

DETERMINANTS OF CONTRACEPTIVE METHOD CHOICE IN KENYA

By

Priscilla M. Ndayara

A Project submitted in partial fulfilment of the requirements for the award of the degree of
Master of Science in Population Studies at the Population Studies and Research Institute,
University of Nairobi.

October, 2016

DECLARATION

This project is my original work and has not been presented for a degree in this or any other university.

.....

Priscilla M. Ndayara

(Reg.No.): Q56/74598/2014

This project has been submitted for examination with our approval as University supervisors:

Sign:.....

Supervisor: Prof. Murungaru Kimani.

Sign:.....

Supervisor: Dr. Andrew Mutuku.

DEDICATION

This project is dedicated to my late father Mr. Christopher Ndayara Omolo, my lovely mom Lucy Wakio Ndayara and brother Willy Ambaka who have encouraged and supported me unconditionally and provided a conducive environment for me to pursue my studies.

ACKNOWLEDGEMENT

First I would like to thank God for seeing me through the entire period of my study. Profound gratitude also goes to my family and friends who have be a voice of reason and my support system, they walked with me throughout the journey and I am eternally gratefully for that.

I would also wish to express my gratitude towards my project supervisors, Prof. Murungaru Kimani and Dr. Andrew Mutuku for their guidance and support throughout the period I worked on the project.

Also, special thanks goes to all PSRI lecturers who have been extremely dedicated and consistent throughout my study. To members of staff at PSRI computer Lab, Library and administration, thanks for providing me with all the necessary materials and documents within the required time.

Finally, special thanks goes to all my classmates and colleagues who constantly encouraged me to push on, thank you all so much.

ABSTRACT

Most studies on contraceptives focus only on contraceptive use and/or prevalence, especially in Africa south of the Sahara. These studies are not by themselves complete to inform and guide policy and programme interventions. These studies coupled up with studies on determinants of contraceptive method choice can provide a better guide to policy makers and program implementers on matters dealing with contraceptive. It has therefore become necessary, especially with the most recent Kenya Demographic and Health Survey data to explore and understand the factors that contribute towards the choice of a contraceptive method.

The objective of the study was to establish the determinants of contraceptive method choice. Data for the study was obtained from 2014 Kenya Demographic and Health Survey data. The study applied a multinomial logit model to determine the factors that influence the choice of a contraceptive method. The results from the model show the continued dominance of injectable over other methods. Women of zero parity and those who have never been in union are the only ones that demonstrate a preference towards condom use. The results further show the impact of education, employment, wealth, place of residence and other factors on contraceptive behavior such as religion.

In order for the population programmes to have a bigger impact on fertility, policy makers and programme implementers need to understand the factors associated with method choice and purpose to impact on these factors in order to promote or discourage the use of certain methods. Apart from more funding towards family planning programmes, women's level of education and standards of living should be improved.

Table of Contents

DECLARATION.....	I
DEDICATION.....	II
ACKNOWLEDGEMENT.....	III
ABSTRACT.....	IV
CHAPTER ONE	1
INTRODUCTION.....	1
1.1 BACKGROUND.....	1
1.2 STATEMENT OF THE PROBLEM	2
1.3 RESEARCH QUESTIONS.....	3
1.4 OBJECTIVES OF THE STUDY	3
1.5 JUSTIFICATION OF THE STUDY	4
1.6 SCOPE AND LIMITATIONS OF THE STUDY.....	5
CHAPTER TWO	6
LITERATURE REVIEW	6
2.1 INTRODUCTION.....	6
2.2 EMPIRICAL LITERATURE REVIEW	6
2.3 SUMMARY OF LITERATURE REVIEW.....	10
2.4 CONCEPTUAL FRAMEWORK.....	11
2.5 OPERATIONAL FRAMEWORK	13
2.6 OPERATIONAL DEFINITION OF VARIABLES.....	14
2.6.1 <i>Dependent variable</i>	14
2.6.2 <i>Independent variables</i>	14
CHAPTER THREE	17
METHODOLOGY	17
3.1 INTRODUCTION.....	17
3.2 SOURCE OF DATA.....	17
3.3 METHODS OF DATA ANALYSIS.....	18
3.3.1 <i>Model Specification</i>	18
CHAPTER FOUR.....	20
CONTRACEPTIVE METHOD CHOICE.....	20
4.1 INTRODUCTION.....	20
4.2 CHARACTERISTICS OF THE STUDY POPULATION.....	20
4.3 FACTORS ASSOCIATED WITH CONTRACEPTIVE METHOD CHOICE.....	22
4.3.1 <i>Contraceptive Access Factors</i>	22
4.3.2 <i>Contraceptive Competence</i>	22

4.3.3	<i>Contraceptive Evaluation</i>	23
4.3.4	<i>Contraceptive Goals</i>	24
4.4	DETERMINANTS OF CONTRACEPTIVE METHOD CHOICE	26
4.4.1	<i>Contraceptive Access</i>	27
4.4.2	<i>Contraceptive Competence</i>	27
4.4.3	<i>Contraceptive Evaluation</i>	27
4.4.4	<i>Contraceptive Goals</i>	28
4.5	DISCUSSION.....	28
CHAPTER FIVE		30
SUMMARY, CONCLUSION AND RECOMMENDATIONS		30
5.1.	INTRODUCTION.....	30
5.2.	SUMMARY	30
5.3.	CONCLUSION.....	31
5.3.	RECOMMENDATIONS	31
5.3.1	<i>Recommendations for Policy</i>	31
5.3.2	<i>Recommendations for further Research</i>	33
REFERENCES.....		34
APPENDICES.....		38

CHAPTER ONE

INTRODUCTION

1.1 Background

Contraceptive use is one of the key proximate determinants of fertility (Bongaarts, 1978). It contributes substantially to the reduction of total fertility rate as it has a direct impact on fertility level. Effective and consistent use of contraceptives ensures couples meet their reproductive goals (number of and spacing of children). Promotion of family planning is one of the critical priority areas in the country's efforts to reduce total fertility rate, slow down population growth and reduce maternal and child mortality (Potts, 1990; Yeakey & Muntifering et al., 2009).

It is recommended that family planning programmes offer a variety of methods that are safe, effective, acceptable and affordable to help women prevent unwanted pregnancies and Sexually Transmitted Diseases and to help them achieve their childbearing goals (APHRC, 2001). The Kenya family planning programme which started in the 1960s offers a variety of family planning methods. Data from various sources show that the choice of these methods differ in different settings and has been changing over time (Bulatao et al., 1989). Magadi (2001) show that injectable is the most dominant method in Kenya and its use has been increasing over time. According to the 2014 KDHS (KNBS et. al. 2015) most common contraceptive method is injectables, it accounts for 26 percent of among the married women. Similarly, 18.7 percent of all women are using injectables in Kenya while 7.1, 5.5 and 3.1 percent of the women were using implants, condoms and the pill respectively.

Proper understanding of key factors that has influenced these determinants is important for improvements in quality of care and program planning and management (e.g. logistics, and financial planning) to enable women to meet their fertility goals, as well as to enable the country to realize its desired fertility impact of contraceptive practice (APHRC, 2001) since the effectiveness of different methods differ. Rajaretnam (2000) however observed that the determinants of contraceptive choice are not clearly understood.

According to Bulatao et al. (1989) contraceptive method choice can be considered as a filtering process which is influenced by: technology and costs, contraceptive supplies, socio-cultural and

personal preferences factors. Technological developments bring new factors into the market while others become obsolete while economic costs determine if methods will be mass produced, Suppliers influence availability while socio-cultural factors partly influence the eventual choice among those methods available. The ultimate choice is dependent upon an individual or his or her personal preferences which are entwined with the socio-cultural factors.

This study operationalizes the above conceptualization to understand the role of these factors on contraceptive method choice in Kenya.

1.2 Statement of the problem

Contraceptive choice is an important factor to assess the quality of care from service providers and it is also at the centre of women's sexual reproductive rights, in order for Kenya to align to the newly adopted Sustainable Development Goals (SDGs), women need to be empowered and provided with a wide variety of contraceptive methods.

Most interventions focus on making sure their clientele have access to contraceptives, without looking at the other side of the coin (the clients reproductive goals and methods which better suit their goals), access to contraceptives is not enough in itself, without addressing and understanding the factors associated with contraceptive method choice, the impact and effectiveness of policies and programs will be less (USAID, 2015).

Studies on contraceptive method choice in Africa and Kenya as well are still very few. A lot has been happening in terms of fertility behaviour and uptake of contraceptives in Kenya, the context from which earlier studies were undertaken has greatly changed, the total fertility currently stands at 3.9 births per woman (KNBS et. al, 2015) which is lower than a TFR of 4.6 in 2008/09. For a sustained decline in fertility, policy makers and service providers need to understand the determinants of method choice as the context changes from one of higher fertility, and low contraceptive prevalence rate to one of relatively lower fertility and higher contraceptive prevalence rate.

Methods must be readily available as well for people to enjoy and freely choose among the options, however deficits have been proven to depress the use of each method. Different countries at different times differ in methods offered as well as to the extent in which the

methods are made available, information is therefore needed on how these factors change over time and how they affect uptake and choice of contraceptive methods (Ross et al., 2002).

In Kenya, there is still a significant proportion of women who are nonusers, however, as we encourage the use of contraceptives, it's also important to provide appropriate methods for different clients, this will ensure uptake as well as sustained use over time, it will also provide room for method switching. It is therefore important to understand the determining factors associated with method choice to better guide policy makers as well as programme directions. According to Bulatao (1989), these efforts coupled up with appropriate method choice among the clientele will in the long run yield dividends in the form of lower fertility rate as well as lower infant and child mortality.

With the increasing trend in contraceptive adoption, contraceptive method choice becomes important as well, as this information, if used by policy makers, can offer guidance as to why people use certain methods opposed to others, and from that, measures to improve the use of certain methods which tend to be more effective can be device. Use of more effective methods is of great importance as they produce a greater impact on fertility even when used in small scale as opposed to less effective methods (Shah, 1991). It is in this light that the determinants of contraceptive method choice become important especially to policy makers.

Earlier studies have examined the factors influencing contraceptive method choice in Kenya (Magadi, 2001). This study updates the information on the factors influencing contraceptive method choice using the most recent national representative Kenya Demographic and Health Survey data.

1.3 Research Questions

- i. What factors are associated with the choice of specific contraceptive methods?

1.4 Objectives of the study

The general objective of this study was to establish the determinants of contraceptive use dynamics in Kenya.

The specific objectives were:

- i. To determine the access and demand factors influencing contraceptive method choice in Kenya.
- ii. To establish contraceptive competence and evaluation factors influencing contraceptive method choice in Kenya.

1.5 Justification of the study

The relationship between choice of methods and quality of family planning programmes and between method–mix and the fertility impact of contraceptive use provide double rationale for analysis of method choice in Kenya (APHRC, 2001). Family planning programs should go beyond the fertility effects, they should also focus on delivering topnotch services and meeting the needs of the client. To this end, facilitating better choices should in the long run yield dividends (Bulatao et al., 1989).

A lot of effort has been put in sexual and reproductive health (SRH) programs in Kenya and all over the world as well, however, despite all these efforts, exhaustively meeting the Sexual Reproductive Health information and services needs of the population has proven to be a challenging task especially in countries South of the Sahara which still have relatively higher fertility rates. Empowering women to have a free choice on the number, timing and spacing of their births is not only a human rights issue, but it also touches on other aspects of sustainable development including health, education and women status in society (USAID, 2015).

Knowledge and voluntary choice of a contraceptive method is a prerequisite for making a decision to initiate contraceptive use. (Ross et al., 2002) found that many countries are yet to attain a full choice among a variety of contraceptive methods. This in turn limits individual access to each method and the use of all methods. To the extent that choice of methods relies on ready access to multiple methods, there's a clear mandate for greater programmatic attention to the provision of a full range of methods.

According to Ahmed (1994), regulating a society's fertility is a collaborative team effort from the users and service providers as well as the government through policies and programmes, all of which ensures there is a consistent availability and access to a wide variety of contraceptive methods. therefore, for a further and sustained decline in fertility, the policy environment should

be conducive and well structured, a conducive policy environment ensures the platform for uptake of appropriate and efficient contraceptive methods, it also accommodate nonusers and users of various methods and ensures a variety of methods are available to all, this can only be made possible if policy makers understand the factors associated with method choice and how these factors are different for and among different groups of people.

It is imperative to note that programme managers and policymakers rely heavily on the information on the pattern of use and the choice of contraceptive method. This understanding is what informs the necessities and needs of the users.

The study is also important to program implementers concerned with encouraging and/or discouraging the use of a particular kind of method. The determinants of method choice can inform program implementers on the interventions needed to different users and in different settings in order for them to encourage of discourse the use of a particular method.

Family planning clients have different needs; couples who want to space births and those who want to stop child bearing (Magadi, 2001). Couples who would like to space and those who want to stop births may require different contraceptive methods, those who want to stop may opt for long term or permanent methods while those who want to space may opt for short term methods, therefore it is important to understand the profile of contraceptive users and their childbearing goals in order to ensure the methods available can cater for their demands.

1.6 Scope and Limitations of the Study

This study sought to examine the determinants of contraceptive method Choice. The study includes all sexually active women within the reproductive age who were not pregnant or infecund at the time of the Survey. The fecund women exclude women who have been sterilized and those who are breastfeeding. The study also only focuses on reversible methods and therefore sterilization is not included on the survey, especially due to the nature of the variable as well as of its rare occurrence in Kenya.

The study is limited to a one level multinomial model which does not take into account the community factors of method choice.

The study is a cross sectional and does not therefore reflect cause analysis relationships.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents literature review on contraceptive method choice. Part one focuses on the empirical literature review while part two presents the conceptual framework and part three presents the operational framework.

2.2 Empirical literature Review

Contraceptive use is one of the key proximate determinates of fertility. Thus for countries that are still going through the demographic transition like Kenya, a further decline in fertility is dependent on consistent and effective use of modern contraceptives which can only be achieved through women having access to and using methods that are appropriate for them. Agrahari et al. (2014) for example observe that fertility decline in developing countries is largely due to increased use of modern contraception and less due to other proximate determinants of fertility.

In Africa South of the Sahara including Kenya, there has been an observed shift towards long term methods from short term methods. Magadi (2001) found that there is a steady increase in injectable use which confirms the shift towards the long term methods in Kenya. More recent studies (APHRC, 2001; Ross and Agwanda, 2012; Ejembi et. al, 2015) further confirm the increase in the use of injectables. The method is also the dominant method of choice in Kenya and most countries south of the Sahara.

The shift towards long term method is of great importance, as long term methods are more effective. Shah (1991) confirms that effective methods produce a greater decline in fertility even if used by a smaller proportion than less effective methods such as withdrawal or traditional methods when used by a bigger proportion of the population. Bruce (1990) emphasizes the importance of method choice in the uptake and effective use of contraception. This study observed that having a variety of “competently provided” methods would attract more acceptors and provide a foundation for satisfied and sustained use.

A sustained decline in fertility requires a policy environment that is conducive and well structured. Such a policy environment ensures availability of various methods which are

appropriate and efficient. This can only be achieved if policy makers understand the factors associated with method choice.

Palmore, Ward and Bulatao (1989), noted that choice of contraceptive methods among couples is a significant policy and research question because of the prevalence in contraceptive use and increased awareness. There are numerous events that illustrate the high level of awareness in choice of contraceptive methods. For instance, in 1989 in the United States, the distributors of three highly popular intrauterine devices (IUDs) stopped because of the anticipated and actual lawsuits. Subsequent years saw numerous changes in the IUDs used by women across the United States (Forrest, 1986). In India, the reliance on female sterilization as a national family planning program faced immense criticism in the 1980s (Palmore, Ward & Bulatao, 1989). However, according to the Ministry of Health and Family Welfare (1985), its continuous promotion on contraceptive methods use and its availability has received much attention across the world because of its ability to prevent and space births.

Many factors influence a woman's or a couple choice of family planning method, on one hand we have the women status and education level as key factors, however there are also factors related to access for example rural or urban residence may affect women's access to contraceptives. Attitude, subjective norms and perceived behavior towards family planning are also hypothesized to influence contraceptive method choice due to the large gap between knowledge, method choice and contraceptive use. More so, the expanding availability and choice of contraceptive methods and strengthening service delivery systems may be one of the determinants of initiation of use of contraceptives (Anasel & Mlinga, 2014).

Studies conducted in Tanzania confirm that, factors like, education, wealth, number of children who are alive, religion and Rural vs urban residency as well as women status (attitudes, subjective norms, and perceived behavioral control) are significant factors determining contraceptive method choice. (Kelly et al., 2013; Msofe et al., 2009; Anna, 2006; Keele, et al., 2005). Studies in Kenya confirm the same factors as having significant influences on method choice (Magadi, 2001; Magadi & Curtis, 2003; APHRC, 2011; Ochako, 2016). Other studies have also found that women characteristics such as their age, number of living children, education level, exposure to family planning messages among other factors being known to

influence method choice (Bulatao, 1989; Stephenson, Beke & Tshibangu, 2008; Gubhaju, 2009). In Bangladesh (Mannan, 2002) also found that religion among other factors were of importance in influencing method choice.

Davidson has interpreted choice with reference to personal attitudes and values (Bulatao, 1989). He brings in psychology to choice where both consumers and providers are important. He further acknowledges that the effort to study individual's contraceptive behavior can be a complicated endeavor, he explains that this is due to the diversity among methods as well as among soon to be users in their competence, beliefs, and motivations. Furthermore, individuals choosing among methods most of the time make choices based on scarce and inaccurate information about method characteristics, such as the potential and type of side effects they may face and correct method use.

Rural/Urban residence is another important factor especially related to accessibility of the methods. For example, the Kenya Service Provision Survey (2011) show that nationwide, 80 percent of facilities reported that they offer at least four different temporary family planning methods yet few facilities actually had these methods available on the day of the survey. The same survey also noted that long term methods are less available than temporary ones. A comparison of availability by residence show that those living in urban areas have access to a wider variety of methods compared to those in the rural areas. According to Ross et al. (2002), there is substantial evidence indicating that a limited choice of contraceptive methods has constrained the opportunity of individual couples to obtain a method that suits their needs, resulting in lower levels of contraceptive prevalence. The study also confirmed that prevalence is highest in those developing countries where access to a variety of methods is uniformly high.

Bruce (1990), proposed framework for quality of care in family planning, contraceptive method choice is among the six elements of his framework and therefore, it is an important determinant of continued contraceptive use. For example, in Indonesia, Pariani, Heer & Van Arsdol (1991) confirmed that clients who received their method of choice displayed the lowest rates of discontinuation at follow up.

In the UNFPA (1996) conference on Population and Development, one of the emerging issues was that appropriate methods vary according to different demand/supply, women characteristics

and other factors, therefore women and men should have access to information and a range of safe and effective methods of family planning for them to exercise free and informed choice.

Popularity of different methods vary in different settings. In China, for instance, the IUDs are relatively popular, while in Malaysia and Indonesia, the oral contraceptives are widely used. Withdrawal and rhythm methods are relatively popular in Sri Lanka and Philippines, while condoms are widely used in Japan and Singapore. Palmore, Ward and Bulatao (1989) noted that a number of countries have adopted the sterilization method. A number of studies also point out the dynamic nature of the contraceptive methods use over time. For instance, in the mid-1960s, the Republic of Korea emphasized the IUD program, which later shifted emphasis to the use of oral contraceptives, the emphasis later shifted to the female sterilization as the most preferred contraceptive method. (Moon et al., 1973; Cho et al., 1984).

Another study conducted in Nang Rong, Thailand concluded that contraceptive choice is highly influenced by kinship network (Entwistle et al., 1996). Therefore, interaction with conventional culture influences the choice of conventional methods of contraception. Changes in the contraceptive behaviour may be facilitated by cultural change transmitted through interpersonal communication; just like passage of information on modern contraception methods increase in access to conventional health care or access to varied contraceptive methods. This study combined both the quantitative and qualitative data to demonstrate the effects of placement of family planning services, village location and the conversational network structure on contraceptive choice (Entwistle et al., 1996).

In the Philippines Laguna et al. (2000) found that in general, older women who may wish to stop having children tend to choose long term methods, whereas younger women, who wish to space rather than stop childbearing, usually prefer reversible methods (especially pills). Higher parity women, tend to favour modern methods (especially injections). Women who are legally married are more likely to use modern methods (especially natural methods, pills, and IUDs) than women living in consensual unions.

Montgomery et al. (2001), in a study conducted in southern Ghana, found that social diffusion process and fertility transition entwines through the contraceptive behaviour. This finding was replicated in the study carried out in Japan (Rindfuss et al., 2004) where a micro-level social change correlated with an individual's particular behaviour.

Communication as a second component of social network analysis involves the passing of family planning information, as well as limiting the channels of communication that are supposed to enhance the spread of innovations. The taboo communication concept in the diffusion model limits diffusion because it is not free flowing, interpersonal communication that is uninhibited (Mannan, 2002). A study conducted by Kohler in 1997 in rural Korea brought more knowledge on social network analysis. The study found that there was limited information shared among network partners and that there is unobserved heterogeneity in a woman's characteristics and attributes (Rindfuss et al., (2004). It was therefore concluded that informal communications influences contraceptive choice across social strata and region.

Based on other studies and comprehensive reviews, more research is required to understand the underlying factors that influence the choice of contraceptive methods. A recent study conducted by the U.S. National Academies of Sciences panel, thoroughly examined the determinants of fertility in the developing nations. This study observed that one of the significant unresolved issues was the choice of contraceptives (Bulatao & Lee, 1983). A similar study conducted by the U.N. Department of International Economic and Social Affairs (1984), recommended more research to be conducted on this topic. It is worth noting that a number of organizations and major funding agencies have prioritized contraceptive decision and use as an area of more research and the funding agencies are ready to offer financial support.

2.3 Summary of Literature Review

It is evident from the literature review that studies that explain the factors associated with contraceptive method choice are very few in Kenya, it is also evident that understanding the factors may be a complicated endeavor as they involve perceptions and subjective norms. It is also clear that contraceptive method choice is an important study area as it determines the initiation and sustained uptake of contraceptives. Furthermore, contraceptive method choice reflects directly on the quality of care that is provided by the service providers.

The literature also indicate that there is an expected shift towards the use of injectables which indicates a shift towards long-term and more effective methods. Literature also shows how appropriate method choice has been shown to have a greater impact on fertility outcomes.

2.4 Conceptual Framework

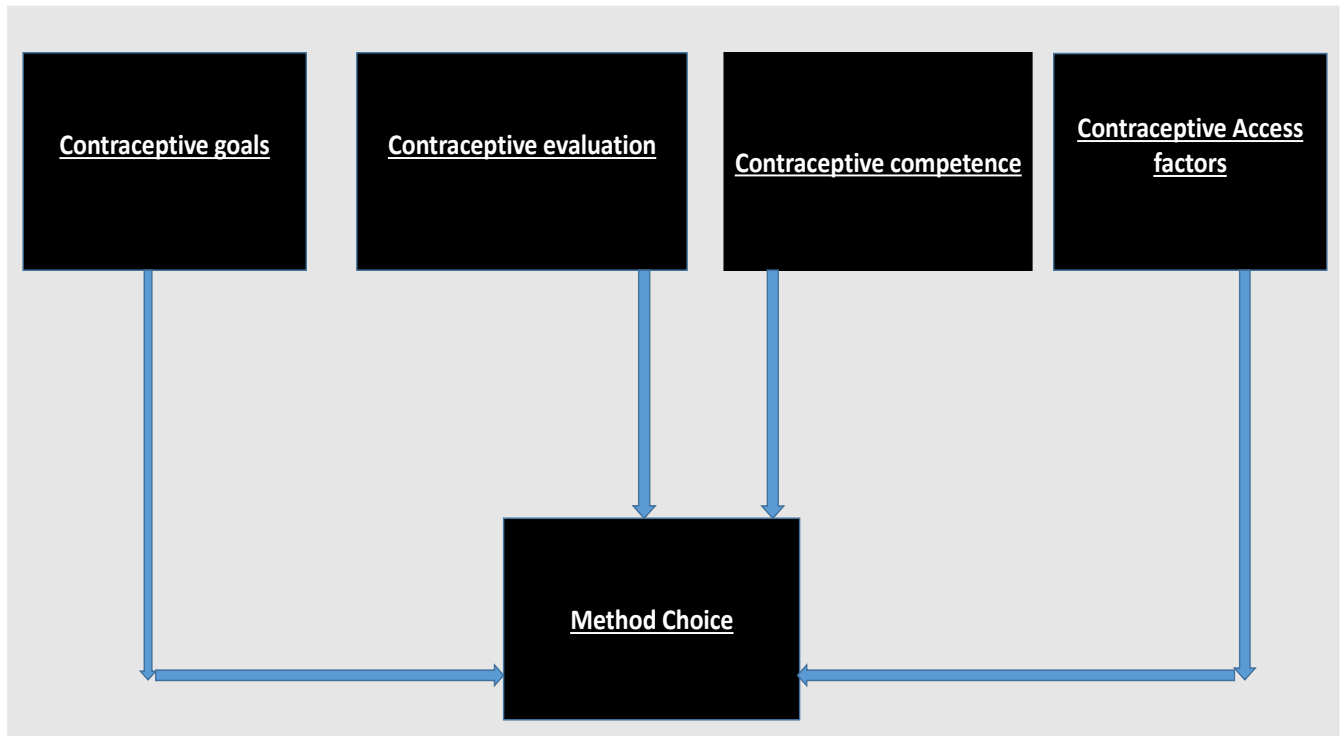
The analysis undertaken in this study was guided by the Bulatao's framework (1989).

This framework has the following four broad components.

1. Contraceptive goals.
2. Contraceptive competence.
3. Contraceptive evaluation.
4. Contraceptive access.

Contraceptive goals involves a couple's or individual's fertility preference, for example limiting versus spacing goals. Contraceptive competence is the ability of an individual woman or couple to use contraceptive methods, it comprises of the woman's level of education, occupation as well as her age. Contraceptive evaluation is the assessment of ethical, moral and cultural influences affecting the use of contraceptives, for example religion, marital status and number of living children. Finally contraceptive access is the availability and accessibility of a wide array of contraceptive methods, it includes variables such as type of place of residence (rural vs urban residence), exposure to family planning methods and economic status of the woman.

Figure 1: Conceptual Framework



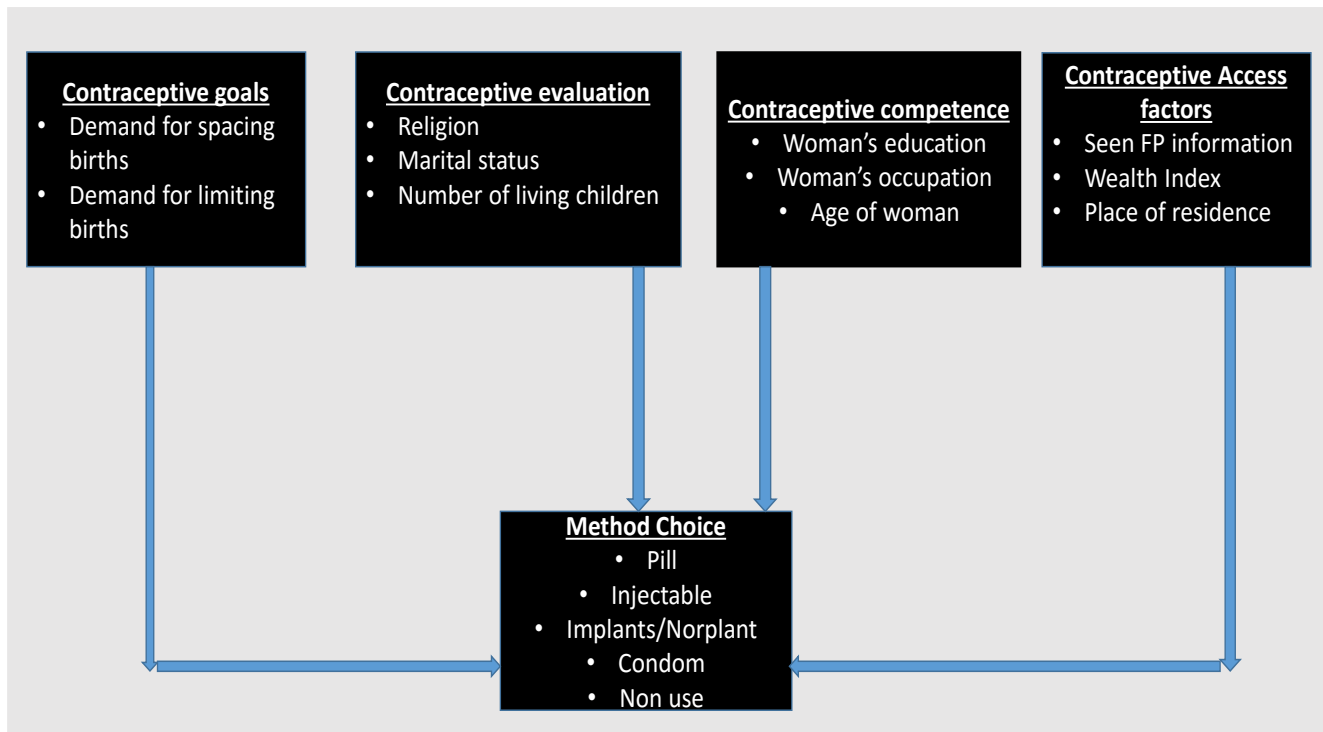
Conceptual model adopted from Bulatao (1989)

Contraceptive method choice is influenced by several factors. In this study, it is hypothesized that four sets of factors, contraceptive goals, evaluation, contraceptive competence and access factors as the major influencers of contraceptive method choice.

Contraceptive goals are the woman's goals for either spacing or limiting her births. Seeing a FP information material, wealth index and type of place of residence are considered as contraceptive access factors, while religion, marital status and number of living children fall under contraceptive evaluation, and the woman's education and occupation as well as her age fall under contraceptive competence. This framework makes an assumption that the groups of factors have a direct impact on the choice a woman makes on the contraceptive method.

2.5 Operational Framework

Figure 2: Operational Framework



Operational model adopted from Bulatao (1989)

The arrows on the framework show the relation between one variable with another. All four broad categories of factors have a direct impact on choosing a method of contraception. Contraceptive evaluation may affect the contraceptive goals.

Contraceptive goals differentiate between limiters and spacers, limiters are the women who want to stop childbearing whole spacers are the women who want to have children in two years or more.

Contraceptive evaluation are the moral costs of using a certain contraceptive, also the different perceptions that a group of people may have towards certain methods of contraceptives, the variables in this component are: religion, marital status and number of living children. Different religions have different perspectives and views on the use of contraceptives, likewise, women in union compared to women who are not in union may have different views towards using methods of contraception, women who are not in union may at times feel and be viewed as

promiscuous if they use contraceptive methods, and women who do not have any children may have a negative attitude towards using a contraceptive method.

Contraceptive competence is the ability of a woman to use the method effectively, it also encompasses a woman's awareness of the different kind of methods, and this helps a woman to choose a method that is appropriate for her. The variables used are the woman's education, age and occupation. Women who have some form of employment and educated women are not only more likely to use a method to delay or avoid getting pregnant, they are also likely to use the method effectively, likewise the older one gets the more experienced and exposed she is likely to be in terms of a method of contraception.

According to Bulatao (1989), the availability of the method dictates whether it will be used. Availability of a method varies, for example promotion of a method, can add significantly to method choice. Affordability of the method is another factor that dictates the use of method, to this end this study includes variables such as seeing a FP information material, place of residence also affects how different women may access different methods. In addition wealth index affects how different groups of women afford different methods as well as access to different service providers, as different service providers offer varied varieties of methods.

Method choice was expressed into five, pill, injections, condom, and implants as well as non-use.

2.6 Operational Definition of Variables

2.6.1 Dependent variable

Method Choice: these are any deliberate parity-dependent methods that are undertaken to reduce the risk of conception. This study concentrates on five grouping of contraceptive methods: The pill, Injectable, implants, condoms as well as no method.

2.6.2 Independent variables

Contraceptive evaluation

Religion: This study has classified religion into three groups: Catholic, Protestants and Muslim/other.

Number of living Children: this is the total number of living children the respondent had at the time of the survey, this study has grouped parity into three: women with no children, those who have 1-2 children and those who have three or more children.

Marital status: whether the respondent is currently, formerly or never married (or lived with a partner).

Currently married includes married women and women living with a partner, formerly married includes widowed, divorced, separated women and women who have lived with a partner but are not now living with a partner and never married women are those who have never been married or have never lived with a partner.

Contraceptive Access factors

Place of Residence: Refers to where the respondent was living at the time of the survey, classified as either urban or rural.

Saw FP information material: this variable separates women who reported to have either seen or not have seen FP information materials.

Wealth index is a composite measure of a household's cumulative living standard, it is calculated using data on a household's ownership of selected assets, such as televisions and bicycles; materials used for housing construction; and types of water access and sanitation facilities places individual households on a continuous scale of relative wealth. DHS separates all interviewed households into five wealth quintiles to compare the influence of wealth on various population, health and nutrition indicators. In this study wealth was recoded into three categories (Poor, Middle and Rich) from the initial five categories

Contraceptive goals

Demand for limiting or spacing: women who stated desire for more children were classified according to whether they wanted the next child later (2+ years) (Demand for spacing), those who did not want any more children (Demand for limiting) and other women who were undecided/unrealistic about when they wanted a child.

Contraceptive competence

Education: Refers to the number of years of formal schooling year. This study classified levels of education into four categories: no education, primary, secondary and higher level of education.

Occupation: refers to respondent's occupation groups. This study classifies employment into four groups: unemployed, self-employed, formal and informal employment.

Age: Age is measured in complete years as at the time of the survey. This study has three groupings for age, 15-24 years, 25-34 years, and 35+ years

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the methodology used in the study. Part one presents the sources of data while part two focuses on the methods of data analysis.

3.2 Source of Data

The study is based on data obtained from 2014 KDHS. This was a nationally representative survey that was designed to provide information on levels and trends in fertility, family planning knowledge and use, and early childhood mortality and morbidity in Kenya.

The sampling frame used was the fifth National Sample Survey and Evaluation Program (NASSEP V) which is maintained by KNBS. From this frame, 617 urban and 995 rural clusters were selected and 25 households were sampled from each cluster, full details of the sampling methodology employed in collecting the data are described in the survey report (KNBS et al., 2015).

The KDHS involved the use of three sets of questionnaires: household (Short and Long), male and female (Short and Long) questionnaires. The household questionnaire recorded information on all household members while, the individual men questionnaire was administered to eligible men aged 15-54 years. The male questionnaire and the individual women questionnaire were similar, however, the male questionnaire excluded the birth history and maternal and child health sections. The individual women questionnaire recorded detailed information on eligible women who were identified from the household questionnaire. The 2014 KDHS collected data from 31,097 women of the reproductive ages 15 to 49 years. The questionnaires on individuals collected information on the respondent's background characteristics, reproductive history, knowledge and practice of family planning, breast-feeding practices, marriage, fertility preferences etc., as well as on her husband's background characteristics.

The analyses in this study used data from the individual women questionnaire only. The analysis undertaken in this study was based on the 7,364 women from whom data on fecundity status was collected, this excludes pregnant women.

3.3 Methods of data analysis

The analysis will be in three sections, first, descriptive analysis was undertaken to understand the profile of users and non-users by different characteristics. Bivariate analysis was then conducted to explain associations between individual independent variables and method choice, this analysis was undertaken using cross tabulations as well as the chi-square test to test for association between the independent and response variables. The analysis of the determinants of contraceptive method choice was undertaken using a multinomial model.

The response variable method type is classified into specific methods, which are: pill, injectable, implants, condom and no method. The classification was guided by the proportion of women using the different methods and their relevance to policy and program intervention, for example condoms were added because of the recommendation of policy implementers that dual protection should be employed to protect against STDs/STIs including HIV/AIDS. Injections and implants were included in the study specifically because of the existing evidence that suggests a shift towards long term methods (Magadi, 2001; Magadi & Curtis, 2003; Ross & Agwanda; 2012). The pill and non-use were included in the analysis because of the huge proportion of women who fall in the groups.

3.3.1 Model Specification

The model is a generalization of the binary regression model. It is used when the dependent variable has more than two categories.

Suppose the response variable y assumes one of the mutually exclusive and exhaustive categories 1, 2,... J. Let p_j , be the probability that $y = j$. With x_k ($k=1, 2, \dots, K$) as predictors of y , the model is specified as K

In $[p_j / p_j] = \sum_{k=1}^K b_{jk} x_k$ for $j=1, 2, \dots, J$.

Because the categories 1, 2, .. , J for the dependent variable y are mutually exclusive and exhaustive, we have $\sum_{p_j} = 1$. With $b_{1k} = 0$, the model determines the coefficients b_{ik} uniquely.

The dependent variable has five categories (no method, pill, injection, condom and implant), one value is the baseline or reference category (no method). For each of the groups, the odds ratio of being in that group as compared to being in baseline group will be calculated. The baseline is the comparison group and the coefficients are all zero which generates four sets of equations with non-zero coefficients.

CHAPTER FOUR

CONTRACEPTIVE METHOD CHOICE

4.1 Introduction

This chapter presents the findings of the study. The first section presents the characteristics of the study population. Section 4.2 provides a description of the study variables while the bivariate analysis in section 4.3. The results on the determinants are presented in section 4.4.

4.2 Characteristics of the study population

Table 4.1 presents the percent distribution of the dependent and the independent variables. This presentation is provided as per the four components of the operational framework. The distribution of the dependent variable is provided as per the specific methods (Pill, Injection, Condom and implants) as well as nonuse.

Almost half of the women were non-users at the time of the survey (49 percent), while among the methods, injections were the preferred method of choice (26.7 percent). The distribution of the other methods were: 10 percent for implants, 8.9 percent for the pill and 5.2 percent condoms.

The three contraceptive access variables: exposure to FP information, wealth status and resident suggest that access to contraceptives is not very high since majority of the women (52 percent) had not seen a FP information and (59 percent) live in the rural while a substantial proportion (38 percent) were in the poor category.

The competence variables show that about half of the women (50.6 percent) have primary education, 40.4 percent of the women were aged 15 – 24 years and 36.2 percent of them are in informal employment while those who are currently in union/living with a man is 51 percent

Contraceptive evaluation variables included religion and marital status of which more than half of the study population were Protestants and were in union at the time of the survey (67.4 and 65.5 percent respectively), the other variable was parity and the results show that women are relatively fairly distributed according to parity with 35 percent reporting 3 or more children and the majority of women (39 percent) had 1-2 children,.

Contraceptive goals indicate that most of the women (42 percent) had a goal of limiting their births while 33.7 percent wanted to space the births.

Table 4.1: Characteristics of the study Population

	Percent	Number
<u>Method Choice</u>		
Not Using	49.0	3611
Pill	8.9	653
Injection	26.7	1963
Condom	5.2	385
Implant/Norplant	10.2	752
<u>Contraceptive Access Factors</u>		
Seen FP informational material		
No	52.2	3845
Yes	47.8	3516
Wealth Index		
Poor	38.2	2813
Middle	19.6	1447
Rich	42.2	3104
Type of place of residence		
Urban	41.3	3041
Rural	58.7	4323
<u>Contraceptive Competence</u>		
Highest educational level		
No education	10.8	798
Primary	50.6	3725
Secondary	28.2	2079
Higher	10.3	762
Occupation		
Unemployed	29.3	2149
Formal Employment	11.0	806
Self Employed	23.5	1722
Informal Employment	36.2	2655
Grouped Age		
15 - 24	28.9	2125
25 - 34	40.4	2972
35+	30.8	2267
<u>Contraceptive Evaluation</u>		
Religion		
Catholic	20.0	1471
Protestant	67.4	4967
Muslim/Other	12.6	926
Marital Status		
Never in union	20.6	1517
Currently in union	65.5	4821
Formerly in union	13.9	1026
Parity		
No Children	15.6	1149
1 - 2 Children	39.2	2888
3+ Children	45.2	3327
<u>Contraceptive Goals</u>		
Demand for Limiting or Spacing		
Demand For Limiting	42.0	3078
Demand For Spacing	33.7	2465
Other	24.3	1782

4.3 Factors Associated With Contraceptive Method Choice

The study explored factors associated with contraceptive method choice. The results are presented in Table 4.2. The results show that all variables were significantly associated with contraceptive method choice. These results for each of the variables are discussed below for the four components of the framework.

4.3.1 Contraceptive Access Factors

Results in the table show that contraceptive method choice is significantly associated with the access factors. Non-use of contraception is higher among those who were not exposed to FP information (54 percent) compared to (43.6 percent) for those exposed as expected. A similar pattern is observed for the specific methods where use is higher for those who are exposed and this impact is observed to be greater for the condom probably suggesting that information on the condom is readily available and more effective. The same pattern of association is reflected in the other two variables. Non-use is lowest among the rich category (46.4 percent) while use for the various categories show a similar pattern with use of the pill, condoms and implants being highest among this category. The only exception is injection where the use is highest among the middle category. Non-use is particularly low for the pill among the poor (4.8 percent). Non-use is slightly higher in the rural (49.8 percent) compared to the urban (48.2 percent). The use of the pill, condoms and implants is higher in the urban while the injectables are relatively more popular in the rural.

4.3.2 Contraceptive Competence

The results show that contraceptive competence is significantly associated with contraceptive method choice. Women with no education as expected had the highest proportion reporting nonuse (83.1 percent) while women with primary education had the least proportion of non-users. Pill and condom use increased with education, results show that use of the two methods was higher among women of higher education while implant use was almost similar for women of higher and primary education at 11.8 and 11.5 percent respectively. The use of injection was highest among women with primary education (33 percent) closely followed by those with high school education (26 percent). Occupation was another significant factor, self-employed women had the least proportion of non-users and as expected, unemployed women had the highest

proportion of non-users (64 percent). Condom use was high among women in formal employment at 9 percent.

The results also show that there is an association between age and method choice, women below 25 years have more than half of their women using no method. Women between ages 25 – 34 have the least proportion of non-users (39 percent) as well as the highest proportion using injections (33 percent). Injectable were the preferred method among all age groups. The result also show that pill use increases with age, 4.5 percent of the women below 25 years reported to be using pills while 10.2 percent and 11.2 percent of women age 25 – 34 years and 35+ years reported to be using pills respectively. Condom use was higher in the younger age group (15 – 24 year olds), this may be attributed to the fact that this group of women may not be in stable relationships and may wish to protect themselves from STIs/STDs including HIV/AIDS, the finding may also be attributed to the fact that condom use is usually promoted more among the young groups.

4.3.3 Contraceptive Evaluation

The result show that the association between method choice and contraceptive evaluation is significant. Nonuse is low (44.2 percent) among protestant women relative to other denomination while Muslim/other denominations reported the highest proportion of nonuse (77.4 percent). Condom use was exceptionally low among Muslims/other at (0.9 percent). Pill, injection and implant use was higher among protestant women while condom use was higher among catholic women. As expected, nonuse was high in women who were not in union (73 percent), women who were formally in union also have a large proportion of nonusers (62 percent). For women who have never been in union, condom use was higher among the specific methods (11.3 percent). Women who were in union and formerly in a union reported relatively higher injection use (33.4 and 19.4 percent respectively). Pill, implant and injection use was generally high among women who were currently in union. Parity was a significant factor as well, as expected a very large proportion of respondents who reported having no children were non users (81.5 percent), nonuse was least among women with 1-2 children. Condom use was significantly higher among women with no children (12.9 percent), implant use increased with parity, it was lowest among the women with no children (0.6 percent) and highest among children with three and more children. Injection use was higher among women with 1-2 children and those with

three or more children. Women with less than two children and those with more than three children had almost similar results with 31 percent reporting to use injections in both categories.

4.3.4 Contraceptive Goals

Contraceptive goals were also significantly associated with choice of a method. Respondents whose goals were to limit their births reported the least proportion of non-users (38.8 percent) and consistent to other factors, they had preference for injections (31.9 percent). Pill, injection and implant use was high amongst the limiters (11.2, 31.9 and 13.7 percent), Condom use was higher among spacers (6.5 percent). Overall, there is a general preference of injections across all categories, only women without children and those who have never been in union prefer to use condoms, however the proportion of non-users is high in all categories, likewise, the majority of non-users of a method are women who have never been in union, women who have no children and women aged 15 – 24.

Table 4.2: Factors Associated with Contraceptive Method Choice

Variable	<u>Method Choice</u>				
	Not Using	Pill	Injection	Condom	Implant
Contraceptive Access					
Seen FP informational material					
No	2077(54.0)	305(7.9)	987(25.7)	139(3.6)	337(8.8)
Yes	1532(43.6)	348(9.9)	976(27.8)	246(7.0)	414(11.8)
$X^2 = 108.339; df = 4; P = 0.000$					
Wealth Index					
Poor	1573(55.9)	135(4.8)	784(27.9)	83(3.0)	238(8.5)
Middle	598(41.3)	137(9.5)	472(32.6)	78(5.4)	162(11.2)
Rich	1440(46.4)	381(12.3)	707(22.8)	224(7.2)	352(11.3)
$X^2 = 246.390; df = 8; P = 0.000$					
Type of place of residence					
Urban	1460(48.0)	309(10.2)	751(24.7)	177(5.8)	344(11.3)
Rural	2151(49.8)	344(8.0)	1212(28.0)	208(4.8)	408(9.4)
$X^2 = 27.976; df = 4; P = 0.000$					
Contraceptive Competence					
Highest educational level					
No education	663(83.1)	16(2.0)	86(10.8)	8(1.0)	25(3.1)
Primary	1586(42.6)	337(9.0)	1237(33.2)	138(3.7)	427(11.5)
Secondary	970(46.7)	213(10.2)	542(26.1)	144(6.9)	210(10.1)
Higher	392(51.4)	87(11.4)	98(12.9)	95(12.5)	90(11.8)
$X^2 = 644.768; df = 12; P = 0.000$					
Occupation					
Unemployed	1385(64.4)	99(4.6)	415(19.3)	105(4.9)	145(6.7)
Formal Employment	379(47.0)	93(11.5)	161(20.0)	73(9.1)	100(12.4)
Self Employed	621(36.1)	212(12.3)	631(36.6)	72(4.2)	186(10.8)
Informal Employment	1208(45.5)	244(9.2)	752(28.3)	135(5.1)	316(11.9)
$X^2 = 432.544; df = 12; P = 0.000$					
Grouped Age					
15 - 24	1249(58.8)	96(4.5)	489(23.0)	153(7.2)	138(6.5)
25 - 34	1172(39.4)	303(10.2)	980(33.0)	128(4.3)	389(13.1)
35+	1190(52.5)	254(11.2)	494(21.8)	104(4.6)	225(9.9)
$X^2 = 318.388; df = 8; P = 0.000$					
Contraceptive Evaluation					
Religion					
Catholic	698(47.5)	132(9.0)	396(26.9)	93(6.3)	152(10.3)
Protestant	2196(44.2)	489(9.8)	1444(29.1)	284(5.7)	554(11.2)
Muslim/Other	717(77.4)	32(3.5)	123(13.3)	8(0.9)	46(5.0)
$X^2 = 354.220; df = 8; P = 0.000$					
Marital Status					
Never in union	1109(73.1)	35(2.3)	153(10.1)	172(11.3)	48(3.2)
Currently in union	1867(38.7)	571(11.8)	1611(33.4)	163(3.4)	609(12.6)
Formerly in union	635(61.9)	47(4.6)	199(19.4)	50(4.9)	95(9.3)
$X^2 = 962.932; df = 8; P = 0.000$					
Parity					
No Children	937(81.5)	21(1.8)	36(3.1)	148(12.9)	7(0.6)
1 - 2 Children	1230(42.6)	308(10.7)	897(31.1)	130(4.5)	323(11.2)
3+ Children	1444(43.4)	324(9.7)	1030(31.0)	107(3.2)	422(12.7)
$X^2 = 937.682; df = 8; P = 0.000$					
Demand for Limiting or Spacing					
Demand For Limiting	1193(38.8)	346(11.2)	981(31.9)	136(4.4)	422(13.7)
Demand For Spacing	1098(44.5)	221(9.0)	722(29.3)	159(6.5)	265(10.8)
Other	1291(72.4)	84(4.7)	258(14.5)	88(4.9)	61(3.4)
$X^2 = 596.015; df = 8; P = 0.000$					

4.4 Determinants of Contraceptive Method Choice

All the significant variables from the cross tabulations were fitted into the multinomial model.

Table 4.3 presents the parameter estimates, standard errors as well as level of significance for the results of the multinomial model while Table 4.4 presents the coefficients.

Table 4.3: Determinants of Contraceptive Method Choice

Parameter	Estimates (Standard errors)			
	Pill/No Method	Injection/No method	Condom/No Method	Implant/No Method
Constant	-4.306(0.359)***	-3.828(0.247)***	-3.853(0.497)***	-3.948(0.328)***
<u>Contraceptive Access</u>				
Seen FP Information Material				
No	-0.129(0.097)	-0.273(0.069)***	-0.363(0.120)**	-0.340(0.093)***
Yes (Ref)	0.000	0.000	0.000	0.000
Wealth Index				
Poor	-1.014(0.134)***	-0.035(0.089)	-0.587(0.164)***	-0.310(0.120)**
Middle	-0.191(0.132)	0.346(0.096)***	-0.101(0.158)	0.118(0.128)
Rich (Ref)	0.000	0.000	0.000	0.000
Residence				
Urban	0.175(0.107)	0.056(0.076)	-0.146(0.129)	0.170(0.101)
Rural	0.000	0.000	0.000	0.000
<u>Contraceptive Competence</u>				
Education Level				
No Education	-1.342(0.327)***	-0.675(0.207)***	-1.426(0.423)***	-1.531(0.286)***
Primary	-0.006(0.179)	0.637(0.153)***	-0.549(0.191)**	-0.144(0.175)
Secondary	0.113(0.173)	0.621(0.151)***	-0.284(0.169)	-0.078(0.171)
Higher (Ref)	0.000	0.000	0.000	0.000
Occupation				
Unemployed	-0.598(0.139)***	-0.480(0.089)***	-0.232(0.150)	-0.543(0.123)***
Formal Employment	0.044(0.164)	-0.123(0.128)	0.077(0.184)	-0.051(0.157)
Self Employed	0.441(0.123)***	0.163(0.087)	0.213(0.169)	-0.078(0.119)
Informal Employment (Ref)	0.000	0.000	0.000	0.000
Age				
15-24	0.197(0.180)	1.458(0.120)***	0.206(0.215)	1.135(0.165)***
24-35	0.517(0.118)***	1.212(0.086)***	0.264(0.167)	1.085(0.112)***
35+ (Ref)	0.000	0.000	0.000	0.000
<u>Contraceptive Evaluation</u>				
Religion				
Catholic	0.799(0.227)***	0.789(0.137)***	1.551(0.387)***	0.728(0.198)***
Protestant	0.774(0.211)***	0.785(0.125)***	1.468(0.376)***	0.706(0.182)***
Muslim/Other (Ref)	0.000	0.000	0.000	0.000
Marital Status				
Never in Union	-0.267(0.250)	-0.184(0.139)	0.250(0.213)	-0.399(0.204)*
Currently in Union	1.802(0.167)***	1.352(0.099)***	0.369(0.179)*	1.212(0.131)***
Formerly in Union(Ref)	0.000	0.000	0.000	0.000
Parity				
No Children	-1.158(0.291)***	-2.550(0.213)***	0.519(0.255)*	-3.144(0.422)***
1-2 Children	0.090(0.126)	-0.259(0.090)**	0.064(0.180)	-0.392(0.120)***
3+ Children (Ref)	0.000	0.000	0.000	0.000
<u>Contraceptive Goals</u>				
Wants To Limit	1.245(0.154)***	1.117(0.102)***	0.839(0.191)***	1.647(0.161)***
Wants To Space	1.209(0.148)***	0.999(0.098)***	0.590(0.150)***	1.488(0.158)***
Wants Now/Undecided (Ref)	0.000	0.000	0.000	0.000

*** P<0.001; ** P<0.01; *P<0.05

4.4.1 Contraceptive Access

Exposure to family planning information material was a significant factor; women who reported to have not seen family planning information material were less likely to use any method compared to women who had reported to have seen family planning information material; women who had not seen FP informational material for example, were 30 percent less likely to use condoms compared to women who had seen FP informational material.

Wealth index was also a contributing factor to method choice, women from a poor background were less likely to use all the methods compared to women from a rich background. Poorer women were 64 percent less likely to use the pills compared to women from a rich background. Similarly, middle class women were 1.4 times more likely to use injections compared to women who were richer.

4.4.2 Contraceptive Competence

The results further show that women who had no education were less likely to use a method of contraceptive compared to women who had a higher level of education. However women with primary and secondary education were both almost two times likely to use injectable compared to women with higher education.

As one would expect, unemployed women are less likely to use any method compared to women who are in informal employment. Women who are in formal employment are more likely to use pills and condoms compare to women in informal employment.

The result further show that age is a significant factor in choosing a contraceptive method, women aged 15-24 years and 25-35 years were 4.3 and 3.4 times more likely to use injections and 3.1 and 2.9 times more likely to use implants compared to women who were 35 years and older respectively. Pill use was also more likely among women age 24 to 35 years compared to the women who were over 35 years of age.

4.4.3 Contraceptive Evaluation

Religion is also a contributing factor to choice of a contraceptive method, in general, women of either catholic or protestant faith were more likely to use all the four methods instead compared

to women of Muslim/other faith. Catholic and protestant women were particularly 4.7 and 4.3 times more likely to choose condoms over no method respectively compared to women of Muslim/other faith.

As expected, women who are currently in union or living with a man are at a greater risk of being exposed to pregnancy which explains their higher likelihood to use methods of contraception compared to nonuse. Currently married women were six times more likely to use pills over no method, similarly they were 3.9 and 3.3 times more likely to use injections and implants respectively compared to their formerly married counterparts.

The results, in the table show that residence was not a significant factor affecting contraceptive method choice.

The results show the significant influence of parity on choosing a method to limit/space ones births, women who did not have any children showed preference in condom use as they were 1.6 times more likely to use condoms compare to the women who had three or more children, women who had no children were also 96 percent less likely to use implants compared to women who had three or more children. This is a clear indication of parity being one of the key determinants of method choice as women with three or more children are opting for long term methods like the implants while women who have no children are using condoms which is a short term method.

4.4.4 Contraceptive Goals

Contraceptive goals (wanting to limit/space or indecision) also significantly contributed to choosing a method, both limiters and spacers were more likely to use any method compared to the other category of women who were unsure of when they want a/the next child. Limiters and spacers were particularly more likely to choose implants compared to the other counterparts.

4.5 Discussion

Consistent with other findings (Magadi, 2003; Anasel & Mlinga, 2014; Ross and Agwanda, 2012) , injections are the dominant contraceptive method, this study found that there is still a general preference of injectables among all sub groups of women apart from women who have

no children and women who have never been in union who tend to prefer using condoms.. Bessinger, Katende and Gupta (2003) explain that condom knowledge was highest among adolescents (ages 15-19) and generally declined with age. They further explain that marital status was the strongest predictor, with currently married women by far least likely to have used a condom at last sex. Reported ever use of condoms was higher among the younger age groups, especially for disease protection.

The use of condoms by unmarried women was studied further on the 1998 Kenya Demographic and Health Survey data by Waithaka and Bessinger (2001) who found that there was higher condom use among adolescents and unmarried women. The findings in this report confirm that this trend is still being observed in Kenya, Magadi (2001) attributes to this rise in condom use among unmarried women to the need for one to protect themselves from STDs as well as HIV/AIDs.

A striking finding from this analysis suggests that younger women are using long term methods compared to their older counterparts,

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1. Introduction

This chapter presents the summary of the study, conclusion from the results and recommendations for policy and further research.

5.2. Summary

The general objective of the study was to establish the determinants of contraceptive method choice in Kenya. The study sought to determine the effect of certain factors towards the choice of a method of contraception. The framework used was adopted from Bulatao (1989)'s framework. This framework proposes four groups of factors; Contraceptive goals, Contraceptive access, Contraceptive competence and Contraceptive access factors. Analysis for the study was in three parts, first, the characteristics of the population were gotten by simple descriptive statistics. After which bivariate analyzing by the use of cross tabulations and the chi-square test was used to test for associations, finally the analytical model used in this study was the multinomial logit model. The variables selected in the study were grouped into. Data for the study was obtained from the 2014 KDHS.

The four broad categories were all significant factors influencing method choice. Injectables continue to be the preferred method of choice Kenya. However women who have never been in union showed preference in condom use, this may be due to the perception that women who are not in unions are promiscuous if they use a method to avoid getting pregnant, this may also be attributed to fact that this group of women are still young and not open and not in stable partnerships for them to use longer lasting methods, furthermore their primary objective may be to protect themselves from diseases. A similar pattern was observed for women who do not have any children.

The findings also show that younger women, age 15-24, are more likely to use long term methods compared to the older women. This may be due to thus group of women having the means and ability to access informational material. Ochako et. al (2016) confirms that more awareness as well as education leads to a higher use of long term methods.

5.3. Conclusion

From the study, it is clear that injectables continue to be the most preferred method in Kenya, The study further illustrates the importance of education, wealth, exposure to family planning information, age, religion, occupation and contraceptive goals on choosing a method of family planning as well as on the overall contraceptive uptake.

This may be due to the perception that women who are not in unions are promiscuous if they use a method to avoid getting pregnant, this may also be attributed to fact that this group of women are still young and not open and not in stable partnerships for them to use longer lasting methods, furthermore their primary objective may be to protect themselves from diseases

From the results, it is also evident that employment and school education is an important factor, women who have no education and those who are unemployed are mainly non users of a method, the interesting fact was that women who had primary level education had the least proportion of non-users and were more likely to use injections compare to women who had attained higher education levels.

The effect of FP information material can also not be ignore, the study clearly shows that women who have seen FP information material are much less likely to fall in the nonuse category.

5.3. Recommendations

5.3.1 Recommendations for Policy

Several policy implications can be drawn from the findings of this study. The results of the study have shown the significant role the different groups of factors played in choosing a method of contraception.

The study clearly shows the effect of education as well as access to contraceptive promotion activities, from the findings the effects of education as well as seeing a family planning information material cannot be ignored, uneducated women and women who had not seen a FP information material were more likely to be non-users, therefore programme implementers need to empower women in order for them to be able to use and freely choose a method of contraception, this can be done through educative programmes on contraceptives as well as encouraging and supporting women to go to school.

The results of this study show the general preference of injections in majority of the subgroups of women. This is an important policy finding as it can be used to bring interventions and ensure the method is available.

It is also evident that women who are not in union have a huge proportion of non-users relative to women who are currently in union as well as women who were formerly in union, this finding implies that women who are not legally married may be at greater risk of having unwanted pregnancies and may be excluded in family planning programmes and policies. This group of unmarried women may be reluctant to go for methods of FP as they may be viewed as promiscuous since they do not have partners, programme implementers should bring intervention to make this group of women comfortable and confident enough to use contraceptive methods.

It was also found that among most groups of women, injections were the most preferred method, however, women who have never been in union and those who have never had children preferred condoms compared to other methods, it's a great concern especially to policy makers who work in the line of HIV/AIDs to further promote and make accessible barrier methods to the population.

This study on individuals' influences on choosing a method, these factors (Access, evaluation, goals and competence) need to be acted upon in order to change the uptake of different kinds of methods, these factors when acted upon, will change the perception and acceptance of methods. For example, programme implementers need to find interventions that will improve on these factors to promote use and/or discourage use of certain methods, they should for example improve on access to a wide variety of contraceptives in order to broaden the choice of methods, likewise they can empower women so that they can be able to meet the costs of these methods that may not be free. Evaluation which involves the moral aspect and subjective norms can be put in check by offering counselling in order to change their perceptions on methods for delaying or avoiding to get pregnant. Programme managers also should explain to women the importance of having fewer and spaced births, and how this affects the quality of children they produce as well as their chances of survival so that contraceptive goals can be goals that have no negative effects on the mother or child alike. Finally, efforts should be put in place to ensure women are well educated and have equal access to family planning information material so that they can

have the knowledge to not only freely choose methods but they can also be able to use the methods sufficiently.

5.3.2 Recommendations for further Research

This study uses cross-sectional data which does not reflect cause effect relationships, researchers maybe interested in employing a longitudinal approach to offer chance for following up of a given group of women and how these four sets of factors (access, goals, evaluation and competence) change as a woman also goes through the reproductive cycle.

REFERENCES

- African Population and Health Research Center ; Macro international inc. 2001. *Contraceptive Use Dynamics In Kenya*, Nairobi: s.n.
- Ahmed, T. 1994. "Contraceptive Methods Choice in Pakistan: Determined or Predetermined." *The Pakistan Development Review*, Vol. 33:34 part II, pp. 773-800
- Anasel, M. G. & Mlinga, U. J. 2014. "Determinants of contraceptive use among married women in Tanzania: Policy implication." *African Population Studies*, 28(2), pp. 978-988.
- Angrahari, Kiran, Mohanty, K Sanjay, Vhauhan K. Rajesh, "Socio-economic differences in contraceptive discontinuation in India," ARI working paper, NO. 229, NOV 2014, www.nus.ari.edu.sg/pub/wps.htm
- Anna T. K & Nassoro R. 2006. 'Utilization of modern family planning methods among women of reproductive age in rural setting: the case study of Shinyanga rural district, Tanzania, *East Africa Journal of Public Health* 3(2), 26-30.
- Bessinger R., Katende C., Gupta N. 2003, Multi-media campaign exposure effects on knowledge and use of condoms for STI and HIV/AIDS prevention in. MEASURE Evaluation Technical Report
- Bongaarts J. 1978. "A framework for analyzing the proximate determinants of fertility," *Population and Development Review* 4(1): 105-132.
- Bulatao, R. A., & Lee, R. D. 1983. eds. *Determinants of Fertility in Developing Countries*. Vol. 1, *Supply and Demand for Children*. Vol. 2, *Fertility Regulation and Institutional Influences*. Academic Press, New York and London.
- Bulatao, R. A., Palmore, J. A. & Ward, S. E. 1989. *Choosing a Contraceptive Method Choice in Asia and the United States*. Westview Press, USA
- Bulatao, R. A. 1989. Toward a Framework for Understanding Contraceptive Method Choice
- Bruce, J. 1990. Fundamental elements of the quality of care: A simple framework. *Studies in Family Planning*, 21(2), 61-91.

Cho, N. H., et al. 1984. "Choekueni Chulsanryok mit Piim Yangsang (Recent changes in contraceptive use and fertility in Korea)." *Journal of Population and Health Studies* vol.4(2): pp. 3-43.

Dr. Rajaretnam, T., October 2000. Sociocultural Determinants of Contraceptive Method Choice in Goa and Kerala India. *The Journal of Family Welfare*, 46(2), pp. 1-11.

Ejembi, Clara Ladi, Tukur Dahiru, and Alhaji A. Aliyu. 2015. *Contextual Factors Influencing Modern Contraceptive Use in Nigeria*. DHS Working Papers No. 120. Rockville, Maryland, USA: ICF International.

Entwisle, et al. 1986. "The multilevel dependence of contraceptive use on socioeconomic development and family planning program strength." *Dermography* vol.23(2): pp.199-216.

Gubhaju, B. 2009. The influence of wives' and husbands' education levels on contraceptive method choice in Nepal, 1996-2006. *International Perspectives on Sexual and Reproductive Health*, 35(4), 176-185.

Keele, J. J., Forste, R., & Flake, D. F. 2005. Hearing native voices: Contraceptive use in Matemwe village, east Africa. *African Journal of Reproductive Health*, 9(1), 32-41.

Kelly L. L'Engle, Heather L. Vahdat, Elizabeth Ndakidemi, Christine Lasway, Trinity Zan, 2013. Evaluating feasibility, reach and potential impact of a text message family planning information service in Tanzania: *Contraception*, 87(2), 251–256.

Kenya National Bureau of Statistics (KNBS) and ICF International. 2015. Kenya Demographic and Health Survey 2014. Nairobi, Kenya and Rockville, MD: KNBS and ICF International.

Laguna Elma, P., Anna Liza C., P. & Aurora E., P. 2000. *Contraceptive Use Dynamics In The Philippines: Determinants Of Contraceptive Method Choice And Discontinuation*, Calverton, Maryland: ORC Macro.

Magadi, Monica, Eliya Zulu, Alex Ezeh, and Siln Curtis. 2001. *Contraceptive Use Dynamics in Kenya: Further Analysis of Demographic and Health Survey (DHS) Data*. Nairobi: African Population and Health Research Center (APHRC) and MEASURE Evaluation Project

- Magadi, M. A. & Curtis, S. L., 2003. "Trends and Determinants of Contraceptive Method Choice in Kenya." *Studies in Family Planning*, 34(3), pp. 149-159.
- Mannan, H. R. 2002. "Factors in Contraceptive Methods Choice in Bangladesh: Goals, Competence, Evaluation, and Access." *Contraception*. Vol. 65, pp. 357-364.
- Moon, H., et al. (1973). *Fertility and Family Planning Report on the 1971 Fertility-Abortion Survey*. Seoul: KoreanInstitute for Family Planning.
- Msofe, Grace E.P Kiondo, Elizabeth. 2009. Accessibility and use of family planning information (FPI) by rural people in Kilombero District. *Africa Journal of Library, Achives and Information Science* 19(2), 117-127.
- Pariani, S., Heer, D. M., & Van Arsdol, M. D.,Jr. 1991. Does choice make a difference to contraceptive use? Evidence from East Java. *Studies in Family Planning*, 22(6), 384-390.
- Potts, M. (1990). "Family planning is crucial to child survival: *Network* 11(4): 2.
- Rindfuss, R. R., & Liao. T. (2004). Medical and contraceptive sterilization in the United States: Similarities and differences in their rationale. *Studiesin Family Planning* vol. 20(1).
- Ross, J., Hardee, K., Mumford, E. & Eid, S., 2002. Contraceptive method choice in developing countries. *International Family Planning Perspectives*, 1(28), pp. 32-40.
- Ross, J. A. & Agwanda, A., December 2012. Increased Use of Injectable Contraception in Sub-Saharan Africa. *African Journal of Reproductive Health*, 16(4), pp. 68-80 .
- Saliku, T., Ochako, R. & Izugbara, C., 2011. *Use of contraceptives among women in Nairobi, Kenya*, Nairobi: s.n.
- Shah, I., 1991. Contraceptive analysis of contraceptive method choice.. *Proceedings of the Demographic and Health Surveys World Conference*, 5-7 August, Volume 1, pp. 617-627.
- Stephenson, R., Beke, A. & Tshibangu, D., June 2008. Community and Health Facility Influences On Contraceptive Method Choice in the Eastern Cape, South Africa. *International Family Perspectives*, 34(2), pp. 62-70.
- United Nations Populaion Fund. 1996. *Program of Action Adopted at the International Conference for Population and Development, Cairo*. New York, UNFPA, p. 53.

USAID, 2015. Family Planning in the Sustainable Development Goals.

Waithaka, M. and Bessinger, R. 2001. Sexual Behaviour and Condom Use in the Context of HIV prevention in Kenya Chapel Hill, NC: Population Services International and MEASURE Evaluation.

Yeakey, M. P., C. J. Muntifering, et al. 2009. "How contraceptive use affects birth intervals: results of a literature review: *Studies Family Planning* 40(3): 205-214

APPENDICES

	<u>EXP (B)</u>			
Parameter	Pill	Injection	Condom	Implant
Constant	-	-	-	-
<u>Contraceptive Access</u>				
Seen FP Information Material				
No	0.879	0.761	0.695	0.712
Yes (Ref)	-	-	-	-
Wealth Index				
Poor	0.363	0.966	0.556	0.733
Middle	0.826	1.413	0.904	1.125
Rich (Ref)	-	-	-	-
Residence				
Urban	1.191	1.058	0.864	1.185
Rural (Ref)	-	-	-	-
<u>Contraceptive Competence</u>				
Highest educational level				
No Education	0.261	0.509	0.240	0.216
Primary	0.994	1.891	0.577	0.866
Secondary	1.120	1.861	0.753	0.925
Higher (Ref)	-	-	-	-
Occupation				
Unemployed	0.550	0.619	0.793	0.581
Formal Employment	1.045	0.884	1.080	0.950
Self Employed	1.554	1.177	1.237	0.925
Informal Employment (Ref)	-	-	-	-
Age				
15-24	1.217	4.299	1.229	3.110
24-35	1.677	3.361	1.302	2.958
35+ (Ref)	-	-	-	-
<u>Contraceptive Evaluation</u>				
Religion				
Catholic	2.224	2.201	4.715	2.070
Protestant	2.168	2.192	4.342	2.026
Muslim/Other (Ref)	-	-	-	-
Marital Status				
Never in Union	0.766	0.832	1.284	0.671
Currently in Union	6.063	3.866	1.446	3.361
Formerly in Union(Ref)	-	-	-	-
Parity				
No Children	0.314	0.078	1.680	0.043
1-2 Children	1.094	0.772	1.066	0.676
3+ Children (Ref)	-	-	-	-
<u>Contraceptive Goals</u>				
Wants To Limit	3.471	3.055	2.313	5.190
Wants To Space	3.351	2.715	1.803	4.427
Other (Ref)	-	-	-	-