FACTORS INFLUENCING USE OF MODERN CONTRACEPTIVES AMONG RURAL WOMEN IN KENYA

By

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DECLARATION

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

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ABSTRACT

This study examined the factors influencing use of modern contraceptives among rural woman in Kenya. The general objective of this study was to investigate factors influencing modern contraceptive use among rural women in Kenya. The study had three specific objectives: to explore selected cultural factors influencing the use of modern contraception among rural women in Kenya, to determine selected socio-economic factors influencing the use of modern contraception among rural woman in Kenya and to examine selected demographic factors influencing the use of modern contraceptives among rural women in Kenya.

This study utilized the 1998 Kenya Demographic and Health Survey and was limited to rural women aged 15-49 years, and had had sex at the time of the survey. Two main methods of analysis were used to achieve the above objectives. Cross tabulations were carried out at the bivariate level to assess the association between contraceptive use and each of the variables, while logistic regression analysis was used to obtain the factors influencing modern contraceptive use among rural women in Kenya.

The bivariate results obtained in this study revealed a statistically significant association between all variables taken into consideration in this study. These variables include region of residence, level of education, religion, ethnicity, age of woman, marital status, number of living children, age difference with partner, husbands approval of family planning, discussion of family planning with partner, exposure to media and modern contraceptive knowledge.

The logistic regression results showed a statistical significance between husbands approval of family planning and contraceptive use. Women whose husbands approved of

family planning were twice more likely to have ever used a modern contraceptive compared to those whose husbands disapproved.

Discussion of family planning with partner was also an important factor influencing modern contraceptive use. Women who discussed family planning with their husband more oftenly were two times more likely to have ever used a modern contraceptive as compared to those who never discussed. Knowledge of modern contraceptives also does influence modern contraceptive use as women who knew at least six modern methods were more than 2 times more likely to have ever used a modern contraceptive as compared to those who knew less than six methods. It is worth noting that the modern methods include pills, Intra-uterine devices(IUD), injections, condoms, implants, diaphragm/foams/jelly, female sterilization, and male sterilization.

Exposure to media is another factor that influences modern contraceptive use. Women who had heard family planning messages on the radio were at least 1.2 times more likely to have ever used a modern contraceptive method than those who had not heard.

The main recommendations of this study were that education should be emphasized for all persons-both male and female in order to promote contraceptive use. It was also recommended that mass media campaigns for family planning be intensified and done in a simple language for easy understanding to persons of all ages. These campaigns should be done at a time when they will reach a greater audience.

DEDICATION

To family and friends who made this real by their moral and/or material support

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TABLE OF CONTENTS

CHAPTER SIX: SUMMARY, CONCLUSION AND RECOMMENDATIONS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION

Many governments in developing countries consider fertility regulation an important component of their overall strategy for improving standards of living. Family planning programmes aimed at increasing contraceptive prevalence are the most widely used approach to bringing about fertility reductions (Wekesa and Omurundo, 2001). Inspite of this, the rate of contraceptive use in the rural areas in Kenya is low compared to the urban areas.

India was the first developing country to establish a National family planning programme in 1952. Since then, many developing countries have established policies and programmes to lower fertility. By 1975,34 developing countries had such policies and programmes and an additional 32 developing countries provided family planning services for non-demographic reasons – for health and Humanitarian reasons (Nortaman,1978, Mauldin,1975).

Kenya was among the first developing countries to adopt family planning and contraception. Family planning activities started as early as 1952 under voluntary Non-Governmental Organizations which culminated into the formation of the family planning association of Kenya (FPAK) in 1967 (CBS, 1984), which has since been providing supplies and services to those who need them at a minimum cost. Currently, the contraceptive prevalence rate (CPR) for Kenya is 39%. Most current users of contraception use a modern method: the contraceptive prevalence rate for modern methods is 32%, while that of the traditional methods is 8%. Use of modern methods has

been noted to rise with age from 10% among married women aged 15-19 to a peak of 40% at age 35-39,after which it declines to 26% among women aged 45-49. As expected, female sterilization is used more commonly by older women while pills and injectables are used by the women in the peak childbearing years age *20-39(NCPD et.al, 1998)*

Compared with other countries in East and Southern Africa where Demographic and Health Surveys have been recently conducted, Kenya's level of contraceptive use is exceeded only by Zimbabwe (48% in 1994) and South Africa (56%in 1998). The 1984 KCPS, 1989 KDHS, 1993 KDHS and 1998 KDHS have documented the increase in modern method use from 10, to 18, to 27 to now 32 %. The rate of increase in uptake of contraception has slowed however. Between 1984 and 1993, nearly two percentage points were added to the contraceptive prevalence rate (modern methods) each year; this has slowed to less than 1% percentage point per year between the 1993KDHS and 1998KDHS (NCPD et al, 1998).

Rapid population growth rates and high fertility hinders both social and economic growth, leading to numerous problems such as unemployment, housing, environmental degradation, inability of the local and central governments to provide even the basic services, increased crime and low levels of standards of living among others (Njai, 1999). Many countries are aware of the relationship between rapid population growth and socio-economic development, and have consequently adopted policies and programmes aimed at reducing the population growth rates. The policies are often implemented through family planning programmes (Ikamari, 1985).

In 1968, the government of Kenya launched the national family planning programme through the ministry of health, which was directly linked to maternal child welfare

programme. Other strategies that have been taken are the provision of basic education through which the norms of a small family can be inculcated into the youth, and the establishment of the national council for population and development (NCPD) in 1982 (Mungai, 1986)

According to Ikamari (1985), many studies on contraceptive use indicate that type of place of residence more often than not, does affect the use of contraception. Kyalo (1996) further notes that women who live in the rural areas are more likely to be non-contraceptors when compared to their counterparts living in the urban areas. According to a study by John Hopkins school of public health in 2003, along with women's education, the most consistent fertility differences between groups reflect where women live-whether urban or rural areas.

In both Kenya Fertility Survey (KFS (1977/78) and Kenya Contraceptive Prevalence Survey (KCPS)(1984), urban-rural differences emerged more clearly in the use of modern contraceptives such as the pill (9.8%) among urban residents compared to only 4.3% among rural women. There also exists a higher rate of unmet need among the rural women. Unmet need for contraception has been defined as currently married women who say either they do not want any more children or that they want to wait for at least two years before the next birth, but are not using contraception. The higher unmet need experienced by the rural women is attributed to a lower diversity of modern contraceptive methods available to them and difficult accessibility in terms of distance to service centers.

Information on the situation of contraceptive use in a country like Kenya is important for planning and evaluation of development programmes especially in the rural areas where over 80% of the Kenyan population live.

This study seeks to explore the role played by socio-economic, cultural and demographic factors on contraceptive use in rural Kenya.

1.1 Statement of the problem

The main developmental goal of family planning was to improve the social and economic conditions of the Kenyan families. However, the broad demographic goal was to lower the rate of population growth. It was hoped that the family planning programme would lead to the attainment of a more balanced population by the year 2000. However, this has not been achieved because of the persistent high rates of contraceptive non-use (Kaseje, 1987, Kyalo, 1996).

The contraceptive prevalence rate for Kenya is 39%. Most current users of contraception use a modern method: the Contraceptive Prevalence Rate (CPR) for modern methods is 32% while that of the traditional methods is 8% which is considered less effective for the prevention of unwanted pregnancy. Policy makers, development planners and the scientific community have therefore given some attention to the important role that research on family planning plays in guiding activities aimed at creating population change.

Over 80% of the Kenya's population live in the rural areas. These people have some familial arrangements, beliefs, attitudes and customs, which may create resistance to contraceptive use. In general, it appears that the environment in which the rural women live does not favor their use of contraception suggesting that just promoting availability

of family planning services may not greatly affect contraceptive practice (NCPD et.al, 1998).

According to the NCPD et.al, (1998), 95.9% of rural women know a modern method of contraception, therefore other factors leading to the low prevalence rate of contraception in these areas should be investigated .This is important because the information can be used for designing programmes to increase the level of contraceptive use if the higher fertility in the rural areas is to be reduced substantially in the near future.

Numerous studies have been done on determinants of contraceptive use and it has been noted that the rural populations have low rates of contraceptive use (KFS, 1977/78;Lightbourne,1980; CBS,1984; Ikamari, 1985; Tuladhar, 1985; Wamucii, 1991; Kyalo 1996; Omuondo,2000; John Hopkins school of public health, 2003). However, this group of women-which makes the larger proportion of women in Kenya–has not been studied independently in terms of the factors that influence their contraceptive use as most studies have focused on the aggregate population. This study sought to answer the following research questions:

- How do various socio-economic, socio-cultural and demographic factors influence the use of modern contraception among rural women in Kenya?
- Why are women who are at the risk of pregnancy not contracepting?

1.2 Study objectives

The general objective of this study was to investigate factors influencing modern contraceptive use among rural women in Kenya. Specifically, the study addressed the following objectives:

- To explore selected socio-cultural factors influencing the use of modern contraception among rural women in Kenya.
- To determine selected socio-economic factors influencing the use of modern contraception among women in rural Kenya.
- To examine selected demographic factors influencing the use of modern contraception among women in rural Kenya.

1.3 Justification

There exists a notable difference in the fertility trends of rural and urban populations in Kenya; which is a major concern to policy makers, planners as well as population experts. The higher rates of fertility among the rural women can be reduced by increased prevalence of contraception, especially of modern contraception. The use of the modern methods among rural women is however quite low Therefore, studies aimed at understanding the factors influencing use of modern contraceptives among the rural women are important.

Further, the factors behind the observed low levels of contraceptive use among rural women should be explored because, whereas contraceptive knowledge in rural Kenya is almost universal , 95.9% are aware of a modern family planning method, the rate is still

quite low. This study will help us understand why there exists a large gap between the knowledge and the practice of modern contraception among rural women in Kenya.

This is therefore an important study area requiring urgent attention in the sense that it is aimed at identifying some of the factors that influence contraception among rural women in Kenya. Understanding these factors will assist programmatic actions to reverse the rate of population growth among rural women.

1.4 Scope and limitations

This study focuses on the socio-economic, socio-cultural and demographic factors, which influence contraceptive use. It is based on the data from the Kenya Demographic and Health Survey (KDHS) of 1998. It focuses on all women in the reproductive ages (15-49 years) who were living in the rural areas and had had sex at the time of the survey.

The survey, though national in coverage, excluded North Eastern Province and four districts in Eastern Province due to inaccessibility and insecurity. These together accounts for about 4% of the Kenya's total population.

This study has the limitation that analysis are based on all women in their reproductive ages, including those who are infertile. This group of women is not exposed to the risk of pregnancy and as such, may not need contraception. However, this group of women will not significantly affect the final results.

It is also not possible to study all factors that influence contraception in rural areas, thus, only selected factors will be considered.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter looks at the past studies on socio-economic, socio-cultural and demographic factors selected for the study that influence contraceptive use. The second part of this chapter gives the conceptual and operational frameworks, study hypotheses and definitions of variables.

2.2 Socio-cultural variables

In many sub-Saharan African countries, the idea of limiting the number of births was so culturally unacceptable that family planning programmes were introduced as a means for promoting better maternal and child health by helping women space their births (Donaldson and Tsui,1990)

Socio-cultural factors such as ethnicity, forms of marriage, religion and gender roles and relationships are embedded in traditional and cultural milieu. They embody values and beliefs, which guide behavior of individuals and communities. They can dictate the extent to which innovations such as the use of contraceptives will be accepted or rejected. They can also be changed or modified through influence of some other factors, notably socio-economic factors such as education (APPRC, 1998).

Whether or not perceptions of the advantages and disadvantages of childbearing become criteria for decision-making on fertility goals depends upon a third factor determining the salience of fertility. This factor, perceived control over birth planning involves the extent of knowledge regarding fertility regulation methods, perceived availability of methods

and the cultural and individual acceptability of methods prior to and during use. Decisions regarding fertility goals and fertility require that individuals know about methods, find them culturally and personally acceptable, and are aware of sources of supplies. Preconception decision-making cannot take place when ways to prevent conception are not known or are considered unacceptable (Shedlin and Hollerbach,1981).

At the national level, the socio-cultural factors that will be considered in this study have been found to be insignificant in influencing contraceptive use. However, I feel that they are important factors especially among the rural populations because they tend to hold on to their cultural background closely, and as such, I expect them to have considerable effect on contraceptive use among the rural women.

Ethnicity

Perhaps the most salient socio-cultural factor in Kenya today is ethnicity. Variations in contraceptive use by ethnicity can indicate the extent of programme effort that should be expended in creating and /or meeting demands for contraception depending on ethnic background (APPRC, 1998)

Studies have shown that culture acts through ethnicity in that there are customs within some certain tribes that make it difficult for couples within these communities to regulate their fertility. In India for example, high fertility levels and low contraceptive use are attributed to their preference for male children. According to Caldwell (1987), high fertility is valued in Africa. Children are seen as an economic resource. In Nigeria, couples give birth to many children with the hope that in future, one could grow up to be

successful enough to support the family and also promote its name. This largely contributed to low contraceptive use rates in the society.

Religion

Although research shows minimum opposition to contraception on religious grounds, religious affiliations remains an important cultural aspect in understanding fertility regulation worldwide (Osiro,2001).

Sub-Saharan Africa may well offer greater resistance to fertility decline than any other world region. The reasons are cultural and have much to do with a religious belief system that operates directly to sustain high fertility, but that also molded a society in such a way as to bring rewards for high fertility (Caldwell and Caldwell, 1987).

According to the 1993 KDHS, religious affiliation affected use of contraceptives. Catholics had higher contraceptive prevalence rates than Protestants, although the differences were small. Muslims had distinctly lower contraceptive prevalence rates that the two Christian groups. In some countries, a legislation banning any form of contraception and family planning on grounds that it violates the biblical injunction to 'Go ye forth and Multiply' have been enacted (Okoth–Ogendo,cf Ocholla-Ayayo,1987)

The 1993 KDHS cited religion as an obstacle to contraceptive use both in female and male surveys, with 8% and 5% respectively, reporting it as a barrier to contraceptive use (NCPD et.al,1994).

2.3 Socio-economic variables

Education

When women have little or no accurate knowledge about modern contraceptive methods, the realities that they have experienced with traditional methods of fertility regulation are projected into the information gaps. Thus added to the grapevine effects of modern methods is the underlying fear that these new and largely unknown solutions will be as inefficient and or dangerous as the traditional ones.

Abdullah et.al.(1984) in a comparative study of contraceptive use in the commonwealth Caribbean countries, found a positive relationship between a woman's level of education and contraceptive use. Mazur (1981) in a study in Poland also found that contraception increased with a woman's level of education. He established a higher contraceptive use among married women with 75% of women with secondary school and above using, compared to 56% intermediary level women and only 42% of women with elementary level education used.

Women's education has been rising at a faster rate than that of men in the last few decades, a trend likely to have played a critical role in Kenya's most recent fertility decline. Kenya has one of the highest literacy levels in sub-Saharan Africa. Trends of fertility closely relate to those of education in that women with higher levels of education have a lower fertility. On the other hand, women with lower levels of education have higher fertility. Thus, female education seems to be inversely related to fertility. Various possible explanations have been put forward in an attempt to account fore the dramatic demographic change in Kenya, which has placed the country among the forerunners of demographic transition in sub-Saharan Africa. One of the most commonly cited

explanation is the acceptability of modern contraceptives owing to the successes registered by the national family planning programme (Mugo, 1998).

Mugo (1998), further notes that studies in fertility conditions and change have consistently pointed that education is an important factor accounting for fertility change and regulation. The education-fertility relationship is one of the most widely documented in demographic literature in the developed Western world, in which a negative relationship between education level and family size has been found to exist in most studies.

Women's education has proved more consistently important than any other socio-cultural factor as a determinant of fertility behavior. Although female education is associated with many other socio-economic characteristics such as the place of residence, social status, family income, the effect of mother's education on fertility remains significant even after these variables have been controlled for (Rodriguez and Cleland, 1987).

Regarding female education and contraception, few scholars would take issue with the fact that female education affects contraception and a woman's level of education has universally been found to be positively related to contraceptive knowledge, access and use. Furthermore, educated women may be more likely to use contraceptives because information about the availability, side effects and costs are usually less difficult and costly for educated women to assimilate and may make them more effective and satisfied users (World Bank, 1980)

According to Castro and Wamucii (1994), female education exerts a more powerful influence on contraceptive behavior than any other factor. The effect of a woman's

education on contraception was found to be quasi-linear and that likelihood of using contraceptives rises monotonically with increased education.

In most societies, reliance on modern methods of contraception increases significantly with education. In approximately two-thirds of the countries analyzed, modern contraceptive prevalence rates among highly educated women exceed those of the uneducated women by 20%. Only a few countries including Ghana, Tunisia, and Thailand have differentials in the use of modern contraceptives by education relatively small. One exception to the prevailing patterns was observed in Sri-Lanka where use of modern methods declined with women's education (Castro, et.al, 1995).

Region of residence

Rural-urban differences in contraception have been observed so consistently over time and space that they have become accepted and even expected. Rural areas are associated with lower contraception attributable to poorer availability of and access to educational, healthcare and family planning services as well as with higher fertility demand resulting from the more traditional and agricultural way of life, relative to urban living. Levels of contraceptive use are also considerably lower in rural areas, which is not surprising given that contraceptive use is noted as the most significant proximate determinant of fertility (Weeks,1994)

Rural-urban differences in contraceptive use favors urban areas. Even in Kenya, where fertility transitions reported to have occurred simultaneously across the rural-urban divide (albeit at different rates), fertility remains considerably higher in rural areas (APHRC, 1998).

It has also been found that women in central province have the lowest probability of non-use while those in Western have the highest probability.

2.4 Demographic variables

Age

Women aged between 15-49 years are usually studied in fertility related studies as they are in their reproductive ages. In Nigeria, studies show that the highest contraceptive prevalence rate is among the currently married women in the 35-39 age group at 8.6%. There was a slight drop at 8.4% on the 40-44 category. Ages 15-19 had the lowest prevalence rate at 1.3% (PC and IRD, 1992).

According to the 1993 KDHS, the highest contraceptive prevalence rate was among the 30-34 age group at 38.2%, followed by the 25-29 age group at 37.5%. The lowest prevalence rate was amongst those aged 15-19 at 5.7%. The older women aged 45-49 had a contraceptive prevalence rate of 26.7 percent. The difference was minimal for 35-39 and 40-44 age groups at 34.6 and 34.2 respectively (NCPD et.al, 1994).

Age difference between spouses.

Some studies show that the more unequal spouses are in terms of age difference or decision making authority in the household, the more likely they are to differ in their reports of contraceptive use and fertility preferences (Dodoo and Seal, 1994).

Generally, as the age difference between husband and wife increases, so does the likelihood that they will disagree about family planning, but the differences are small (NCPD et.al,1998).

Marital status

Marital status is the demographic event most often used to estimate the time regular sexual relations begin, implying that those involved are involved in making decisions on whether or not to use contraceptives (Osiro, 2001).

Studies in both developed and developing countries have found that marital status has an influence on modern contraception. The never married will use modern contraceptives so as to avoid unwanted pregnancies while those in unions use contraceptives in order to delay or avoid pregnancy. Most of the married women will contracept once they have had their desired family sizes.

Bumpass and Rindfuss (1984) reported that the non-use of coital related methods rise substantially when currently married women become separated from their husbands. This may result from the cooperation and trust between partners required for some of the coital related methods such as the condom.

A study in Uganda conducted between 1995 and 1998 to assess the trends in contraceptive use in rural Rakai District over a period of thirty months, revealed that women's use of modern contraceptives increased significantly amongst women in polygamous marriages at 9.3% than those in monogamous marriages at 7.5%. The never married and those divorced were least likely to contracept at 4.5% and 2.9% respectively (Lutalo et.al, 2000).

Women in both monogamous and polygamous marriages had made progress in adopting use of contraception, with those in monogamous marriages taking the lead.

Number of living children

In many cultures it is assumed that family planning methods are used only when couples have already had as many children as they want. As the concept of family planning gains acceptance however, couples begin to use contraception for spacing births as well as for limiting family size (Osiro, 2001).

In Indonesia, contraceptive use increased with the number of living children a woman had, reaching 60% amongst women with two or three children, then declines among women with four or more children. 9% of childless women are current users of family planning presumably to delay their first birth (PC and IRD, 1996).

In Zambia, evidence suggests that young women are more likely to have started using contraception at low parities than older women. For instance, 20% of women in their 40's started using contraception when they had either no children or only one child compared to around 40% of women aged 20-24. 12% of women aged 15-19 started using contraception before they had a child (CSO, 1996).

The Kenya Demographic and Health Survey of 1993 notes that older cohorts (35-39) generally start using contraception at high parities than younger women, for example, 2% of women aged 20-24 started to contracept after their first child compared to 5% of women aged 45-49. This probably reflects that young women are more likely to use contraception to space births while older women use it to limit births (NCPD, et.al,1994).

2.5 Intermediate variables

Discussed family planning with husband

Various family planning surveys have underscored the importance of programmes that work to improve association between contraceptive prevalence and husband-wife discussion about family planning (FHI, 1992). From a family perspective, the first step in a rational process of fertility decision-making involves communication between spouses. Such communication should thus be among the most important precursors of lower desired family size and increased contraceptive use. Many studies have reported a low communication between spouses about family size and family planning, and women with low levels of contraceptive use also report little spousal communication (Lasee and Becker,1997).

Empirical studies demonstrate that contraceptive use is associated with discussion about family planning between husbands and wives. A family planning knowledge, attitudes and practice survey among Nigerian men found that whereas 22-60 percent of the respondents who had such discussions reported that their wives used a family planning method, only 4-19 percent of those who said they had never discussed family planning with their wives used such methods(Oni and McCarthy,1991). This finding has been confirmed in Kenya where husbands discussion with their wives, approval of and a general positive attitude to family planning were found to have a significant influence on wives contraceptive use (Gachango,1993).

Partner discussion which facilitates decision making between husband and wife plays an important role in determining fertility sizes. In a study of husband-wife communication

and interaction, it was found that matters pertaining to sex, contraception and family size are the least discussed between partners as compared to economic survival. The respondents in most cases were mutually involved in sorting out disputes between them. Husbands were found however to have more say in such matters. The most educated respondents and /or those from more affluent districts (such as Nyeri and Meru) share more of their social life with partners than those with less education and /or from less developed districts. Increased discussion about family planning and any subsequent impact on family planning knowledge, attitudes and behavior is an indirect effect of the media campaign. Numerous studies have shown that discussion about family planning between sexual partners is strongly associated with contraceptive use (Gathiti, 1997).

Husband approves Family Planning

Opposition from husbands is a reason that has been cited as a cause of contraceptive non-use among women (Casterline et.al,1997,Rutenberg and Watkins et.al, 1996,. Ngom1997 cf Wangila,2001), found that the existing patterns of reproductive control suggest that husbands pro-natalist attitudes may dampen wives willingness to adopt family planning.

Most countries of the world, particularly developing nations, still have male dominated cultures. For example, in Sub-Saharan Africa, ancestral customs give men rights over womens' procreative power. In such situations, we would expect that the husband's approval may often be a precondition for a woman to use family planning. Studies in other regions have shown that one reason women give for non-use is husband's disapproval(Lasee and Becker,1997).

A husband's approval of family planning is critical for wife's use of contraceptives, especially in a predominantly patriarchal society like Kenya. Women who use contraception secretly usually lack support from their husbands or know that their husbands would not approve use of contraceptives (Rutenberg and Watkins,1996). Approval of family planning is likely to come out during discussions with husbands on the need to space and limit childbearing. Women whose husbands approved use of contraceptives had higher contraceptive prevalence rates (45%), than those whose husbands were opposed (14%). Women who approved use of family planning (36%) were also more likely to use contraception than those who disapproved use of family planning (7%)(NCPD et.al.1993).

With an aim of expanding the universe of family planning acceptance and practice, it may be useful to consider the reasons given by women to explain their absolute rejection of family planning. In a study carried out by Dow and Werner,(1981) on the Kenyan women, the largest single explanation for never approving of family planning use(30.9%) was the lack of familiarity with the programme. This was followed by 18.7% of the cases by fear of the negative health effects associated with family planning practice. As neither concern requires a change in values, it's likely that greater programme presence, as part of a more effective information, education, communication effort, would tend to reduce or eliminate these objections. Unfortunately, the other objections, although frequently vague, are largely ideological in character, and it is difficult to anticipate their elimination in the absence of significant value change. In fact, the changes required in most cases may be practical as well as ideological.

Knowledge of contraceptive methods

Where knowledge of a source is low, then there are differentials in contraceptive use. In Nepal, in 1981, about 48% of married women had never heard of any modern contraceptive method and an additional 17.4% did not know of any family planning outlets. Of the remaining 36.6%, only one in every five was currently using modern contraceptives(Cornelius and Novak,1983).

One of the major problems that have beset researchers of contraception is how to measure these important variables. The average measure of knowledge of a contraceptive method can range from simple awareness of the name of methods to a rough measure of functional knowledge such as a woman's report that she knows how to use a method (UN,1979,cf Mungai,1986), which is seen as a prerequisite to knowledge of a family planning outlet.

Exposure to media-heard Family Planning on radio

Mass media interventions can play a major role in promoting family planning use. Large increases in the number of family planning clients at clinics follow different patterns of communication campaigns. Mass media includes radio, television, newspapers, posters and certain forms of popular entertainment. Coordinated development communication is especially crucial in promoting family planning (Gathiti, 1997).

In Jamaica, radio was found to be a primary medium in two family planning communication projects: one conducted by the government's national family planning board and the other by the Jamaica family planning association. In the government project developed by the office of the international advertising agency, songs, radio,

television, newspapers and cinema adverts were used to promote family planning (Gillery and Moore, 1986).

In a study carried out in Gambia by Valente (1994) to determine the effects of a radio drama about family planning issues showed that programme exposure was associated with an increase in knowledge, positive attitudes and contraceptive users. The radio was found to be an extremely efficient means of reaching large numbers of people and can persuade people to visit family planning clinics.

A strong statistical association was demonstrated between reports of having heard or seen messages about family planning on radio, in newspapers, magazines, posters or on television and various measures of reproductive behavior in general and in use of contraceptives in particular. These associations are seen to persist even when a variety of life cycle, residential and socio-economic controls are imposed (Gathiti, 1997).

2.6 Conceptual framework

This study used the Bongaarts framework for analyzing the proximate determinants of fertility. Bongaarts (1978) presented a simple but comprehensive model for analyzing the relationship between intermediate fertility variables and the level of fertility. The model includes only a smaller number of conceptually distinct and quantitatively important intermediate fertility variables. To allow simple quantification, Bongaarts identifies eight factors, which he grouped into three categories.

The first category refers to exposure factors. This refers to the proportion married which includes the proportion of women in reproductive age and who engage in regular sexual intercourse. In this category, Bongaarts' analysis deals with the women in their child

bearing age, living in stable sexual unions such as formal marriages and consensual unions.

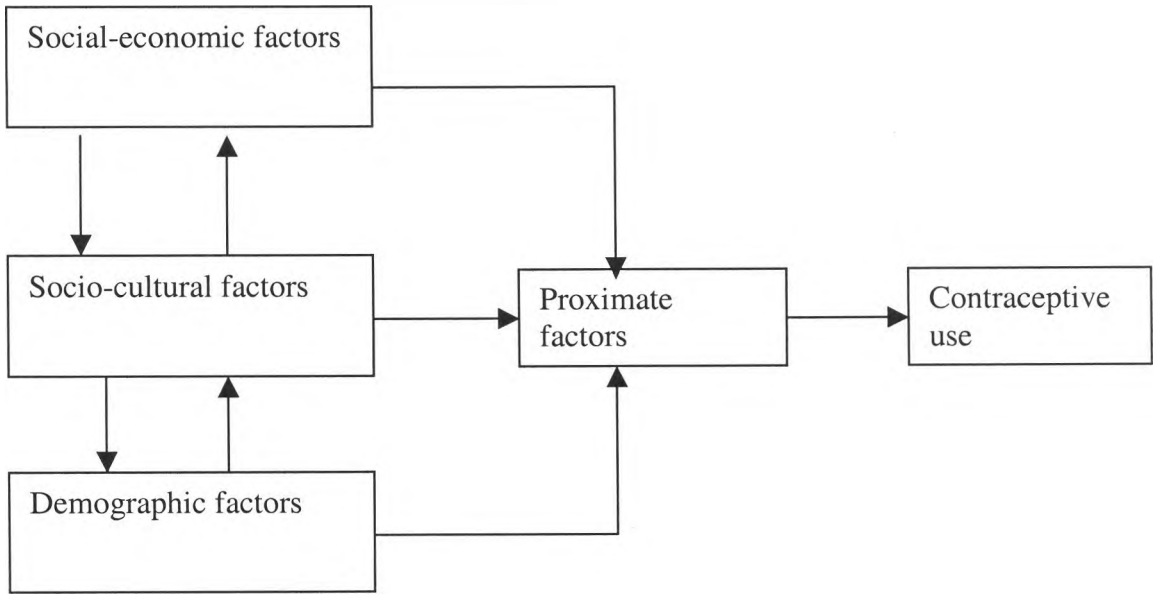
In the second category, Bongaarts refers to the deliberate marital fertility control factors. These include contraception and induced abortion.

The last category refers to natural marital fertility factors. These include lactational infecundability, frequency of intercourse, sterility, spontaneous intra-uterine abortion and duration of the fertility period.

The Bongaarts framework's quantitative nature and its ability to dissect fertility level into proximate determining components makes it appropriate for this study. The proposed model for relationship between intermediate fertility variables and fertility is highly aggregate and its data requirements are relatively modest thus making its application possible. Contraceptive use, the dependent variable in this study is a function of fertility and is shown in the model as a primary cause of fertility variation among populations.

The fact that the framework encompasses the independent variables that are examined in this work, namely socio-economic, cultural and demographic factors makes it far much suitable compared to others. Further, the Bongaarts framework has been modified by several authors to study the effects of socio-economic, socio-cultural and demographic factors on contraceptive use, for example Gichuhi (1991), and Osiro(2001).

The Bongaarts model can be represented as follows.



Modified from Bongaarts, J, (1978) 'A Framework for Analyzing the Proximate Determinants of fertility', working papers, New York.

In his model, Bongaarts identified the following as the main intermediate variables: induced abortion, proportion of women married and breastfeeding. Among these, the study has concentrated on contraception as a factor of fertility and how socio-economic, socio-cultural and demographic factors may influence contraceptive use.

Conceptual hypothesis

From the literature review and the Bongaarts model, we can make a conceptual hypothesis that socio-economic, socio-cultural and demographic factors influence use of modern contraceptives among women in rural areas in Kenya.

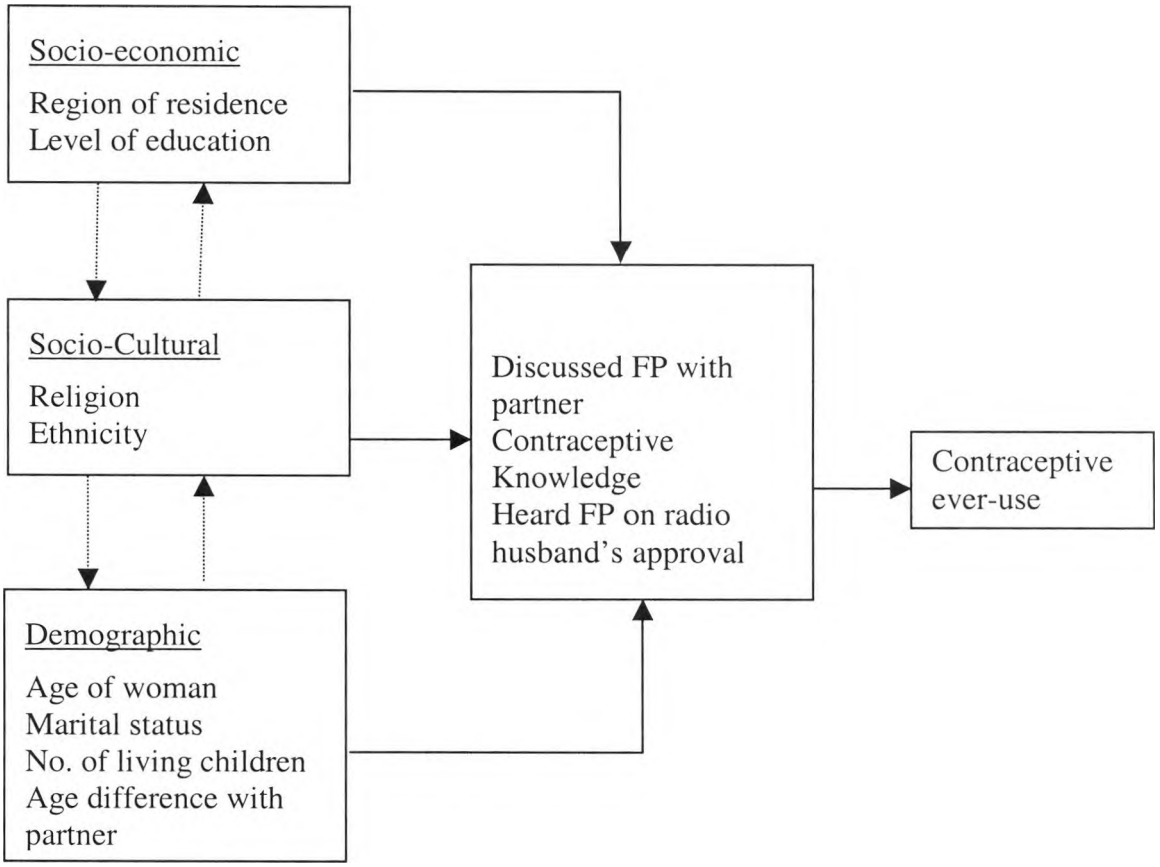
2.6.1 Definition of concepts.

Socio-economic factors: these refer to the woman's region of residence and her level of education.

Socio-cultural factors: these will include the woman's religion and ethnicity.

Demographic factors: these will refer to the woman current age, the number of living children , her marital status and age difference with her partner.

2.7 Operational framework



Modified from Bongaarts, J, (1978) 'A Framework for Analyzing the Proximate Determinants of fertility', working papers, New York.

2.9 Operational hypotheses

1. More educated women are more likely to contracept than the less educated women.

2. Region of residence is likely to influence use of modern contraceptives

3. Women with three and above living children are more likely to use modern contraceptives than those with few or no children.

4. There is a significant positive relationship between partner discussion and modern contraceptive use.

5. There is a positive relationship between knowledge of modern contraceptive methods and use.

6. Partner's approval of family planning is likely to influence use of modern contraceptives.

7. There is a positive relationship between exposure to mass media and modern contraceptive use.

2.7.1 Definition of operational variables

Outcome variable

Contraceptive use: contraception refers to the prevention of pregnancy for purposes of limiting or spacing ones children. In this study it has been categorized as use and non-use as determined by the selected independent variables.

Background variables:

Age of woman: it refers to the past life existence. It is the primary basis of demographic classification of vital statistics. This work concentrates on ages 15-49, and has been classified into three age groups, thus <20, 20-34, and 35+

Age difference between spouses: this refers to the age difference between a woman and her sexual partner. It has been categorized as husband younger, husband 0-4 years older, husband 5-9 years older and husband 10+ years older.

Marital status: this includes both formal and informal unions. This variable has been grouped into three categories: never married, currently married and widowed/divorced/separated. This is an important demographic variable often used to estimate the time when regular sexual relations begin, hence the need for contraceptive use.

Number of living children: this variable has been divided into three categories: no child, 1-3 children and 4+ children. This variable is important because it helps respondents decide whether to use contraception or not.

Region of residence: this variable refers to the province in which the respondent lives. It includes all the provinces in Kenya with the exception of North Eastern Province, which was not included in the study, and Nairobi which is totally urban. These provinces include Central, Eastern, Coast, Nyanza, Rift Valley and Western.

Level of education: education can be defined as the transmission of ideas, Knowledge or values through the formal system. This variable is defined as the number of years spent by the woman in educational institutions acquiring formal education and is classified into three categories: no education, primary education, and secondary+ education.

Religion: this refers to a particular system of faith that the woman belongs to. This research has categorized them as Catholics, Protestants, and other religious affiliations, which include muslims, amd those with no religion. These affect an individuals contraceptive use.

Ethnicity: an ethnic group refers to a particular distinct category of the population in larger society and does not necessarily live collectively in one geographical area. In this

study, ethnicity has been studied as Kalenjin, Kamba, Kikuyu, Kisii, Luhya, Luo, Mijikenda/Swahili, and others.

Intermediate variables

Partner discussion on family planning: this was measured in terms of the number of times a couple discusses family planning and was categorized as never, once or twice and more often.

Contraceptive knowledge: this refers to the number of modern contraceptive methods that the woman knows. This was classified as 1-5 methods, and 6+ methods.

Exposure to mass media: this refers to radio, newspapers, and television among others used to impart information to the society. This research concentrated on the radio only as it is the major source of information to people in the rural areas. This is because it is affordable to most of them. It was categorized as heard of family planning on radio in the last few months or had not heard.

Husband approves of Family Planning: this refers to the partner's approval or disapproval of modern contraceptive use. This is categorized as approves, disapproves and don't know.

CHAPTER THREE

DATA AND METHODOLOGY

3.1 Introduction.

This chapter presents the data and analytical methods used in this study. It is divided into two broad sections; the first section covers the data source, the second section presents analytical methods.

3.2 Data source

This study used secondary data generated from the 1998 Kenya demographic and health survey (KDHS), which was the third such survey carried out in Kenya. The 1998 KDHS was a nationally representative survey of 7881 women aged 15-49 years and 3407 men aged 15-54 years. The study was conducted by the National Council for Population and Development (NCPD) and the Central Bureau of Statistics (CBS) in collaboration with other institutions including Macro-International Inc. of Calverton, Maryland (USA), US Agency for international Development (USAID/Nairobi), and the British Governments Department for International Development (DFID/UK).

The 1998 KDHS covered the entire country with the exception of seven sparsely populated northern districts, which together comprise about 4% of the country's population. A two-stage stratified sampling approach was used. The first stage involved selecting sampling points or clusters while the second stage involved selecting households within the sampled points from a list compiled during the KDHS household listing exercise. The sample points were selected from a national master sample-the

sampling frame-called the National Sample Survey and Evaluation Programme (NASSEP-3), maintained by the Central Bureau of Statistics.

A total of 444 rural and 924 sampling points were drawn. Six of these clusters (comprising 1%) were not surveyed due to inaccessibility. In order to produce reliable estimates of certain variables at district level, 15districts were over-sampled. These were Bungoma, Kakamega, Kericho, Kilifi, Kisii, Machakos, Meru, Muranga, Nakuru, Nandi, Nyeri, Siaya, South Nyanza, Taita Taveta and UasinGishu. Also, Nairobi and Mombassa were over sampled. As a result of this over sampling, the 1998 KDHS is not self-weighting; rather, weights are needed to produce national estimates.

The main objective of the survey was to collect up-to-date information on fertility, nuptiality, childhood mortality levels, fertility preferences, awareness and use of family planning methods, use of maternal and child health services and knowledge and behavior related to HIV/AIDS and other sexually transmitted infections.

This study used the information on family planning , and mainly focuses on the modern contraceptive use among rural women.

3.3 ANALYTICAL METHODS

3.3.1 Descriptive statistics

Frequencies have been used to describe the variables in order to understand the distribution.

3.3.2 Cross tabulation

Cross tabulations have been used at the bivariate level of analysis to test for association between the background, proximate and the outcome variables. It is a simple analytical

method although it has the limitation that it doesn't control the effect of other variables and thus further analysis will be necessary.

Chi-square test is used to test the significance of the associations between each of the independent variables and the dependent variable. This happens when the variables are in a contingency table and the hypotheses to be tested are:

Ho: there is no significant association between X_1 and X_2

H_1: there is a significant association between X_1 and X_2

The chi-square statistic is computed as:

$$X^2 = \frac{\sum(O-E)^2}{E} \quad \ldots\ldots\ldots\ldots 1$$

Where E is the expected frequency for a cell

O is the ~~expected~~ observed frequency for a cell

$\sum$ (Sigma) means sum.

One major drawback of the chi-square statistic is that it doesn't give the direct effect of the relationship between two variables of interest; it only indicates the existence of a relationship and its significance.

3.3.3 Logistic regression

Logistic regression is used to analyze dichotomous data; this is where the dependent variable takes value of either zero or one. Such data is generated by yes/no responses.

In this study, logistic regression has been used to study the effect of each explanatory variable on contraceptive use. This makes it the most appropriate model to use for this study.

The purpose of logistic regression is to identify the best fitting model to describe the relationship between the dependent variable-use or non-use of modern contraception in this case- and a set of independent variables.

From a mathematical point of view, logistic regression is extremely flexible and easy to interpret. For instance, the mathematical form on which the logistic model is based has estimates that must lie in the range between zero and one, and this enables it describe the probability of an event happening. This is not always the case for other possible models, which is why the logistic model is the first choice when probability is to be estimated (Hosmer and Lemershow, 1989).

The odds ratios generated permit direct observation of the relative importance of each independent variable in predicting the likelihood of contraceptive behavior, compared with the reference category. Besides, logistic regression has the advantage of allowing inclusion of statistical controls, which is not possible with chi square test. The general equation is in the form:

$$Y = \frac{e^{Bo+BiXi}}{1+e^{Bo+BiXi}}$$

to make the distribution linear, a logit transformation is carried out, thus:

$$L=\ln(P/1-P)=Bo+BiXi$$

where L refers to the logit or the log of odds

Bo refers to the intercept of the logistic regression model

Bi refers to the logistic regression coefficient

Xi refers to the independent variable

Logistic regression uses the concept of maximum likelihood and results are analyzed using iteration method. The negative value of B_1 means the probability of having the observations to not having it is then computed by exponentiating the Bi.

Two models have been fitted in this study. The first model studies the effect of the background and intermediate variables on the outcome variable, and takes into consideration the rural women with partners , while the second model studies the effect of the background and intermediate variables on the outcome variable for all women, regardless of whether they have a partner or not.

CHAPTER FOUR

RESULTS OF BIVARIATE ANALYSIS

4: Introduction

This chapter presents the basic characteristics of the study population and differentials in contraceptive use. It begins by presenting the basic frequencies and then followed by the presentation and discussion of differentials in contraceptive use.

4.2: The basic characteristics of the study population

This study restricts itself to rural women in their reproductive ages(15-49 years), who had ever had sex as at the time of the survey (1998).

Table 1: The percentage of rural women by selected background characteristics

characteristic	percentage	Number of cases
Region of residence		
Coast	11.0	587
Central	11.5	617
Eastern	16.4	874
Nyanza	19.4	1036
Rift valley	29.0	1549
Western	12.8	682
Total	100.0	5345
Education level		
None	16.0	854
Primary	62.1	3320
Secondary +	21.9	1171
Total	100.0	5345
Religion		
Catholic	27.2	1450
Protestant/other Christian	66.4	3456
Others	6.4	344
Total	100.0	5340

Table 1 continued

Ethnicity		
Luo	12.6	672
Kalenjin	20.1	1073
Kamba	9.9	529
Kikuyu	15.2	812
Kisii	8.0	427
Luhya	14.3	765
Mijikenda /Swahili	6.5	347
Others	13.4	713
Total	100.0	5338
Age		
<20	11.8	630
20-34	53.6	2863
35+	34.6	1852
Total	100.0	5345
Marital status		
Never married	15.6	832
Married	74.8	3999
Widowed/divorced/separated	9.6	514
Total	100.0	5345
Number of living children		
No child	13.4	714
1-3 children	43.6	2328
4+ children	43.1	2303
Total	100.0	5345
Age difference with partner		
Husband younger	2.2	87
Husband 0-4yrs older	31.2	1233
Husband 5-9yrs older	39.2	1548
Husband 10+yrs older	27.4	1082
Missing cases	-	1395
Total	100.0	5345
Partner discussion		
Never	29.6	1184
Once or twice	38.3	1530
More often	32.1	1282
Missing cases	-	1349
Total	100.0	5345

Table 1 continued

Modern Contraceptive knowledge		
Knows 0-5 methods	37.7	2013
Knows 6+ methods	62.3	3332
Total	100.0	5345
Heard FP on radio in last few months		
No	48.9	2613
Yes	51.1	2730
Total	100.0	5343
Husband's approval		
Disapproves	22.0	880
Approves	64.2	2565
Don't know	13.8	553
Missing cases	-	1347
Total	100.0	5345

Source: Computed from KDHS, 1998

The majority of rural women interviewed were from the Rift Valley Province, comprising 29.0 percent, while the least were from Coast and Central Provinces which had 11.0 percent and 11.5 percent, respectively. The results indicate that 62 percent of the study population had primary education. Those with secondary education and above comprised 22 percent, while those with no education constituted 16 percent.

Protestants and other Christians constituted 66 percent, Catholics 27 percent, while other religions had the least number of women (6% of the study population).The variable ethnicity had Kalenjin comprised 20.1 percent, Kikuyu (15.2%), while the Mijikenda/Swahili group had only 6.5 percent. The age group 20-34 had the most women (53.6%), while the <20 age group had 11.8 percent. Over 34 percent of women were aged 35+.

Women who reported that they were currently married were 74.8 percent, while those who were never married were 15.6 percent. The distribution of the number of living children depicts that majority of had 1-3 children (43.6%),while the smallest percentage had no children (13.4%). When the age difference between husband and wife was computed, those with husband 5-9 years older were 39 percent while those with younger husbands were only 2 percent.

Women who reported that they discussed family planning with husband once or twice comprised 38.3 percent, those who discussed more often were 32.1 percent while those who never discussed were 29.6 percent. The distribution of the knowledge of methods depicts that most women (62.3%) know more than five methods, while those who knew 0-5 methods constituted over 37 percent.

Women who reported having heard of family planning on radio in the last few months constituted 51 percent, while those who had not heard were 49%. It can also be noted from the results that majority of the married women had husbands who approved of family planning (64.2%). those whose husbands disapproved were 22.0 percent, and lastly those who did not know were only13.8 percent.

4.3: Differentials in contraceptive use

In this subsection, the responses that rural women gave in relation to questions in ever-use of modern methods of family planning are analyzed and presented. Out of 5345 women, 2412 of them had ever used a modern method of contraception, which translates to 45.1%, while 2933 (54.9%) had never used any modern contraceptive method.

Table 2: Distribution of use of modern contraceptives by various background characteristics of women

characteristic	never use	ever use	Total number of cases
Education			
No education	71.0% (606)	29.0% (248)	854
Primary education	56.4% (1871)	43.6% 1449)	3320
Secondary + education	38.9% (456)	61.1% (715)	1171
Total	54.9% (2933)	43.1% (2412)	5345
Df=2 sign=0.000	**x^2 value=0.2122**		
Region			
Coast	64.9% (381)	35.1% (206)	587
Central	32.7% (202)	67.3% (415)	617
Eastern	45.8% (400)	54.2% (474)	874
Nyanza	60.0% (622)	40.0% (414)	1036
Rift valley	61.8% (958)	38.2% (591)	1549
Western	54.3% (370)	45.7% (312)	682
Total	54.9% (2933)	45.1% (2412)	5345
Df=5 sign=0.000	**x^2 value=0.2168**		
Age			
<20	503(79.8)	127(20.2)	630
20-34	1503(52.5)	1360(47.5)	2863
35+	927(50.1)	925(49.9)	1852
Total	2933	2412	5345
Df=2 sign=0.000	**X2 value=0.1825**		
Marital status			
Never married	71.6% (596)	28.4% (236)	832
Currently married	51.3% (2052)	48.7% (1947)	3999
Widowed,Divorced,Separated	55.4% (285)	44.6% (229)	514
Total	54.9% (2933)	45.1% (2412)	5345
Df=2 sign.=0.000	**X^2 value=0.1149**		
Number of living children			
No child	80.7% (576)	19.3% (138)	714
1-3 children	55.3% (1287)	44.7% (1041)	2328
4+ children	46.5% (1070)	53.5% (1233)	2303
Total	54.9% (2929)	45.1% (2412)	5345
Df=2 sign.=0.000	**X^2 value=0.2578**		

Table 2 continued

Religion			
Catholic	53.8% (780)	46.2% (670)	1450
Protestant/other Christian	53.0% (1880)	47.0% (1666)	3546
Others	78.2% (269)	21.8% (75)	344
Total	54.9% (2929)	45.1% (2411)	5340
Df=2 sign.=0.000	**X^2 value=0.0811**		
Ethnicity			
Luo	69.2% (465)	30.8% (207)	672
Kalenjin	67.7% (726)	32.3% (347)	1073
Kamba	54.1% (286)	45.9% (243)	529
Kikuyu	36.0% (292)	64.0% (520)	812
Kisii	41.0% (175)	59.0% (252)	427
Luhya	53.7% (411)	46.3% (354)	765
Mijikenda/Swahili	73.5% (255)	26.5% (92)	347
Others	44.9% (320)	55.1% (393)	713
Total	54.9% (2930)	45.1% (2408)	5338
Df=7 sign.=0.000	**X^2 value=0.3549**		
Heard Family Planning on radio			
No	62.7% (1638)	37.3% (975)	2613
Yes	47.4% (1294)	52.6% (1436)	2730
Total	54.9% (2932)	45.1% (2411)	5343
Df=1 sign.=0.000	**X^2 value=0.0126**		
Number of methods known			
0-5 methods	74.0% (1489)	26.0% (524)	2013
6+ methods	43.3% (1444)	56.7% (1888)	3332
Total	54.9% (2933)	45.1% (2412)	5345
Df=1 sign.=0.000	**X^2 value=0.4755**		
Discussed Family Planning with husband			
Never	74.2% (878)	25.8% (306)	1184
Once or twice	48.8% (746)	51.2% (784)	1530
More often	33.3% (427)	66.7% (855)	1282
Total	51.3% (2051)	48.7% (1945)	3996
Df=2 sign.=0.000	**X^2 value=0.4176**		

Table 2 continued

Husband approves of family planning			
Disapproves	69.5% (612)	30.5% (268)	880
Approves	37.8% (970)	62.2% 1595)	2565
Don't know	84.8% (469)	15.2% (84)	553
Total	51.3% (2051)	48.7% 1947)	3998
Df=2 sign.=0.000	**X^2 value=0.5524**		
Age difference			
Husband younger	50.6% (44)	49.4% (43)	87
Husband 0-4 yrs older	44.4% (547)	55.6% (686)	1233
Husband 5-9 yrs older	51.3% (794)	48.7% (754)	1548
Husband 10+ yrs older	58.9% (637)	41.1% (445)	1082
Total	51.2% (2022)	48.8% (1928)	3950
Df=3 sign.=0.000	**X^2 value=0.4857**		

Source: Computed from KDHS, 1998.
Note: The figures in the parentheses are the number of cases in each category.

The results in the Table 2 above indicate a significant relationship between the level of education and modern contraceptive use. The proportion of modern contraceptive users was highest among those with at least secondary education (61.1%). Among those with no education 29.0 percent of them had ever used a modern contraceptive method. This association between education and modern contraceptive use is significant at 99 percent level of signficance.

Region of residence also, was found to have a significant relationship with contraceptive use in this study. Over half of the women in Central province had ever used a modern method (67.3%), while Coast province had the least number of women who had ever used a modern contraceptive method (35.1%).

The results also show that the percentage of ever use was highest among women aged 35+, with 49.9 percent having ever used a modern contraceptive. Among those aged 20-

34 47.5 percent had ever used a modern contraceptive. 20.2 percent of women aged <20 years had ever contracepted using a modern method. It can also be noted from the results that contraception increases with age.

Likewise, marital status is significantly associated with contraceptive use. 48.7 percent of the currently married have ever used a modern method, and only 28.4 percent of the single women had ever contracepted using a modern method. The results further indicate that women with at least four children are the greatest contraceptors, while those with none are the least-53.5 percent and 19.3 percent respectively.

Religion also, has a significant influence on contraceptive use. Contraceptive use among the Catholics and the protestants is almost at the same rate, with Protestants slightly higher (46.2% and 47.0% respectively). Ethnicity also has a significant association with modern contraceptive use. Over 50 percent Kikuyu and Kisiis were found to have ever used a modern contraceptive method. Mijikenda/Swahili and the Luo groups were the least with 26.5 percent and 30.8 percent respectively being those who have ever used a modern contraceptive.

A significant association was found between ever use of modern contraceptives and having heard family planning on the radio in the last few months. 52.6 percent of those who had heard had ever contracepted using a modern method, 37.3 percent had not heard. As expected, knowledge of more contraceptive methods leads to a higher probability of contracepting. The women who knew at least six modern methods were contracepting most (56.7%), while among those who knew 0-4methods,only 26.0 percent had ever used a modern method of contraception. In this study, contraceptive use has been noted to increase with the knowledge of methods.

A significant association was found between discussions of family planning with husband and contraceptive use. 66.7 percent of those who discussed family planning more often had ever used a modern contraceptive method, while 25.8 percent of those who never discussed had ever used a modern contraceptive method. Husbands approval of family planning also does influence contraceptive use. 62.2 percent of women whose husbands approved of family planning had ever contracepted, while only 30.5 percent of women whose husbands disapproved had used a modern method. 15.2 percent of women who had ever contracepted did not know whether their husbands approved or not.

Age difference between partners has also been found to be significantly associated with modern contraceptive use. Women whose husbands were 0-4 years older contracepted most. (55.6 percent of them had ever used a modern contraceptive method, while only 41.1 percent of those with husbands at least ten years older had ever used any modern method. 49.4 percent of those who had contracepted using a modern method had husbands who were younger.

CHAPTER FIVE

DETERMINANTS OF USE OF MODERN CONTRACEPTIVES

5: Introduction

In this chapter, the results of logistic regression analysis used in this study are presented. The multivariate analysis results are presented and discussed in this chapter. In the multivariate regression analysis, two models were fitted. The first model studies the effects of the variables (for women with partners) on the outcome variable, while the second model examines the effects of the variables on the outcome variable for all rural women. The results are presented in table 3 and 4.

Table 3:Odds ratios giving the probability of having ever used modern contraception among rural women with partners by selected background variables

variable	β	S.E	significance	(Exp)β
Region of residence				
Coast (Rc)	0.000		0.000	1.000
Central	0.648	0.326	0.047	1.992
Eastern	0.664	0.228	0.004	1.942
Nyanza	-0.365	0.336	0.277	0.694
Rift valley	0.009	0.282	0.974	1.009
Western	-0.286	0.306	0.350	0.752
Level of education				
No education(Rc)	0.000		0.000	1.000
Primary education	0.522	0.121	0.000	1.686
Secondary + education	1.117	0.146	0.000	3.057

Table 3 continued

Ethnicity				
Luo(Rc)	0.000		0.000	1.000
Kalenjin	-0.317	0.250	0.205	0.728
Kamba	-0.709	0.326	0.030	0.492
Kikuyu	0.504	0.282	0.074	1.655
Kisii	1.296	0.176	0.000	3.660
Luhya	0.273	0.252	0.280	1.314
Mijikenda/Swahili	-0.033	0.393	0.934	1.033
Others	0.369	0.293	0.207	1.447
Number of living children				
None(Rc)	0.000		0.000	1.000
1-3 children	1.235	0.215	0.000	3.437
4+ children	1.773	0.224	0.000	5.888
Number of methods known				
0-5 methods(Rc)	0.000		0.000	1.000
6+ methods	0.761	0.086	0.000	2.141
Heard FP on radio in the last few months				
No(Rc)	0.000		0.000	1.000
Yes	0.219	0.078	0.005	1.244
Husband approval				
Disapproves(Rc)	0.000		0.000	1.000
Approves	0.797	0.099	0.000	2.219
Don't know	-0.487	0.160	0.002	0.614
Discussed FP with partner				
Never(Rc)	0.000		0.000	1.000
Once or twice	0.344	0.107	0.001	1.411
More often	0.755	0.117	0.000	2.129
Constant	-4.054	0.518	0.000	0.017

Source: computed from KDHS 1998
NB: Rc-Reference category

In this model, all the variables have been included excluding marital status.

Results in the Table 3 above indicate that region of residence is a significant factor influencing use of modern contraception. Women from the Central and Eastern provinces were more than 1.9 times more likely to have ever used a modern contraceptive than those from the Coast. Women from Nyanza and Western Provinces were 0.7 and 0.8 times less likely to have ever used a modern contraceptive as compared to women from Coast, while those from the Rift Valley were once more likely to have ever used a modern contraceptive in comparison to those from Coast Province.

Education also is a significant factor. Women with at least secondary education were 3 times as likely as those with no education to have ever used a modern contraceptive method, while those with primary education were almost twice as likely as those with no education to have ever used a modern contraceptive method.

Similarly, ethnicity was also significant, with Kisiis being 4 times more likely as compared to the Luo to have ever used a modern method. Contrary to findings in the 1993 Kenya Demographic and Health Survey, Kikuyu women were not the most contracepting group as they have been found to be only 1.7 times more likely to have ever used a modern method compared to the Luo. Kamba women were found to be 0.5 times less likely to have ever used a modern contraceptive method in comparison to the Luo women.

The number of living children a woman had at the time of the survey was also significant. The higher the number of children one had, the higher the likelihood of having ever used a modern contraceptive. Women with at least four children were six times more likely to have ever used a modern contraceptive method as compared to those with no child, while

those women with 1-3 children were three times more likely to have ever used a modern contraceptive method in comparison to those with none.

The number of modern contraceptive methods known to the respondent was is a significant factor influencing modern contraceptive use. Women who knew at least six methods were two times more likely to have ever used a modern contraceptive method as compared to those who knew less than six methods. Similarly, women who had heard family planning messages on the radio were 1.2 times more likely to have ever used a modern contraceptive method compared to those who had not heard. This was a highly significant factor influencing modern contraceptive use.

Husbands approval of family planning is a significant factor influencing modern contraceptive use. Respondents whose husbands approved of family planning were two times more likely to have ever used a modern contraceptive method than those whose husbands disapproved. Those who did not know if their husbands approved or not were 0.6 times less likely as those whose husbands disapproved to have ever used a modern method of contraception.

Discussion of family planning with partner is also a significant factor influencing modern contraceptive use. Those respondents who discussed family planning with partner either once or twice, were 1.4 times more likely to have ever used a modern contraceptive while those who discussed family planning with their partner more often were two times more likely to have ever used a modern contraceptive compared to those who never discussed

Age difference, age and religion were not significant factors in this model.

Table 4: Odds ratios giving the probability of having ever used modern contraception among rural women by selected characteristics

variable	β	S.E	Significance	(Exp)β
Number of methods known				
0-5 methods(Rc)	0.000		0.000	1.000
6+ methods	0.960	0.070	0.000	2.613
Heard FP on radio in the last few months				
No(Rc)	0.000		0.000	1.000
Yes	0.371	0.065	0.000	1.449
Region of residence				
Coast(Rc)	0.000		0.000	1.000
Central	0.729	0.256	0.004	2.073
Eastern	0.816	0.178	0.000	2.612
Nyanza	-0.427	0.270	0.114	0.653
Rift valley	0.179	0.220	0.417	1.196
Western	-0.141	0.244	0.565	0.869
Level of education				
No education(Rc)	0.000		0.000	1.000
Primary education	0.654	0.101	0.000	1.922
Secondary + education	1.195	0.121	0.000	3.303
Religion				
Catholics(Rc)	0.000		0.032	1.000
Protestants/other Christian	0.075	0.071	0.293	1.078
Others	-0.529	0.191	0.025	0.589
Ethnicity				
Luo(Rc)	0.000		0.000	1.000
Kalenjin	-0.539	0.208	0.010	0.584
Kamba	-0.650	0.272	0.017	0.522
Kikuyu	0.325	0.233	0.163	1.385
Kisii	1.280	0.143	0.000	3.596
Luhya	0.145	0.212	0.493	1.157
Mijikenda/Swahili	0.022	0.322	0.950	1.022
Others	0.272	0.242	0.261	1.313

Table 4 continued

Marital status				
Never married(Rc)	0.000		0.030	1.000
Currently married	0.347	0.111	0.002	1.414
Widowed/divorced/separated	0.416	0.147	0.005	1.516
Number of living children				
None(Rc)	0.000		0.000	1.000
1-3 children	1.017	0.130	0.000	2.764
4+ children	1.636	0.147	0.000	5.134
Constant	-1.580	13.513	0.907	0.206

Source:Computed from KDHS 1998
NB: Rc-Reference category

In this model, all the variables have been included excluding approval of family planning by partner, discussion of family planning with partner and age difference with partner.

As expected, higher knowledge of modern contraceptive methods was found to have a significant positive relationship with contraceptive ever -use. Those who knew at least six modern methods were more than two times more likely to have ever used a modern contraceptive method as compared to those who knew less than six methods. Results in the table 4 above indicate that having heard of FP on the radio over the last few months has a significant positive relationship with contraceptive ever-use. Women who had heard FP on radio over the last few months were found to be 1.4 times more likely than those women who had not heard to have ever contracepted using a modern method.

The region of residence was also found to have a significant effect on the use of modern contraceptives, with women from Central and Eastern regions being more than 2 times more likely to have ever used a modern contraceptive method compared to those women from the Coast. Table 4 above further indicates that women with at least secondary education were 3 times more likely to have ever used a modern method of contraception

compared to those with no education, while those with primary education were twice more likely to have ever used a modern method of contraception compared to those with no education. There is therefore a significant increasing trend in contraceptive use with increase in level of education.

Protestant women were also found to be once more likely to have used any modern method of contraception compared to the Catholic women. Those women from other religions were found to be 0.5 times less likely to have ever used a modern method as compared to the Catholics.

Kisiis were found to have the highest odds ratio. These were more than 3 times more likely to have ever used a modern contraceptive method compared to the Luo,while the Kalenjin and Kamba women were 0.5 times less likely to have ever used a modern contraceptive in comparison to the Luo.

Marital status was found to be a significant factor influencing modern contraceptive use. The currently married and those divorced/separated/widowed were more than 1.4 times more likely to have ever used a modern contraceptive method compared to the single women.

A significant positive relationship was found between number of living children and modern contraceptive ever-use. Women who had at least four children were found to be five times more likely to have ever used a modern contraceptive method in comparison to those with none, while those who had 1-3 children were three times more likely to have ever used a modern contraceptive method as compared to those with none.

Age was not found to be a significant factor in this model.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6: Introduction

The main objective of the study was to investigate factors influencing modern contraceptive use among rural women in Kenya. The study used the 1998 Kenya Demographic and Health Survey, and was limited to rural women aged 15-49 years, who had ever had sex. Analysis was carried out at two stages: bivariate and multivariate. At the bivariate stage, the study established the relationship between each of the independent variables and the dependent variable. This was achieved using cross tabulations. The significant variables were then used for further analysis in the second stage of analysis using logistic regression.

In this chapter, the main findings of the study are reviewed. These are in turn used to discuss the main conclusions as well as the recommendations.

6.2: Summary of findings and conclusion

The various factors which were taken into consideration were the socio-economic, socio-cultural and demographic factors which influence certain proximate factors to affect modern contraceptive use. Under the socio-economic variables were level of education and region of residence. Under the socio-cultural factors were religion and ethnicity while under the demographic factors were age of woman, marital status, number of living children and age difference with partner. The intermediate factors included discussion of Family Planning with partner, contraceptive knowledge, exposure to media, particularly the radio and husbands approval of Family Planning.

The findings discussed in this section are based on the results of the cross tabulations and the logistic regression methods of data analysis.

In chapter one, the study problem is presented as well as the study objectives, justification and scope and limitations of the study. Chapter two presents the literature review relevant to this study and also the conceptual and operational frameworks. The hypotheses of the study and the definition of the operational variables are also given in the latter part of the chapter. Chapter three discusses the data and methodology and it gives the methods of analysis used in this study. Bivariate analysis results obtained from cross tabulations are presented and discussed in chapter four, whereby it was found that all variables taken into consideration in this study were significant at p=0.001, and all of them were consistent with the findings of previous studies.

6.3 Conclusion

For the women with partners,we can conclude that husbands approval of family planning is a necessary precondition for contraceptive use among rural women in Kenya. This implies that male involvement in family planning is important and should be emphasized. Discussion of family planning with partner is also an important factor in influencing modern contraceptive use, and as such, couples should be encouraged to discuss family planning.

In both models, a significant positive relationship was found to exist between knowledge of modern contraceptives and ever use. The more methods an individual knows, the more likely she is to have ever used at least one of them. This therefore means that more modern contraceptive awareness campaigns should be carried out as a way to increase contraceptive awareness and eventual contraceptive adoption.

Exposure to mass media is also an important factor influencing modern contraceptive use. As such, we accept the hypothesis that there is a positive relationship between exposure to mass media and modern contraceptive use. Region of residence was also found to influence modern contraceptive use among rural woman in Kenya. The region that the respondent lives in largely influences her ever use of contraceptives. The hypothesis that more educated women are more likely to contracept than the less educated women has been confirmed in this study. Education , especially for women , should therefore be encouraged and promoted.

Ethnicity also influences modern contraceptive use. Unlike other studies which have found the Kikuyu as the most contracepting group, this study found Kisii to be the most contracepting group.

The number of children a woman has also determines if she uses a modern contraceptive. Therefore we accept the hypothesis that women with at least three living children are more likely to have ever contracepted using a modern method than those with fewer children.

In the second model which took into consideration all the women, marital status was found to be a significant factor influencing modern contraceptive ever-use.

The variables age, age difference and religion were not found to be significant determinants of contraceptive use among rural women with partners while age was not significant among all the women.

6.4: Recommendations

6.4.1: Recommendations for policy

Fertility regulation is an important component for improving the standards of living especially for the developing countries. Therefore, contraceptive use should be encouraged as a way to regulate fertility and as such the following recommendations for policy have been made.

More educated women were found to be contracepting more than the less educated women. In order to increase contraceptive use among rural women in Kenya, education among all women of all ages should be emphasized. Besides, education regarding population and the family should also be taught in schools. Education should also be emphasized to men of all ages as well, in order to increase modern contraceptive use rates by changing their attitudes towards family planning and therefore leading to higher rates of approval and discussion of family planning.

Information, education and communication campaigns should be done through all possible channels urging people to discuss family planning with their spouses. Similarly, education on the various modern methods of contraceptives should be carried out in order to increase modern contraceptive approval and consequently, use.

Mass media should also be enhanced in promoting family planning. Information, education and communication campaigns carried out through the media should be done using a simple language and at a time when it will reach a greater audience. Such campaigns should be intensified by increasing the number of family planning messages in the media.

6.4.2: Recommendations for further research

A similar study on factors influencing modern contraceptive use should be done using more current data and use current use as the outcome variable in order to compare results. Also, a more detailed research which takes into consideration other variables that may affect modern contraceptive use should be done.

REFERENCES

Abdullah et.al, 1984:Contraceptive Use and Fertility in the Commonwealth Caribbean Countries, Geneva, World Fertility Report, No.60.

APPRC, 1998,Fertility decline in Kenya: Levels, Trends and Differentials, Population Council, Nairobi, Kenya.

Blanc A and Poukouta P.A. (1997) ' Components of Unexpected Fertility Decline in Sub-Saharan Africa,' Demographic and Health Survey Analytical Reports, 5.

Bongaarts, J.1986: 'The Transition in Relative Behaviour in the Third World' the world Population and US Policy: Choices Ahead, New York and London.

Bongaarts, J.1978: ' A Framework for Analyzing the Proximate Determinants of Fertility' Working Papers, New York.

Bongaarts J. and Bruce J, 1995, 'The Causes of Unmet Need for Contraception and the Social Context of Services,' Studies in Family Planning, vol.26 (2).

Caldwell, J.C.1987, 'The Cultural Context of High Fertility Levels in Sub-Saharan Africa' population and Development Review 13(3).

Casterline J.B, Perez A.E and Biddlecom A.E,1997, Factors underlying Unmet Need for Family Planning in the Philippines', Studies in Family Planning, vol.28(3).

Castro, M.T.et.al, 1995; 'The Impact of Women's Education on Fertility in Latin America: Search for Explanation' International family planning perspectives, 21.

Castro and Wamucii, 1994:' A Decade of Change in Contraceptive Behaviour' Latin America Population Bulletin, No.6.

Central Bureau of Statistics, 1980, Kenya Fertility Survey, 1977-1978, Ministry of Economics and Planning, Government Printer, Nairobi.

Central Bureau of Statistics, 1984, Kenya Contraceptive Prevalence Survey, Ministry of Planning and National Development, Government printer, Nairobi, Kenya.

Central statistics Office, 1996, Ministry of Health, Macro International; Zambian Demographic and Health Survey, 1996.

Cornelius R.M. and Novak A, 1983, 'Contraceptive Availability and Use in Five Developing Countries,' Studies in Family Planning, vol.1 (2).

Dodoo,F.Nii-Amoo and Ama Seal,1994, 'Explaining Spousal Differences in Reproductive Preferences: A Gender Inequality Approach,' Population and Environment, vol.5(5).

Donaldson and Tsui, 1990, 'The International Family Planning Movement' Population Bulletin, vol.45 (3), Population Reference Bureau, Washington DC.

Dow, T.E and Werner, L.H, 1982; 'Perceptions of Family Planning and Family Planning Programmes Held by Rural Kenyan Women,1981, Nairobi Kenya.

Family Health International, 1992, 'Men and family Planning' Network, 13(1).

Gachango, G.W.1993, Some Factors Affecting Husbands Contraceptive Use in Kenya, Post Graduate Diploma Project, PSRI, University of Nairobi.

Gathiti,Z, 1997; Family Planning Communications and Contraceptive Use in Kenya, 1997,

Gillery, R.H. and S.H.Moore, 1986, Radio-Spreading the Word of Family Planning; population Reports, Series J, No. 32.

Hosmer, D.W. and Lemershow, S, 1989, Applied Logistic Regression, John Wiley and sons, New York.

Ikamari, L.D.E, 1985, Determinants of Contraceptive Use in Kenya, MA Thesis, PSRI, University of Nairobi.

John Hopkins School of Public Health, 2003, 'The Reproductive Revolution Continues,' Population Reports, xxxi (2).

Kaseje, D.O, 1987, Factors Affecting Acceptance and Use of Modern Contraceptive Methods in Saradidi, Kenya.

Khan, M.A and Mizanur Rahman, 1997, 'Determinants of Contraceptive Method Choice in Rural Bangladesh,' Demographers Notebook, Asia Pacific Population Journal, 12(3).

Kyalo, M.M, 1996, Determinants of Contraceptive Non-use in Kenya: Evidence From the KDHS (1989), MA Thesis PSRI, University of Nairobi.

Lasee,A and Stan Becker, 1997, 'Husband -Wife Communication About Family Planning and Contraceptive Use in Kenya' International Family Planning Perspectives,23.

Lightbourne, R.E, 1980, 'Urban-Rural differentials in Contraceptive Use,' Comparative Reports, No.10, The Netherlands: International Statistical Institute.

Lutalo, T.et.al, 2000, 'Trends and Determinants of Contraceptive Use in Rakai District, Uganda, 1995-1998' Studies in Family Planning, 31(3).

Mauldin, W.P.1975; 'Assessment of National Family Planning Programmes in Developing Countries,' Studies in Family Planning, Vol.6 (2), The population Council, New York.

Mazur, P.D, 1981; 'Contraception and Abortion in Poland,' International Family Planning Perspectives, vol.7 (2) the Planned Parenthood International.

Mugo, J.M, 1998; The Effect of Female Education on fertility in Kenya, MA Thesis, PSRI, University of Nairobi.

Mungai, M.W, 1986; Knowledge, Availability and Use of Contraceptives in Kenya, MA Thesis, PSRI, University of Nairobi.

National Council for Population and Development, Central Bureau of Statistics, Office of the Vice President and Ministry of Planning and National Development and Macro International Inc; 1994, Kenya Demographic and Health Survey, 1993, Nairobi and Calverton.

National Council for Population and Development, Central Bureau of Statistics, Office of the Vice President and Ministry of Planning and National Development and Macro International Inc; 1999, Kenya Demographic and Health Survey, 1998, Nairobi and Calverton.

Njai, K.G.N, 1998; Socio-economic and Demographic Determinants of fertility: A Comparative Study of Nyeri, Taita-Taveta, Kisii-Nyamira and Bungoma Districts, MA Thesis, PSRI, University of Nairobi.

Njogu Wamucii, 1991, 'Contraceptive Use in Kenya; Trends and Determinants,' Demography,28(1), Institute of Development /Macro Systems Inc.Columbia,USA.

Nortman, D.l, 1978; 'Population and Family Planning Programmes,' the population council, New York.

Ocholla-Ayayo,A.B.C, 1988; Social-cultural Environment and Family Planning in Kenya, Education and Communication in Family Planning in Africa, Dakar, Senegal.

Ocholla-Ayayo, A.B.C, 1991;The Spirit of a Nation, Shirikon Publishers, Nairobi.

Omuondo, D.O, 2000; Factors Influencing the Practice of Family Planning among Men in Central and Western Provinces in Kenya, MA Thesis, PSRI, University of Nairobi.

Oni, G.A and J, McCarthy, 1991, 'Family Planning Knowledge, Attitudes and Practice of Males in Ilorin, Nigeria,' International Family Planning Perspectives, 17(2).

Osiro, G.A, 2001; Contraceptive Use in Nyanza Province, MA Thesis, PSRI, University of Nairobi.

Population council and Institute for resource Development, 1996; Indonesia 1994: Results from the demographic and Health Survey' Studies in Family Planning27 (2).

Population Council and Institute for Resource Development, 1992; Nigeria 1990: Results from the demographic and Health Survey' Studies in Family Planning, 23(3).

Population Studies and research Institute, 1992, Husband-Wife Communication and Interaction District, International Family Planning Perspectives, 20.

Rodriguez and Cleland, 1987, Fertility Behaviour in the Context of Development, Evidence from the World Fertility Survey, US.

Ross, J.A and Frankenberg, 1993;Findings of Two Decades of family Planning Research, population council, New York.

Rutenberg N. and Watkins S.C, 1997, 'The Buzz Outside the Clinic: Conversation and Contraception in Nyanza Province, Kenya,' Studies in Family Planning vol.28 (3).

Safilios, R.C and Mburugu E.K, 1986; Women's Income and Fertility in Rural Kenya, University of Nairobi.

Shedlin, M.G and Hollerbach, P.E; 1981, 'Modern and Traditional Fertility regulation in a Mexican Community: The Process of Decision Making,' Studies in Family Planning, Vol.12(6/7), Population Council New York.

Tuladhar, J.M, 1985; 'Determinants of Contraceptive Use in Nepal,' Journal of Biosocial Science, 17.

Valente T.W et.al, 1994; Radio Promotion of Family Planning in the Gambia, International Family Planning Perspectives, 20.

Wangila, S.W,2001; Factors Underlying Unmet Need for Contraception in Kenya, M.A Thesis,PSRI,UoN.

Weeks, J, 1994 Population: An Introduction to Concepts and Issues, Belmont, California: Wadsworth.

Wekesa and Omurundo, 2001; 'Socio-economic and socio-cultural Dimension of Traditional and Modern Contraception in Kenya,' Population and development in Africa: Anthropological Perspectives, PSRI.