

**SOCIOLOGICAL AND DEMOGRAPHIC DETERMINANTS OF FERTILITY
BEHAVIOUR: A STUDY OF MANG'U LOCATION OF THIKA DISTRICT //**

BY

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**Thesis submitted in partial fulfilment of the requirements for the Master of Arts
degree (in Sociology) of the University of Nairobi**

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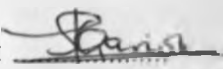


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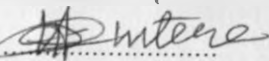
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DEDICATION

This thesis is dedicated to my beloved parents Salome and Henry Kariuki, for their continued love, guidance and encouragement that I have always counted on throughout my studies.

ACKNOWLEDGEMENTS

I wish to acknowledge all the people who in one way or another contributed to the demanding process of writing this thesis.

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However, I am entirely responsible for any shortcoming in this thesis.

ABSTRACT

The aim of this study was to examine how socio-economic, cultural and demographic variables relate to family size preferences in Mang'u Location, Thika District, where the total fertility rate is reported to be on the decline. This objective was based on the observation that although family planning programme has been operational in the country for over three decades, the population growth rate has remained high. In an attempt to determine the factors responsible for the situation, this study has attempted to analyse the problem by looking at the relationship between the preferred family size and the socio-economic, cultural and demographic characteristics of 120 married women who were covered in the survey.

If it were known why some couples prefer large families while others prefer small families, it would be easier to work out a motivation model so as to increase the number of family planning acceptors. Therefore, the main objective of this study was to fill up this gap by examining some of the socio-economic, cultural and demographic variables that are expected to discourage or to encourage high fertility in Thika District.

The study sample was composed of 120 married women living in Mang'u Location, Kamwangi Division of Thika District. Simple random sampling technique was used to get the sub-locations, villages and households that were covered in this survey. The key instrument of data collection was the interview schedule. However other methods such as interviewing of key informants and simple observation were used. The questionnaire consisted of open and close-ended questions. The interview schedule focused on married women of 15-49 years. This is because this is the group that has a higher risk of conception.

To determine the influence of the socio-economic, cultural and demographic variables on family size preferences, simple statistical analysis and percentages were computed using

the Statistical Package for the Social Sciences (SPSS) computer programme. The variables were close-tabulated, chi-square (X^2), Pearson's contingency coefficient (C) and Pearson's Correlation Coefficient (r) were used to interpret the relationships between the dependent variable and the independent variables.

The study found that the size of the family preferred is getting increasingly smaller. Occupation of women and formal education were found to be the major socio-economic variables influencing the preferred family size. Majority of the respondents in this study were poor. Low income was found not to be an inevitable barrier against reduction in fertility. Land was found to be an insignificant factor for women to consider in making family size decisions. Among the socio-cultural factors, post-partum abstinence was found to be the major factor influencing the preferred family size. Religion and sex preference were found to be important factors in influencing the family size. Age at marriage and marital duration were also found to have a strong influence on the preferred family size. Low mortality was found to influence women towards a lower level of reproduction. The use of contraceptives was found to be inversely related to the preferred family size. The study has shown that the use of modern family planning methods does not conflict with traditional values. Male approval of family planning was found to be weak. Fear of the side effects of contraceptives was found to be the most important reason for not using the methods.

Thus, in an attempt to accelerate a decline in family size preferences, this study has made the recommendations that:-

1. The Government should devise policies which will increase the accessibility of good quality education for women in the country. Education should be made more affordable so that women can improve their education levels. Particularly, population education should be introduced in the school curriculum;

2. To keep down mortality, the government should plough more money into health services, child survival and save motherhood,

3. Contraceptive use should be encouraged especially among the young married women. This is because the young married women have a longer reproductive period than older women,

4. To avoid resistance to some of the modern contraceptives, dissemination of correct information about the advantages and the possible side effects of contraceptives should be organised in a manner to enable men and women to participate actively in the programme. This will enable them to be totally committed to the programme.

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CHAPTER ONE

PROBLEM STATEMENT, OBJECTIVES AND STUDY JUSTIFICATION

1.0 INTRODUCTION

Kenya has for long experienced a rapid rate of population growth. This rapid demographic change could be due to the effects of better health and reduced infertility plus the fact that many children could be a rational response to living conditions not only in rural but also in urban society (Boserup 1985:390). Until recently, the cost of childbearing was low. The cost of educating children was lower than it is today. Children were an asset because they provided labour on the farms. They collected firewood, prepared food, drew water and grazed goats, cows and sheep (Kabwegyere 1977:197).

An improvement in living conditions due to economic development and modernisation has brought a rapid decline in the number of deaths and particularly a decline in infant and child mortality. The result has been a high rate of natural increase of population in most parts of the country.

The first census in Kenya was taken in 1948. It showed that Kenya had a population of 8.6 million with an annual growth rate of 3.3%. In 1969 the population had risen to 10.9 million (CBS 1969). By 1979 the population had risen to 15.3 million with an annual growth rate of 3.8% (CBS 1979) and by 1989 the population was 21.4 million (CBS 1989). The population is projected to increase to 39 million by the year 2,002 reaching 50 million by 2009 and 100 million by 2025 (CBS 1984:1).

High population growth rate in Kenya was recognised as a problem as early as 1962. The results of the 1962 census showed a growth rate of 3.0% which was one of the highest growth rates in the world. In response to this, the Family Planning Association of Kenya

(F.P.A.K.) was established by private individuals. By 1967, the official National Family Planning Programme was launched. The government later launched a five year (1975-1979) family planning programme whose intent was to reduce the high annual rate of natural increase from 3.3% in 1975 to 3.0% in 1979. The results of the 1979 census showed a growth rate of 3.8% a higher rate than the projected rate of 3.0%. The government response was to establish the National Council For Population and Development (N.C.P.D.) in 1982. This council was supposed to put emphasis on programmes aimed at changing family sizes and norms rather than concentrating exclusively on family planning techniques. The activities of the Kenyan government and those of donors and Non-Governmental Organisations (NGOs) have since then been concerned with population and family planning programmes.

Rapid population growth rate in Kenya has been viewed with a lot of concern. This is because it is seen as a threat to the development of the country. Kenya is primarily an agricultural country. Land is therefore a crucial resource. The impact of a high rate of population growth on land is a great problem because a rapid rate of population growth puts more pressure on the already strained land resources. This pressure forces people to move not only from rural to urban areas but also from one part of the rural place to another (Ominde 1968:266). Over-population leads to rural decline and degradation of the natural resources. A rapid rate of population increase requires a higher level of the necessary savings and investments to achieve a certain average output. High population may strain the basic services like education, housing and health. Furthermore, a rapid rate of population growth leads to an accelerating rate of urbanisation which increases problems of housing, pollution and crime.

Fortunately, Kenya has recently recorded a decline in fertility. The country, not long ago presented as the nation with the highest rate of population growth in the world, is currently "one of the fore-runners of a trend of fertility decline in sub-Saharan Africa" (Egero 1994:3). The statistics computed in the 1984 Kenya Contraceptive Prevalence

Survey (K.C.P.S.) shows an evidence of a possible decline in fertility from a Total Fertility Rate (T.F.R.) of 8.1 children per woman in 1977/78 (Kenya Fertility Survey) to 7.7 in 1984 (CBS 1984:50). The findings of the Kenya Demographic Health Survey of 1989 provided the first evidence of a major decline in fertility to 6.7 children per woman (KDHS 1989:XIX). Further evidence of a continuation and an acceleration of fertility decline was revealed by the KDHS of 1993. TFR was then reported to be 5.4 children per woman (KDHS 1993:23). Table 1:1 shows that the TFR is projected to decline to 4.8 children per woman by the year 2001. These past surveys have therefore indicated that fertility in Kenya is undergoing a transition. The decline in fertility is especially significant in the urban areas and central and eastern regions of the country (KDHS 1993:24). A number of districts in Western, Nyanza, Rift Valley and North Eastern Provinces have remained as "corridors of high fertility" (CBS 1996:40). The decline in fertility has been attributed to increased use of family planning methods. Although family planning activities were started by the Kenyan government in the 1960s only a few years after independence, it is only recently that a decline in fertility has been reported (Egero 1994:10). One would therefore like to know what has facilitated this decline.

Table 1:1 Kenya's population structure and projections

	1979 census	1989 census	1995 estimates	2001 projected
Total population (mn)	16.2	23.2	27.5	31.9
Growth rate (% pa)	3.9	3.4	2.9	2.5
Average population density (per sq.km).	26	37	43	49.9
Urban population	2.3	3.9	5.3	7.4
Total fertility rate	7.8	3.9	5.3	4.8

Source: National Development Plan, 1997-2001:131

District. These factors include education, occupation, income, land, religious affiliations, sex preferences, post-partum abstinence, age at first marriage, age, marital duration, mortality and contraception.

1.2 Objectives of the Study

In view of the above, this study aims at investigating (some of) the factors that account for the declining trend in the fertility situation in Thika district. The main purpose is to investigate the factors that affect the desire for children and lack of such desire. Though fertility variations are primarily determined by biological processes, they are also affected and modified by socio-economic and socio-cultural factors. This study will examine the effects of some of the socio-economic, socio-cultural and demographic variables that affect the desired/preferred family size. The independent variables to be explored include education, land, occupation, income, religious affiliation, post-partum abstinence, sex preferences, age, marital duration, age at first marriage, mortality and contraception.

The overall objective of this study is to examine the role of selected socio-economic, socio-cultural and demographic variables in suppressing the desire for children in the area of study. The main idea is to isolate the factors that would be of importance to policy makers and planners in addressing the population issue. An examination of these determinants of fertility decline is of great importance because these determinants are potentially very important in explaining the fertility of the society (Anker and Knowles 1982:5). Accelerating the pace of fertility decline is of enormous importance for the improvement of the levels of living and reducing environmental degradation in Kenya.

The major objectives of this study include:

1. To estimate the mean number of children preferred by currently married women in the reproductive age groups in Mang'u Location of Thika district.

2 To identify the various social, economic and demographic factors responsible for a decline in the preferred family size among the currently married women in their reproductive years

3 To find out how social, economic and demographic factors influence the preferred family size among the currently married women in reproductive age groups

1.3 Justification of the Study

The study recognises that the observed high population growth rates in most parts of the country is a serious concern to a developing country like Kenya because of the problems associated with these rapid growth rates. The problems associated with high population growth rates reinforce concern among scholars, policy makers and planners to identify the appropriate anti-natalist population policies. There is also need to formulate instruments that will ensure successful implementation of these policies.

Muganzi (1994:13) argues that of the three components of population change - migration, mortality and fertility - fertility is currently the major determinant of population growth in Kenya. Fertility is affected by both biological and social factors. Changes in fertility are often a result of a decision, and therefore a sociological phenomena (Monsted 1978:103). Therefore the trends in fertility is important in policy planning both in the short-term and in the long term. Since the district has recently recorded a decline in the population growth rate, a research on the determinants of fertility decline in the area of study is of tremendous importance to the country because it reveals what has made it possible for the area to record this decline. This could be used as a starting point for reducing fertility in other parts of the country and accelerating the decline in areas that have recorded only slight declines in fertility. Therefore an understanding of the factors affecting the desire

for children among married women is of paramount importance in an attempt to understand the potentials for converting married women in the country into adopters of fertility control measures

Most studies on fertility have concentrated on the independent variables of marriage and intercourse, with little attention given to the impacts of socio-cultural and socio-economic determinants of fertility variations. The field of socio-economic variations no doubt requires more carefully planned sociological studies especially in the light of the changing social and economic conditions of living, modernisation and urbanisation. The importance of studying the socio-economic, cultural and demographic determinants of fertility derives from the fact that these variables are of great importance in affecting fertility in the society (Anker and Knowles 1982:5). These factors must be considered if planners have to understand the needs of the people they serve and more importantly if policy makers are to formulate and implement family planning programmes.

It has been shown that in Kenya, fertility decline is more rapid in the urban areas than in the rural areas. By 1977/78 urban women had a T.F.R. of 6.1 which declined to 4.7 in 1989 and 3.4 in 1993. The rural averages were 8.4, 7.0 and 5.8 respectively (Egero and Mburugu 1994:38). Yet, most studies on fertility have largely concentrated in urban areas with little emphasis on the rural population. This study has however been carried out in the rural areas. As a result it attempts to help us understand the underlying factors that shape fertility in the rural parts of the country where very little is known about the factors that are currently affecting the desire for children. This study therefore hopes to contribute to our understanding of fertility by collecting information on factors that account for the current fertility situation in the rural area. The study is timely because the decline in fertility is a very recent phenomena. There has been very little previous work on the determinants of fertility among women in Kenya. The study hopes to make suggestions and recommendations that can be useful to policy makers and planners in regulating fertility in the country.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.0 INTRODUCTION

This chapter presents a review of literature and theoretical framework. The literature that is reviewed basically shows how fertility may be influenced by socio-economic, socio-cultural and demographic variables.

Human reproductivity in every society is determined directly by a set of factors which are referred to as the intermediate determinants of fertility. These intermediate factors are said to directly influence fertility through socio-economic and cultural factors. Davis and Blake (1956:211) attempted to classify these intermediate factors. Their classification was later modified by Bongaarts (1978:2) when he classified them into three broad groups as shown below.

I. Exposure factors.

- 1. Proportion married.**

II. Deliberate Marital Fertility control factors.

- 2. Contraception**
- 3. Induced abortion.**

III. Natural Marital fertility factors.

- 4. Lactational infecundity**
- 5. Frequency of intercourse**
- 6. Sterility**
- 7. Spontaneous intrauterine mortality**
- 8. Duration of the fertile period.**

The above intermediate determinants of fertility are acted upon by social, economic and cultural factors. The literature reviewed below discusses how these socio-economic, socio-cultural and demographic factors may affect fertility in the society.

2.1 Socio-Economic factors and Preferred Family Size

2.1.1 Education and Family Size Preferences

Education and especially that of females has been shown to exert a powerful effect on fertility (Caldwell 1980a:228). Studies that have been conducted have revealed negative or positive and sometimes an insignificant change in fertility depending on levels of formal education. Education influences fertility through a number of ways. Education influences the willingness of spouses to accept new methods of contraception and their ability to use contraceptives appropriately. For this reason, formal education is said to play an important role in accelerating the pace of fertility decline (Gupta 1994:112). Studies have shown that there is a strong relationship between women's educational achievement and fertility reduction in many societies (Nag, 1982:40, Henin, 1979:9)). Women with formal education frequent family planning clinics more than those women with no education. Education influences fertility through the acquisition of family planning information and by making women to be more aware of their rights. An increase in education produces an increase in the use-efficiency of family planning methods by increasing the usage levels of contraceptives and by giving a larger preponderance to the more efficient methods (Lesthaeghe *et al* 1983:41). In most cases women with formal education start to use contraceptives at earlier stages in their child-bearing period. Efficient users of contraceptives are also normally more educated than inefficient users of contraceptives (Dow 1981:17).

Education can also increase the preference for consumption goods that are not related to children. Education reduces traditional practices and such preferences like large families.

Furthermore, education increases the income that a woman can earn thus increasing the opportunity cost of withdrawing from the labour force in order to raise children (Anker and Knowles 1982:32). Education further discourages high fertility by reducing the economic utility of children. This is because education creates aspirations for upward mobility for women. Educated women can work outside the household where they can earn as high incomes as their husbands. In rural areas educational attainment for currently married women remains poor (KCPS 1984:27) and it is therefore important to find out if education has had an impact on fertility in the rural areas.

Bogue (1969:693) argues that throughout the world, there seems to be a strong inverse correlation between the amount of educational attainment and the level of fertility. Studies have also shown that at the initial stages of fertility transition educated women may have higher fertility rates (Njogu 1992:1885). This argument is concurrent with Cleland's (1987:7) that the highest marital fertility is found among women with a little schooling. Cleland (1987:6) argue that in Africa fertility control is virtually absent among couples where the wife is uneducated or has incomplete primary education but rises with higher levels of schooling. The highest fertility is found among women with a little schooling while the lowest fertility is recorded by the small number with secondary education. In Kenya large increases in primary school enrolments are already taking place but secondary school enrolment remains a reserve of the minority.

Studies on women's educational achievement have shown that education increases communication between husband and wife. This encourages attempts to control child-bearing. Education makes it possible for women to have a wide range of contraceptives. It also delays the entry of couples into marital unions (Dixon 1975; Anker and Knowles 1978:11).

Education may change the values, beliefs and attitudes of people toward a small family norm and a style of rearing children that is relatively costly by the parents in terms of time

and money (Easterlin 1978:67). Education could also enhance the spreading of western ideas and values which undermines traditional norms and values that favour large families (Caldwell 1980a:228).

Caldwell (1980b) argues that education affects fertility by restructuring the family relationships and the direction of the flow of wealth. He argues that where the children are not provided with formal education, the wealth flows from children to parents and that in such cases parents have everything to gain from large families. Formal education has the impact of reversing the intergenerational wealth flows. In this case, parents expend more resources on children than they receive from them. The spouses can therefore benefit by limiting the number of children. This is especially the case in Kenya where the fertility decline is said to reflect a response to higher costs of education, in a climate of increasing appreciation of the value of education for one's children (Kelly and Nobbes, 1990 cited in Egero and Mburugu 1994: 59).

Some scholars have suggested that sometimes education and fertility may be positively related. Cleland (1987:7) observed that in poor countries with low literacy levels, a few years of primary education may at first raise fertility. A similar observation was made by Bjork (1971:131). The increase in fertility may be due to abandonment of traditional practices such as breast-feeding, post partum abstinence and polygamy (Njogu 1992:1885). This view is concurrent with that of Cochrane (1979) who found that at low levels of education, fertility is higher among couples with a few years of schooling. In countries with higher levels of female education, fertility is inversely associated with education. Such kind of a relationship where the uneducated women have lower fertility than those with some primary education has also been reported by other scholars (Henin, 1979:5-6; Ominde *et al* 1983).

In some cases the income of educated women is high, making fertility high since women with high incomes can afford to support more children. Education may also indirectly

affect the fecundity of women. This is because educated women may be more knowledgeable about their health, diets and hygiene. Educated women may also reduce the length of the breast-feeding, period allowing for earlier conception. This reduces the length of post-partum amenorrhoea, miscarriages and intrauterine mortality thus increasing fertility. The educated women may also afford nutritious food. This improves the health of the people and increases their fertility.

Egero and Mburugu (1994:39) argue that in Kenya women with a few year's of education in 1970s had a higher fertility than other women. This high fertility is also said to be highly linked to a tendency among educated women to reduce the breast-feeding period. In the 1970s most of the Kenyan women who had a formal education were young and this caused a tremendous increase in marital fertility with an increase in education. The trend reversed in 1980s. With higher educational achievement women adopted a pattern of lower fertility in 1980s. Although the mean desired family size is usually said to decrease steadily with increasing levels of education, in sub-Sahara African, even relatively highly educated women are said to want to have a large number of children (United Nations 1987).

Nkanata (1984:92) in a research on family size preferences in Meru District found majority of women respondents had primary level of education which did not greatly influence their decisions on the desired number of children. Onguti (1987:55) using data collected by Kenya Contraceptive Prevalence Survey of 1984 found no great fertility difference between women with no education and the women who had 1-4 years of education.

Mburugu and Oucho (1985:29), considered illiteracy in private sector institutions as an obstacle to family planning. They observed that 23% of women were illiterate while 17% of men were illiterate. Respondents who were less educated were found to desire larger families (Mburugu 1985:36). Gachuhi (1971:3) also considered education as a prerequisite to adoption of family planning. He considered education of the spouses to be

a facilitating factor in the adoption of family planning.

Immerwahr (1981) considers wives' education as one of the socio-economic variables that affect the use of contraceptives. He considers the relationship between the years of wife's education and the use of contraceptives among women of ages 15-50 years and were exposed to the risk of pregnancy in Sri-Lanka.

Caldwell (1968:134) notes that the use of contraceptives rose steeply with the education of the wives from 5% among the uneducated women ever contracepting to 71% of those with post secondary training or university education. Furthermore, wives employment status may affect the contraceptive use and the desired family size. Most working women may not be interested in exploiting the labour of their children. They may not also need many children for old age security. The working mothers are also more interested in the financial benefits from their jobs and are capable of supporting themselves even in old age. Furthermore, women who are educated and employed prefer to have few children whom they can give the necessary food and shelter.

Education may reduce fertility indirectly through the reduction of mortality. For females, increasing educational attainment reduces mortality of infants and young children (Anker and Knowles 1980:181). Education reduces mortality due to the likelihood that education leads to breakages in traditional family raising habits, better hygienic ways of raising children, better nutrition and better medical care. Educated women are more aware of preventive and curative health care that benefits the child. They are less fatalistic about diseases. The effect may be to reduce mortality. When the mothers are sure that the children they have are going to survive, they may lower their fertility through the use of contraceptives.

The extension of formal education and particularly education for females has been identified as an important determinant of the onset and the speed of the fertility transition

in less developed countries (Lesthaeghe *et al* 1983:15). Dow (1981:22-23) found out that women with no schooling had 6.19 children; those with standard 1-4 education had 6.28 children. Women with standard 5-8 education had 5.86 children. This is an indication of the importance of education on fertility decline. Maleche (1990:27) found that the primary level of education has negative effects on the family size preferences. Contraceptives use was found to increase with educational levels, from 9.9% among women with no education to 24.2% among women with secondary or higher education. This may be due to the little knowledge that education provides at the primary school level. Keraka (1991:31) found that women with lower primary level of education tended to prefer large family sizes compared with those women who are more educated. She also found that contraceptive use increased with increase in the level of education and that as the number of dead children increased, the use of contraceptives decreased because couples had not achieved their desired family size.

The available literature indicates therefore that the relationship between education and fertility are complex and they vary by regions. The impact of education and desired family size may vary with the level of economic development and over time. The level of educational attainment among women may be powerful in influencing fertility. This is however not applicable in every society (Cochrane 1983).

2.1.2 Women Socio-Economic Status and Preferred Family Size

Although little attention has been given to the socio-economic status of women and its influence on the desired family size, there is some evidence to suggest that high incomes of women are positively related to the reduction in the size of the family. This is because women with high incomes spend more money on education, clothing and the general upkeep of their children. Furthermore, a small family increases the mother's availability for income generating activities (Rothschild and Mburugu 1986:10). Women who contribute more to the family's income are generally said to have a greater opportunity cost if they

drop out of their jobs in order to rear children. But if the contribution of the woman to the family's income is minimal, the opportunity cost of dropping out of the job is smaller. Those women with a small opportunity cost will have less reason not to bear children (Preston 1971, Leibeinstein 1974). According to Mburugu (1987:180) among women who enjoy a higher status in terms of education and income, children become expensive for parents who have to pay for their education. They therefore use contraception in order to achieve lower fertility.

Atoh (1989:33) suggests that the analysis of western experience shows that decline of fertility started first among the upper income classes resulting in an inverse relationship between income and fertility. He however reports that an analysis of the data available from Japan indicates neither a positive nor a negative relationship between income and fertility as measured by the average number of children ever born.

Gupta (1994:110) in an analysis of the factors that motivates fertility decline in Punjab, India, found that per capita income is strongly negatively related to fertility, showing that high income is associated with lower fertility. It was also found that large increments in land ownership are associated with very small increases in family size and that there is a greater fertility control in families with small holdings. It was found that women of the dominant caste have significantly lower fertility than the others. Similar findings were recorded by Kishor (1994:89) in a study of fertility decline in Tamil-Nadu in India. It was found that fertility is higher among the economically backward than the economically better off. However, it was found that fertility of the poor was declining along with the fertility of the rich and that the fertility of the poor was perhaps declining more than fertility of the rich.

Egero and Mburugu (1994:48) consider economic deprivation of both women and men as an important factor in the process of fertility decline. They argue that sustained abject poverty gradually undermines a person's self-respect and expectations that she or he could

change things. They say that for those whose struggle consists of survival, a proposal to plan one's family cannot be expected to make much sense; and that poverty implies an increasing reliance on children as a resource in the struggle for survival.

Another factor that could influence the desired family size is the woman's autonomy (Gupta 1994:113). According to Gupta (1994) women with lower decision making power within the household have significantly higher fertility than those with greater autonomy. Occupation is also recognised as having an important effect on fertility. For instance, it is reported that in the West, fertility is comparatively lower among the "white collar" workers compared to the agricultural and "blue collar" workers (Atoh 1989:32).

The occupation of the woman is of importance in fertility decline just like the occupation of the husband. Female labour participation have been shown to be inversely related to the family size. Married women who are gainfully employed generally have fewer children than other married women (Atoh 1989:33).

Some African communities prefer large families. The husband is sometimes least involved in rearing the children. For example, Hakansson (1988:11) has indicated that among the Abagusii, each wife is expected to raise her children by her own efforts and with little support from her husband. It is the responsibility of the wife to produce food and to obtain the school fees. This puts the wife under economic pressure. Among the Abagusii, the sons may be valued because they give the parents monetary support when they are employed. This applies not only to the Abagusii but to many African communities.

The literature on women's social economic status has tended to emphasise on the opportunity cost paid by the woman who has to give up paid employment in order to rear a child. These women who are highly paid are assumed to be more reluctant to give up their jobs. But in the Less Developed Countries (LCD's), the maids are widely available meaning that the more highly paid women can afford to hire these helpers with only a

small proportion of their wages.

The rapid rate of urbanisation has often been suggested to be linked with fertility decline. There are observed differentials in fertility between urban and rural areas, with low fertility in the urban areas (KDHS 1993:23). It is generally believed that modern cities have a conducive environment for the development of attitudes and practices that motivate a limitation in the size of the family. The factors that have led to lower fertility in the urban areas are increased costs of children and the decreased economic usefulness of children (Ware 1977a:536).

The participation of women in income generating activities provides women with incomes which they may spend without reference to their husbands. They may also make decisions about family planning without the permission of the husbands. Very little attention in the past studies has been given to the roles of women's independent incomes in influencing the desired family size. Most studies especially in Africa have concentrated on the family income and the role of women (Ware 1977b: 12).

2.2 Socio-Cultural Factors and Preferred Family Size

Cultural norms, beliefs, attitudes and practices have a strong influence on fertility level trends and differentials in every society. The socio-cultural dimension has not been given enough attention in explaining population dynamics in Kenya and more so in the rural areas where very few studies have been done.

In Kenya, a number of studies have shown fertility variations by type of marriage especially variations between monogamous and polygamous marriages. Polygamy has been shown to be positively correlated with fertility (Muinde and Mukras 1979:36). These scholars have shown that a competition between the wives to get more children so as to gain wealth and respect from the husband and the community leads to the observed

positive correlation. This finding was different from that of Anker and Knowles (1982:76) who found polygamy to be negatively related to fertility. Like Anker and Knowles, Henin (1979:11) also found that in all the provinces of Kenya women in monogamous unions had more children than women in polygamous unions. Henin's view has been supported by studies by a number of scholars (Mosley 1981:30; Onguti 1987:61)

Fertility may also be influenced by religion. An explanation of fertility variation based on socio-cultural ideologies has been attempted by Ottieno and Ayayo (1988). They noted that Protestantism and Catholicism do not allow polygamy unlike the Moslems who allow it. Ang'awa (1990:97) found that the total fertility rate of both Catholics and Protestants do not differ very much. There was however a substantial difference between the total fertility rate of Christians and the Moslems. The total fertility rate of Christians also differed greatly from that of those people who still keep traditional African faiths. Ang'awa (1990:97) using the Kenya Fertility Survey (KFS) data found that the total fertility rate for Catholics was 8.46, for Moslems it was 6.67, for Protestants 8.76 and traditionalists 7.01. The findings of Ang'awa concur with those of Onguti (1987:58) who using the Kenya Contraceptive Prevalence Survey (KCPS) data of 1984 found Moslems to have a total fertility rate of 6.49, Protestants 8.69 and Catholics 8.95 and traditionalists 7.76.

The size of the family may be influenced by the desire of the spouses to have male children. Studies have shown a clear preference for sons in countries like India, Korea, Taiwan, Japan and Hawaii (Arnold *et al* 1975). Studies in Africa have shown that the desire for the male children is very strong. This is especially in exogamous systems. The male child is required to continue the line. The assumption is that all the daughters will get married and will go to live with their husbands elsewhere. In such a situation, the parents will require a son to look after them in old age. A son is required to provide security in old age. For this reason, a woman may continue to give birth until the sought for sex is born. Such a couple will not listen to family planning teaching regardless of

sweet words (Ocholla Ayayo 1988:35).

Gupta (1994:114) in a case study from Punjab - India found that all women stated a strong son preference and on average less than one woman in two expressed a desire to have a daughter. Among the women who desired a smaller family, the proportion wanting a daughter was found to drop further still. The study found that the number of sons desired is positively and significantly related to fertility. The results suggested that parents child bearing is structurally largely around a targeted number of sons. Thus Gupta (1994) noted that when women state their desired family size what they are really stating is the number of children they think they would probably need to bear in order to reach their desired number of sons. Furthermore women were said to stop childbearing when they reach their targeted number of sons.

The value of the sons is still high in African Societies due to inheritance. A family that does not have a son may keep on trying to get one. The man may sometimes be forced to marry a second wife with the intention of having a boy child. Bride wealth is valued in most communities in Kenya. Thus a family which has sons only may struggle to get a girl due to bride wealth investment.

Fertility can be affected by the type of family structure. For instance, in extended families fertility is usually high. In extended families early marriages are predominant and children are cherished by the community. As such child care is a collective responsibility and the spouses are encouraged to have as many children as possible. Children are also economically useful in extended families (Ocholla Ayayo 1988:17; Ware 1977(a):479). This tends to raise fertility.

Sometimes cultural values may help to control fertility. For instance, in some cultures the spouses may be separated when the woman is pregnant. The woman continues to stay away from the husband even after she has delivered until the time when the child stops

breast feeding. This may help to reduce coital frequency which may eventually lead to a decline in fertility. Polygamy as already stated, is another cultural practice that has been found to have the effect of reducing fertility (Mosley 1981:16). Also breast feeding is a cultural practice that influences fertility by extending the length of infecundity (Mosley 1981:3).

Studies have therefore shown that the desired family size is influenced by socio-cultural factors. The role played by these factors have not been emphatically stated especially as far as Thika district is concerned. It is important to explore these socio-cultural factors since as shown above it is not possible to divorce cultural factors from the population dynamics.

2.3 Demographic Factors and Preferred Family Size

Mortality and particularly infant and child mortality is likely to affect fertility behaviour. In places where infant mortality is high, the use of contraception is normally low. This can be attributed to the tendency of women to replace actual loss of children or even anticipated loss. Mortality and especially infant and child mortality may also affect fertility through their effect on lactation period. For instance, a reduction in infant and child mortality lengthens the average period of lactation which implies a longer period of post partum amenorrhoea (Kimani 1982:22).

A woman's experience of child and infant mortality may be positively related to the number of children ever born. One likely explanation is the purely biological effect of losing a child within a few months of birth leading to the earlier assumption of ovulation and shorter interval to the next birth. Also there is the social class effect where by people lower down in the hierarchy have both higher fertility and higher child mortality. Another likely explanation for the direct relationship between infant mortality and the number of children ever born is that women who have lost a child would want to compensate for this

loss both for emotional reasons and in order to reach a desired family size (Gupta 1994:114).

The experience of India shows that the onset of fertility decline was related to the growing security of life and livelihood. A decline in mortality led to a substantial population pressure. The health services expanded to the rural areas making it possible to stop infant mortality. This facilitated a shift from a high fertility region to a low fertility region (Gupta 1994:117). Thus when mortality goes down and people realise that children are likely to survive, people may react by trying to have fewer children. As Becker (1960:212) argues “parents are primarily interested in survivors, not in births per se. Therefore, a decline in child mortality would induce a corresponding decline in births”

Adult mortality, however, may also affect fertility. This is especially through marriage. A reduction in adult mortality increases the number of marriages and lengthens the period of reproduction. The improved health of the spouses may increase fertility by lowering the levels of subfecundity and infertility.

Age at marriage may also exert a considerable influence on fertility. The number of children ever born may be lower where women marry late than where they marry early. Bongaarts (1978:4) notes that marriage is one of the intermediate determinants of fertility. Marriage is likely to affect fertility through the number of women who get married, the proportion who stay in stable unions and the age at which they marry (Bongaarts 1978). Women who marry late, may be because they have spent a lot of time in school, have a lower fertility rate. The Kenya Fertility Survey (KFS) of 1988 confirmed a strong relationship between marital status, age at first marriage and cumulative fertility. Furthermore, it was found that the reproductive level of single mothers was greatly below that of ever married women.

The Kenya Demographic Health Survey (KDHS) of 1993 found out that early initiation

into child bearing is generally a major determinant of large family size and rapid population growth, particularly in countries where family planning is not widely practised (KDHS 1993:30). This is particularly the case in Kenya where marriage is universal and women marry at young age (Ang'awa 1987:63). Early marriage leads to early child bearing and high fertility. In Kenya, it has been noted that 58% of Kenyan women marry before they reach the age of twenty years. The woman's age at marriage is positively associated with her education according to the findings of the KDHS of 1993.

2.4 Contraceptive Use and Family Size

One of the most important factors explaining fertility decline in Kenya is the intensive Family Planning Programme adopted by the Kenya Government (KDHS 1993:36). Kizito, *et.al*, (1991:9) in explaining fertility decline in Kenya between 1977/78 and 1989 found that contraceptive was the most important determinant of fertility decline explaining 62% of the aggregate fertility decline. It was also noted that the changing proportion of women who were exposed to the risk of childbearing through marriage was also an important determination of fertility decline. Approximately 26% of fertility decline was attributed to a change in marital patterns. Studies have indicated that the use of modern contraceptives is particularly prevalent in urban areas than in the rural areas (KDHS 1993:38). However, it has been noted that contraceptive prevalence is rising and fertility is falling in Kenya and the speed at which those changes are occurring suggest that Kenya has passed a turning point and entered a transition (Robinson 1991:1).

The KDHS of 1993 found out that knowledge of some family planning method is virtually universal among both males and females in Kenya. Among the currently married people, it was found that 97% of women and men knew at least one modern contraceptive method. The pill, injection, female sterilisation and condoms were said to be the most widely known methods. In Kenya both modern and traditional methods of preventing conception are used. In Kenya one third of the married women are said to be using contraception

methods. Thus for significant declines in fertility to occur and for small fertility size to emerge, it seems that those who are motivated to have few children have to contracept. In the absence of significant use of contraceptives large family size may be the rule even among couples who express attitudes that favour small family sizes.

2.5 Summary of Literature Review

The literature reviewed above indicates that there are a number of factors which may influence the preferred family size. These are the socio-economic, cultural and demographic factors. This study looks at the role of these factors in influencing fertility behaviour in Thika district. From the literature review presented above it is clear that studies on the preferred family size are not extensive in the country. This study hopes to fill in the gap of knowledge on family size preferences.

2.6 Theoretical Framework

A theory is a hypothetical deductive system because it states deductive connections among the hypotheses. It is “a set of interrelated constructs (concepts), definitions and propositions that presents a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomena” (Kerlinger 1964:11). Thus a theory of fertility should be a set of postulates and statements of relationships among well defined variables that taken together can explain the major forces affecting fertility (Magadi 1994:41). Scholars have not come into an agreement on the underlying factors that affect fertility behaviour in the society. They are also not in agreement as to which theory is the most appropriate in explaining fertility behaviour. Thus there exists several theories to explain fertility with none being fully dominant.

On the issue of fertility regulations, there is also no consensus as to the best method of

regulating fertility Some people are of the idea that no form of intervention can reduce fertility and that the solution lies in development. This was put clearly at the 1974 Bucharest World Population Conference where it was said that "Development is the best contraceptive".

Some scholars are of the opinion that specific measures aimed at regulating fertility can be adopted and can bring about a decline in fertility even before the onset of substantial economic development. There is also no agreement as to the best and most effective approach that can bring a decline in fertility. The differences in opinions about the most appropriate measures are based on what different people perceive to be the major factors that underlie the determinants of fertility behaviour in any society. This study will look at the importance of different factors that affect fertility.

A theoretical framework is essential to the understanding of factors that may influence or are associated with an identified problem (Khasakhala 1994:51). It is in recognition of this that this study adopts three theoretical frameworks which are discussed separately below. These theoretical approaches have incorporated some or part of the variables considered in this study.

2.6.1 The Social-Economic Theory of Fertility

The socio-economic theory of fertility has been developed by scholars to explain how socio-economic variables impact on the fertility behaviour in any society. The proponents of this theory include Becker (1960), Mincer (1963), Easterlin (1969), Namboodiri (1972), Caldwell (1983).

The socio-economic theory emphasises rational fertility decision-making process by the spouses. This decision making process is based on the balance between costs and benefits of children. The major proposition in the theory is that reproductive behaviour is largely a

result of underlying preferences of parents to have children during their reproductive periods. According to this theory, the parents consider the perceived economic value of children, that is, they consider the input and the output of children. Thus the theory argues that child bearing is a rational behaviour based on the perceived costs and benefits of adding a child to the household (Arnold *et al*, 1975). Thus parents are expected to have the number of children that will maximize the well-being of the family.

Becker (1960) recognises that fertility is related to socio-economic conditions, family size preferences and conscious decision of limiting child bearing. In his theory he considered household income to be a major determining factor on the number of children that husband and wife should have. Becker views reproduction as an economic behaviour influenced by the household income, education of the parents and the earning opportunities of the wife.

According to Becker (1960:210), the households are viewed as rational entities that maximise their well being subject to various constraints. He views children as both a consumption and a production good. Children can be viewed as commodities and the parents are said to attempt to obtain the 'optimal' combination of children and other commodities in face of the economic limitations. Becker (1960:235) consider children as consumer durables. His argument is that as household income increases, parents demand for children will increase.

Becker's theory has been applied in several studies. Studies by a number of scholars such as Dextray (1973), Ross (1986), Fawcett (1983:429) and Walji (1980:220) have found that children are beneficial to the parents in that they give pleasure to the parents; childbearing and rearing confers status to women and men, and parents are assured of support and security when they grow old. However, children have to be fed, clothed and educated. The parents and especially mothers lose incomes during the period of child bearing and child rearing. It has been argued by some scholars like Caldwell, (1980a:226)

and Walji (1980:19) that children in the rural areas are of high economic value and that this is the reason why fertility in the rural areas is high.

But, there is now an evidence that fertility is declining not just in the urban areas but also in the rural areas (KDHS 1993:46). According to Caldwell (1983:380) fertility decline results from a reversal of the 'wealth flow' caused by a change in emotional relationships within the family and changes in economic relations among family members. External changes such as the provision of education make children more costly to bring up.

Becker (1960:210) considers income to be positively related to fertility:- the higher the income the more children a family will have. There is some evidence today to suggest that income and fertility should be negatively related. The experience of the developed nations have shown fertility to be inversely related to the level of income.

The socio-economic framework as proposed by Becker (1960) has faced heavy criticisms from many scholars. Youssef (1982:200) criticises the theory on the grounds that it is individualistic and that it ignores psychological aspects, cultural norms and gender roles that are of importance in determining fertility behaviour. Easterlin (1969) and Leibenstein (1974) consider that the theory emphasises freedom of choice as far as fertility decisions are concerned but does not adequately account for differences between status groups.

Caldwell (1983:392) further criticise the theory for its attempts to superimpose western economic individualism by kin relations, where extended family is still common. Furthermore, the theory is criticised for its generalisations about the costs and benefits that occur to the parents which, according to Caldwell, are undocumented.

The theory gives little emphasis on the socio-cultural factors that affect fertility. Yet, these factors are very important in regulating fertility behaviour. In this study we have considered both socio-economic and socio-cultural factors in order to establish how they

affect fertility behaviour. The study will look at how applicable this theory is in Mang'u location of Thika district

2.6.2 The Demographic Transition Theory

The demographic transition theory considers the factors that determine the family size to be socio-cultural as well as economic. The theory, according to Monsted and Walji (1978:26), describes the pattern of demographic transition from high fertility - high mortality via high fertility declining mortality via declining fertility - low mortality to a stage of low fertility - low mortality, which took place in the currently advanced societies of the world, notably Europe and America.

Notestein (1953) and Blacker (1947) have offered a classical description of the demographic transition theory. They have recognised that population moves through a series of stages from a situation of high mortality and fertility. Both before and after the transition, population growth is very slow. But in the intervening stages of the transition, population growth is rapid. This is because the mortality decline occurs before the decline in fertility levels.

The theory recognises that a decrease in mortality (e.g. due to economic and social changes) is responsible for a rapid rate of population increase. Fertility reduction may be a response to population pressure resulting from mortality reduction. The population pressure occurs because there is a time lag as a result of the time required for the people to realise that mortality has declined and for the social and economic institutions supporting high fertility to change.

The demographic transition theory emphasises economic modernisation (industrialisation), social transformation and urbanisation. It emphasises on the economic transformation of the developed countries. It is expected that as countries become industrialised, the

standards of living are improved. This is the major cause of mortality decline. Industrialisation and urbanisation increase the costs of bearing and rearing children. This ultimately results in fertility decline.

The demographic transition theory has been criticised for making an assumption that all populations must pass through a similar if not identical stages. It assumes that there are general and detectable stages through which all populations must pass through, yet, it is a description of the demographic history of the advanced European countries. It gives no indication as to how much development is required in order to initiate the transition from high mortality and high fertility to low mortality and low fertility. The developing countries have been able to lower the rates of mortality in a short span of time due to the transfer of technology from the developed countries.

According to Notestein (1953:18), the decline in fertility in Western countries can be attributed to economic and social transformation which was accompanied by industrialisation, urbanisation, spread of education, shift of labour from agriculture and a reduction in mortality. Notestein's view has been challenged even in the Western context because some historical studies show that fertility declined in many places in populations which were largely agrarian and illiterate and where the infant mortality rates were high (Knodel and Walle 1986). Studies in rural Punjab-India, have shown that the onset of fertility decline took place in the context of an essentially subsistence agrarian society where infant mortality was high, low levels of literacy and lack of effective family planning programmes (Gupta 1994:109).

The theory also focuses mainly on a reduction in the fertility levels as a response to population pressure resulting from mortality reduction. The theory does not give due emphasis to alternative responses such as economic development and migration. Furthermore, although the theory provides us with a framework that we can use to analyse changes in fertility, the theory is too broad and therefore it is difficult to subject it to

rigorous scientific tests.

Despite the many criticisms levelled against the demographic transition theory, it still explains much of the population phenomena observed today not only in the developed countries but also in the developing countries. For example, the conditions that motivated a decline in the size of the family desired in the Western countries were due to rapid urbanisation and industrialisation. This, as already noted led to increased cost of children and lack of benefits from the labour provided by children. The maintenance of large families became unbearable and this forced couples to reduce the sizes of the families. Similar conditions are now taking root in many developing countries, Kenya included. The costs of raising children has increased enormously especially with the introduction of the Structural Adjustment Programmes (SAPs) which have affected people in urban and also those in rural areas. Changes are therefore expected to occur which may fulfil the predictions made by the proponents of the demographic transition theory. Then, we expect the desired family size to decline. The impacts of the SAPs affects women more because they are the ones who are more responsible for preparing food and clothing the children. This can even be more serious in cases where the husband has gone to the urban areas, leaving the wife to take care of children in the rural areas. The economic constraints may therefore act as a pressure on the women to reduce fertility. Thus as the society undergoes social and economic transformations, we should expect the preferred family size to change as people may decide to prefer a small family that they can easily provide for.

2.6.3 The Wealth Flows Theory

An important 'theory' of fertility decline was developed by Caldwell (1982). He calls his approach a restatement of the demographic transition theory. The theory was developed in relation to the economic and social benefits and costs of large families. Caldwell argues that whether high or low fertility is economically rational is determined by social

conditions, primarily by the direction of the intergenerational wealth flows. Caldwell (1980b) defines wealth flows as the monetary goods, services and guarantees that one person provides to another. Caldwell's theory explains stable high fertility and a subsequent decline in fertility in terms of 'lifetime' net intergenerational wealth flows.

Caldwell (1982:171) argues that all African societies are organised socially and economically so that the wealth flows from the younger generations to the older generations. To Caldwell it is apparently impossible for a reversal of the intergenerational flow of wealth to occur before the family is largely nucleated both emotionally and economically. Caldwell says that no where in Africa has this reversal of intergenerational flow of wealth occurred. It is only in urban areas among elite where this is taking place. This has been supported by a research done by Kabwegyere (1977:198) who found definite social benefits arising from having many children among the Akamba people in the rural areas.

To Caldwell (1982:173) low fertility will exist in situations where wealth flows from the older generations to the younger generations. The behaviour of people is assumed to be rational. Societies with low levels of fertility will differ from those with high levels of fertility in the net value of the intergenerational wealth flows.

According to Caldwell, education is one of the key factors behind a decrease in fertility. When a large proportion of the population is educated fertility is expected to decline. Caldwell thought that education affected fertility through restructuring family relationships and the direction of the wealth flows from the younger generations to the older generations as it was in the traditional African societies.

Caldwell (1980a:249) considered that the proportion of the community receiving some formal education rather than the duration of schooling among those who have attended school is among the most potent force behind a decline in fertility. But eventually, the

costs and the benefits of children to the older generations (e.g. parents) will determine whether their desired family size will take a downward trend or an upward trend. Even the use of contraceptives depending on a multiple of factors that influence it will vary inversely with the size of the family that is desired (Caldwell 1980a:226).

In his study, Caldwell (1977b:28) discusses the perception of education and the impact it has on fertility behaviour. Here, it is postulated that while children still provide net economic benefits, fertility would remain high. To Caldwell, this is an economically rational strategy. Thus, the inputs of children's labour into the domestic market encourages a rationality of high fertility and this ensures that high fertility prevails. When children are no longer an economic advantage, fertility declines.

The wealth flows theory therefore explains fertility as declining as soon as the net economic lifetime advantages from children are no longer anticipated. It also predicts that the traditional modes of production will always be characterised by high fertility. This is because of the perceived benefits of large families. Non-familial production will be characterised by a low fertility because children will drain resources from the parents. In nuclear families, the intergenerational wealth flows is from the old to the young. The individualistic behaviour that is characteristic of nuclear families force the couples to reduce fertility. Thus, Caldwell (1982) argues that a decline in fertility occurs due to the economic changes that results from westernisation through mass education and market economies. Fertility will therefore decline because of urbanisation and industrialisation.

The wealth flows theory has been widely adopted by a number of scholars (e.g. Ross, 1986, Cleveland, 1986) in analysing the population trends. However, the theory has been criticised on the grounds that it describes very complex social and economic phenomena which makes vague suggestions about major clusters of factors which apparently influence an important component of population growth namely; fertility (Walji 1980:216). As such the theory has a low predictive value. Another criticism has come from Handwerker

(1981:230) who criticises the Caldwell's hypothesis that "the attainment of universal (westernised) schooling across a single nation or cultural group is the force that changes intergenerational attitudes and hence (inter-family) economic relationships" (Caldwell 1980b:231). Handwerker claims that this hypothesis has not been validated.

Despite the criticisms levelled against Caldwell's theory, the theory is useful in that it explains changes that could motivate a decline in fertility. The theory may therefore help us to capture a significant part of the demographic situation in Thika district.

2.7 Hypotheses

This study has four major hypotheses which are tested in chapter five. The dependent variable is the preferred family size while the independent variables were the socio-economic, socio-cultural and demographic factors. The operational definition of these variables has been given in chapter three.

- 1. *Women with higher socio-economic status are more likely to limit their preferred family size.***
- 2. *Socio-cultural values influence the preferred family size.***
- 3. *There is a significant relationship between demographic variables and the preferred family size.***
- 4. *There is a significant inverse relationship between contraception and the preferred family size.***

CHAPTER THREE

METHODOLOGY

3:0 INTRODUCTION

This chapter presents a description of the area of the study, sampling procedures, methods of data collection, limitations of the study and methods of data analysis. This study mainly relied on primary data. The methods of data collection included the interview schedule, informal interviews and direct observation. The data that was collected was interpreted by use of descriptive and inferential statistics. The statistics used in this study were computed using the statistical package for social sciences (SPSS) computer programme.

3.1 Area of Study

This study was conducted in Mang'u Location, Kamwangi Division of Thika District in the Central Province of Kenya. Thika District is a new district created only recently out of Kiambu and Murang'a Districts. The district is distinguished for its variety of landscapes, climates, resources and land use patterns. Thika town, the district headquarters is approximately 40 kilometres North of Nairobi. The district is bordered to the North by Maragwa District, Kiambu District to the South and West, and Machakos to the East.

3.1.1 Population Trend

Thika is a very densely populated district with some divisions having densities of over 600 persons per square kilometre. The available statistics show that the district has a population growth of approximately 2.87% (Kiambu District Development Plan 1994-1996:90). This is a reduction from a rate of 3.7% between 1969 and 1979 (CBS 1969 and 1979). The current growth rate is therefore considered to be high (Kiambu District

Development Plan 1994-1996). As such, population remains a real problem in the area. Land pressure has been very high in the district leading to a high magnitude of under-employment and unemployment. The dependency ratio is very high with over 50% of the population falling in the dependants age-groups. The resources of the district are therefore under stress to support the high population. The district is largely dominated by the Agikuyu ethnic group. However, there are traces of other ethnic groups such as Embu, Kamba, Luo and Luhya.

3.1.2 Climate and Soils

The district has fertile well drained soils with an average annual rainfall of about 1,050 mm with maximum rainfall during the two rainy seasons between April, May, October and November.

3.1.3 Land Use

The major economic activities carried out in the district includes livestock keeping, cash crops farming and food crops farming. The district is largely an agricultural zone with climatic conditions favouring the growth of cash crops such as tea, coffee and horticultural produce. Land for farming has been reducing in size. This has made many people to migrate to other areas particularly to Nairobi and other major towns in the country in search of employment and land settlement opportunities. Furthermore, high population density in the district has led to environmental degradation. For example, deforestation and poor farming methods have led to soil erosion, reduction of the volume of water in the rivers, silting of rivers, etc. (Kiambu District Development Plan 1994-1996:90).

3.1.4 Infrastructure

The socio-economic infrastructure in Mang'u location is relatively rich. Mang'u location is served by several health centres. Educational facilities are also available. However, the increased number of people will no doubt require more health and educational facilities, housing and employment.

3.1.5 Status of Women

Women are generally respected in the Agikuyu community. There are a number of women groups in Mang'u location. However, women are disadvantaged in terms of employment, education, inheritance of property and in decision making. In the community, women occupy a lower socio-economic status than men.

3.2 Sampling

Sampling is taking any portion of a population or universe and considering it as representative of that population or universe (Kerlinger 1964:52). In every scientific social research, it is important to take a sample that is representative of the parent/entire population. A representative sample must be selected randomly. Random sampling involves drawing a portion of a population so that each member of the population has an equal chance of being selected. What is discovered can then be used to generalise the total population. Thus, it is important to use a method of selection which gives each of the units in the population to be covered a calculable (and non-zero) probability of being selected (Moser and Karton 1971:80).

3.2.1 Unit of Analysis

In this study the unit of analysis are 120 currently married women in the reproductive age

groups (15-49 years) from all the six Sub-locations of Mang'u namely: Mukurwe, Mang'u, Mitero, Gatukuyu, Nyamang'ara and Karuri. As stated earlier, the study focused on married women of 15-49 years because they are the ones who are potentially exposed to the risk of conception. Married women have a higher rate of coital frequency than other women. That is why we decided to interview them exclusively. Given the limited time and financial constraints, it was deemed necessary to sample the population

3.2.2 Sampling Procedure

The principles of probability sampling were used in order to get a representative sample of the whole location and in order to make the study more scientific. Mang'u location (the area of study) has six sub-locations. These are Mukurwe, Nyamang'ara, Mitero, Gatukuyu, Mang'u and Karuri. The six sub-locations have homogenous characteristics. The study respondents were drawn from three of the six sub-locations.

The study could not cover all the six sub-locations due to limitations of time and finances. Through simple random sampling techniques, the researcher selected the sub-locations, villages and households to be included in the study. This was achieved through the use of a multi-stage sampling procedure.

The researcher visited the local chiefs and assistant chiefs offices and requested them to provide from their registers, the names of the villages in the sub-locations and also the names of the household heads in individual villages. Where there were no ready registers, the researcher requested the administrators to prepare. Though it was a time consuming exercise, they were able to do it with the help of church leaders and village elders. This information was used to make sampling frames for villages and for the households that were covered in this study.

Table 3:1

Distribution of the households and sample size according to the randomly selected villages in Mang'u Location

Sub-location	Villages	Total no of Households	Sample size
Mitero	Banguro	167	
	Kianganga *	178	20
	Riakarime	183	
	Kwanjui *	181	20
Mukurwe	Gatina	193	
	Gichagi *	179	20
	Kang'oo	195	
	Laini *	184	20
Nyamang'ara	Karia *	177	20
	Nyamang'ara *	180	20
	Mukuyuini	313	
	Ruriini	133	
TOTAL		2263	120

** Villages from which the sample of respondents was drawn*

By following the procedures described above, the study succeeded in drawing a sample that was representative of the currently married women of 15-49 years in Mang'u location. The procedures were strictly adhered to in order to ensure that the data collected was valid and reliable, thus making it possible for the study to generalise its findings.

3.3 Methods of Data Collection

3.3.1 Primary Data

(I) Interview Schedule

The major technique for collecting data in this study was the questionnaire method. The interviewing was done by the researcher. The researcher completed the questionnaire as the interview progressed. The interview schedule (attached in the appendix) was made up of questions related to the socio-cultural beliefs and demographic variables that directly or indirectly influences the preferred family size. As already stated, the questionnaire focused on married women within the reproductive age groups (15-49 years). This is the group that has a higher risk of conception. This is the main reason why we opted to interview them exclusively in our study.

The interview schedule consisted of open-ended and close-ended questions. The open-ended questions allowed the respondents to give their views without limiting themselves to specific answers. Moreover, open-ended questions allowed the researcher to ask probing questions. With the questionnaire method, the researcher was able to collect both qualitative and quantitative data.

The actual fieldwork took the researcher a period of three months. It commenced in February and ended in April 1997. The respondents were assured that all the interviews were confidential. All the interviews were carried out in the presence of only the respondent and the interviewer. In the end, the researcher was able to interview 120 currently married women of 15-49 years.

(ii) Direct Observation

As already stated above, the bulk of the primary data for this study was collected using an interview schedule. But the study also employed simple observational techniques where necessary. For example, the researcher observed the crops, livestock, the size of the land and other forms of capital that portrayed the general standard of living of the people.

(iii) Key Informants

Other methods that were used to supplement the information included unstructured questions (informal discussions). Key informants such as sub-locational chiefs, women leaders and agents of family planning organisations were interviewed.

3.3.2 Secondary Data

This study has made use of secondary data relevant to the study. These include written materials and official records. The researcher collected secondary data from the Central Bureau of Statistics (CBS) Library in Nairobi, and from the University of Nairobi Library. The information collected provided the researcher with a good understanding of the reproductive behaviour in the Location.

3.4 Scope and Limitations of the Study

The fieldwork was carried out in Mang'u location, Thika District in the Central Province of Kenya. This is one of the very densely populated rural districts in the republic. As a result land pressure has been high.

The study focused on the currently married women of ages 15-49. A total of 120 married

women were interviewed from three of the six sub-locations that make up Mang'u location. The researcher accepts that a sample of 120 respondents is a small sample. The researcher would have preferred a larger sample if adequate funds and time were available. This is because in most cases, larger samples give better findings and offer more reliable data enabling researchers to make better conclusions and generalisations.

The major limitation was lack of registration of vital events such as the age of the respondents and age at marriage. The respondents answers on age and marital duration were assumed to be accurate although some errors due to memory lapses are likely to occur. Similarly, there was lack of documentation concerning sale of crops and livestock products. In addition most respondents were not well informed about the income of their husbands. This made it difficult to get accurate information on monthly income. An attempt was however made to assess the households income by examining different economic activities and assets of the respondents. Therefore, what the respondents gave as their incomes should be taken only as estimates.

The study was carried out during the dry season. Many respondents were therefore busy working on their farms since the planting season was near. The researcher solved the problem by pleading with the respondents to spare some time for the interview. It also took much more time to complete an interview than it was initially anticipated. This required a lot of understanding and patience from the respondents. The researcher however took time to convince the respondents that the study was important. This was possible after cordial conversations. Moreover, reaching the respondents was tedious and time consuming. The researcher had to walk for long distances.

Responses to questions on family planning should be treated with caution. Some respondents considered questions on family planning to be personal and sensitive. Furthermore, some of the respondents were initially hostile as they claimed that numerous researchers had visited the area before making empty promises to improve the peoples'

welfare. The respondents argued that nothing had been done despite providing a lot of information. Some amount of time was spared to convince the respondents that the research was important.

3.5 Operational Definition of Concepts and Variables

3.5.1 Preferred Family Size

This has been used as the dependent variable in this study. The Preferred Family size in this study is used to refer to the total number of children the respondent would like to have or expect to have up to the end of her reproductive period. This is equivalent to the total number of girls plus the total number of boys preferred.

3.5.2 Socio-economic Variables

The socio-economic variables used in this study include education, land, occupation and income.

3.5.2.1 Education

Education is a socio-economic variable that refers to the total number of years spent in an educational institution acquiring education by the respondents. Formal education was used in this study to indicate the highest level a respondent has attained through the modern education system. Respondents were categorised according to education levels. Four categories were obtained, namely:- those with no education at all, those with lower primary education (standard 1-4), upper primary education (standard 5-8), those with secondary and post secondary school education.

3.5.2.2 Income

This refers to the total monthly cash of the family. It will be taken as the sum total of the income of the wife and husband. We have categorised income into three classes: Those with a monthly income of below 5,000 shillings, respondents with income between 5001-10,000 and those who had a monthly income exceeding 10,000 shillings.

3.5.2.3 Occupation

This concept was used in this study to refer to the economic activities which the respondents involve themselves in for the purpose of generating income. The respondents were in the formal employment (e.g. clerks, teachers), informal employment (e.g. vegetable vendors, brewers) and in the agricultural sector.

3.5.2.4 Land

This variable consider the sizes of the farms in acres. The respondents were categorised according to the sizes of the farms. Three categories were obtained: Those with 1.0 acres or less; those with 1.1-2.0 acres and those with more than 2.0 acres of land.

3.5.3 Socio-cultural variables

This applied to cultural factors that influences family size. The socio-cultural variables used in this study include religious affiliation, sex preferences and post-partum abstinence.

3.5.3.1 Religious affiliation

This refers to the denomination of the respondent. This measure was used to find out whether the religion of the respondents influences their desire for children. The respondents belonged to different denominations namely: African traditional religions, catholics and protestantism. Islamic religion was absent in Mang'u location. In this study, the term 'African traditional religion' was used to describe the religious affiliation of those respondents who did not embrace both catholicism and protestantism doctrines

3.5.3.2 Sex Preference

This concept refers to the sex of a child that the respondent would prefer to have more than the other be it a son or a daughter. Respondents were asked to name the sex preference of their next child. Some respondents did not need an extra child of any sex, others preferred a boy or a girl, while others did not mind the sex of their next child.

3.5.3.3 Post-partum abstinence

This concept will refer to the period of sexual abstinence before sex resumption after the birth of a baby by the respondents. Some respondents abstained for less than 2 months, others between 2-4 months, while others had a post-partum abstinence of more than 4 months.

3.5.4 Demographic variables

This applied to the independent variables used in the study to explain the preferred family size. The demographic variables used in this study include: Age of the respondents, Age at marriage; marital duration, Infant and Child Mortality.

3.5.4.1 Age

This refers to the duration in years of the respondent, past existence at the time of study. Five age categories were obtained namely:- 20-24 years, 25-29, 30-34, 35-39 and those respondents who were of 40 years or above.

3.5.4.2 Age at Marriage

This refers to the age of the respondents at the time when they entered into marital unions

with their husbands. Four categories of age at marriage were obtained. These are: 15-19 years, 20-24, 25-29, 30-34 years.

3.5.4.3 Marital Duration

This refers to the period that the respondents have been into marital unions. Five categories were obtained namely:- those who have been into marital unions for 1-5 years, 6-10, 11-15, 16-20, 21 years and above.

3.5.4.4 Child Mortality

This demographic variable has been used to refer to the children born within the marital unions but have died. Some respondents had lost none, some had lost 1-2 children while others had lost more than 2 children.

3.5.5 Contraception

The term “contraception” refers to all the methods including traditional techniques that are adopted in order to prevent conception. Contraception is an important intervening variable in this study. Women have opted to use some means of fertility control to avoid having children beyond the number that is desired. The use of contraceptives by women is a key factor in fertility regulation in Mang'u location. In this study, we have current users and non-users of contraceptives. Current users were those respondents who were using a family planning method during the time of the study. Non-users were those respondents who were not using a method during the time of the interview.

3.6 Methods of Data Analysis

In this study, we have applied both descriptive and inferential (inductive) statistical tools in analysing the primary data.

3.6.1 Descriptive Statistics

In Chapter Four we have computed descriptive measures such as the mean, percentages, frequency distributions and the standard deviation. Our aim was to condense the data into manageable proportions. Descriptive statistics have been used to determine the basic distributional characteristics of each of the variables that have been used in the subsequent statistical analysis in Chapter Five. Descriptive statistics are important in instances where the researcher finds it necessary to handle inter-relationships among more than two variables. The descriptive statistics used in our study were computed using the statistical package for social sciences (SPSS) computer programme (Nie *et al*, 1975).

(i) Mean

Often referred to as the 'average', the mean is the most common measure of central tendency. The mean is obtained by summing the individual values for each case (x_i) and dividing by the total number of cases (N). Thus:

$$\bar{X} = \frac{\sum_{i=1}^N x_i}{N}$$

where

x_i = Number of score for each case

N = Total number of valid cases

(ii) Percentages

Percentages are used to standardise size by calculating the number of cases that would be present in a given category if the total number of cases were 100 assuming that the proportion in each category remained unchanged (Blalock 1972:33). The percentage

distribution adds up to 100

(ii) Standard Deviation

Standard deviation is a measure of dispersion of scores from the mean. Put simply, standard deviation is the square root of the variance. It shows us how much an individual score is less or greater than the mean of the set of scores.

(iv) Frequency Distribution

Frequency distribution is a tabular arrangement of data by classes together with the corresponding class frequencies (Hagood 1969:27). In this study, we have presented most of the data in a tabular form. The data has been distributed into categories in order to determine the number of individuals belonging to each frequency class.

3.6.2 Inferential/Inductive Statistics

Inferential statistics facilitate the process of induction. It assists in inferring properties of a population on the basis of known sample results (Blalock, 1972:109). The inferential statistics used in this study include cross-tabulations, chi-square and measures of association.

(i) Cross-tabulations

Cross-tabulation is defined as “a joint frequency distribution of cases according to two or more classificatory variables” (Nie *et al* 1975:218). In Chapter Five we have cross-tabulated different variables. The joint frequency distributions have been analysed using the chi-square test in order to determine whether the variables are statistically independent or dependent.

(ii) Chi-square (χ^2)

Chi-square is a type of a statistical test of significance which helps us to determine whether a systematic relationship exists between two variables (Nie *et al*, 1975:223).

Chi-square has been used in this study to test for significance of relationships between variables. The value of chi-square is got by computing the cell frequencies which would be expected if no relationship is presented between the variables. The expected frequencies are compared to the actual (observed) distribution. The formula for computing chi-square is:-

$$\chi^2 = \frac{(O-E)^2}{E}$$

where, O = observed frequency

E = expected frequency

The value of chi-square is determined by the discrepancy between the expected and the actual frequencies. A greater discrepancy makes the value of chi-square larger. A large chi-square implies that there exists a systematic relationship between variables. But if there is no relationship between two variables in a sample, deviations from expected values are assumed to occur by chance. Large values of chi-square in a randomly selected sample are not likely to occur due to chance (Nie *et al*, 1975:224). In this study we have computed the chi-square in order to decide whether our variables are related or independent. The 95% level of confidence is applied in the acceptance of the hypotheses. If the calculated value of χ^2 is less than the table value the null hypothesis is maintained. The null hypothesis is rejected when the calculated χ^2 is more than the table value and the conclusion is drawn that there is a significant association between the variables (Gupta 1987:664).

(iii) Measures of Association

Measures of association shows the strength of the relationship between two variables. A measure of association indicates the extent to which characteristics of one variable are related to those of another.

Distributions are normally summarised by a number of measures of association such as the contingency co-efficient [c], phi, gamma, tau and pearson's product moment correlation co-efficient [r].

In this study, we have used the pearson's correlation co-efficient [r] and the pearson's contingency co-efficient [c].

(a) Pearson's Correlation Coefficient (r)

Pearson's co-efficient [r] gives both the strength and the direction of the relationships. The correlation co-efficient [r] indicates whether the relationship is positive or negative. Pearson's correlation co-efficient also indicates whether a relationship is weak or strong. The value of [r] varies from -1 (perfect negative relationship), through 0 (No relationship, or independence) to +1 (perfect positive relationship). When the value of [r] is close to zero, the assumption is made that there is little or no linear relationship between the two variables. Since [r] is a measure of linear relationship even a strong curvilinear relationship may yield only a weak value of [r]. Sometimes there is a strong relationship between two variables but the relationship is curvilinear rather than linear (Bailey, 1978:343). If the value of [r] approaches +1.0 or -1.0 it is assumed that there is a strong linear relationship (Nie *et al*, 1975:279).

Pearson's correlation co-efficient is useful in calculating the percentage of variance that occur in the dependent variable due to a change in the independent variable. This value is got by calculating the square of the pearson's [r] (Abrahamson 1969:47). The square of pearson's [r] (i.e. r^2) is more useful when one is concerned with the strength of relationship than with the direction of the relationship. In this study we have used the pearson's [r] to

measure the strength and direction of the associations.

All the statistics were computed using the S.P.S.S. Computer programme. When working with the S.P.S.S computer programme, it is possible to treat all variables for the application of correlation analysis. This was done easily by working with dummy variables. Dummy variables are created by treating each category of nominal variables as a separate variable (Nie *et al.* 1975:374). Arbitrary scores like 0 and 1 are then assigned for all cases depending on whether a score is present in each of the categories.

(b) Contingency Co-efficient [c]

Contingency co-efficient (c) is a measure of association that is based upon chi-square. It is obtained as:-

$$C = \sqrt{\frac{X^2}{X^2 + N}}$$

where X^2 = chi-square

N = Number of cases

The maximum value of C is determined by the number of rows and columns in the contingency tables. Its value is never greater than one (Nie *et al.* 1975:225). Unlike the correlation coefficient (r), contingency coefficient does not show the direction of the relationship.

CHAPTER FOUR

DESCRIPTION OF THE DATA

4.0 INTRODUCTION

This chapter examines the economic, cultural and demographic characteristics of the respondents in Mang'u location, Thika District. The chapter presents percentage distributions of respondents according to their socio-economic, cultural and demographic characteristics. The percentage distributions were obtained through the scientific package for social sciences (S P S S) computer programme. The data described in this chapter precedes statistical analysis which is presented in chapter five.

4.1 Percentage Distribution of Respondents According to Age

Table 4:1 shows the percentage distribution of respondents according to their ages at the time of this study. Approximately 53.3% of the respondents were of ages less than 30 years. The age group 25-29 years had the highest frequency (30.8), while the age group of 40 years and above had the lowest frequency (12.5%). The mean age of the respondents was 30.165 years with a standard deviation of 6.143. The oldest respondent was 49 years while the youngest was 20 years. The sample was therefore largely made up of young married women respondents.

Table 4:1 Age of the Respondents

Respondents age	Number	Percent	Cumulative percent
20-24	27	22.5	22.5
25-29	37	30.8	53.3
30-34	24	20.0	73.3
35-39	17	14.2	87.5
40+	15	12.5	100
Total	120	100	

source: survey data

4:2 Ethnic groups

Majority (119) of the respondents were Kikuyu. Only one respondent (0.83%) belonged to the Embu ethnic group. This shows that Mang'u area is predominantly occupied by the Agikuyu ethnic group.

4:3 Number of wives

All the respondents were in monogamous unions. This was attributed to the high costs of children's education, high cost of living and a reduction in the sizes of the farms. These have made polygamy to be unattractive for men. Thus, although polygamy was very common in the traditional Gikuyu society, today it is not common in the society.

4:4 Percentage Distribution of Respondents according to their Marital Duration in Years

Table 4.2 shows the distribution of the respondents according to the number of years that they have been in marital unions. The table shows that approximately 54.2% of the

women had stayed within the marriage unions for a period of ten years or less. Majority(30.8%) had a marital duration of 6-10 years. The mean marital duration was 11.234 years with a standard deviation of 6.151 years. The minimum marital duration was one year and the maximum was 27 years

Table 4.2 Marital Duration in Years

Marital Duration	Number	Percent	Cumulative percent
1-5	28	23.3	23.3
6-10	37	30.8	54.1
11-15	23	19.2	73.3
16-20	17	14.2	87.5
21+	15	12.5	100.0
Total	120	100.0	

Source: Survey data

4.5 Percentage Distribution of the Respondents according to their Age at the Time of Marriage

In Mang'u Location the age of women at marriage is low. From table 4.3 it is evident that majority (40.0%) of the respondents got married at the ages 20-24 years. Majority (75.0%) of the respondents were in marital unions before they were 25 years old. The mean age at marriage was 21.125 years with a standard deviation of 2.955 years the minimum age at marriage was 15 years while the maximum was 34 years.

Table 4.3 Age at Marriage In Years

Age at Marriage	Number	Percent	Cumulative percent
15-19	42	35.0	35.0
20-24	48	40.0	75.0
25-29	18	15.0	90.0
30-34	12	10.0	100.0
Total	120	100.0	

Source: Survey data

4:6 Respondents Religious Affiliation

Table 4.4 shows the distribution of respondents according to their religious affiliation. From the table it is evident that majority (50.8%) of the respondents were Catholics, 35.0% were Protestants while only 14.2% were traditionalists.

Table 4.4 Religious Affiliation

Religion	Number	Percent	Cumulative Percent
Catholics	61	50.8	50.8
Protestants	42	35.0	85.8
Traditionalists	17	14.2	100.0
Total	120	100.0	

Source: Survey data

4.7 Percentage Distribution of Respondents according to their Educational Status

Table 4:5 shows the distribution of respondents according to their levels of education. The table shows that Mang'u location is an area with high levels of literacy. Only 13.3% of the respondents had no formal education. Approximately 18.3% of the respondents had attained formal education up to lower primary (standard 1-4); 46.7% had education up to the upper primary school level (standard 5-8). Only 21.7% of the respondents had secondary school and post secondary school education.

Table 4:5 Level of Education

N==120

Level of formal education	Number	Percent	Cumulative percent
No formal education	16	13.3	13.3
Lower primary (std 1-4)	22	18.3	31.6
Upper primary (std 5-8)	56	46.7	78.3
Secondary and post secondary	26	21.7	100.0
Total	120	100.0	

Source: Survey data

4:8 Percentage distribution of the Respondents according to the Ability to Read

From the table below (table 4:6) it is evident that majority(84.2%) of the respondents said that they could read easily, 12.5% said they could read with difficulty while only 3.3% said they could not read at all. The number of women who could not read at all was therefore low.

Table 4.6 Ability of the respondents to read

Ability to read letter, magazine etc.	Number	Percent	Cumulative percent
Can read easily	101	84.2	84.2
Can read with difficulty	15	12.5	96.7
Can not read at all	4	3.3	100.0
Total	120	100.0	

Source: Survey data

4.9 Distribution of Women's Main Occupational Roles in the Sample

Table 4.7 shows the distribution of women in the sample according to their main occupations. The table shows that 67.5% of the respondents were mainly in the agricultural occupation. Agriculture is therefore the main occupation of women in Mang'u location. This is because the area of study was basically rural.

Table 4.7 Women's main occupational roles

Occupation	Number	Percent	Cumulative percent
Formal	15	12.5	12.5
Informal	24	20.0	32.5
Agriculture	81	67.5	100.0
Total	120	100.0	

Source: Survey data

4:10 Percentage distribution of Husbands according to their Occupational roles

While 67.5% of the women were in agriculture (table 4:7), only 14.2% of their husbands were in agriculture. Majority of their husbands(49.2%) were in formal and informal(36.7%) employment. Their husbands had occupations such as business, driving, carpentry, teaching and clerical work among other occupations. This is perhaps due to the shortage of land which has meant that women are left in agriculture while men look for sources of livelihood outside the agricultural sector.

Table 4:8 Husbands' occupational roles

Husband's occupation	Number	Percent	Cumulative percent
Formal employment	59	49.2	49.2
Informal employment	44	36.7	85.8
Agriculture	17	14.2	100.0
Total	120	100.0	

Source: Survey data

4:11 Percentage distribution of Respondents according to the Household levels of Income

Table 4:9 shows the distribution of respondents according to the household total monthly income. Majority(49.2%) of the respondents had a monthly income of Ksh. 5,000 or less, while 32.5% of the respondents had a monthly income of between 5001 and 10,000 shillings. Only 18.3% of the respondents had a monthly income of more than 10,000 shillings. The mean monthly income of the respondents' households was 7,267.208 shillings with a standard deviation of 7,495.467 shillings. This clearly shows that there is a

very large gap between the haves (rich) and the have-nots (poor).

Table 4:9 Monthly House hold Income

Monthly income	Number	Percent	Cumulative percent
0 - 5,000	59	49.2	49.2
5,001 - 10,000	39	32.5	81.7
>10,000	22	18.3	100.0
Total	120	100.0	

Source: Survey data

4:12 Percentage distribution of respondents according to Land size in Acres

Table 4:10 shows that 60.0% of the respondents had land size of one acre and below. Only 15.0% of the respondents had more than two acres of land, while 25.0% of the respondents had 1.1-2.0 acres of land. The average size of the land was 0.985 acres with a standard deviation of 0.819. The maximum acres of land owned by one household was four acres while one respondent had no piece of land.. This is a clear indication that there is land pressure in Mang'u location. This is a serious problem especially because majority (67.5%) of the respondents were mainly in agriculture.

Table 4.10 size of Land in Acres

Size of Land in Acres	Number	Percent	Cumulative percent
0.0 - 1.0	72	60.0	60.0
1.1 - 2.0	30	25.0	85.0
>2.0	18	15.0	100.0
Total	120	100.0	

Source: Survey data

4.13 Percentage Distribution of Respondents According to the Total Number of Children Ever Born

Table 4.11 shows the distribution of respondents according to the total number of children that they had given birth to including dead children. The table shows that 57.5% of the respondents had given birth to 1-3 children while 5.8% had given birth to more than 6 children. Approximately 36.7% of the respondents had given birth to between four and six children. The mean number of children ever born was 3.492 children with a standard deviation of 1.896 children. The minimum number of children ever born was one while the maximum was ten children.

Table 4:11 Children Ever Born

Number of children	Number	Percent	Cumulative percent
1 - 3	69	57.5	57.5
4 - 6	44	36.7	94.2
>6	7	5.8	100.0
Total	120	100.0	

Source: Survey data

4:14 Percentage Distribution of Respondents According to the Current Family size (Number of Living Children)

Table 4:12 shows that 62.5% of the respondents had 1-3 living children; 31.7% had families of between 4-6 children while 5.8% had families of more than 6 children. The mean number of living children was 3.283 with a standard deviation of 1.661. This implies that couples in Mang'u location have small size families. The mean current family size is lower than the average number of children ever born. This is due to the mortality of children.

Table 4:12 Number of Living Children

Current family size	Number	Percent	Cumulative percent
1 - 3	75	62.5	62.5
4 - 6	38	31.7	94.2
>6	7	5.8	100.0
Total	120	100.0	

Source: Survey data

4:15 Percentage Distribution of Respondents According to the Total Number of Children Dead

Table 4:13 shows the distribution of respondents according to the number of children dead. According to table 4:13, 70.0% of the respondents had no children who had died. Approximately 18.3% had lost between 1-2 children while 11.7% of the respondents had lost more than 2 children. The mean was found to be 0.543 with a standard deviation of 0.548. Thus Mang'u Location seems to have low rates of mortality. Low child mortality can be attributed to better nutritional status and health facilities.

Table 4:13 Children mortality

Number of dead children	Number	Percent	Cumulative percent
0	84	70.0	70.0
1-2	22	18.3	88.3
>2	14	11.7	100.0
Total	120	100.0	

Source: Survey data

4.16 Percentage Distribution of Respondents According to the Preferred Additional Number of Children

Table 4:14 shows the percentage distribution of respondents according to the extra number of children preferred. The table shows that 40.8% of the respondents would not prefer an extra child. Approximately 42.5% of the respondents would prefer 1-2 more children while 16.7% would prefer more than 2 extra children. Thus, 40.8% of the respondents seem to have got the number of children that they would like to have in their reproduction period. The mean number of extra children wanted was 1.137 with a standard deviation of 1.266.

Number of extra children	Number	Percent	Cumulative percent
0	50	40.8	40.8
1-2	52	42.5	83.3
>2	18	14.7	98.0
Total	120	100.0	

Table 4:14 Additional Number of Children Preferred

Number of additional children preferred	Number	Percent	Cumulative percent
0	49	40.8	40.8
1 - 2	51	42.5	83.3
>2	20	16.7	100.0
Total	120	100.0	

Source: Survey data

4.17 Percentage Distribution of Respondents According to The Additional Number of Boys Preferred

Table 4:15 depicts the number of extra boys preferred by the respondents. Approximately 60.8% of the respondents said they would not prefer another boy, 36.7% would prefer 1-2 extra sons, while 2.5% would prefer more than 2 extra boys. The mean number of extra boys preferred was 0.567 with a standard deviation of 0.0807.

Table 4:15 Additional number of Boys Preferred

Number of boys	Number	Percent	Cumulative percent
0	73	60.8	60.8
1 - 2	44	36.7	97.5
>2	3	2.5	100.0
Total	120	100.0	

Source: Survey data

4.18 Percentage Distribution of Respondents According to The Additional Number of Girls Preferred

Table 4.16 shows that 70.0% of the respondents would not prefer another girl, 20.0% would prefer one extra girl, while 10% of the interviewees would prefer two extra girls. The mean number of extra girls preferred was found to be 0.40 with a standard deviation of 0.666. Thus, it is evident that the mean number of extra girls preferred is lower than the mean number of boys preferred.

Table 4:16 Additional number of Girls Preferred

Number of Girls	Frequency	Percent	Cumulative percent
0	84	70.0	70.0
1 - 2	24	20.0	90.0
>2	12	10.0	100.0
Total	120	100.0	

Source: Survey data

4.19 Percentage Distribution of Respondents According to the Preferred Family Size

The respondents were asked to state the number of children they would like to have by the end of their reproductive period. Table 4:17 depicts the distribution of respondents according to the preferred family size. From the table, it is evident that 31.7% of the respondents would prefer to have 1-3 children by the end of their reproductive periods, 49.2% would prefer 4-6 children while 19.2% of the respondents would prefer more than six children. The minimum number of children preferred was two while the maximum was nine. The preferred family size is small with a mean of 4.262 children and a standard

deviation of 1.329

Table 4:17 Preferred Family size

Children preferred	Number	Percent	Cumulative percent
1 - 3	38	31.7	31.7
4 - 6	59	49.2	80.9
>6	23	19.2	100.0
Total	120	100.0	

Source: Survey data

4.20 Percentage Distribution of Respondents According to the Ideal Family Size

The respondents were asked about the number of children that they thought was appropriate for couples irrespective of the number they themselves had. Table 4:18 depicts the distribution of respondents according to the size of the family that they think is ideal for couples. The table shows that 15.8% of the respondents think that 1-2 children are ideal. Approximately 73.3% said the ideal family size is between 3-4 children while 10.8% suggested a number greater than 4 children. The mean number of ideal children was 3.650 with a standard deviation of 0.913. Thus, it is evident that the average ideal number of children is lower than the average preferred number of children as shown in table 4:17. Thus, the respondents preferred larger families than the families they thought were ideal for the society..

Table 4:18 Ideal Family Size

Ideal family size	Number	Percent	Cumulative percent
1 - 2	19	15.8	15.8
3 - 4	88	73.3	89.2
>4	13	10.8	100.0
Total	120	100.0	

Source: Survey data

4.21 Percentage Distribution of Respondents According to the Length of Post-partum Abstinence

Respondents were asked to say how long they wait before they resume sexual intercourse after the birth of a baby. Table 4:19 shows the duration of post-partum abstinence among the respondents. Approximately 64.2% of the respondents had a post-partum abstinence period of less than 2 months, 23.3% of the respondents had a period of between 2-4 months while 12.5% abstained for more than 4 months. The mean period of abstinence was 2.155 months with a standard deviation of 1.228. The minimum period of sexual abstinence was 0.25 months (one week) and the maximum was eight months. Thus, generally women in Mang'u Location have a short period of post-partum abstinence

Table 4:19 Post-partum Abstinence

Length of Abstinence (months)	Number	Percent	Cumulative percent
<2	77	64.2	64.2
2 - 4	28	23.3	87.5
>4	15	12.5	100.0
Total	120	100.0	

Source: Survey data

4.22 Percentage Distribution of Respondents According to the Sex Preference of the Next Child

As shown in table 4:20, 40.8% of the respondents said they would not prefer another child of any sex in future. Approximately 27.5 % of the respondents would prefer their next first child to be a boy. Approximately 19.2% of the respondents would prefer a girl while 12.5% would like a child of any sex. Among the respondents who needed a child in future, 46.5% would therefore prefer a boy while about 32.4% would prefer a girl. Thus, there is a higher preference for boys than for girls in Mang'u Location.

Table: 4:20 Sex Preference

Sex preference	Number	Percent	Cumulative percent
Does not need a child of any sex	49	40.8	40.8
Prefer a boy	33	27.5	68.3
Prefer a girl	23	19.2	87.5
Would like a child of any sex	15	12.5	100.0
Total	120	100.0	

Source: Survey data

4.23 Percentage Distribution of Respondents According to The Total Number of Boys Preferred

Table 4:21 shows the total number of boys preferred by women in their reproductive period. Only 0.8% of the respondents said they would not prefer to have any boy. Majority(92.5%) of the respondents preferred to have 1-3 boys while 6.7% preferred more than 3 boys. The mean number of boys preferred was 2.125 with a standard deviation of 0.836.

Table 4 21 Total number of Boys preferred

Number of Boys preferred	Number	Percent	Cumulative percent
0	1	0.8	0.8
1-3	111	92.5	93.3
>3	8	6.7	100.0
Total	120	100.0	

Source: Survey data

4:24 Percentage Distribution of Respondents According to the Total Number of Girls Preferred

Table 4:22 shows that 3.3% of the respondents would prefer not to have any girl throughout their reproductive period. Majority(93.3%) of the respondents would prefer 1-3 girls while only 3.3% of the respondents would prefer more than three girls. The mean number of girls preferred was 1.950 with a standard deviation of 0.887. Thus, in Mang'u Location there is a sex preference bias with most respondents having a higher preference for boys than for girls.

Table:4:22 Total Number of Girls Preferred

Number of girls preferred	Number	Percent	Cumulative percent
0	4	3.3	3.3
1-3	112	93.3	96.7
>	4	3.3	100.0
Total	120	100.0	

Source: Survey data

4.25 Percentage Distribution of Respondents According to the Use of Contraceptives

Table 4.23 shows that 70.0% of the respondents were using at least one family planning method. Only 30.0% of the respondents were not using a method of contraceptive at the time of the study. The Majority of the respondents were therefore in favour of using contraceptives. The mean length of contraceptive use was 34.883 months.

Table 4:23 Current Use of Contraceptives

Use of contraceptives	Number	Percent	Cumulative percent
Adopters	84	70.0	70.0
Non-Adopters	36	30.0	100.0
Total	120	100.0	

Source: Survey data

4.26 Percentage Distribution of Respondents According to Those Who Have Ever Used Contraceptives

Table 4:24 shows that 88.3% of the respondents have used a family planning method at one point in their life. The percentage of the respondents who have ever used contraceptives is therefore higher than the percentage of those currently using contraceptives. Only 11.7% of the respondents have never used a family planning method in their life. Majority(88.3%) of the interviewees had therefore experimented with contraceptives.

Table 4:24 Use of Contraceptives

Contraceptives use	Number	Percent	Cumulative percent
Ever used Contraceptives	106	88.3	88.3
Never used contraceptives	14	11.7	100.0
Total	120	100.0	

Source: Survey data

4.27 Percentage Distribution of Respondents According to The Family Size When They First Used Contraceptives

Table 4:25 shows the distribution of respondents according to the number of children they had when they first used a family planning method. From the table, it is evident that while 11.7% have never used a family planning method, 8.3% of the respondents used a family planning method even before they got their first child. But, majority of the respondents comprising 67.5% first used a family planning method when they had 1-3 children. Some of the respondents(10.0%) used a method when they had 4-6 children while 2.5% used a family planning method when they had over 6 children. The mean number of children at the time of the first use of contraceptives was 2.017 with a standard deviation of 1.685.

Table 4:25 Family Size at Time of first Use of Contraceptives

Number of children	Number	Percent	Cumulative percent
Never used contraceptives	14	11.7	11.7
0	10	8.3	20.0
1 - 3	81	67.5	87.5
4 - 6	12	10.0	97.5
>6	3	2.5	100.0
Total	120	100.0	

Source: Survey data

4:28 Reasons for Preferring more children

Table 4:26 shows that 71 respondents wanted to have more children in future. The table shows that 18.3% of those who wanted more children wanted to have more so that they could name their parents, brothers or sisters. Majority(23.9%) of those who wanted more children did so because of fear of mortality. This is an indication that although mortality in Mang'u has taken a downward trend, people still have a deep rooted fear of death and would still think of mortality when they are planning their families. Approximately 16.9% wanted to have an extra child because they had children of one sex.

Table 4:26 Reasons for Preferring more children

Reasons for preferring more children	Number	Percent
To name parents, brothers or sisters	13	18.3
Does not have a child of one sex	12	16.9
Old age security	6	8.5
Children are God's blessings	8	11.3
Ability to support more	8	11.3
Replace dead children	3	4.2
Fear of mortality	17	23.9
First child grown up	4	5.6
Total	71	100.0

Source: Survey data

4:29 Reasons for not Preferring more Children

Table 4:27 shows the distribution of respondents according to the reasons for not wanting more children. The table shows that approximately 49.0% of the respondents who did not

want more children was because of the general high costs of raising children.

Table 4.27 Reasons for not Preferring more children

Reasons for not preferring more children	Number	Percent
Shortage of land	8	16.3
High costs of education	14	28.6
General high costs of living	24	49.0
General poor health of mother	3	6.1
Total	49	100.0

Source: Survey data

4.30 Reasons for Preferring Next Child to be a Boy

The respondents had various reasons for preferring a boy for their next child. Majority (36.4%) preferred a boy for their next child because they did not have any boy.

Table 4.28 Reasons for Preferring Next Child to be a Boy

Reasons for preferring next child to be a boy	Number	Percent
Do not have any boy	2	8.7
Want a boy to help with farm work	1	4.3
Want a boy to carry on the family name	6	26.1
Want a boy to help with household work	8	34.5
A boy is better than a girl	4	17.2
Total	23	100.0

Table 4.28 Reasons for Preferring the Immediately Next Child to be a Boy

Reasons for preferring a male child	Number	Percent
A boy to inherit property	4	12.1
To name a father or brother	6	18.2
Does not have any boy	12	36.4
Last child was a girl	7	21.2
Boys assist in old age	4	12.1
Total	33	100.0

Source: Survey data

4.31 Reasons for preferring next child to be a girl

From table 4:29 it is evident that approximately 34.8% of the respondents who preferred a girl for their next first child, did so because they wanted to name their mothers or sisters. This is an indication that the idea of naming a child after a mother or sister is very prominent among the Agikuyu people. Table 4:29 shows the distribution of respondents according to the reasons for girl preference.

Table 4:29 Reasons for Girl Preference

Reasons for Girl Preference	Number	Percent
Dowry price	2	8.7
Girls assist in House hold chores	3	13.0
Does not have any Girl	6	26.1
Want to Name mother or sisters	8	34.8
Has no Land for Boys	4	17.4
Total	23	100.0

Source: Survey data

4:32 Reasons for Disinterest in the Sex of the Child

Only 15 respondents said that they did not mind the sex of their next first child. The reasons given were that children are given by God and parents should therefore accept whatever they get. Majority (53.3%) however felt that there is no difference in sexes because girls can now do most of the jobs that men do.

Table 4:30 Reasons for not Minding the Sex of the Child

Reasons for any sex	Number	Percent
Girls can do same work as boys	8	53.3
Children are God given	7	46.7
Total	15	100.0

Source: Survey data

4.33 Respondents Knowledge of Contraceptives

For small family sizes to be realised, fertility has to be controlled by avoiding conception. This is possible through the use of contraceptives. Majority (70.0%) of the respondents were users of contraceptives in Mang'u location. The methods of contraception that women in Mang'u location use are pills, intrauterine devices (coil), injection, male condoms, female sterilisation, periodic abstinence, withdrawal and norplant. When the respondents were asked whether they have heard of these family planning methods, most of the respondents said they have heard about these methods but do not have accurate knowledge about them. Majority (94.2%) however have not heard of the Norplant method. Out of 120 respondents, 51 (42.5%) respondents were not aware of the withdrawal method. The distribution of the respondents according to their knowledge of different family planning methods is shown in table 4:31.

Table 4.31 Distribution of respondents according to their awareness of the various methods of contraception that respondents in Mang'u location have heard about

Method	AWARE		UNAWARE	
	Number	Percentage	Number	Percentage
Pill	120	100.0	0	0.0
Injection	120	100.0	0	0.0
Female sterilisation	120	100.0	0	0.0
Condom	115	95.8	5	4.2
Intrauterine devices(coil)	112	93.3	8	6.7
Periodic abstinence	106	88.3	14	11.7
Male sterilisation	78	65.0	42	35.0
Withdrawal	69	57.5	51	42.5
Norplant	7	5.8	113	94.2

Source: Survey data

4.34 Communication on contraceptives use between couples and the approval by husbands in Mang'u location

Most of the respondents (93.3%) talked about contraceptives use with their husbands. Only 6.7% of the respondents said that they have never discussed about contraceptives use with their husbands. Approximately 11.6% of the respondents revealed that though they discussed, their husbands did not approve the use of contraceptives.

Table 4:32 Communication on contraceptives use between couples

Communication on contraceptives	Number	Percent
Never discussed contraceptives	8	6.7
Discussed and husband approves	98	81.7
Discussed but husband disapproves	14	11.6
Total	120	100.0

Source: Survey data

4.35 Distribution of respondents according to their main sources of family planning information

When the respondents were asked to name their main source of the family planning information, 42.5% of the respondents said they got the information from the radio and 47.5% of the respondents said they got the information in the hospitals. Other sources of information include friends, newspapers, seminars and church. Table 4:33 shows the distribution of respondents according to the main sources of family planning information.

Table 4:33 Distribution of respondents according to the main sources of family planning information

Sources of family planning information	Number	Percent
Hospitals, clinics etc.	57	47.5
Radio	51	42.5
Friends and relatives	4	3.3
Seminars	3	2.5
Newspapers, magazines etc.	2	1.7
churches	3	2.5
Total	120	100.0

Source: Survey data

4.36 Family Planning Methods Currently In Use

The pill was found to be the most favourite family planning method. Approximately 44.0% of the users of contraceptives used the pill, 34.5% used the injection, 9.5% used the periodic abstinence method and 4.8% used withdrawal method. Only 2.4% used the condom. This shows that the condom is not a popular method among married women in Mang'u location. Most respondents said that the condom is only supposed to be used in extra marital affairs.

Table 4:34 Distribution of the users of contraceptives according to the main methods in use

Methods of Family planning	Number	Percent
Pill	37	44.0
Norplant	1	1.2
Periodic abstinence	8	9.5
Coil	1	1.2
Condom	2	2.4
Withdrawal	4	4.8
Female sterilisation	1	1.2
Male sterilisation	1	1.2
Injection	29	34.5
Total	84	100.0

Source: Survey data

4.37 Reasons for not using contraceptives

We have mentioned elsewhere in this chapter that 30.0% of the total respondents were not

users of contraceptives. Various reasons were given for not using contraceptives as shown in table 4:35. Approximately 38.9% of the non-users said they feared that contraceptives could have negative effects on their health.

Table 4:35 Reasons for not using Family Planning Methods

Reasons for not using contraceptives	Number	Percent
Respondents gave birth recently	5	13.9
Fear of side effects	14	38.9
Inconvenience	1	2.8
Need for more children	8	22.2
Religious and cultural beliefs	4	11.1
General poor health of respondents	4	11.1
Total	36	100.0

Source: Survey data

4.38 Reasons for use of Contraceptives

Table 4:36 shows that majority of the users of contraceptives revealed that economic factors were the major reasons for the use of contraceptives. With high costs of education, shortage of land and general high costs of living, the respondents saw the need to regulate their fertility by using contraceptives

Table 4:36 Reasons for using contraceptives

Reasons for using contraceptives	Number	Percent
Spacing of children	28	33.3
High costs of education	11	13.1
Shortage of land	18	21.4
High costs of living	21	25.0
Doctors recommendation	2	2.4
Not able to support more	4	4.8
Total	84	100.0

Source: Survey data

4:39 Advantages of having a Small Family

Majority of the respondents comprising 94.2% thought that it was advantageous to have a small family. The majority (55.8%) thought that a small family is good because couples are able to offer good quality education. Approximately 24.2% said that the costs of feeding, clothing and housing are lower if a couple has a small family, while 14.2% said that a small family meant less pressure on land.

Table 4:37 Advantages of having a small family

Advantages of having a small family	Number	Percent
No advantage at all	7	5.8
Easy to educate	67	55.8
Generally easy to bring up	29	24.2
Ease pressure on land	17	14.2
Total	120	100.0

Source: Survey data

4:40 Disadvantages of having a Small Family

Half of the respondents thought that having a small family was not disadvantageous at all; while the other half thought a small family puts somebody in a disadvantaged position. Table 4:38 shows the reasons why some respondents thought it was inconvenient to have a small family

Table 4 38 Disadvantages of having a Small Family

Disadvantages of a small family	Number	Percent
No disadvantage	60	50.0
Left childless in case of mortality	16	13.3
Less assistance in old age	9	7.5
less assistance in farm, household chores etc.	20	16.7
Failure to name relatives	8	6.7
Breeds laziness and extravagance	7	5.8
Total	120	100.0

Source: Survey data

conclusion

In this chapter, we have basically presented the characteristics of the respondents. The chapter has examined the economic, cultural and demographic characteristics of the respondents. The description of the data has revealed that the respondents interviewed were young married women. Their age at marriage was found to be low. The literacy level in Mang'u location was found to be high and therefore majority of the respondents were able to read easily.

The main occupation of women was found to be agricultural production. Most respondents were poor and they had very small pieces of land. Child mortality in the

location was found to be low. The preferred family size was also found to be low. Women were found to have a short period of post-partum abstinence. Respondents were found to have a higher preference for sons than for daughters. Majority of the respondents were found to be adopters of modern contraceptives. A detailed statistical analysis of the influence of the socio-economic, cultural and demographic variables on the preferred family size is carried out in chapter five.

CHAPTER FIVE

DATA ANALYSIS

5:0 INTRODUCTION:

In this chapter, we present an analysis of the research data. As we mentioned in the third chapter of this study, the main variables are related to each other and descriptive and inferential statistics are used to interpret the relationships. The variables are cross-tabulated, percentages, chi-square (X^2), Pearson's Contingency Coefficient (C) and Pearson's Correlation Coefficient (r) are used. We have already given a detailed explanation of the uses of these statistics in chapter three.

The overall objective of this study was to examine the role of selected socio-economic, socio-cultural and demographic variables in influencing the respondents' desire for children. In line with this objective, this chapter has mainly concentrated on the association between the dependent variable (Preferred Family Size) and the key independent variables. We have also compared our research findings with the findings of other studies that have previously been conducted in the country.

5.1 Socio-Economic Factors Influencing Preferred Family Size.

In this section, we are mainly concerned with the relationship that exists between the key socio-economic variables and the dependent variable (Preferred family size). The aim here is to find out if there exist relationships between these factors and the preferred family size. If the relationship is found to exist, we seek to know whether it is a positive or a negative relationship. The major concern is actually to seek to know the validity of the first hypothesis of this study which states as follows:

H₁: Women with higher Socio-economic status are more likely to limit their family size.

The alternative null hypothesis can be stated as follows:

Ho: Women with higher Socio-economic status are less likely to limit their family size.

The dependent variable in this hypothesis is the preferred family size. The key independent variables that are used in this study to measure socio-economic status are education, occupation, income and land. The operational definitions of these variables have been given in chapter three.

5:1:1 The influence of Education on the Preferred family size

Formal education plays a vital role in regulating fertility. Education has an impact on the willingness of women to adopt family planning techniques. Education also has an impact of reducing traditional practices and beliefs that favour large sizes of the family.

Table 5.1 shows that education is an important factor as far as fertility preference decision making is concerned. The table shows that only 7.7% of the respondents who had secondary school education and above preferred to have more than six children. Majority (60.7%) of those who had upper primary level preferred four to six children. Approximately 49.2% of the total respondents preferred to have four to six children.

Approximately 31.7% of the respondents preferred 1 - 3 children while 19.2% of the respondents preferred to have more than 6 children. Among those who preferred more than 6 children, 43.5% had no education at all, 30.4% had lower primary school education, 17.4% had upper primary level education while only approximately 8.7% had secondary school education and above.

It is evident from these figures that larger family size preference decrease with the rise in

education. This may be due to the new ideas that educated people acquire. This makes the people to change their attitudes towards children. Thus, generally in Mang'u Location, women with lower education tend to prefer larger family sizes compared to those women with higher educational achievements.

When chi-square was calculated, it was found to be 28.998 with 6 degrees of freedom and significant at 95% level of confidence. The association between education status and family size preference was also found to be very strong as indicated by a big value of Pearson's Contingency Coefficient (c) (0.441). The Pearson's Correlation Coefficient - 0.234 shows that there is a significant negative linear relationship between education and the preferred family size. The inverse relationship between education and the preferred family size means that as education of women rises, there is a likelihood that they will limit their family sizes. In Mang'u Location, the level of literacy is high, a factor that may have made it possible for people to suppress high fertility.

The inverse relationship between preferred family size and education has been documented by other researchers. Omega (1985:123) confirms our findings because he found a negative correlation between education and fertility. Keraka (1991:31) in a study on contraceptives use in Kisii District found that women with lower education prefer large family size than those who are more educated.

The conclusion that we can make here is that increasing literacy levels in Mang'u Location has gone along way to suppress fertility in the location. Therefore, it seems like for fertility to decline further, we have to increase literacy levels in Mang'u location.

Table 5.1 Preferred family size according to the level of education

(N = 120)

Family size preference	Education level					Percent
	None	Lower primary	Upper primary	Secondary and above	Total	
1 - 3	6	6	18	8	38	31.7
4 - 6	0	9	34	16	59	49.2
>6	10	7	4	2	23	19.2
Total	16	22	56	26	120	100.0
Percent	13.3	18.3	46.7	21.7	100.0	

Source: Survey data.

$\chi^2_C = 28.998$ with 6 degrees of freedom, significant at 95% level of confidence.

Pearson's $r = -0.234$

Contingency Coefficient (C) = 0.441.

5:1:2 The influence of occupation on preferred family size

Occupation seems to play an important role in regulating fertility in Mang'u Location. In this study, respondents were asked to name their main occupation. Three occupations were identified. The three occupations identified were formal employment, informal employment, and agricultural occupation. In Mang'u Location, 67.5% of the women interviewed were mainly in agriculture; 12.5% were in formal employment while 20.0%

were in the informal sector.

Among those who were in the formal employment, 33.3% preferred 1 -3 children, while 66.7% preferred more than 6 children. Among those in the informal sector, 29.2% preferred 1 -3 children, 41.7% preferred 4 - 6 children, 29.2% preferred more than 6 children. Among the respondents who were mainly in agriculture, 32.1% preferred 1 - 3 children, 60.5% preferred 4 - 6 children while 7.4% preferred more than 6 children. Thus it is evident that across all the occupations. Women in Mang'u preferred small family sizes.

Table 5:2 reveals that the relationship between occupation and preferred family size is strong. A calculated chi-square of 23.905 with four degrees of freedom, is significant at 95% level of confidence. This demonstrates a strong association between occupation and family size preference. Pearson's contingency coefficient (c) of 0.408 shows a very strong association between women's occupation and the preferred family size. Pearson's correlation coefficient of - 0.281 shows there is a significant inverse relationship between occupation and the preferred family size.

Table 5:2 Preferred family size according to the main occupation of women.
(N = 120)

Family size preference	Occupation of women				
	Formal employment	Informal employment	Agriculture	Total	Percent
1 - 3	5	7	26	38	31.7
4 - 6	0	10	49	59	49.2
>6	10	7	6	23	19.2
Total	15	24	81	120	100.0
Percent	12.5	20.0	67.5	100.0	

Source: Survey data.

$\chi^2_c = 23.905$ with 4 degrees of freedom, significant at 95% level of confidence.

Pearson's $r = -0.281$

Contingency Coefficient (C) = 0.408.

A cross tabulation of the preferred family size according to the main occupation of the husbands also reveals that there is a strong association between the number of children preferred by women and the occupation of their spouses. Table 5:3 shows that 49.2% of the husbands were in formal employment, 36.7% were in informal employment, while 14.2% were in agriculture. Among those who preferred 1 - 3 children, 50.0% of their husbands were in the formal sector, approximately 31.6% were in informal sector, while 18.4% were in agriculture. Those who preferred 4 - 6 children, 61.0% of their husbands were in the formal employment, while 39.0% were in the informal employment. Among those who preferred more than 6 children, 17.4% were in the formal employment, 39.1% were in the informal sector, while 43.5% were in agriculture.

The calculated chi-square of 25.300 and 4 degrees of freedom is significant at 95% level of confidence, indicating a strong relationship between husbands occupation and women's family size preference. Pearson's contingency coefficient (c) of 0.417 is indicative of a strong association between the women's family size preference and the occupation of their husbands. Pearson's correlation coefficient of 0.2117 shows that there is a significant positive relationship between women's family size preference and the husbands' occupation. This finding differs from that of Rono (1994:108) who found a negative correlation between men's occupation and the preferred fertility.

The emerging conclusion is that, in Mang'u Location, the occupation of both women and men have a significant effect on family size preferences. Thus we conclude that, women occupation may have contributed substantially in suppressing fertility in Mang'u Location.

Table 5:3 Preferred family size according to the main occupation of husbands

(N = 120)

Family size preference	Occupation of husbands				
	Formal employment	Informal employment	Agriculture	Total	Percent
1 - 3	19	12	7	38	31.7
4 - 6	36	23	0	59	49.2
>6	4	9	10	23	19.2
Total	59	44	17	120	100.0
Percent	49.2	36.7	14.2	100.0	

Source: Survey data.

$\chi^2_c = 25.300$ with 4 degrees of freedom, significant at 95% level of confidence.

Pearson's $r = 0.211$

Contingency Coefficient (C) = 0.417

5:1:3 The influence of income on preferred family size.

Table 5:4 shows the distribution of respondents according to the preferred family size and household income levels. The table shows that 49.2% of the respondents reported to have a monthly household income of 5,000 shillings or less, 32.5% had an income of between 5,001 and 10,000 shillings, 18.3% of the respondents had a monthly income of more than 10,000 shillings. The table reveals that, among those who preferred 1 - 3 children, approximately 55.3% earned 5,000 shillings or less; 34.2% earned between 5,001 - 10,000 shillings, while 10.5% earned more than 10,000 shillings per month.

For those who preferred 4 - 6 children, 49.2% earned 5,000 shillings or less, 23.7% earned between 5,001 and 10,000 shillings, while 27.1% had a monthly income of more than 10,000 shillings. In the category of those who preferred more than 6 children, 39.1% had an income of 5,000 shillings or less, 52.2% had an income of 5,001 - 10,000 shillings, while 8.7% earned more than 10,000 shillings.

A cross-tabulation of the data gave us a calculated chi-square of 7.378, $df = 4$ which is not significant at 95% level of confidence. Contingency Coefficient (C) of 0.241 shows that the association between income and family sizes' preference is strong. Pearson's Correlation Coefficient of 0.083 indicates that the relationship between income and preferred family size is positive. This means that people with higher incomes prefer bigger families. It is those people who have lower income who will see the need to reduce the size of their families. Odera (1981:83) confirms this finding. In a study in rural Nyanza, it was found that increasing household incomes increases fertility. The finding of this study however slightly differs from that of Nkanata (1984:90) who found a negative relationship between income and the desired family sizes.

The finding of this study is that, as the household income rises, family size preference may increase. Low incomes may lead to greater adoption of contraceptives use among women

in Mang'u Location. The direct (positive) relationship between income and preferred family size shows that peoples' desire for children can increase if their incomes can enable them to raise children easily.

Table 5:4 Distribution of respondents according to monthly household income level and family size preference. (N = 120)

Family size preference	0 - 5000	5,001 - 10,000	>10,000	Total	Percent
1 - 3	21	13	4	38	31.7
4 - 6	29	14	16	59	49.2
>6	9	12	2	23	19.2
Total	59	39	22	120	100.0
Percent	49.2	32.5	18.3	100.0	

Source: Survey data.

$X^2_c = 7.378$ with 4 degrees of freedom, not significant at 95% level of confidence.

Pearson's $r = 0.083$

Contingency Coefficient (C) = 0.241

5:1:4 The influence of land on preferred family size

The cross-tabulated data in Table 5:5 show that land is not a very important factor as far as fertility decisions among women in Mang'u Location are concerned. The table shows that among those who had less than one acre of land, 27.8% preferred 1 - 3 children, 55.6% preferred 4 - 6 children, 16.7% preferred more than six children. Among those who had between 1.1 - 2.0 acres of land, 30.0% preferred between 1 - 3 children; 43.3%

preferred 4 - 6 children, 26.7% preferred more than six children.

Among the respondents who had more than 2.0 acres of land, 50.0% preferred 1 - 3 children, 33.3% preferred between 4 - 6 children and approximately 16.7% preferred more than six children.

When chi-square was calculated, its value was found to be 3.460 with 4 degrees of freedom. The calculated chi-square is lower than the critical chi-square value. Thus the calculated chi-square is not significant at 95% level of confidence. Thus, the null hypothesis that there is no significant relationship between land size and family size preference is maintained. The small value of C (0.173) suggests that the association between the size of the land and family size preference is weak. Pearson's Correlation Coefficient of -0.076 indicates a weak negative linear association between land size and the preferred family size.

This finding means that, respondents with big sizes of land prefer smaller families than those respondents with smaller land sizes. Therefore it seems like women in Mang'u Location are not induced to have bigger families by big pieces of land. This finding could be due to the fact that, unlike men who attach great value to land, women may not see land as an essential resource that should guide their fertility decisions. Secondly, although land is associated with the provision of food and shelter, in Mang'u bigger sizes of land do not necessarily enable one to be in a better economic position to provide for the family.

Basing on the above findings, we can argue that land has a negative (inverse) relationship with the preferred family size. This finding is at variance with the thesis advanced by Bogue (1969:844) who argue that, families with bigger sizes of land are likely to have more children.

Table 5:5 Family size preference according to the size of the land in acres. (N = 120)

Family size preference	Land size in acres				
	< 1.0	1.1 - 2.0	>2.0	Total	Percent
1 - 3	20	9	9	38	31.7
4 - 6	40	13	6	59	49.2
>6	12	8	3	23	19.2
Total	72	30	18	120	100.0
Percent	60.0	25.0	15.0	100.0	

Source: Survey data.

$X^2_c = 3.460$ with 4 degrees of freedom, not significant at 95% level of confidence.

Pearson's $r = -0.076$

Contingency Coefficient (C) = 0.173

5:1:5 Conclusion of the findings involving hypothesis 1

In the preceding section, we have discussed and presented an analysis of the influence of Socio-economic variables, (education, occupation, income and land) on the dependent variable which is the preferred family size. In this section, we have revisited our hypothesis in order to summarise our findings and see the validity or the invalidity of our first hypothesis which was stated as follows:

H₁: Women with higher Socio-economic status are more likely to limit their family size.

H₀: Women with higher Socio-economic status are less likely to limit their family size.

In this study, we have found that education and the preferred family size have a strong

relationship. The relationship would have been stronger were it not for the fact that majority (46.7%) of the respondents had upper primary school education which may not have substantially changed their attitudes towards children. If majority of the respondents had secondary and college education, it may have had a stronger negative effect on their attitudes towards large family sizes. Education seems to be an important socio-economic factor that changes the attitudes of people towards children. Thus, we accept the hypothesis that women with higher education status are more likely to limit their family size.

Occupation was found to have a strong relationship with preferred family size. Majority of our respondents were farmers. It was found that there was a strong association between occupation and preferred family size among women. Therefore we conclude that, among women in Mang'u Location, occupation apparently seems to be an important factor in regulating the sizes of their families.

It has been shown that, income has a moderately strong positive relationship with family size preferences. It is worth noting that, majority of our respondents were farmers with low incomes. They felt that low incomes and general problems of upbringing are a great handicap to their desired fertility. That is why most respondents said if their incomes increased, they could increase their family sizes. The conclusion that emerges here is that the higher the income of women in Mang'u Location, the higher the preferred family size. This is a demonstration of how women think that children are very essential but they will not like to give birth to more children than they can afford to clothe, feed and above all provide with good quality education. Women would prefer to have families that they can provide for and offer a better quality of life.

The relationship between land and preferred family size was seen to be a weak negative relationship. This finding confirmed the null hypothesis that women with higher socio-economic status (land) are less likely to limit their family size. If land can be seen as a

measure of socio-economic status, we find that in Mang'u Location, women with bigger pieces of land (higher socio-economic status); are likely to have fewer children. However, it is apparent that in Mang'u Location, land is not an important factor in guiding fertility decisions. The size of the land will not significantly affect the total number of children that a woman will prefer to have by the end of her reproductive period. Thus, we conclude that in Mang'u Location, women who have large pieces of land are unlikely to limit fertility than women with smaller pieces of land. This finding may be due to the way women in Mang'u Location perceive land. Though they know land is an important resource, they do not see it as the only important source of livelihood.

5:2 Socio-Cultural Factors Influencing Preferred Family Size

Cultural beliefs, attitudes and practices have an influence on the fertility level in Mang'u Location. The Socio-Cultural variables that affect population dynamics in Kenya include:- type of marriage (monogamous or polygamous), religious affiliation, sex preference and post-partum abstinence.

In Mang'u Location, all the respondents interviewed were in monogamous unions. This means that the Agikuyu ethnic group which was traditionally a polygamous society is today more of a monogamous society. However, many women said that although their husbands do not have other legal wives, they suspect that they have concubines. Economic problems have made it difficult for men to support more than one wife. Polygamy therefore seems to have moved into a new culture where men keep concubines without the knowledge of their legal wives.

In this section, we look at the role of some of the socio-cultural beliefs and practices and how they influence the family size preferences. The Socio-cultural factors discussed here are religion, sex preference and post partum abstinence. The operational definitions of these variables have been given in chapter three. The aim is to seek to know the validity

or invalidity of the second hypothesis which was stated as:-

H₁: Socio-cultural values influence the preferred family size.

The null hypothesis can be stated as:-

H₀: Socio-cultural values do not influence the preferred family size.

5:2:1 The influence of religious affiliation on preferred family size

Religious beliefs sometimes influence the family size preferences. In Mang'u Location, among those who preferred more than six children, majority (82.6%) were Catholics. As shown in Table 5:6, 31.1% of the Catholics preferred 1 - 3 children, 37.7% preferred 4 - 6 children, while 31.1% preferred more than six children. Approximately 27.0% of the Protestants preferred 1 - 3 children, 64.9% preferred 4 - 6 children, while 8.1% of them preferred more than six children.

Among the respondents who belonged to the African traditional religions, 40.9% preferred 1 - 3 children, 54.5% preferred 4 - 6 children, while 4.5% of them preferred more than six children. Thus, the cross-tabulated data show that Catholics preferred to have large families than the respondents of other denominations.

The calculated chi-square values show that the relationship between family size preference and religion was rather strong. A calculated chi-square of 11.00, $df = 4$ is significant at 95% level of confidence. This indicates that, there is a moderately strong association between religious affiliation and family size preferences. Contingency coefficient (c) of 0.29 shows a strong association between religion and the preferred family size. When Pearson's correlation coefficient was computed, there was found to be a negative

association between religion and family size preferences. The Pearson's r of -0.194 shows that the association between religion and family size preference is strong.

This finding does not tally with that of Nkanata (1984:90) who found religion to be positively related to fertility preferences. This study shows that catholics prefer larger family sizes compared to protestants and traditionalists. Religious beliefs affect the use of contraceptives through beliefs on large family size preferences. Some of the catholics said that their church does not allow them to practice artificial methods of family planning. As one catholic argued, "... in our church, we are taught that family planning is killing and it is unnecessary because God will provide another world if we fill this one." There were a number of catholics who however said that although their religion does not allow contraceptives, they use them secretly. The conclusion that we can draw from our findings is that religion has an influence on the preferred family size.

Table 5:6 Preferred family size according to religions of the respondents

(N = 120)

Family size preference	Religious affiliation	
	Catholics	Protestants
1 - 3	19	10
4 - 6	23	24
>6	19	3
Total	61	37
Percent	50.8	30.8

Source: Survey data.

$\chi^2_c = 11.0$ with 4 degrees of freedom, significant at 95% level of confidence.

Pearson's $r = -0.194$

Contingency Coefficient (C) = 0.29

5:2:2 The influence of sex preference on the preferred family size

Table 5:7 shows that the preference for a boy in Mang'u Location is higher than the preference for a girl. The respondents were asked if they would prefer their next first child to be a boy or a girl. Approximately 40.8% of the respondents said they would not like to have an extra child in future. Those who said they would prefer their next first child to be a boy were 27.5% of the respondents; while 19.2% of them preferred a girl for their next child. Those who preferred a child of any sex were 12.5% of the total respondents. Among the respondents who preferred a son for their next child, 21.2% had a family preference of 1 - 3 children, 72.7% preferred 4 - 6 children and 6.1% preferred more than six children.

Among those who preferred a girl for their next child, 39.1% preferred a family size of 1 - 3 children, 47.8% preferred a family of 4 - 6 children and 13.0% preferred a family size of more than six children. Among the respondents who did not mind the sex they get for their next child, 40% preferred 1 - 3 children, 53.3% preferred 4 - 6 children and 6.7% preferred more than six children.

The cross-tabulated data show that there is a significant relationship between sex preference and the preferred family size. A calculated chi-square of 15.35, $df = 6$ was significant at 95% level of confidence. This shows that there is a significant relationship between the sex preferred by the respondents and the family size preference. A contingency coefficient of 0.34 confirms a strong relationship between sex preference and family size preferences. Pearson's correlation coefficient of -0.186 shows that there is a

negative association between sex preference and the preferred family size.

The argument presented here is that women in Mang'u Location have a higher preference for boys than for girls. A family which has sons may struggle to get a girl due to the need to name their mothers. Among the women who desired a smaller family, the proportion wanting a daughter is smaller. This suggests that childbearing in Mang'u Location is structured largely around a targeted number of sons. In fact, one of the respondents said she would stop childbearing when she got the number of boys she desired. It can therefore be concluded that sex preference has an influence on the preferred family sizes in Mang'u Location.

Table 5:7 Distribution of respondents according to preferred family size and sex preference.

(N = 120)

Family size preference	Sex Preference					
	Doesn't need child of any sex	Prefer son	Prefer daughter	Prefer any sex	Total	Percent
1 - 3	16	7	9	6	38	31.7
4 - 6	16	24	11	8	59	49.2
>6	17	2	3	1	23	19.2
Total	49	33	23	15	120	100.0
Percent	40.8	27.5	19.2	12.5	100.0	

Source: Survey data.

$\chi^2_c = 15.35$ with 6 degrees of freedom, significant at 95% level of confidence.

Pearson's $r = -0.186$

Contingency Coefficient (C) =0.34

5:2:3 The influence of post-partum abstinence on preferred family size

Post-partum abstinence as a behaviour among human beings may be used as a way of avoiding pregnancy. Thus, the length of sexual abstinence after birth may reflect the size of the family that a woman may prefer. Women who abstain from sex for long after giving birth are usually assumed to have a low preference for children. Table 5:8 however shows that women may abstain for long periods even when their preference is for a large family. The table shows that among the women who abstained for less than two months, 35.1% preferred 1 - 3 children; 50.6% preferred 4 - 6 children; 14.3% preferred more than 6 children. For those with a sexual abstinence of 2 - 4 months, 25.0% preferred 1 - 3 children; 60.7% preferred 4 -6 children and 14.3% preferred a family of more than six children. Among the respondents who abstained for more than four months, 26.7% preferred 1 - 3 children, 20.0% preferred 4 - 6 children and 53.3% preferred more than six children.

The calculated chi-square value shows that the relationship between preferred family size and post-partum abstinence is moderately strong. A calculated chi-square of 11.26 with 4 degrees of freedom was significant at 95% level of confidence. A contingency coefficient (c) of 0.29 confirms a strong association between post-partum abstinence and family size preference. The Pearson's correlation coefficient of 0.205 shows that the relationship is positive. This indicates that long periods of post-partum abstinence are related to larger family size preferences. As we found in chapter 4 women in Mang'u Location have low periods of post-partum abstinence. The positive relationship between periods of abstinence and family size preferences was not expected. Basing on the above findings, we can generally conclude that longer periods of post-partum abstinence do not necessarily indicate a low family size preference in Mang'u Location.

Table 5:8 Distribution of respondents according to preferred family size and post-partum abstinence.

(N = 120)

Family size preference	Post-partum abstinence period in months				
	<2	2 - 4	>4	Total	Percent
1 - 3	27	7	4	38	31.7
4 - 6	39	17	3	59	49.2
>6	11	4	8	23	19.2
Total	77	28	15	120	100.0
Percent	64.2	23.3	12.5	100.0	

source: Survey data.

$\chi^2_c = 11.26$ with 4 degrees of freedom, significant at 95% level of confidence.

Pearson's $r = 0.205$

Contingency Coefficient (C) = 0.29

5:2:4 Conclusion of the findings involving hypothesis 2

In the section above, we have looked at the relationship between some selected socio-cultural factors and the preferred family size. The socio-cultural factors considered were religion, sex preference and post-partum abstinence. The aim was to look at the validity of the second hypothesis which was stated as:-

H₁: Socio-cultural values influence the preferred family size.

The null hypothesis was stated as:-

H₀: Socio-cultural values do not influence the preferred family size.

Religion was found to be negatively related with the preferred family size. The

Table 5:8 Distribution of respondents according to preferred family size and post-partum abstinence

(N = 120)

Family size preference	Post-partum abstinence period in months				
	<2	2 - 4	>4	Total	Percent
1 - 3	27	7	4	38	31.7
4 - 6	39	17	3	59	49.2
>6	11	4	8	23	19.2
Total	77	28	15	120	100.0
Percent	64.2	23.3	12.5	100.0	

source: Survey data.

$\chi^2_c = 11.26$ with 4 degrees of freedom, significant at 95% level of confidence.

Pearson's $r = 0.205$

Contingency Coefficient (C) = 0.29

5:2:4 Conclusion of the findings involving hypothesis 2

In the section above, we have looked at the relationship between some selected socio-cultural factors and the preferred family size. The socio-cultural factors considered were religion, sex preference and post-partum abstinence. The aim was to look at the validity of the second hypothesis which was stated as:-

H₁: Socio-cultural values influence the preferred family size.

The null hypothesis was stated as:-

H₀: Socio-cultural values do not influence the preferred family size.

Religion was found to be negatively related with the preferred family size. The

relationship between religion and the family size preference was however found to be moderate. The cross tabulated data indicate that catholics have a higher family preference than protestants and traditionalists. The argument presented here is that religion as one of the socio-cultural factors examined in this study has an influence on the preferred family size.

The preference for boys was found to be more prevalent than the preference for girls. The need for a son was found to affect the preferred family size. The emerging conclusion is that, sex preferences significantly influence the preferred family size, and women in Mang'u Location are not likely to stop giving birth until they get the targeted number of sons.

Post-partum abstinence was found not to have a limiting effect on the family size preferences. Women were found to have longer periods of abstinence even when their family size preference is high. The emerging conclusion is that, long periods of post-partum abstinence are not indicative of a lower family size preference. In fact, post-partum abstinence was surprisingly found to be positively related to the preferred family size.

5:3 Demographic Factors and Family Size Preferences.

In this section, we examine the influence of demographic factors on the preferred family size. The key demographic factors that have been considered are:- Age of the respondents, age at marriage, marital duration and child mortality.

5.3:1 The influence of age of the respondents on preferred family size.

Table 5.9 shows that the relationship between age and women's family size preferences is weak. Those respondents who were aged 20 - 24 years comprised 22.5% of the respondents and 44.4% of them preferred 1 - 3 children, 44.4% preferred 4 - 6 children and 11.1% preferred more than six children.

Respondents who were aged between 25 - 29 years comprised 30.8% of the respondents and 32.4% of them preferred 1 - 3 children, 51.4% preferred 4 - 6 children and 16.2% preferred a family of more than six children. Among the respondents who were aged 30 - 34 years, 33.3% preferred 1 - 3 children, 54.2% preferred 4 - 6 children and 12.5% preferred more than six children. Respondents aged between 35 and 39 years comprised 14.2% of the respondents and 29.4% of them preferred 1 - 3 children, 41.2% preferred 4 - 6 children and 29.4% preferred more than six children. Among the respondents who were above forty years old, 6.7% preferred 1-3 children , 53.3% preferred 4-6 children and 40.0% preferred more than six children. These statistics show that younger women had a lower preference for children.

The chi-square value shows that the relationship between age and the preferred family size is a weak relationship. A calculated chi-square of 7.13 with 8 degrees of freedom was not significant at 95% level of confidence. Pearson's contingency coefficient of 0.24 shows that the association between the two variables is moderate. The Pearson's Correlation Coefficient of 0.258 shows that the relationship between age and preferred family size is positive. This indicates that higher ages are associated with higher family size preferences. This finding is in line with that of Odera (1981:109-110) who found that women in older age groups show higher fertility. Thus, in Mang'u Location, the family size preference increases with the increase in the age of women. The older women are therefore less likely to limit their family sizes. The possible explanation is that, older women may be willing to stick to the customs, norms and values of the Agikuyu community which

advocated for many children.

Table 5:9 Distribution of respondents according to age and family size preference

(N = 120)

Family size preference	Age of the respondents					Total	Percent
	20 - 24	25 - 29	30 - 34	35 - 39	>40+		
1 - 3	12	12	8	5	1	38	31.7
4 - 6	12	19	13	7	8	59	49.2
>6	3	6	3	5	6	23	19.2
Total	27	37	24	17	15	120	100.0
Percent	22.5	30.8	20.0	14.2	12.5	100.0	

Source: Survey data.

$\chi^2_c = 7.13$ with 8 degrees of freedom, not significant at 95% level of confidence.

Pearson's $r = 0.258$

Contingency Coefficient (C) = 0.24

5:3:2 The influence of age at marriage on preferred family size.

Women in Mang'u Location are married at young ages. The age at marriage has an influence on the preferred family size. It can be seen in table 5:10 that, 75.0% of the respondents became married at the age of 24 years and below. The respondents who became married at age 15 - 19 years comprised 35.0% of the respondents and 35.7% of them preferred 1 - 3 children, 54.8% preferred 4 - 6 children and 9.5% preferred more than six children.

Among women who married at ages 20 - 24 years, 37.4% preferred 1 - 3 children, 47.9% preferred 4 - 6 children and 14.6% preferred more than six children. The respondents who were married at age 25-29 years comprised 15.0% of the respondents and 16.7% preferred 1 - 3 children, 55.6% preferred 4-6 children and 27.8% preferred more than six children. Only 10.0% of the respondents became married at age 30 - 34 years and 16.7% preferred 1 - 3 children, 25.0% preferred 4 - 6 children while 58.3% preferred more than six children. Thus, evidently, the family size preference is higher among the women who married at higher ages than those who married at low ages.

When chi-square value was computed, it was found to be 12.82 with six degrees of freedom significant at 95% level of confidence. The contingency coefficient of 0.31 indicates a strong association between age at marriage and the preferred family size. Pearson's correlation coefficient of 0.287 shows a positive association between age at marriage and the family size preference. The possible explanation for the positive relationship between preferred family size and age at marriage is that later marriages are mostly of couples who may be totally resolved and feel they are mature to be parents. They know that their younger counterparts have children and they would like to procreate faster, spacing their offspring's closely, in order to catch up with others who started their families earlier. On the other hand, early marriages are made up of couples who have not resolved and would not like to burden themselves with children in case of a breakage in their marital unions.

Table 5:10 Preferred family size according to age at marriage

(N = 120)

Family size preference	Age at marriage (in years)					
	15 - 19	20 - 24	25 - 29	30 - 34	Total	Percent
1 - 3	15	18	3	2	38	31.7
4 - 6	23	23	10	3	59	49.2
>6	4	7	5	7	23	19.2
Total	42	48	18	12	120	100.0
Percent	35.0	40.0	15.0	10.0	100.0	

Source: Survey data.

$\chi^2_c = 12.82$ with 6 degrees of freedom, significant at 95% level of confidence.

Pearson's $r = 0.287$

Contingency Coefficient (C) = 0.31

5:3:3 The influence of marital duration on preferred family size

The duration of marriage has a positive relationship with the preferred size of the family. This means that respondents in Mang'u Location who have been in marital unions for long preferred large families than women who have been in marital unions for shorter periods. Table 5:11 shows the preferred family size according to the duration of marriage. Approximately 23.3% of the respondents have been in marital unions for 1 - 5 years and 42.9% preferred 1 - 3 children, 53.6% preferred 4 - 6 children and 3.6% preferred more than six children. The respondents who have been in marriage for 6 - 10 years comprised 30.8% of the respondents and 40.5% of them preferred 1 - 3 children, 40.5% preferred 4 - 6 children and 18.9% preferred more than six children.

Among the respondents who have been in marital unions for 11 - 15 years, 26.1% preferred 1 - 3 children, 52.2% preferred 4 - 6 children and 21.7% preferred more than six children. Among the respondents who were in marital unions for 16 - 20 years, 5.9% preferred 1 - 3 children, 76.5% preferred a family of 4 - 6 children, while 17.6% preferred more than six children. Only 15 respondents were in marital unions for more than 20 years. Among them, 26.7% preferred 1 - 3 children, 26.7% preferred 4 - 6 children and 46.7% preferred more than six children.

The chi-square value shows a moderately strong relationship between marital duration and family size preferences. A calculated chi-square of 15.52 with eight degrees of freedom was significant at 95% level of confidence. A contingency coefficient of 0.34 indicates that the association between these two variables is strong. A Pearson's correlation coefficient of 0.290 shows that marital duration and family size preferences are positively related. The possible explanation for the positive association between marital duration and preferred family size is that those who have been in marital unions for long are older people who have stuck to the Agikuyu traditional norms that advocated for bigger families.

Table 5:11 Distribution of the respondents according to marital duration and preferred family

(N = 120)

Family size Preference	Marital duration (in years)						Percent
	1 - 5	6 - 10	11 - 15	16 - 20	>20	Total	
1 - 3	12	15	6	1	4	38	31.7
4 - 6	15	15	12	13	4	59	49.2
>6	1	7	5	3	7	23	19.2
Total	28	37	23	17	15	120	100.0
Percent	23.3	30.8	19.2	14.2	12.5	100.0	

Source: Survey data.

$X^2_c = 15.52$ with 8 degrees of freedom, significant at 95% level of confidence.

Pearson's $r = 0.290$

Contingency Coefficient (C) = 0.34

5:3:4 The influence of child mortality on the preferred family size

Mortality is positively related to family size preferences. There is a tendency for the respondents to prefer a large family size when the mortality rate is high. Children's mortality in Mang'u Location is low. Low mortality could be due to better nutrition and health facilities. Those who had not lost a child comprised 70.0% of the respondents. Among them, 33.3% preferred 1 - 3 children, 57.1% preferred a family of 4 - 6 children and 9.5% preferred a family of more than six children. The respondents who had lost 1 - 2 children were 22 (18.3% of the respondents). Among them, 13.6% preferred 1 - 3

children, 40.9% preferred a family of 4 - 6 children, and approximately 45.5% preferred a family size of more than six children. Only 11.7% of the respondents had lost more than two children. Among them, 50.0% preferred 1 - 3 children, 14.3% preferred 4 - 6 children and 35.7% preferred a family of more than six children.

When chi-square value was computed, it was found to be 18.05 with four degrees of freedom and significant at 95% confidence level. A contingency coefficient (c) of 0.36 shows that the association between the two variables is strong. Pearson's correlation coefficient of 0.159 shows a positive association between mortality and family size preference. This finding differs from that of Omagwa (1985:128) who found child mortality to be inversely related to fertility. The observed positive relationship between mortality and preferred family size could be due to the desire by women to compensate for the loss of an offspring or even an anticipated loss. The findings of KDHS (1993:75) confirm the positive relationship between preferred family size and child mortality.

Table 5:12 Distribution of the respondents according to total number of children dead and preferred family size

(N = 120)

Family size preference	Number of dead children				
	None (0)	1 - 2	>2	Total	Percent
1 - 3	28	3	7	38	31.7
4 - 6	48	9	2	59	49.2
>6	8	10	5	23	19.2
Total	84	22	14	120	100.0
Percent	70.0	18.3	11.7	100.0	

Source: Survey data.

$\chi^2 = 18.05$ with 4 degrees of freedom, significant at 95% level of confidence

Pearson's $r = 0.159$

Contingency Coefficient (C) = 0.36

5:3:5 Conclusion of the findings involving hypothesis 3

The third hypothesis of this study was stated as:-

H₁: There is a significant relationship between demographic variables and the preferred family size.

The null hypothesis can be stated as:

H₂: There is no significant relationship between demographic variables and the preferred family size.

The demographic variables that have been examined are age, age at marriage, marital duration and child mortality. The age of the respondents was found to be positively related to the family size preference. The Pearson's correlation coefficient (r) was found to be 0.258. The conclusion that can be drawn is that the age of the respondents is positively related to family size preferences.

Age at marriage was found to be positively related to family size preferences. The family size preference was found to increase with the age at marriage. Pearson's correlation coefficient (r) was found to be 0.287. Marital duration was also found to be positively related to the family size preferences. Women with fewer years in marriage were found to have a lower family size preference. Pearson's correlation coefficient (r) of 0.290 indicates that marital duration is an important factor in influencing family size preferences. Children's mortality was also found to be positively associated with the family size preferences.

All the four demographic variables that were examined were therefore found to be positively related to family size preferences.

5:4 The influence of contraceptive use on the preferred family size

The fourth hypothesis of this study was stated as:-

H₁: There is a significant inverse relationship between contraception and the preferred family size.

The alternative (null) hypothesis can be stated as:

H₀: There is no relationship between contraception and the preferred family size.

Table 5.13 shows contraceptive use according to family size preference. The cross tabulated data presented in table 5.13 show that majority (49.2%) of both adopters (users) and non adopters (non users) of contraceptives preferred 4 - 6 children. Approximately 28.6% of the current contraceptive users preferred 1 - 3 children, 48.8% preferred 4 - 6 children, and 22.6% preferred more than six children. About 38.9% of the non adopters of contraceptives preferred a family of 1 - 3 children, 50.0% preferred 4 - 6 children, and only 11.1% of the non adopters preferred a family size of more than six children.

When chi-square value was computed, it was found to be 1.75 with two degrees of freedom and not significant at 95% level of confidence. The association between the two variables is weak as indicated by the value of the contingency coefficient (0.12). Pearson's correlation coefficient of -0.142 shows that contraceptives use and family size preferences are negatively associated. The negative relationships between contraceptives use and family size preference means that as family size preference increases, contraceptive use decreases. The relationship between contraceptive use and family size preference is however weak. This finding is at variance with the findings of Ikamari

(1985:101) who found a positive relationship between contraceptive use and the preferred family size among women. Our findings also differ from those of Mungai (1986:86) who also found a positive association between contraceptives use and desired family size.

The findings of this study however, tally with the findings of Rono (1994:121-122) who found a negative association between the use of contraceptives and the preferred family size among men.

Thus, basing on the above findings the hypothesis that there is a significant inverse relationship between the use of family planning techniques and family size preferences among women cannot be accepted.

Table 5:13 Distribution of the respondents according to adoption of contraceptives and family size preference.

(N = 120)

Family size preference	Adoption of contraceptives			
	Adopters	Non adopters	Total	Percent
1 - 3	24	14	38	31.7
4 - 6	41	18	59	49.2
>6	19	4	23	19.2
Total	84	36	120	100.0
Percent	70.0	30.0	100.0	

Source: Survey data.

$X^2_c = 1.75$ with 2 degrees of freedom, not significant at 95% level of confidence.

Pearson's $r = -0.142$

Contingency Coefficient (C) = 0.12

5:5 Coefficient of Determination (r^2) and Percentage of Variance of Selected Explanatory Variables Affecting Family Size Preferences in Mang'u Location

Table 5.14 shows that all the explanatory variables selected for this study account for 53.3% variance in the family size preferences in Mang'u Location. This implies that there are other important variables apart from the ones discussed here that are significant in explaining family size preferences in Mang'u Location.

Marital duration was found to be the most important variable explaining preferred family size. It explained 8.4% variance of preferred family size in Mang'u Location. The second important determinant was found to be age at marriage. Age at marriage explained 8.2% variance of family size preferences among married women in Mang'u Location. Both marital duration and age at marriage were found to be positively related to the preferred family size. The third important determinant of preferred family was the occupation of women. This variable was found to explain 7.8% variance of preferred family size in Mang'u Location. Education was also found to be an important determinant of the preferred family size, accounting for 5.4% variance of the preferred family size. Land and income were found to be of less importance in affecting the preferred family size. They accounted for 0.5% and 0.6% variance respectively. Table 5.14 summarises the relationship between the selected independent variables and the preferred family size in Mang'u Location.

Table 5:14 Coefficient of determination (R^2) and percentage of variance of selected explanatory variables affecting family size preferences in Mang'u location

VARIABLE	R	R^2	VARIANCE
Education	-0.234	0.054	5.4%
Occupation	-0.281	0.078	7.8%
Income	0.083	0.006	0.6%
Land	-0.076	0.005	0.5%
Religion	-0.194	0.037	3.7%
Sex preference	-0.186	0.034	3.4%
Post-partum abstinence	0.205	0.042	4.2%
Age	0.258	0.066	6.6%
Age at marriage	0.287	0.082	8.2%
Marital duration	0.290	0.084	8.4%
Mortality	0.159	0.025	2.5%
Contraceptives	-0.142	0.020	2.0%
Total			53.3%

Source: Survey data.

conclusion

In this chapter, we have presented a detailed statistical analysis of the research findings. We have evaluated the influence of socio-economic, cultural and demographic variables on the preferred family size. This evaluation was done through the testing of four main hypotheses based on the factors that were thought to influence the preferred family size. The findings of the study show that education is inversely related to the preferred family size. Occupation was found to have an influence on the preferred family size. Income was found to be positively associated with the preferred family size. Land was found to be inversely associated with the preferred family size. Religious affiliation, sex preference

and post-partum abstinence were found to have an influence on the preferred family size. Age, age at marriage, marital duration and mortality were found to be positively associated with the preferred family size. The study found a negative association between the use of contraceptives and the preferred family size among women in Mang'u location.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.0 INTRODUCTION

This chapter presents a summary of the salient research findings, conclusions and recommendations. This study sought to answer sociological questions through four research hypotheses which were stated as:-

- 1. Women with higher socio-economic status are more likely to limit their family size.*
- 2. Socio-cultural values influence the preferred family size.*
- 3. There is a significant relationship between demographic variables and the preferred family size.*
- 4. There is a significant inverse relationship between contraception and the preferred family size.*

6.1 Socio-economic Status and the Women's Family Size Preferences

This thesis sought to explore the relationship between socio-economic factors and the family size preferences. The socio-economic factors selected for the study included education, occupation, household income and land acreage.

Majority (86.7%) of the respondents were found to be literate. Only 13.3% of the respondents were illiterate. The relationship between the respondents' level of education and their family size preference was found to be very strong. Education was found to

have a negative impact on large family size preferences. This means that provision of women's education is important in influencing them to prefer small families. The Pearson's correlation coefficient (r) was -0.234 and the respondent's education level was found to explain 5.4% variance of the preferred family size in Mang'u Location. The implication was that education affects the views and attitudes of women on the family size preferences.

Out of 120 respondents, majority (67.5%) of the respondents were in the agricultural sector. Occupation was found to have a significant influence on the preferred family size. The Pearson's correlation coefficient (r) was found to be $r = -0.281$ and respondents' occupation was found to explain 7.8% variance in the current family size preferences in the Location. Thus, we conclude that women occupation has a significant influence on the family size preference.

Our respondents were generally in the low income bracket. The average income per household was Ksh.7,267.208 per month. The majority (81.7%) of the families had an income of less than Ksh.10,000 per month. Thus, income was very low, and hence respondents expressed their inability to meet the requirements of education, food and health facilities. Our findings indicated that children were considered as a form of financial investment or assets. Thus, it was found that those people who had higher incomes opted to have bigger families. However, the cross tabulated data of income and family size preference (table 5:3) indicated that there is a weak positive relationship between income and the family size preferences. The Pearson's correlation coefficient (r) was 0.083 and income was found to explain 0.6% variance of the preferred family size in Mang'u Location. Thus, as the household income increases, there is less likelihood that women will favour small families and the adoption of contraception. We therefore conclude that low income of the respondents is not an inevitable barrier against the reduction of fertility, and in fact higher income may act as a barrier against family size regulation.

The study sample was largely made of people with small pieces of land. The mean land acreage was 0.985 acres. The respondents attributed the small pieces of land to land subdivision due to large family sizes. The respondents faced the problem of no longer being able to give land through inheritance to their sons. The respondents said that this has made many young people move to the urban centres in search of alternative sources of employment. This study found an insignificant inverse relationship between the amount of land and family size preferences. Land is therefore an insignificant factor for women to consider in making family size decisions. The Pearson's correlation coefficient was found to be $r = -0.076$ and land was found to explain only 0.5% variance in female family size preferences. The conclusion was that though land is important in the provision of food, in Mang'u Location land is not an important factor for women to consider in making their family size decisions. It was apparent that land is not an inducement for women to have more children.

It is worth noting that this study was conducted at a time of general economic hardships. As such, economic hardships may have forced people to hold down family sizes and influenced their attitudes and opinions towards large family size and contraceptive use. Furthermore, harsh economic conditions may have made it difficult for parents to feed, clothe and educate large numbers of children.

6.2 Socio-cultural factors and women's family size preferences

Religion was found to have a significant influence on family size preferences. Catholic religion was found to discourage the use of artificial methods of family planning. The chi-square values indicated that the relationship between religion and family size preferences was significant at 95% level of confidence (table 5:5). Pearson's correlation coefficient of -0.194 shows that religion is a moderately strong factor in influencing the sizes of the family that respondents prefer. Religion was found to explain 3.7% variance of the preferred family size. The emerging conclusion was that religion has a moderately strong

effect in the family size preferences. The study therefore depicts a society where women seem to be influenced by religion in making fertility decisions.

The study found sex preference to have a significant influence on the family size preferences. It was found that 27.5% of the respondents preferred a boy for their next child, and 19.2% preferred a girl for their next child. A calculated chi-square of 15.35 and $df = 6$ was found to be higher than the critical chi-square at 95% confidence level; thus indicating a significant relationship between sex preference and preferred family size. Pearson's correlation coefficient of -0.186 shows that sex preference is a moderately strong factor in influencing preferred family size. Sex preference explains about 3.4% of the variability of the family size preferred in this sample. Thus, sex preference is an important factor in influencing the family size in Mang'u Location.

The post-partum abstinence period in Mang'u Location is low. The average post-partum abstinence period was 2.155 months. The period of sexual abstinence after the birth of a baby was found to have a positive association with the preferred family size. This means that women with longer periods of post-partum abstinence prefer bigger families. The relationship however was not very strong. The conclusion that emerges is that women may have longer periods of post-partum abstinence even when their preference for children is high. Their efforts may be geared towards the spacing of the children. Post-partum abstinence explained 4.2% variance of the preferred family size in Mang'u Location.

6.3 Demographic Factors and Women's Family Size Preference

Age was found to be an important variable that influences the family size preferences. Older women were found to prefer bigger families. Consequently, older generation of women had a negative effect on the regulation of family size preferences. Younger women preferred smaller family sizes. This is an indication that the attitude of younger

women is more in favour of fertility regulation than the attitude of older women. The Pearson's correlation coefficient (r) was found to be 0.258 and the age of women was found to explain 6.6% variance in the current family size preferences in the area. According to this information, therefore, the older the female parents the least likely that they would get involved in regulating their family sizes. The older women may therefore least participate in family planning and in fertility regulation.

Marital duration and age at marriage were found to be positively related to the family size preferences. This was attributed to the stability of marriages of those people who marry at older ages. Marital duration was found to explain 8.4% variance in the family size preferences while age at marriage explained 8.2% of the variance in the family size preferences in Mang'u Location. It is generally assumed that in Kenya late age at marriage leads to fertility decline. The finding of this study however shows that late age at marriage has a strong effect on family size preferences with women who marry late preferring bigger families. Thus, women who marry at older age may not see the need to regulate their family sizes unlike women who marry at younger ages.

Children mortality was found to have a strong influence on the preferred family size. Where mortality was high, women had an inclination towards a bigger family. The respondents were found to have access to primary health care. This could have contributed to low mortality rates that were observed. Thus, we conclude that lower mortality influenced women towards a lower level of reproduction. Mortality was found to explain 2.5% variance in the family size preferences in Mang'u Location. Thus, mortality decline in the location has seemingly played a significant role in motivating women to have smaller family sizes.

6.4 Use of Contraceptives and Family Size Preferences

Majority (70.0%) of the respondents were users of contraceptives. Approximately 25.0% of the respondents quoted the use of family planning as a remedy to the high costs of living in the area. The respondents however felt that due to harsh economic conditions, it was impossible to educate, clothe and feed even a small number of children. Thus, though 30.0% of the respondents did not use family planning methods, there was a general consensus on the need of having a smaller family.

The study noted that the pill was the most popular method among the users of contraceptives with 44.0% of the adopters of contraceptives using the pill. Some methods were however not popular among the users. For example, only 2.4% of the current users made use of the condom. Most of the respondents claimed that the condom is supposed to be used by their husbands in their extra-marital affairs in order to protect themselves against sexually transmitted diseases particularly the deadly HIV-AIDS disease.

This study found that communication between couples about the use of contraceptives was very common. About 93.3% of the respondents discussed about contraceptives use with their husbands. The husbands approval of family planning was found to be very high. Approximately 81.7% of the respondents discussed contraceptives use with their husbands and the latter approved of the method of family planning. Only 6.7% of the respondents had not discussed family planning with their husbands.

The study found that the most common reason for not using family planning methods was fear of side effects that are associated with contraceptives use. The study also found that the most common reason for preferring more children was to replace dead children. The study found that 13.3% of the respondents thought it was disadvantageous to have a small family because of the fear of mortality.

Contraceptives use was found to be inversely related to the preferred family size. The relationship was however found to be weak. The conclusion was that contraceptives use does not significantly influence the family size preferences. The adopters of contraceptives were found to have a lower children's preference than the non-adopters. Contraceptive use was found to explain 2.0% variance in the family size preference in Mang'u location. Thus we conclude that contraceptives use contribute to the reduction in the family size. The researcher however notes that the regulation of fertility in the area occurred with or without the use of modern contraceptives. However, modern contraceptives became a useful support when the need to control pregnancies went beyond what was possible with the traditional patterns of fertility regulation.

6.5 Recommendations for Policy Makers

Women in Mang'u location were found to have interests in regulating fertility through the use of modern contraceptives. It was evident that majority (70.0%) of the respondents used modern contraceptives and virtually all women knew at least two methods of family planning. However, there is still need for more education and motivation if fertility levels are to be kept down.

This study found that condom use in marital unions was very low. The researcher recommends that condom use in marital unions be promoted more vigorously. Family planning educators should help the people to remove the stigma that surrounds the use of condoms in the area. Currently, the condom is only popular in extra-marital affairs and not for the purpose of the prevention of pregnancy. Family planning educators should help to spread facts about the use of the condom as a family planning device. Currently, dissemination of adequate information on the use of contraceptives is lacking in the area. Good and correct information about possible side effects of contraceptives should be made available to both men and women. As it is today, resistance to some of the modern methods of contraception is based on hearsay.

Family planning awareness should be reinforced among both the female and male population of all religious denominations. If possible, population education can be introduced in the education curriculum so that we can mould the attitudes of young people to be in favour of family planning and smaller family size preferences. Family planning education should aim at broadening their knowledge about the use of contraceptives and their side effects. The community based distribution should be more concerned about the health of the users of contraceptives other than merely concentrating on the distribution of contraceptives. Furthermore, we highly recommend that community based distribution systems be sufficiently expanded in order to enable women to get sufficient supplies of contraceptives. The Government therefore needs to play a more active role in the provision of modern contraceptives.

Women with higher levels of education were found to prefer smaller families. Women education plays a significant role in fertility regulation. Thus, female education was identified as a major factor behind the trend towards smaller families in Mang'u Location. Education is therefore a major tool that can change the attitudes of women in the rural areas towards small family size preferences. The preference for small families is also a response to higher costs of education, food and clothing. Children's education was found to discourage women from having large families because by sending children to school, parents lose their labour. In Kenya, education requires parents to invest a lot of money especially with the introduction of the cost-sharing. We recommend that the Government should devise strategies and policies which will strengthen the aspirations for women's education in the country in order to maintain the trend towards the smaller family. Education should be made more affordable so that most of the males and females can improve their education levels.

Campaigns are required in order to clearly convince people in the rural areas that Kenya needs a healthy, well-fed and well-educated population. To achieve this, young married

couples should be targeted by family planning educators. Furthermore, in order to make family planning more successful, women empowerment should be encouraged. This will put women in a better position to make independent family size decisions. An improvement of women's position in the families will no doubt enable them to have a greater control of their reproduction and their health.

An improvement in the general standards of living of the population is very essential because it may motivate people to use contraceptives in order to reduce fertility. The study therefore suggests that there is need to tackle the problem of abject poverty in the area. To ensure that the trend towards smaller family size is maintained, our planners should plough more money into productive health services, child survival and safe motherhood. To change the attitudes of people towards small families, child mortality has to be kept down. This study found that attitudes of people are in favour of smaller families when mortality is low.

The study found that 11.6% of the respondents were discouraged from using contraceptives by their husbands. Thus, patriarchal dominance was a barrier to fertility regulation in the area. For family planning to be successful, it must involve women as well as men, since human reproduction in most cases involves joint decisions. Male involvement in family planning programmes needs to be reinforced in order to broaden their knowledge about the working of contraceptives. This will also help men to appreciate the use of contraceptives and more importantly they would encourage their wives to use the contraceptives. Even more important, information on family planning and access to contraceptives should be fully respected as a human right in Kenya.

Finally and crucially, family planning programmes should especially target the married women because they are more likely to have an unmet need for family planning than those women who are not married.

6.6 Suggestions for Further Research

1. Since this study was carried out in a small area and the sample size was small, it would be crucial to carry out a larger sample covering the major regions of Kenya. This would make it possible to arrive at more valid and meaningful observations.
2. The variables investigated in this study explained 53.3% variance in the family size preferences. A macro-level study is required to investigate the role of other variables that may have an influence on the family size preferences. Studies should also focus on the role of birth spacing and cessation of child bearing on the change of fertility patterns in the country.
3. Furthermore, since this study was carried out only in a rural environment, it would be essential to carry out a comparative study in order to compare the effects of rural residence against urban residence on preferred family size. The differences in the features of urban and rural households may affect the supply, the demand and the costs of regulating fertility in the country.

Conclusion

This study has provided a confirmation of the impact of socio-economic, cultural and demographic factors on the demand for children. The study found that the marriage age of women is still low. Fertility desires are low as children contribute little economically and the taste of parents is changing away from large families. There is therefore a perceived need to regulate fertility in Mang'u Location. Due to the effects of extensive family planning programmes, the costs of regulating fertility have declined tragically. The desire to limit family size among the respondents was found to be very strong as 70.0% of the respondents adopted fertility regulation measures.

The impact of education, female employment, a decline in mortality rate and late age at

marriage may accelerate the decline in preferred fertility. The demand for children continues to decline due to the high costs of raising children. Therefore, the current fertility situation in Mang'u Location is a result of a complex set of interrelated socio-economic, cultural and demographic factors. The development of the family planning programme has no doubt contributed enormously in the regulation of fertility in Mang'u Location.

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APPENDIX

QUESTIONNAIRE FOR CURRENTLY MARRIED WOMEN AGE 15 - 49 YEARS

TO BE COMPLETED BY RESEARCHER

UNIVERSITY OF NAIROBI

DEPARTMENT OF SOCIOLOGY

RESEARCH ON DETERMINANTS OF FERTILITY

Confidential information to be used for research purposes only

A. IDENTIFICATION

District.....

Division.....

Location

Sub-location.....

Village.....

Respondent's name: (Mrs.).....

Interviewer 's name

Number of visits.....

Date(s).....

Time

Language used in interview

Kikuyu

English

Kiswahili

B. RESPONDENT'S BACKGROUND CHARACTERISTICS:

First, I would like to ask you some questions about you and your household.

1. How long have you been living in this sub-location continuously?years

2. when were you born?

YearMonthAge

If does not know year and month, interviewer's estimate of age
based on some major event

3. What is your ethnic group (tribe)?

4. What is your religion?

Catholic

Protestant

Muslim

Traditionalist

Other (specify)

C MARRIAGE INFORMATION

Now let us come to the issue of marriage.

5. What is your marital status?

Married

Single

Divorced

Separated

Widowed

If not currently married terminate the interview

6. Is your husband

Staying with you at the moment?....

Staying away for the time being?....

Stopped staying with you for good?...

If stopped for good, terminate this interview.

7. When did you marry? Year.....Month

8. How old were you at the time of marriage?

.....Years

9. (i) Have you been married only once or more than once?

Once

Twice

Thrice

Other (specify)

(ii) If married more than once, when was your first marriage?

.....

(iii) How old were you at first marriage?

.....Years

10. How old is your present husband?

.....Years

11. Does your husband have other wives?

Yes ...

No

If yes, how many wives does he have you included?

Two ...

Three ...

Four ...

Other (specify)

12 If he has other wives, what number are you in the order of the wives he has?

First

Second

Third

Fourth

Other (specify)

D. SOCIO-ECONOMIC STATUS

13. Have you had formal education?

Yes ...

No

14. If yes, what was the highest level of schooling you attended?

Lower primary

Upper primary

Secondary

College/university

15. Have you attended an adult education class?

Yes ...

No ...

If yes, for how long?

16. Can you read a letter /newspaper /magazine easily, with difficulty, or not at all?

Easily

With difficulty

Not at all

17. What is your main occupation?

- (i) Formal employment e.g. salary, wages etc
- (ii) Self employment e.g. business, informal sector etc.
- (iii) Agriculture
- (iv) Other (specify)

18. If in employment other than agriculture, what is your total monthly income?.....shillings

19. What is the main occupation of your husband?

- (i) Formal employment (e.g. salary, wages, etc.)
- (ii) Self employment (e.g. business, informal sector, etc.)
- (iii) Agriculture
- (iv) Other (specify)

If in employment other than agriculture, state his monthly income.
..... Shilling

20. Do you or your husband own land?

Yes ..

No ..

If yes, what is the size of the farm?Acres

21. What are the major crops grown?

- (i)
- (ii)
- (iii)

(iv)

22 Did you sell any of these crops last year?

Yes ..

No ..

23 Roughly how much did you get from the sale of these crops last year?.....Shillings.

24 Do you keep livestock in your homestead?

Yes ...

No ..

If yes, how many?

Type	No
------	----

Goats ...	
-----------	--

Sheep ...	
-----------	--

Cows ...	
----------	--

Poultry ...	
-------------	--

Others (specify)	
------------------	--

25. How much income did you get from these animals last year?.....Shillings.

26. Do you have any commercial property(ies)?

Yes ...

No ...

If yes, state the property(ies).

(i)

(ii)

(iii)

(iv)

(v)

How much income do these possessions offer you per month?.....Shillings

E. FAMILY SIZE PREFERENCES

27. have you ever given birth?

Yes ...

No

If yes, how many children have you given birth to including children who may have died?

Sons ..

Daughters ...

28. Provide the following information about your living children.

Child	Sex	Age	Current occupation
1st			
2nd			
3rd			
4th			
5th			
6th			
7th			
8th			
9th			

etc. (1988) (1988) (1988) (1988) (1988) (1988) (1988) (1988) (1988) (1988)

29. Sometimes it happens that children die. I know that it is very painful to talk about it, but it is important to get the correct information.

(a) Have you ever given birth to a child who was born alive but later died?

Yes ...

No ...

If the answer by the respondent is no, interviewer should probe: Any baby who cried or showed signs of life but only survived a few hours or days?

(b) In all how many of your children have died?

Boys

Girls.....

30. (a) Are you intending to have more children in future?

Yes ...

No ...

Give reasons for your answer.

(i)

(ii)

(iii)

(b) If yes, how many?

Boys.....

Girls.....

31. (a) If you could choose exactly the number of children to have in your whole life, how many children would you choose?

.....

(b) Of these how many would you want to be boys and how many girls?

Boys.....

Girls.....

(c) And do you prefer your next first child to be a boy or a girl?

Boy

Girl

Any.....

Give reasons for your answer.

(i)

(ii)

(iii)

(iv)

32. (a) If you could go back to that time in your life when you did not have a child and choose the exact number of children to have in your whole life, how many children would you choose?

.....

(b) How many would you have wanted to be:

Boys ...

Girls ...

33. (a) What number of children would you suggest is good for couples in this area?

(b) Give reason(s) for your answer

(i)

(ii)

(iii)

(iv)

34. In what ways are your children useful?

(i) At the moment

.....

(ii) In future

.....

35. In your community, if a woman had no children how was/ is she looked at?

.....

.....

.....

36. What is your opinion towards barrenness?.....

37. For how long do you wait before you resume sexual intercourse after the birth of a baby?

Years

Months

38. Should a couple resume sexual intercourse when breast feeding is over or it does not matter?

(i) Should resume only when it is over

(ii) Does not matter

(iii) Does not know

F. KNOWLEDGE AND PRACTICE OF FAMILY PLANNING

39. Have you heard of family planning?

Yes

No

If yes, from whom?

.....

40. There are a number of methods that a couple can use to delay or to avoid pregnancy. Which of these methods have you heard about? (Tick where appropriate).

Pill ()

I.U.D ()

Injection ()

Condom ()

Female Sterilisation ()

Male sterilisation ()

Periodic abstinence ()

Withdrawal ()

Norplant

() Others (specify)

41. Have you ever used a family planning method?

Yes ..

No ..

If no, why.....

If yes, when did you start and when did you stop? (a) Month
(started) Year

(b) Month (stopped) Year

42. (a) Are you currently using any of the methods?

Yes ..

No ...

(b If no, why

(c) If yes, which method and why this method?

(d) When did you start using this method?

Year

Month

43. How many children, if any did you have when you started using a method?

Boys

Girls ...

44. If you are not currently using a method are you intending to use one in the future to avoid pregnancy?

Yes ...

No ...

If no, why?.....

45. If you are planning to use a family planning method in future, which method(s) are you planning to use?

.....

.....

Give

reasons.....

.....

46. Does your partner approve the use of family planning methods to avoid pregnancy?

Yes ...

No ...

.....

47. Do you approve the delaying or prevention of pregnancy by

couples be it your friends, relatives, etc ?

Yes ...

No ...

Give reasons for your answer

.....

.....

.....

48. Do you talk to your husband about family planning?

Yes ...

No ...

49. In your opinion, what are the main advantages of having a small family?

.....

.....

.....

.....

50. And what are the main disadvantages of having a small family?

.....

.....

.....

.....

Thank you for your patience and co-operation during this interview

Map No 2

THIKA DISTRICT
ADMINISTRATIVE BOUNDARIES

0 10 20 Km.

GATANGA

GATUNDU

KAMWANCHI
MANGA

KAKUZI

THIKA

RUIRU



--- District Boundary
--- Zonal "