO/CFT/202/CP/11. 14.

Bogue,D. (1983), ”*Normative and Psychic Costs of Contraception*.” Pp 151-92 in Determinants of Fertility in Developing Countries, Vol 2,ed,R.Bulatao and R.Lee. New York: Academic Press

Bongaarts, J. and S.C. Watkins. (1996). *Social Interactions and Contemporary Fertility Transitions*. Population and Development Review 22:639-82.

Bongaarts, J, Mauldin WP, Phillips J. (1990), *He demographic Impact of Family Planning Programs*. Studies in Family Planning; 21(6): 299-310.

Bongaarts, J., (2009), Human Population Growth and the Demographic Transition. *Philosophical Transactions:Biological Sciences, 346, 2985-2990*

Brander, J. A., (2007), Viewpoint: Sustainability: Malthus Revisited. *The Canadian Journal of Economics,* 40, 1-38.

Casterline, John, Zeba Sathar, and Minhaj Haque.(2001) *"Obstacles to contraceptive use in Pakistan: A study in Punjab."* Studies in Family Planning 32, No. 95-110.

Cheng, Kai-Wen.(2011) *The Effect of Contraceptive Knowledge on Fertility: The Roles of Mass Media and Social Networks*. Journal of Family and Economic Issues, 32(2): 257–267

Chipeta, E.K., W. Chimwaza and L. Kalilani-Phiri, (2010). *Contraceptive knowledge, beliefs and attitudes in rural Malawi: Misinformation, misbelieves and misperceptions*. Malawi Med. J., 22(2): 38-41.

Cleland J, et. Al.(2006). Family planning: the unfinished agenda. The Lancet Sexual. and Reproductive Health Series

Hanson,S.J.;Burke,Anne E.(2010).The Johns Hopkins manual of gynaecology and obsterics(4th ed.) pp 382-395.Philadelphia;Wolters Kluwer Health/Lippincott Williams & Wilkins

Davis K. (1963), *The theory of change and response in modern demographic history*. Pop, Index 29; 345-66

Dang A. (1995), Differentials in contraceptive use and method choice in Vietnam. International Family Planning Perspectives; 21(1):2–5.

Degraff et al.,. (1997), "*Community Level Determinants of Contraceptive Use in Phillipines*: A Structural Analysis"Demography Volume 34-Number 3,385-396

De Seliva, W.(1993). *Influences of Son preference on contraceptive use and fertility of Sri lanka women*. Journal of Biological Science. 25(3): 319-331

Dibaba, Y. (2008). *Factors influencing women's intention to limit child bearing in Oromia, Ethiopia*. Ethiopian Journal. Health Development., 22(3): 28-33.

Donaldson P, Tsui A. O. The International Family Planning Movement.Population Bulletin, 1990; 45(3): 3-44.

Easterlin, R. A., E. Crimmins, et al. (1985). *Theoretical Framework. The Fertility Revolution*. Chicago, University of Chicago Press

Elfstrom, .M. (2011). *Community Factors Influencing Contraceptive Use among Married Women in 21 African Countries,* MPH Thesis, Rollins School of Public Health., Emory University

Ezeh, Alex Chika. 1993. "*The Influence of Spouses Over Each Other's Contraceptive Attitudes in Ghan*a". Studies in Family Planning, 24(3)

Family Health international, (FHI) (2007), *Addressing Unmet Need for Family Planning in Africa*: Long-Acting and Permanent Methods. http:// www.fhi.org/NR/Shared/enFHI

Freedman, D.S., & Thornton, M. (1982*). Income and fertility, the elusive Relationships*. Demography. 19(10): 65-78

Fikree, F.F., Khan A, Kadir MM, Sajan F, Rahbar MH. (2001). *What influences contraceptive use among young women in urban squatter settlements of Karachi, Pakistan*.International Family Planning Perspectives, 27:130-6

Gregson, S., Zhuwau, T., Anderson, R.M. and Chandiwana, S.K. (1999), *Apostles and Zionists:* The influence of religion on demographic change in rural Zimbabwe. Population Studies 53(2): 179-193.

Goldewijk, K. K., (2005), *Three Centuries of Global Population Growth*: A SpatialReferenced Population (Density) Database for 1700-2000. *Population and Environment, 26, 343-367*

Hermalin.A.I (1983), "*Fertility Regulations and Its Costs.A Critical Essay*".Pp 1-53 in Determinants of Fertility Decline in Developing Countries.Vol 2,ed, R.Bulatao and R.Lee.New York:Academic Press

Hemmings, J., Wubshet, T., Lemma, S., Antoni, T., & Cherinet, T. (2008), *Ethiopian Women's Perspectives on Reproductive Health:* Results from a PEER study in the Guraghe Zone. London: Marie Stopes International.

Hirschman,.C. (1994),''*Why Fertility Changes*."Annual Review of Sociology. Volume 20:203:233

Islam, M., & Mahmud, M.(1995). *Contraception among adolescents in Bangladesh*. Asian-Pacific population Journal. United Nation: 10(1): 21-38.

Islam, M.A. and Kabir, M. (2000). *Does mass media program has any impact on the pregnancy status of rural women*. Jahangirnagar University Journal of Science, 22 & 23, 245-255

Jato, M.N., Simbakalia, C., Tarasevich, J.M., Awasum, D.N., Kihinga, C.N.B. and Ngirwamungu, E. (1999).*The impact of multimedia family planning promotion on the contraceptive behavior of women in Tanzania*. International Family Planning Perspectives, 25(2), 60-67

Kabagenyi,A.Nankinga,O.and Rutaremwa G.(2011) *Perceived Partners' Desire for More Children and Modern Contraceptive Use among Married Women in Uganda*. Department of Population, School of Statistics and Applied Economics,Makerere University

Kabir et al.(2013).*Association of programmatic factors with low contraceptive prevalence rates in a rural area of Bangladesh*. Reproductive Health 2013 10:31

Kasarda, J., Billy, J. and West, K. (1986).*Status Enhancement and Fertility*. Orlando, Florida: Academic Press.

Kent, M. M., & Mather, M. (2002), *What Drives U.S population?* Washington, DC; Population Reference Bureau

Kenya National Bureau of Statistics and ICF Macro.(2010). *2008–09 Kenya Demographic and Health Survey: Key Findings*. Calverton, Maryland, USA: KNBS and ICF Macro

Khasakala,A.(2011), Ethnic Fertility Differentials and their Proximate Determinants in Kenya: Implications for Development,In Population Association in America Meeting, *Fertility Change and Ethnicity Identity in Africa*

Kiragu, K., and L.S. Zabin (1995), "*Contraceptive Use Among High School Students in Kenya*" International Family Planning Perspectives 21:108-113.

Kirk, .D. (1996), *Demographic Transition Theory* Population Studies, Vol. 50, No. 3 (Nov., 1996), pp. 361-387

Kizito, P.M.L.,W.Obungu, M. Kibet & W. Njogu (1991), *Fertility Transition in Kenya*. DHS Further Analysis. Studies No.11.Calverton MD: Macro International

Kohler, H.-P., J.R. Behrman, and S.C. Watkins. (2001). *The Density of Social Networks and Fertility Decisions: Evidence From South Nyanza District, Kenya*. Demography 38:43-58

Kravdal, Oystein.(2002). *Education and fertility in sub-Saharan Africa: Individual and community effects*. Demography 39:233-250.

Kyalo,.M,M. (1996), *Determinants of Contraceptive Non use*, MA Thesis, P.S.R.I, University of Nairobi, Kenya

Laguna, Elma P., Anna Liza C. Po., and Aurora E. Perez.(2000). *Contraceptive Use Dynamics in the Philippines: Determinants of Contraceptive Method Choice and Discontinuation*. Calverton, Maryland: ORC Macro

Lakew,.Y.Reda,.A.Tamene,H.Benedict,S.and Deribe,K. (2013): *Geographical variation and factors influencing modern contraceptive use among married women in Ethiopia: evidence from a national population based survey*. Reproductive Health10:52.

Magadi, M. K., Madise, N. J., & Rodrigues, R. N. (2000), "*Frequency and Timing of Antenatal Care in Kenya*: *Explaining the Variations between Women of Different Communities"*, Social Science and Medicine, vol. 51, pp. 551-561.

McDevitt, T.M., Adlakha, A., Foweler,T.B., & Harrris-Bourne,V.(1996). *Trends in Adolescent fertility and contraceptive use in the developing world*. New York: Bureau of the Census

Martin-Castro, T and Juzrez, F. (1995). *The impact of women education on fertility in Latin America*: Searching for explanations: International Family Planning Perspectives, 21: 52-53 80.

Muhenje, .O. (2002), *Determinants of Contraceptive Non use Among Kenyan Youth*, MA Thesis, P.S.R.I., University of Nairobi

Magadi, M., Zulu E, Ezeh A, and Curtis S. 2001. *Contraceptive use dynamics in Kenya: further analysis of Demographic and Health Survey (DHS) data*. Nairobi, Kenya and Calverton, Maryland: Africa Population and Health Research Centre (APHRC) and MEASURE Evaluation Project, ORC Macro

Magadi MK, Madise NJ and Rodrigues RN(2000), *Frequency and timing of antenatal care in Kenya: explaining the variations between women of different communities*, Social Science & Medicine,51(4):551– 561

Malhotra, A., & Thap, S.(1991), *Determinants of Method Choice in Sri Lanka Asian-Pacific population Journal.* United Nation: 6(3): 25-40.

Mathe, J.K., K.K. Kasonia and A.K. Maliro,(2011). *Barriers to adoption of family planning among women in eastern democratic republic of Congo*. African. Journal. Reproductive. Health, 15(1): 69-77

McClelland, G.(1983). *Family-size desires and measures of demand*. Bulatao, R A, Lee, R. Determinants of fertility in developing countries, Academic Press, New York.

Monica Das Gupta & Jiang Zhenghua & Li Bohua & Xie Zhenming & Woojin Chung & Bae Hwa-Ok, 2003. *"Why is Son preference so persistent in East and South Asia:a cross-country study of China, India and the Republic of Korea,"* The Journal of Development Studies, 40(2), pages 153-187.

Montgomery, M.R. and J.B. Casterline. (1996), *Social Learning*, Social Influence and New Models of Fertility. Population and Development Review 22(Suppl.): 151-75.

Murungaru,K.Njeru,M.and Ndirangu,G.(2013).*Regional variations in contraceptive use in Kenya: comparison of Nyanza, Coast and Central Provinces.* African Population Studies Vol 27, 1

NCAPD-National Coordinating Agency for Population and Development (2011). *State of Kenya's Population*, NCAPD:Nairobi

Nazar-Beutelspacher, A., et al. (1999), *Education and Non use of Contraceptives among poor women in Chiapas,* Mexico. International Family Planning Perspectives, 25(3): 132-138

Nuwaha, F and Amooti-Kaguna B.(1999).*Predictors of home deliveries in Rakai District, Uganda*, African Journal of Reproductive Health,3(2):79–86

Obermeyer, CM and Potter JE.(1991). *Maternal health care utilization in Jordan: a study of patterns and determinants*,Studies in Family Planning,22(3):177–187.

Olaleye, D.O. and A. Bankole.(1994). *The Impact of Mass Media Family Planning Promotion on Contraceptive Behavior of Women in Ghana.* Population Research and Policy Review, 13, 161-177

Oketch, et al., (2011), *Contraceptive Use among Women of Reproductive Age in Kenya's City Slums*

Okezie, C. A., Ogbe A. O.and Okezie C. R.(2010) *Socio-economic determinants of contraceptive use among rural women in Ikwuano Local Government Area of Abia State, Nigeria* International NGO Journal Vol. 5(4), pp. 74-77, May 2010

Oppongg, Tawiah, E. (1994). *"Determinants of cumulative fertility in Ghana*,". Demography 21, 1-8

Palamuleni, Martin E.(2013). *Socio-Economic and Demographic Factors Affecting Contraceptive use in Malawi.* African Journal Reprodroductive Health;17 [3]: 91 -104

Rabbi, A.M. (2012). *Mass Media Exposure and its Impact on Fertility: Current Scenario of Bangladesh*. Journal of Scientific Research, 4(2), 383-395

Republic of Kenya (2013), *Kenya's Population Situation Analysis*, Nairobi: Government Printer

Robey, B, Rutstein SO and Morris L. (1992), *The Reproductive Revolution*: New Survey Findings. Population Reports, Series M, Number 11.

Rutenburg, N., Ayad, M., Ocho, L.H., & Wilkinson, M. (1991). *Knowledge and use of contraception*.Demographic and Health surveys comparative studies No.6, Columbia, MD: Institute for Resource Development

Saleem, S. and Bobak, M. 2005. *Women's autonomy, education and contraception use in Pakistan: A National study*. Reproductive Health,2:8 doi:10.1186/1742-4755-2-8

Saluja,N., S. Sharma, S. Choudhary, D. Gaur, S. Pandey. (2011*). Contraceptive Knowledge,Attitude and Practice Among Eligible Couples of Rural Haryana*. The Internet Journal of Health, 12(1)

Sara, E. Yeatman and Jenny Trinitapoli (2008), *Beyond denomination*: The relationship between religion and family planning in rural Malawi. Demographic Research Volume 19, Article 55, Pages 1851-1882

Stephenson,R. Baschieri,A. Clements,S. Hennink,M.& Madise,N.(2007). *Contextual Influences on Modern Contraceptive Use in Sub-Saharan Africa* American Journal Public Health.;97(7):1233–1240.doi: 10.2105/AJPH.2005.071522

Seiber, EE, Bertrand JT, and Sullivan TM (2007), *Changes in contraceptive method mix in developing countries*. International Family Planning Perspectives; 33(3):117-123.

Shah, NM, Shah MA and Radovanovic Z(1998), Patterns of desired fertility and contraceptive use in Kuwait. International Family Planning Perspectives; 24(3):133–138.

Speidel, J., (2007), Family Planning and Reproductive Health: The Link to Environmental Preservation. *Population and Environment*, 250-257

Syed,I.S.(2000).*Acceptance of contraceptive among married women of Reproductive age in Puthamonthon Distric, Thailand*. MA Thesis, Faculty of graduate Studies, Mahidol University

Tabutin, D. & Schoumaker, B. (2004), *The Demography of Sub-Saharan Africa from the 1950s to the 2000s*. A Survey of Changes and a Statistical Assessment. Population, 59, 457-555.

Tawiah,E.O.(1997).*Factors affecting contraceptive use in Ghana*.Journal of Biosocial Science. 29(2):141-9.

Teferi,Z. (2009), *Determinants of contraceptive use among currently married women in Amhara and Oromiya Regions of Ethiopia*, MPhil Thesis, Departmen of Statistics, University of the Western Cape

Thomson, E.(2001). *Family Size and Preferences*. Elsevier Science. P. 5347. Elsevier Science.

Tsui, A. O. & Ahmed, S.; Li, Q.; Liu, L.(2012). "Maternal deaths averted by contraceptive use: An analysis of 172 countries". The Lancet 380 (9837): 111–125. doi:10.1016/S0140-6736(12)60478-4. PMID 22784531

Tuoane, M. (1999), *Patterns of Contraceptive Bahaviour and the Delivery of Family Planning Services in Lesotho*. PhD Thesis, University of Southampton.

Ullah, S and Chakraborty N (1993), *Factors Affecting the Use of Contraception in Bangladesh:* A Multivariate Analysis. Asia-Pacific Population Journal; 8(3):19-30.

United Nations Educational, Scientific, and Cultural Organization, (UNESCO, (2011), *Education counts towards millennium development goals*

United Nations Population Fund (UNFPA) (2004), State of World Population:The Cairo Consensus at Ten: Population, Reproductive Health and the Global Effort to End Poverty, New York: UNFPA, 2004.

United Nations Population Fund (UNFPA).,(2008). *Reducing unmet need for family planning: Evidence-based strategies and approaches.* Outlook, 25(1): 1-7

Vlassoff, M., Singh, S., Darroch, J. E., Carbone, E., & Bernstein, S. (2004), *Assessing costs and benefits of sexual and reproductive health interventions.* New York: Alan Guttmacher Institute

Woldemicael, G. and R. Beaujot,(2011). *Currently married women with an unmet need for contraception in Eritrea: Profile and determinants*. Canadian. Studies. Population.38(1-2): 61-81.

Yeakey, M. P., et al. (2009), *How Contraceptive Use Affects Birth Intervals*: Results of a Literature Review. Studies in Family Planning, 40(3): 205-214. Non use and ineffective methods of contraception