WOMEN'S STATUS AS A CRUCIAL FACTOR IN FERTILITY REGULATION

A CASE STUDY OF MATHARE AND KOMAROCK RESIDENTIAL AREAS OF NAIROBI

BY

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"This thesis is my original work and has not been presented for a degree in any other university".

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DEDICATION

This paper is dedicated to my wife and parents who consistently gave me the moral and financial support respectively that enabled me complete this work.

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ABSTRACT

This is a Micro-level study which attempts to examine the impact of differential status of women on fertility level at family level in an Urban setting in Nairobi-Kenya.

Women's education and labour force participation were used as the main status variables in this study. The study examined and explored the direct and indirect relationship between the status variables and women's fertility. To measure the effects of the status variables on fertility, the present study applied the model of fertility determination.

The family formed the sampling unit whereas the individual wife aged 15-49 years formed the interview unit. A total of 200 ever-married women selected to form the sample was covered. To select the sample units, a simple random sampling using the lottery method was adopted. The interview schedule formed the basic tool for data collection. In the analyses of the data the main techniques used included mainly percentages and tables.

In summary it was found out that education is the most significant variable that determines women's status. Labour force participation also had some effects on fertility through its far reaching effects on breast feeding intensity and preference for children especially sons.

It is the general recommendation in this paper that in terms of future development, the opportunities to be examined should pertain to women's general access to and control of resources; education, employment, politics and adequate health care.

CHAPTER ONE

1.O INTRODUCTION

Many authors have cited the status of women as a key determinant of fertility, and have suggested that improvement in the status may be central element in successful efforts to reduce fertility
(Germain,1975[1]; 1Bongaarts 1983[2]; Easterlin and Crimmins 1985[3]). They argue that the subordinate of women relative to men is key to the explanation of why fertility decline has been delayed in some countries in Africa, Latin America and Asia. The demographic literature has suggested a number of empirical indicators that measure both the socio-economic and domestic dimension of the status of women[4]. This study focuses on two available (but not always satisfactory) indicators of women status. These include the level of education and work status.

The concern in this study is to examine and explore the direct and indirect relationship between these status variables and women's fertility. Of great interest than the direct measure of women's status on fertility are the intervening channels- both inadvertent and deliberate- that mediate this relationship. The study therefore examines the effects of the women's status indicators on intervening variables.

Three sets of intervening variables are examined. These include: supply of children and fertility regulation and decision making (Bongaarts 1982[5], Easterlin and Crimmins 1985[6]).

The assumption in this study is that a woman in a higher status- measured by her educational level and work status (labor force participation) will be able to control her fertility as compared to a woman in a lower status. This assumption is consistent with the general trend in other analyses of (Lee and Bulatao 1983[7], Bongaarts and Memken 1983[8], and Manson 1984[9]). In order to confirm this assumption, the present study focuses on two estates, Mathare Valley and Komarock residential areas, with probable differential "status" of women.

1.1 PROBLEM STATEMENT

As has been true in many academic disciplines, in demography the subject of women's status was, until recently viewed as a special topic rather than one central to mainstream theories of reproductive change.

Although papers were written that mentioned women's role and status (Chochrane, 1948[10]), general statements about the determinants of fertility for most parts ignored these variables. This intellectual isolation of the concept of women's status from the mainstream of demographic thought in parts reflects the functionalist and feminist cast of traditional demographic transitional theory.[11] As outlined by Coale (1973) and others, traditional demographic theory tended to focus on the interests and constraints of the family units rather than on those of individuals within them. Conflicts between husbands and wives and between parents and children were thus ignored.[12]

Although the demographic transition theory recognizes that women's labor force participation might motivate couples to limit fertility, this effect is based on the implications of women's work for the family's budget, rather than on its implication for women's freedom from the control of the family members[13].

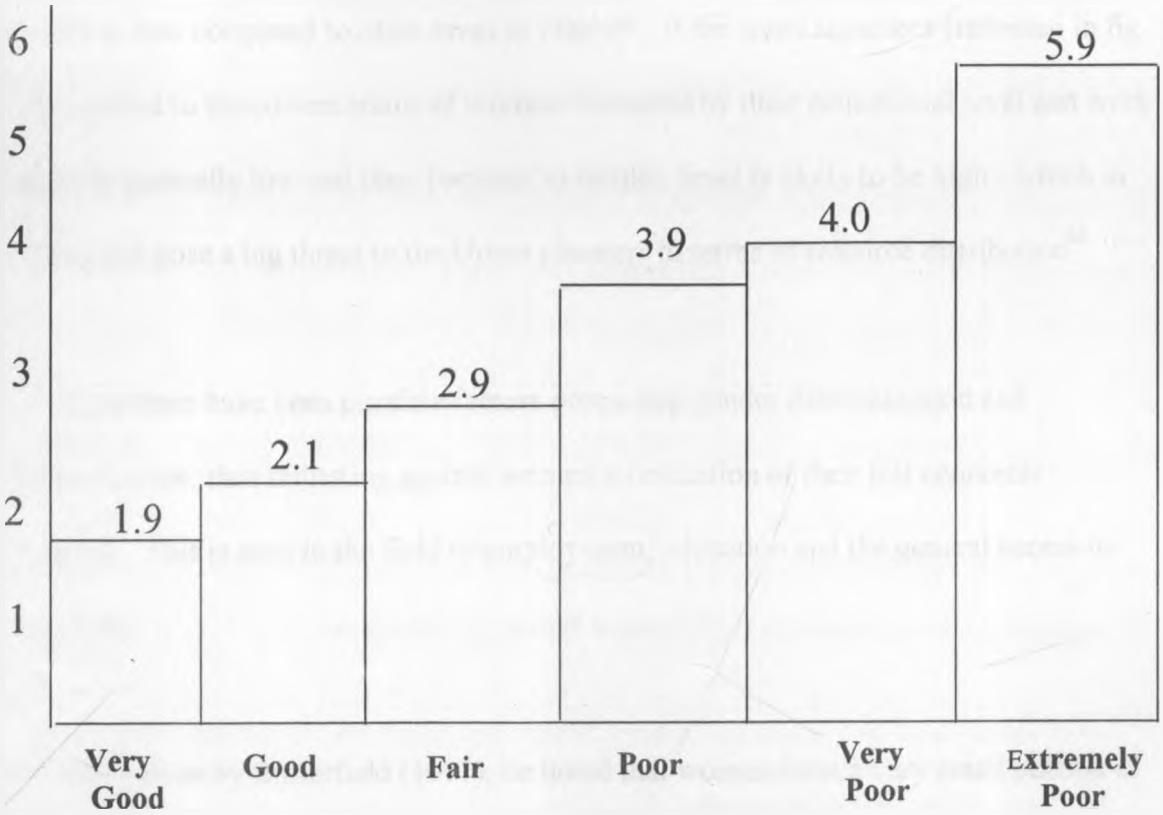
This is not to say that all demographers have ignored the topic of women's status in the past, on contrary, beginning in the 1966's a small group feminists (e.g. Blake 1965[14], Easterlin 1965[15], Caldwell 1975[16] and Germain 1975[17]), argued that the status of women has important demographic implications. Only within the last decade, however has this topic entered the mainstream of demographic thought. Currently the status of women plays an important role in caldwells (1982)[18] theory of wealth flows, in Cains' (1980)[19] idea of risk insurance and fertility transition, in Easterlin and Crimmins (1985)[20] synthesis model of fertility determination and other studies done by the United Nations (1975, 1988)[21]. The present study applies the model of fertility determination to measure the effects of improved status of women on fertility within the family unit.

Although the status of women has entered the mainstream of Demographic thinking, it has not become the central variable in most theories of fertility transition. In this context, understanding what is meant by "status of women" and tracing the impacts of women's status variables on fertility becomes the central aim of the study.

Ranking of the status of women in 99 countries by the population crisis committee (1988) indicates that in no country in the world do women enjoy equal status with men. In the least developed countries of Africa, the Middle East, Asia and Latin America, crushing poverty overlaid with long standing pattern of discrimination create harsh conditions for women. Over 60 per cent of all women and girls in the world live under conditions which threaten their health, deny them the choice about child bearing, limit their economic participation and fail to guarantee them equal rights and freedom with men.[22]

As figure 1 indicates, fertility levels depend highly on the status of women and that the lower the status, the highly the fertility and vice versa.[23]

Figure 1: BIRTHS PER WOMAN COMPARED TO STATUS OF WOMEN



STATUS OF WOMENS' BANKINGS

SOURCE: POPULATION CRISIS COMMITTEE, 1988

It is within the context of such findings (fig 1) the present study focuses on the possible impacts of women's status on fertility in the slum area of Mathare, where the status of women is low compared to other areas in Nairobi. If the same argument (reflected in fig 1) is applied to the current status of women measured by their educational level and work status is generally low and their (women's) fertility level is likely to be high - which in turn would pose a big threat to the Urban planners in terms of resource distribution.[24]

In Kenya there have been possible factors promoting gender discrimination and differentiation, thus militating against women's realisation of their full economic potential. This is seen in the field of employment, education and the general access to resources.

In a study done by Butterfield (1977), he noted that women form a very small portion of the work force in the formal sector, which is a major source of wage employment in Kenya. Although their representation ion the formal sector is somewhat large, it is still quite small in absolute numbers[25]. Reports from Kenya Economic Survey (1991) further indicate that women's participation in Industrial labour force has remained low despite a modest growth in its (industrial) portion of total employment. The survey further shows that the total employment. The survey further shows that enrolment in schools have risen dramatically in the 1980 and 1990's for both women and men, especially in primary schools. However it has been noted that educational of women decrease in a rather dramatic fashion beyond 8 years of education[26].

The type of household decision that women in Kenya would be expected to make would be a mirror-image of their inferior status in many levels of the society. A study done by Hanger and Morris (1973) revealed that women's autonomy in decision making is more systematically correlated with the utilization of their own labour which is the only resource that they have more or less completely under them[27].

The world's poorest women are not merely poor, they live on the edge of subsistence; they are economically dependent and vulnerable, politically and legally powerless. As wives and mothers, they are caught in a life cycle that begins with early marriage and too often ends with death in child birth. They work long hours and sometimes work harder than men, but their work is typically unpaid and unvalued (world development forum 1998).

" ..... Increasingly, households as headed by women with dependant children presaging, the feminization of poverty, working women with families work a whole day responsible for their jobs plus their care of children and household chores."[28]

Slum women presumably are not exempted from such conditions. As the findings of the Kenya Demographic health survey (1988) show, educational achievement of women in Nairobi is the highest among the 8 provinces in Kenya, with 30% having completed primary school education and 43% having attained secondary and high level[29]. In contrast, the general education attainment of women in Mathare is lower and more than half of the women have no schooling background. According to the findings of Nelson (1977) more than 50% of the women in Mathare have no schooling background

Women in Mathare participate in two major categories of economic activity, namely wage employment and petty commodity production. The latter is more pronounced since most of them lack the required skills that would allow them to compete in the skilled job market.

There is generally ill health among children who suffer from malnutrition. Social amenities and public utilities such pit latrines and health facilities are scarce. The place is overcrowded and housing is poor quality. The reverse is the case of Komorock estate where the social economic status of the residents is quite high.

1.2 AIMS OF THE STUDY

Given the low status of women in Mathare, it is the central aim of this study to:-

1. Investigate the possible impacts of the status variable on their (women's) fertility regulation.

The study further attempts to show how each status variable affects fertility through the intervening variables for example:-

a) How each education and work status affects women's age at first marriage
b) How education affects infant and child mortality
c) How education and work status affects the use of contraception and
d) How labour force participation affects duration and intensity of breast feeding.

For the purpose of comparision the study attempts to investigate the possible impacts of the similar status variables on fertility in a high status area.

2 it is the ultimate objective of this study to provide policy makers with data useful in making programme decision, geared towards improving the status of women and finally reducing fertility.

1.3 JUSTIFICATION OF THE STUDY

In the past, there has been an over reliance on macro and micro level research and analysis in the study of fertility behaviour emphasing mainly the relationship between population growth, resource use and economic development, basing their arguments on the malthusian and Demographic transition theories: Adelman 1963[32] Heer 1962[33] Becker 1960 and Notenstein 1945[34] Demeney 1979 and Coale 1973 respectively. Most of these studies have isolated the concept of women status from the main stream of Demograghic thought. In Kenya (Nairobi), the studies on fertility (Omwagwa 1985[36]; Walji 1980[37]; Dow and Heisel 1966[38]) have in the past focused mainly on the social-cultural and economic factors in their explanations of the fertility behaviour. No specific study, that the researcher is aware of has in the past focused on the impacts of women's status on fertility in Nairobi and Mathare Valley in particular.

More so, the research in the area can be justified in terms of the widespread scholarly interest in a subject area so closely tied to conditions of life for the people. It is also clear, however, that anticipating and adjusting for population growth is essential if policy goals are to be met. An ability to specify the magnitude of changes is required background information for the development of policy in many areas.

As the experience of the Third World countries has shown, rapid population growth has many social and economic consequences related to the whole range of economic and social conditions of the people. Education system, health, food and housing needs, the quantity and quality of the labour force, the nature of markets for consumers are all influenced by population growth [39]. With improved understanding of the forces that shape population growth such as women's status, policy makers will be better positioned to anticipate changes and influence outcomes.

The study is a general attempt to improve the conditions of the already improvised population. In particular, it is a study geared towards improving the status of the slum women and further enhancing the understanding between their status and fertility - which would presumably reduce fertility in the long run.

Further, to establish the direction and strength of the relationship between the status variables and fertility, a comparative study approach is adopted. The study focuses on two estates with 'differential' status variables; Mathare Valley and komorock estates represent low and high status areas, respectively.

The rate of population growth is an acute problem affecting development in Kenya, Africa, and the world as a whole. According to the Kenya Demographic Health Survey (1989), the Kenyan population growth rate of 4.0 per cent per annum presents a critical problem to the government. Unemployment is too high and of the 90 per cent of the population living in the rural areas, large proportions drift to the urban areas every year. The movement creates the slum problem, theft, thurgery, banditry, overcrowding, poor sanitation, and many other social ills. With the rising cost of living in Kenya every year, it is very necessary for couples to plan their families so as to cope with the scarce resources and the increasing demands on them.

In order to reduce the family sizes, the Kenya government thus called for family planning programs (F.P.P). The family planning programs in Kenya was initiated in 1966-67 on the assumption that if population numbers continue to increase, all the resources including land, forestry, food e.t.c would be eaten up and economic development would be retarded.

In spite of the attempts to reduce the family size through the family planning programs, Kenya still remains one of the countries with the highest fertility rate in the world. The major concern for the government is therefore the rate at which her population is growing.

The current study focuses particularly on women's status as a crucial factor in fertility regulation. The focus on women should be of particular concern to any country that is intending to control her population. Women as opposed to men dictate population growth through their direct and indirect contribution towards fertility regulation.

A married couple will plan the number of children they wish to give birth to. However, it is the individual woman who will make the final decision concerning the procedures and steps that should be taken to arrive at the required number. She might secretly decide to discontinue pregnancy through abortion without necessarily consulting with the husband. A woman will also decide to tactfully avoid conception through the use of her safe sex period, or by secretly going for an injection or an operation. Others will adopt the use of the pill and the use or non-use of pills to control conception entirely lies with her.

More so, women who are denied a chance by their husbands to raise the number of children they require may opt to look for children elsewhere. This will also happen incase the husband dies or is rendered sexually inactive as a result of sickness.

There is a strong justification in the current study for focusing on women in relation to population growth as much of the fertility related issues lies with them.

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CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 INTRODUCTION

High Population growth is an acute problem affecting development in Kenya, Africa and the world as a whole. The main contributing factor to this growth rate in Kenya has been the high fertility rate (an average of 5.4 children per woman) and continued declining mortality rate (Kenya Population Census 1989).[40]

It is the view in this study that demographic behaviour to a large extent is a response to the economic conditions in a society. Although improvements in the Kenya Economy are quite evident, debate continues as to whether poverty has gotten worse or not.

Mason 1984[41] notes:

> "Kenya's growing economy is still characterized by large inequalities and much poverty is thus established beyond serious doubts, not withstanding the incomplete nature of the evidence.... There are various reasons why some groups in society risk being left behind in the development process, which include illiteracy, large numbers of children and a tendency for government programmes to favour the already well to do.

Equality remains a central concept in development planning and is postulated by the policy makers mainly in terms of opportunities. For the purpose of this study, the most important opportunities

examined pertain to women's general access to and control of resources: education and labour force participation which highly determine their (women's) status.

The literature reveals that demographic behaviour to a large extent is a response to the economic conditions in a society. Within this context, literature focuses upon the relations which might be traced between improvement in the status of women and their fertility behaviours. It further reveals that the status of women cannot affect fertility directly, but does so through the intermediate fertility determinants (Davis and Blake, 1956[42], Bongaarts 1978, 1982[43], Bulatao, lee and Bongaarts 1983[44] and, Easterlin and Crimmins 1985[45]).

Before examining the specific impact of female status variables on the intermediate fertility determinants, the literature focuses briefly on the problem of definition/of the concept 'women status' the factors that facilitate gender discrimination in Kenya, and on past studies regarding the general status of low income women in African cities.

WOMEN'S STATUS

There seem to be among many scholars that a consensus on the definition of the concept of "status of women" cannot be reached (Oppenheim Mason 1985 and smith Obler 1985 and Oppong and Abu 1978)

".... The status of women is essentially non unitary phenomenon and attempts to compare the "status of women" in broad sense in different societies or types of societies are fruitless

endeavors..., Further, if "status" is not a unitary phenomenon there are women monolithic category".[46]

Oppong and Abu (1978) argue:

"... It is now widely recognized that status is not an unidimensional concept, but that women hold a configuration of status associated with roles which change through the course of their lives. Thus change and improvement in one aspect of their lives may not necessarily be matched by equivalent changes in another"[47].

Women may have control of different kinds of resources in various stages of the life cycle. The kind of resources which are highly valued in one community may count less in another.[48]

Among the terms used in social demographic literature are not only "status of women" (e.g., Dixon 1978), but also "female autonomy" (Dyson and Moore 1983), "Patriarchy" (Cain 1979), and "womens rights" (Dixon 1975). All these terms refer in part to some aspect of gender inequality.

Dyson and Moore (1983) define female autonomy as:

"The ability .... to obtain information and use it as the basis for making decisions about one's intimates. Thus equality or autonomy between the sexes ... implies equal decision making ability with regard to personal affairs.[49]

Dixon (1978), after noting that the status of women is an elusive concept, "defines it as:

".... the degree of women's access to (and control over)material resources (including food, income and other forms of wealth) and social resources (including knowledge, power and prestige) within the family, in the community, and in the society at large".[50]

Despite the bewildering variety of specific terms

and definitions to be found in the demographic literature, certain common threads can be seen, most terms and definitions refer at least in part to gender inequality, and most specifically focus on two basic dimensions of gender inequality, namely inequality in power and inequality in access to or control of resources.

In this study "women status" is looked at in relation to husbands power and the individual woman's access to or control of resources within the family unit.

2.2 DISCRIMINATION OF WOMEN IN PRE AND POST COLONIAL PERIOD

Most people explain inequality between sexes as a function of conditions in Africa's pre-colonial era.

This is not entirely true as much of the division of labour was based on sex differences and the woman's place was recognized. In the words of Anta Diop:

"A study of our past can give us a lesson in our government. Our ancestors prior to any foreign influence had given women a choice place. They saw her not as a sex object but as a mother. This has been true from the Egypt of our pharaohs until our time. Women participated in running public affairs within the framework of a feminine assembly. Sitting separately but having the same prerogative as the male assembly".51

As is evident from the above quotation, there was some complementarity between the sexes for the betterment of society. When patriarchy and male domination set in later, the woman's position was significantly changed. Women struggled for ...../16

equality within the system, they cooperated in times of great need. Indeed, a common feature of the traditional economic system was the grouping and mobilization among women to assist each other during cultivation, weeding, harvesting, and social occasions such as births.

It is common knowledge that the initial literature of women in pre-independent Africa was written by Europeans. Because of their patriarchal background they conducted their studies with considerable Ethnocentrism, often scrutinising African place in the light of Western cultural values. (Sandhu 1979)[52]. In most cases they either ignored or totally obliterated the political role women played in traditional cultures. The way the colonialist saw the African woman is aptly summarized in the sentiments of a French administrator.

"The greater number of indigenous societies reserve for women a place which is clearly inferior, approaching that of a domestic animal (sandhu 1979)[53]

This distortion of women's role in politics was not solely the fault of the colonialists. European writers often obtained information from male informants. Since most African societies were patriarchal the men provided information about their women which was similar to that of the colonialists view of their women, a view which portrayed women as being confined to household chores at the expense of public life.

Lambert (1965)[54] also notes that in most Kenya societies in the pre-colonial period, women who were past child - bearing age gained respect as

elders, were often consulted about issues of National importance and became educators of young females.

In the Niger and Chad regions and in Hausa territory women founded cities, led migrations and conquered kingdoms. Cases in point are Queen Amina of Katsina who through her widespread conquests received tributes from powerful chiefs. Oral traditions from West African states such as the Akan and Ashanti speaking people tell of women founding small estates such as Mampong, Wandu, and Jobel (Lebeuf 1960)[55] .

The stability of these institutions was disrupted with the onset of colonialism. The colonialist ignored the political role women played in traditional cultures and confined them to the stereotyped roles that characterized their own women in the Western world. African women now found themselves systematically excluded from participation in the new set-up. They realised that the material and psychological basis upon which their authority had rested had crumbled and that most of their privileges had disappeared (Lebeuf 1960).

Despite this disorientation, women overcame the stereotyped roles which were confined to them and instead actively participated in those activities which led to the independence of Kenya. Agikuyu women for example were at the forefront of the resistance movement during the struggle for Independence. Mugo (1975)[56] and Rosebury and Nottingham (1966)[57] cited a case when Mary Muthoni was shot dead in the Harry ...../18

Thuku procession of 1922 as she tried to arouse a crowd into demanding for Harry Thuku's release. According to eye witnesses, 200 women were part of the huge crowd which gathered outside the Nairobi prison on March 16, 1922 to protest the arrest of Harry Thuku.

It is also on record that during the Mau-Mau era, some women held very senior positions in the military ranks in the forest of Nyandarua and Kirinyaga. A case in point is that of Marshall General Muthoni who led the Mau-Mau warriors during battles and was greatly respected for her strength of character (Likimani 1983)[58]

It is therefore not surprising that women feel a deep sense of betrayal that their contribution during the struggle for independence have never been adequately acknowledged and sufficiently compensated. Besides, hardly any literature exist on the role of women during this period while pain staking efforts have been made by historians to record the efforts made by men to liberate their people.

Mugo(1975) aptly summarizes the corrosive bitterness felt by women at their betrayal.

"Women were more or less forgotten during the dishing out of the sweet fruits and many of them left to vegetate in their kitchen gardens at home. If anybody truly felt the pain of dispossession during the emergency, it was militant women who showed complete loyalty to the cause - surrendered a daughter, son, husband herself and all she had only to drink from the bitter cup of complete dispossession for all time."[59]

At Independence the government's sessional paper,

African Socialism, clearly indicated that participation by men and women in National development should be on equal terms. However women soon realized that just as their contributions had been ignored during the colonial era, independence would not bring any remarkable changes in their lot. The Government failed to involve them on an equal basis with men in the country's economic, political and social institutions.

In Wippers words
"Government by Africans was no more indeed even less responsible to woman's rights than had been the case during the colonial administration" (Wipper 1971)[60].

The early years of Independence upto 1971 for example indicate no major land marks of women's involvement in Kenyas politics. Of the 12 special seats filled by appointments into parliament in 1965, none was allocated to a woman. Infact the first woman was elected into parliament in 1969 nearly 10 years after independence.

Women's labour force participation is also restricted by biased legislation. Information on women's rights and the available recourse of justice are deliberately lacking in the Kenyan law. Hence there is no coherent policy or institutional procedures which individual woman may seek to have discriminatory practices in the labour force redressed.

Women's labour power is generally regarded as cheaper than that of men. The mentality instilled...../20

in the colonial era of women's dependence on their men-folk still persists. This erroneous conception abated even when there is increasing data showing that a greater number of households in Kenya are female headed. A study done in Kenya by Butterfield (1977)[61] noted that in their re-employment and job application women tend to prefer low status and low paying jobs. This is a demonstration that discriminatory recruitment policies are deeply embedded in culture and social processes of most Kenyans. He further noted that women formed a very small portion of the workforce in the formal sector, which is the major source of wage employment in Kenya.

The economic survey (1991) further show that in employment by industry and gender, female participation has remained low despite a modest growth in its proportion of total employment as indicated in table 1.

Table 1: Employment in Industries in Kenya 1989 - 1990 by Sex: 000's

Industrial Employment Type	Males		Females		Total	
	1989	1990	1989	1990	1989	1990
Regular	931.4	963.4	243.5	256.6	1,174.9	1,220.0
Casual	155.5	144.1	42.6	43.6	197.9	187.7

Source: Economic Survey 1991 Central Bureau of Statistics

Discrimination towards women in the labour force participation is further shown by relatively low wages paid to them.

Apart from low wages, women seem to lose in

seniority accumulation, advancement of skills and general work experiences due to reproductive demands such as nursing sick member of their families. Employers overlook women in promotion by citing their problems of mobility and in-experience in work due to frequent absenteeism. Forms of discrimination are shown in the workers social security schemes. The National Health Insurance Fund (NHIF) for example is construed to be for men only.

Although there are some attempts to remove constraints against women workers, these institutions are blind to modification and there is need for transformation of cultural values.

The colonialists discriminatory policies in Education for women still persist to date. female enrolment at all levels of Education is much lower that of males. In Kenya enrolment in schools has risen from the 70's for both men and women at every level. However it has been noted that Education opportunities for women decrease in rather dramatic fashion beyond first eight years of schooling compared to men as shown in Table 2.

Table 2: Enrolment in schools (1990) and institutions (1990 – 1991) by sex in Kenya

INSTITUTION	MALES		FEMALES		TOTAL	
	Number	%	Number	%	Number	%
Primary	2,766,300	51.0	2,626,00	49.0	5,392,300	100.0
Secondary	353,695	87.0	264,766	43.0	618,461	100.0
Diploma	894	74.0	311	26.0	1,205	100.0
Under-graduate	26,254	71.0	10,527	29.0	36,781	100.0
Post-graduate	1,340	75.0	442	25.0	1,782	100.0

Source: Economic Survey 1991 Central Bureau of Statistics.

A breakdown of enrolment in Primary, Secondary, Diploma, Under-graduate, Post-graduate level of education show that females constituted, 49.0, 43.0, 26.0, 29.0, 25.0 per cent of the total respectively.

Since 1972 Primary school education has expanded remarkably. The number of primary schools more than doubled from 6,657 in 1972 to reach 15,465 in 1992. Sex ratio (Girls to Boys) improved steadily from75: 100 to an impressive 90: 100 in 1972. In secondary teacher training colleges and polytechnic respectively, the ratio has improved remarkably from 45:100 to 75:100, 60:100 to 75:100 and 6:100 to 40:100 in 1972 to 1992 (Kenya Development Plan 1994-1996)[62] . University education has witnessed the greatest expansion and development as compared to others. Student's enrolment between 1979 to1992 grew at an average annual rate of about 11.2 per cent. The high rate of enrolment is attributed to the increase in the number of

Universities coupled with the first 1987/88 double intake followed by a similar intake of the 8-4-4.Enrolment has been quite low as the highest women/men ratio realized since 1972 was 42:100 in 1989 and therefore declined to 37:100 for first year intake in 1972. Generally, completion rates for girls in primary schools are lower and therefore fewer of them joining and completing secondary education. At the university the ratio of women to men is 1:3 with most of the women joining the faculty of arts.

These differential rates of enrolment result from a range of socio-economic and cultural factors, which make parents, regard education for their daughters as less of a priority than their sons. In societies where girls marry early or where they do not have any economic obligations to their parents after marriage, education for daughters may be seen as bringing few or no economic benefits. Parents may also fear that education will give their daughters too independent an outlook, or damage their chances of marriage. Once at school girls tend to drop out earlier than boys. This may be due to pressure of household chores, or because they are needed at home to look after young brothers and sisters. In some parts of the world, particularly in sub- Sahara Africa, increasing numbers of teenage girls are dropping out of school because they are pregnant.[63]

These low enrolment levels and high dropout rates are matters of serious concern, particularly in the light of research findings about the positive impact of women's education on fertility. Although...../24

there could be discrimination and differentiation militating against women's realization of their economic potential, it is important to note that the Kenya Government's development goals are geared towards equality. For example, the 1984-88 development plan summarizes the major goals as geared towards the attainment of:

"Political equality, religious freedom, social justice, freedom from want, ignorance and disease, human dignity including freedom of conscience, equal opportunities for all citizens and a high and growing national income, equitably distributed among the national families."[64]

The best that could be said at this point is that many development initiatives are still taken with the assumption that benefits will somehow accrue to all and sundry on the same scale, irrespective of the fact that through historical and cultural, or political circumstances, some strata of the society, such as women are in a relatively disadvantaged position.

2.3 LOW INCOME WOMEN IN AFRICAN CITIES

The literature of African cities yields a number of descriptions of women as petty commodity producers (notably beer brewers, traders and prostitutes), and their need for financial independence and freedom from husbands (Backer 1959, Ardener E. 1961 and Little 1973)

"Understanding or directly associated with these various motives (for going to town) is the fact that women perceive an opportunity of improving their status. Like the young men before them, women are increasingly becoming impatient with their traditionally ascribed positions. They speak of their desire for freedom" and "emancipation" and may see town as a place where this can be achieved (Little

1973)[65]

White 1978[66] found that urban women in New London appreciated town life because "here is their business, here alone is the possibility of maintaining themselves by their own efforts"

Hellman observes for women in Roonjarg:

".... the status of women must be affected as a result of the earning power which the sale of beer affords them. they become an economic asset to their families and this secures them a degree of economic security and independence" (Hellman 1948)[67]"

"Women are making use of opportunities of the urban area to become economically independent by supporting themselves in the urban area and not returning to their homes as deserted wives" (Ibid pp.87)"[68]

Hard (1969) in a study done in urban Ghana observes:

"Women, through a combination of petty trade commercialized sex, and brewing attain a higher standard of living independent of male control"[69].

Skinner (1974) in a study done in Ougadougou and Beinfeld (1974) in Dar-es-Salaam describes independent minded women making lucrative profits by brewing local beers and running bars.

".... brewer can make more money in a Month of trading than many white collar workers" (Skinner 1974 pp.74)[70].

The freedom from parental restraint, control of men and marriage, the ability to act independently (economically and socially), and the ability to choose and change partners were the particular desires observed among the women in Mathare Valley Nelson 1977).

"I don't like to marry ever. That is why I stay in town. I have stayed a long time

without a husband and it would be impossible for me to make myself obey .. a man, who will always want to rule his wife (Nelson 1977 pp 293)".

"It is hard to marry once you start "Busaa"business, because one gets a lot of money. It is hard to be dependent on a man who will probably be " money tight" (wants to control the money) (pp.293).

"I love men, but never to marry. Besides, why do I need to marry? I have my children, if I was married, I'd have to wash, cook and stay in the house to clean it. This way, I am free to roam, to meet many friends and when I come home, I sleep in peace".

As independent heads of households, majority of women in Mathare perceived themselves as being independent, depending on no one to help them raise their children and pursuing career strategies as competent urban women.

Elkan (1956)in support of these findings observes:

".... women in Jinja were inspired to come (to Jinja) by real desire for independence and for emancipation from men "

The literature examined above suggests that women who migrate to the urban areas and particularly those who migrate to the slum areas necessarily achieve the desired social and economic freedom. However, the question raised in this paper is whether this freedom improves the general status of women in these areas. If it does, how is the improved status related to their fertility behaviour? The expectation in this paper is that if they ever achieve the desired freedom and improved status, then they should have low fertility levels.

Dinan (1976)[73] referring to Ghanaian women argues that women, especially low-income, self employed and uneducated, have lost more in the long run than they have gained. Few real occupational options exist for them in the urban areas, except for trading, brewing and prostitution. Boserup (1970)[74] and Schwarts (1972)[75] to support this view maintain that urban women have entered a worsening situation of subjection and dependence. Rather than obtain the desired economic independence, given the limited employment facilities in the formal sector, they (women) have entered into commercialized sex, which ends up degrading them socially (Bujra 1975 pp. 214-5).[76]

In the slum areas, women exploit their position in a situation of demographic imbalance. Mayer R. (1968)[77] in a study done in Nairobi argues that women who live in slum areas combine prostitution with petty commodity production to support themselves and their children.

Obbo C. (1973) supports this finding. She observed in Kampala that women who lived in the slum areas involved themselves in petty commodity production. They did not marry, had several children, financed the education of their children and also hoped to be helped by their children when they found employment.

If majority of these women are self-employed, uneducated and generally of low income, of what relevance is this to their current and future fertility behaviour?

2.4 INTERMEDIATE DETERMINANTS OF FERTILITY

Davis and Blake (1956) provide a taxonomy of mutually exclusive intermediate variables that are necessary for successful reproduction: variables which define the probability of sexual intercourse such as the use of contraception resulting in live birth, such as spontaneous or induced abortion.[78]

Bongaarts (1978, 1982)[79] has presented a useful classification of the intermediate variables and their influence on fertility in high and low fertility situations. His classification has four major categories: The proportion of the population that is married or in sexual unions, the proportion of the married population using contraception and the effectiveness of contraception, the extent to which a population uses induced abortion, and the average length of breastfeeding in the population.

To distinguish the classification of Bongaarts from that of Davis and Blake, he (Bongaarts) calls these the "proximate" variables. Intermediate variables other than the age at marriage, contraception or abortion are grouped by Bongaarts under the general heading of natural fertility variables. Although Bongaarts regards the natural fertility variable as less significant than the other proximate variables in particular situations, especially where there is universal early marriage and little deliberate control of fertility within marriage, they may be important determinants of the sometimes large variations in fertility.

Bulatao, Lee, Hollerbach and Bongaarts (1983)[80] examine approximately seven different intermediate

determinants of fertility (derived from National Academy of scientific framework for fertility analysis). The intermediate determinants examined by these scholars include; those that determine the supply and demand of children, and fertility regulation and decision making, as outlined in table 3.

Table 3: INTERMEDIATE DETERMINANTS OF FERTILITY

SUPPLY OF CHILDREN:
Female age at (first) marriage
Marital Disruption, celibacy and Remarriage
Breast feeding.

DEMAND FOR CHILDREN:
Sex preferences
Value for children
Miscellaneous effects of desired family size.

FERTILITY REGULATIONS AND DECISION MAKING
Use of contraception
Factors entering into fertility decision.

The next section examines the specific impact of the women's status variables on the intermediate determinants of fertility - identified by Bongaarts (1982) but modified by Easterlin and Crimmins, (1985) Easterlin (1978 and 1983) to suit the variables available in the present study. This forms the theoretical framework used in the entire study.

2.5 THEORETICAL FRAMEWORK

The study applies the synthesis model of fertility determination (Easterlin and Crimmins, 1985; Easterlin 1978 and 1983) to measure the effects of improved status of women on fertility behaviour. The argument behind the framework is that any improvement in the status of women affects the fertility transition (that is, shifts from natural to controlled fertility and from high to low levels of fertility) through the sum of its effects on variables related to the potential supply of children in a given household, the demand for children and the cost associated with the practice of fertility regulation.

The demographic literature has suggested that improvements in the status of women is facilitated by the modernization process. Aspects of modernization seen as potentially affecting fertility through improved status of women include: innovations in public health and formal schooling, urbanization, female employment in the modern sector and changes in family structure to mention only a few. This process tends on balance to lower the demand for children, raise potential supply, and reduce regulation costs (Lee and Bulatao 1983 Bongaarts and Menken 1983; and Hermalin 1983)[8].

The status of women through the modernization process cannot affect fertility directly, but does so through the intermediate fertility determinants identified by Bongaarts (1982). Table 4 sets out the ways in which selected dimensions of the status of women are believed to influence fertility through the intermediate variables.

Table 4: Hypothesized association of selected women's status indicators with fertility via their effects on intervening factors affecting fertility.

INTERMEDIATE VARIABLES	EFFECTS OF WOMEN'S STATUS INDICATORS ON INTERVENING VARIABLES	
	EDUCATION	EMPLOYMENT
SUPPLY		
Age at marriage	-	+
Marital disruption	-	+
Breastfeeding	*	*
Child mortality	-	*
DEMAND		
Desired family size	-	-
Value of children	-	-
Sex preference	*	*
FERTILITY REGULATION		
Methods known	+	+
Interpousal communication	+	+
Use of contraceptives	+	+

SOURCE: Easterlin and Crimmins 1985; Easterlin 1978 and 1983

* = No or Unclear effect
\+ = Shows positive impact
\- = Negative impact

Any given indicator may affect fertility through more than one channel, and the effects may not necessarily be in the same direction. Not all of these effects are the result of deliberate changes in fertility-related behaviour. On the contrary, there are well-documented inadvertent consequences of changes in the status of women: for example, education and work force participation have been found to reduce the duration of lactation, thereby unintentionally increasing fertility, other things

being equal.

At the same time, improvements in the status of women are expected to induce behavioural changes that bring about a reduction in fertility through diminished demand for children and lowered perceived costs of fertility regulation. In sum, the effects of the status of women on fertility will depend on the relative strengths of each of these factors, and on the extent to which the fertility - enhancing aspects of changes in women's status is offset by increased contraceptive use. The argument postulated in this paper is that in a poorer population (associated with early stages of transition), the unintended effects are more powerful than the deliberate effects, in wealthier populations, however, the intended behavioral changes determine fertility.

2.6 DETERMINANTS OF FERTILITY AND WOMEN'S STATUS VARIABLES:

SUPPLY OF CHILDREN:

WOMEN'S AGE AT MARRIAGE

In the developing countries, women's age at Marriage, usually has an inverse relationship to fertility, presumably because it determines exposure time and also because it is correlated with other factors that independently tend to reduce the supply of or demand for children.

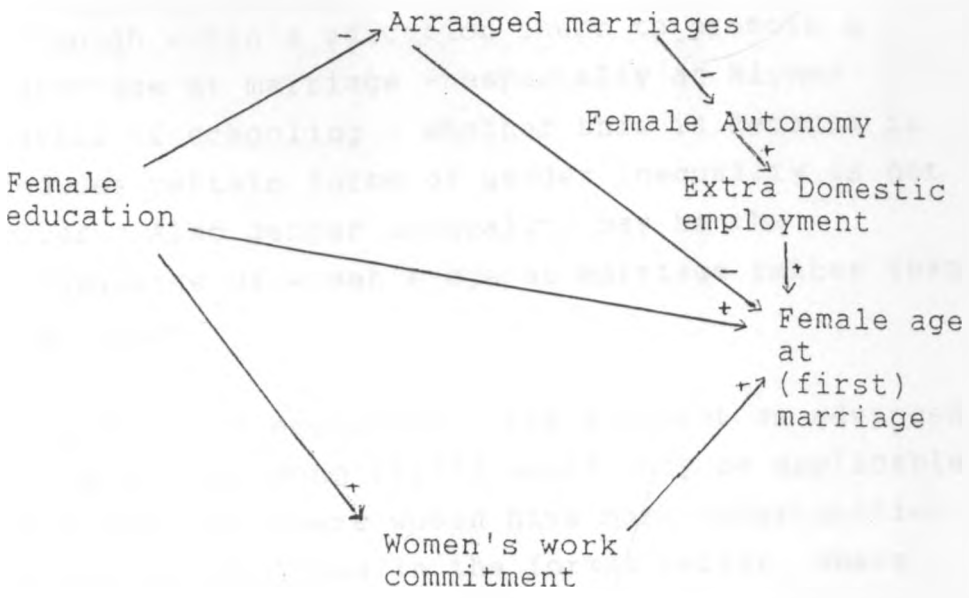
Figure 2 depicts the hypothesized effects of the women's status variables on women age at first marriage. Discussed in this paper are the effects of women's education and premarital employment.

Both women's education and premarital employment have a positive statistical relationship to womens age at first marriage in the developing countries where these relationships have been studied Cochrane 1979[82].

As figure 2 indicates, women's education may influence the age at marriage for several different reasons.

Education tends to be negatively correlated with arranged marriages, and according to many authors (Caldwell 1982 Dyson and Moore 1983)[83] arranged marriages tend to go along with a young female age at marriage. Education is also said to be associated with an increase in women's domestic power, something that in turn, is thought to lead to (or reflect) their participation in extra domestic employment before marriage (e.g Dyson and Moore 1983; standing 1983)[84]. In addition, Education is thought to increase womens "work commitment" (Sallatt and Wong 1977)[85], which may in turn lead to a postponement of marriage in order to provide an opportunity to work. It (education) is also thought to Westernize women's views of the family, something that tends to promote a desire to marry "romantically" rather than by arrangement in the early teenage years (Caldwel , 1983)[86].

Figure 2: HYPOTHESIZED EFFECTS OF WOMEN'S STATUS VARIABLES ON AGE AT MARRIAGE.



Source: (Dixon, 1975/ Dyson and Moore, 1985; Germain, 1975; Salatt and Wong, 1977).

Although not shown in figure 2, two distinct reasons why pre-marital employment delays a woman's age at first marriage have been examined. One is the value that single women's work has for their parents in cultures that require married women to contribute to their in-laws' rather than their own parents' household (Salatt and Wong 1977). In these cultures, parents whose daughters are capable of working may try to prevent the girl from marrying early in order to enjoy the benefits of her earnings.

The second reason is the impact that work has on women's own aspirations and attitudes (e.g Blake 1965: Salatt and Wong 1977). Earning a paycheck

may give women a taste for independence thereby fostering greater women autonomy and a later age at marriage[37].

Although women's education seems to promote a later age at marriage - especially at higher levels of schooling - whether this is because it reduces certain forms of gender inequality is not clear. Also gender inequality may be the consequence of women's age at marriage rather than its cause.

On premarital employment, the argument as advanced by Salatt and Wong (1977) would only be applicable in situations where women have more opportunities of getting employed in the formal sector, where they can contribute some money to their parents or earn a paycheck. Such employment opportunities scarcely exist in rural or slum areas where women generally have low educational levels.

However the findings of these scholars (Caldwell (1975); Dyson and Moore, (1985); Germain, (1975); Salatt and Wong, (1979) on the relationship between education, employment and age at marriage tend to agree highly with the findings of other scholars; Easterlin and Crimmins, (1985); Easterlin, (1978 and 1983); outlined in Table 4 .

BREASTFEEDING

Prolonged breastfeeding (lactation) is known to have a negative effect on fecundity. The longer a woman lactates, the longer on average, is the period of post partum amenorrhea (the period between a birth and the resumption of the

menstrual cycle) Orsini 1977, Van Ginneken 1974 and Bongaarts 1978[88]. In countries where lactation is sometimes combined with a post partum sexual taboo, as is said to be the case in Kenya (Malnos 1972), the biological relationship between lactation and fertility would be further strengthened.

In non-contracepting populations, the incidence, duration and intensity of breastfeeding often have a strong impact on the supply of children and hence on fertility (Bongaarts 1982)[89].

Both women's education and employment have frequently been cited as important determinants of breastfeeding behaviour.

Although the statistical Association between women's education and breasfeeding seems to be consistently negative across the developing countries (Nag 1983), the effects on fertility of this relationship may be small. Better educated women often use contraception at high enough rates to compensate for the loss of the anovulatory effects of breastfeeding[90].

Even more controversial is the influence of women's gainful employment on breastfeeding. Although studies of Malaysia and the Philippines suggest that the type or location of work may affect the intensity or duration of breastfeeding (Nag 1983), analysis of world Fertility Survey from eight countries (Jain and Bongaarts 1981) claims to have found no effects of the type or fact of employment on the duration of

Breast-feeding. The present study is therefore an attempt to improve the relationship between
education, employment type and breast-feeding practices

CHILD MORTALITY

Since it is widely assumed that high levels of infant and child mortality affect total fertility positively (Mason 1984 Oppong 1978, Preston 1978), the study examines the impacts of women's status variables on these (infant and child mortality).

" One is never going to convince women to adopt contraceptives on a large scale as long as mortality levels are high. Preston1978 [91] Preston 1978 and Oppong 1983 also observed in their studies that unless couples are assured that their off- springs will survive, they will be unwilling to curtail their fertility.

" One or two children give a parent no guarantee whatsoever that one's off-spring will survive and eventually support the parents." (Oppong 1983) [92]

The most elaborate hypothesis about women's status and child mortality focus on the levels of women's formal education as the ultimate factor determining child mortality. There are several paths through which education may influence infant and child mortality.

First, better educated women are likely to use contraceptives than are less educated women (Cochrane1983)[93] The use of contraception may in tern lengthen the birth interval, and the · · /38

lengthening of birth intervals in turn tends to reduce infant and child mortality.

A second set of effects of women's education operates through a closely related pair of variables, the "emotional nucleation" of the family (Caldwell 1983) and women's domestic autonomy (Dyson and Moore 1983). Caldwell (1979) has elaborated the first of these concepts, which refers to a shift in emphasis from the obedience of women to men, to an emphasis on the husband-wife relationship on the conjugal family and on relative gender equality. Caldwell argues that, in Nigeria, the greater equality between spouses and between generations that accompanies emotional nucleation undermines traditional feeding priorities and therefore results in a more equal distribution of food within families. This usually means that both mothers and children experience improved nutrition[34].

Caldwell further argues that educated women are better able to adopt innovative behaviours and can stand upto the mother-in-law's authority more than uneducated ones. This may help them acquire modern medical services and to practice new, more hygienic forms of child care. In Caldwell's analysis of Nigeria, women's education and their domestic power are both important for determining their behaviours that in turn influence infant and child mortality given that the care of infant and younger children is usually defined as the primary or exclusive responsibility of the mother[35].

In the context of those contemporary developing

countries where women provide much of their own support or where traditional family support systems are breaking down (e.g lindenbaum 1981, cain et al. 1979), an increase in women's domestic power may help to lower infant and child mortality. A summary of these hypothesized associations is shown in table 4.

DEMAND FOR CHILDREN

SEX PREFERENCE:

The usual assumption in the demographic literature is that various aspects of women's status influence the perceived net value of sons and daughters and hence determine parental preference for children of each sex. These preferences for children may in turn influence fertility (Williams 1983). In particular, a strong preference for sons may act as a drag on fertility decline as a population adopts fertility regulation and otherwise experiences a declining demand for children[96].

Studies done in India by Morrison (1975) and Lahiri (1975) confirm this. In their findings, they suggest that sons are preferred to daughters as they are not only regarded to be of an economic advantage to parents, but that they also carry on the family lineage.

"The blessing for a woman who is in India is that may she bear ten sons and make her husband the eleventh."
(Lahiri 1975)[97].

Morrison reports that the desire for a male child was a crucial variable for men of all educational standards.

"Sons are necessary to carry on the family lineage, required to perform certain

traditional religious duties and are desirable means of support in old age than daughters."[98]

Although most authors seem to assume that sex preferences reflect something about a society's gender role system, precisely what it is that determines these preferences is unclear, especially at the aggregate level. However, recent writings on Bangladesh (cain et al 1979; Cain 1980) suggest that it is the seclusion of women and hence their inability to be economically productive, along with the breakdown of the extended kin network as a source of economic support for the widow, that lies at the root of a very strong preference for male children among women[99].

Since parents preference for male to female children presumably reflects something about the value of each sex, the issue of gender inequality and sex preference is further discussed in the "value of children" section.

VALUE OF CHILDREN

In this study, an attempt is made to examine two relatively specific values of children to mothers or fathers that have been argued to reflect some aspect of gender inequality and that may in turn influence the total demand for children. These are: the value of children for economic gain i.e. as a source of labour, wealth or household help, and their value for "risk insurance" i.e. as a source of economic support in widowhood, old age or times of disaster.

There are several different suggestions in the literature about the impact that gender inequality may have on children's value for economic gain or support. One suggestion made by Oppong (1983)[100] is that the more ardous a woman's work (both domestic and extra domestic) and the more it is normatively acceptable to use child labour in the household, the greater will be the economic value of the children to their mother.

A second suggestion focuses much more clearly on gender inequality in Germain's (1975)[101] idea that the more heavily women are involved in non maternal roles (primarily in productive work), the less they will value children as sources of support because of their ability to support themselves. The idea seems plausible for women whose employment provides a relatively good income. It is less plausible however, for the poor slum women. For these women (slum women) as studies by Bunster (1983) and others e.g. Merrick and Schmink 1983) suggest, income earning often requires the assistance of children either on the job (if mother is a self-employed woman) or in the home[102].

A third suggestion in the literature as to how the gender inequality may relate to the children's economic value is found in Caldwell's (1982, 1983) theory of later generational "wealth flow.". Caldwell argues that in pretransitional societies, children and other descendants have a great value to kin group's senior men because gender and age inequality ensures that these men reap the benefits of children's labour (this holds not just

when children are young, but also when they reach adulthood).

Caldwell again argues that children lose their economic value when the family's "emotional nucleation" occurs, children becoming instead a net economic drain for the older generations. One aspect of the family's nucleation is the reduction of gender inequality. As families nucleate, gender inequality declines and children lose their economic values[103].

According to demographic theories, the introduction of universal school enrolment of children has reduced the immediate value of children in the family production. The direction of the generational "wealth flow" has turned. This turn of the wealth flow, implying economic burden instead of asset of several children has played a central role in the theories of modernization and fertility decline[104].

Recent studies of the importance of children's contributions in rural households in Kenya reveal that children still play an important role of providing labour in the families, even when they go to school. However, the total economic benefit of having many children has changed considerably, with the increased school enrolment, as the payment of school fees is one of the major cash burdens of rural families"
(Monsted and Walji 1978, Kayongo Male and Walji 1984)[105]

Children may have value for women as a form of "risk

insurance" this value in turn being determined in part by their low status (Cain 1980, 1982, Cain et al. 1979). In a study done in Bangladesh, Cain related women's need for "risk insurance" in the form of children to their inability to fend for themselves economically given the denial to women of employment opportunities and the breakdown of the traditional extended family system in the face of increased poverty such that widows can no longer rely on their in-laws for economic support. Cain suggests that this leaves women with only one hedge against the possibility of widowhood and starvation, namely, children, especially sons[106].

In Cain's writings, economic inequality between the sexes, in combination with the nucleation of the family is argued to increase children's value as risk insurance. Cain et al.(1979) suggest that the persistence of high fertility in Bangladesh may in part reflect this relationship.

An important question about this theory of children's value is whether the economic situation of the family or broader society can alter children's importance as insurance against risk or as a source of support in old age. The literature on the perceived value of children as old-age insurance suggests that the more affluent the society or the family, the "less" men need to rely on their sons to provide support in case of old age. Among the affluent, assets may substitute for children[107].

A study by Vlassoff and Vlassoff (1980)[108] of an Indian village found that men looked to their land

holdings, not their sons, to provide them support in old age. Cain (1982) also seems to imply that children's risk insurance value to women is only important in poor populations or classes. In more affluent ones, the resources available within the family, community or state may allow widows to survive without having to depend on their sons.[109]

DESIRED FAMILY SIZE

Many authors, make the general claim that employed women desire fewer children than non-employed women do or that those employed in modern sector, extra-domestic jobs desire fewer children than do those working at home. The main reason is the supposed incompatibility between working and caring for children that forces women to make trade-offs between amount of time worked and the number of children born. The hypothesis is questionable, both on logical and empirical grounds (Mason and Palan 1981)[110]. The extent of "role incompatibility" for most third world women may be limited. Even when an inverse relationship does exist, whether it reflects anything about women's power or autonomy is unclear.

Some authors argue that this kind of relationship between female labour-force participation and fertility is mostly found in industrial settings where industrial organization of production removes work from home and organizes labour in terms of efficiency rather than compatibility with child care (Karsada, 1971; Has 1972)[111].

While there is an agreement that in developed countries a negative relationship exist between employment and fertility, the causes of the

relationship are not well understood. Moreover, even if the existence and interpretation of the relationship within the industrialized world were accepted by all, the relevance to developing countries would not be established, since efforts to examine the relationship in developing country context have yielded conflicting results.

For national population samples, the World Fertility Survey results confirm the existence of a negative relationship between fertility and female employment (Rodriguez and Cleland, 1980)[112]. While a few studies provide evidence of a negative association, many others demonstrate a positive relationship or no relationship at all. For example, even in the urban areas of developing countries, women's employment or labour force participation has not been found to be consistently associated with fertility standing 1983[113]

There are factors which underly the relative infrequency of an inverse employment fertility relationship in the third world. First, the organization of production remains largely kin and household based. Here women typically work in the family's firm or in a family run business; grow or make goods at home for sale elsewhere, or do occasional work as domestic servants or labourers. Because of this, rural as well as urban third world women employed in the informal sector tend to enjoy closer proximity to their children while they work.

The other factor is the greater availability in

the third world of parental surrogates (mainly servants and non nuclear kin), especially in women's own households. Because third world women, whether poor or rich often have a female relative or servant living with them, they tend to enjoy inexpensive, reliable baby sitting help to a much greater extent than do women in industrial settings.

However, in urban areas, fertility and female labour force participation should be more strongly related than in rural areas. In urban areas, alternative source of child care are less common since the extended family system is weaker and older children are more likely to be attending school.

As far as education of women is concerned, the argument advanced by scholars such as Cochrane (1979, 1983) is that, it is the most pervasive factor influencing fertility control behaviour. Formal education tends to reduce the demand for children by shifting tastes in a manner unfavourable to children and decreasing the price of goods relative to children. If better education improves the income - earning possibilities of women, then the alternative cost of the mother's time required in child-rearing is increased. While some offset to this may be available, for example, through the help of other family members or domestic workers, there is probably some net positive effect on the cost of children and thus a tendency toward a reduction in the demand for children.[11]

In addition, compulsory education may increase the relative cost of children by reducing the possible contribution of child labour to family income.

Tastes for children, that is, the intensity of the desires for children relative to goods, are affected negatively by education because children, and the life style associated with them, are essentially an "old" good, while education presents images of new life styles competitive with child care.[115]

Also, education may lead to higher standards with regard to child care and rearing, creating greater emphasis on the "quality" of children at the expense of numbers. In these ways, education increases the subjective attractiveness of expenditures competitive with having more children, and thus tends to lower the demand for children.[116]

All these relationships are reflected in Table 4 which shows a negative association between education and employment on the desired family size.

FERTILITY REGULATION:
Some aspects of women status are related to contraceptive knowledge and use.

First, female education (once again) is seen as a key determinant of contraceptive use. Better educated women are argued to be more willing to engage in innovative behaviour than are less educated women, and in many third world contexts,

the use of contraception remains innovative (Caldwell 1979, Dyson and Moore 1983)[117]. Better educated women are also argued to have more knowledge of contraceptive methods or of how to acquire them than are less educated because of their literacy, greater familiarity with modern institutions, and greater likelihood of rejecting a fatalistic attitude towards life. There is good evidence that, for whatever reason, women's education does indeed promote the use of contraception in most developing countries (Cochrane 1979; Michael 1973, Smith 1983 and the KDHS 1989)[118].

"Current contraceptive use increases with educational level; women with secondary and higher education are more than twice as likely to use contraception as women with no education." (KDHS 1989)[119]

Education lowers contraceptive cost by reducing the information cost, raising effectiveness and aiding in best selection and use and by raising the marginal product of contraceptive use in conjunction with any specific contraceptive device (Michael, 1973)[120].

Second, how equal husband and wife are is frequently argued to influence contraceptive use. Equality between spouses is supposedly linked to the likelihood of communicating about such matters as fertility control, and communication is in turn argued to influence the use of contraception or at least the effectiveness of its use. The evidence in support of this hypothesis is apparently weak (Beckman 1983, Hollerbach 1983 and KDHS 1989).[121]

Changes in women's status may further have an

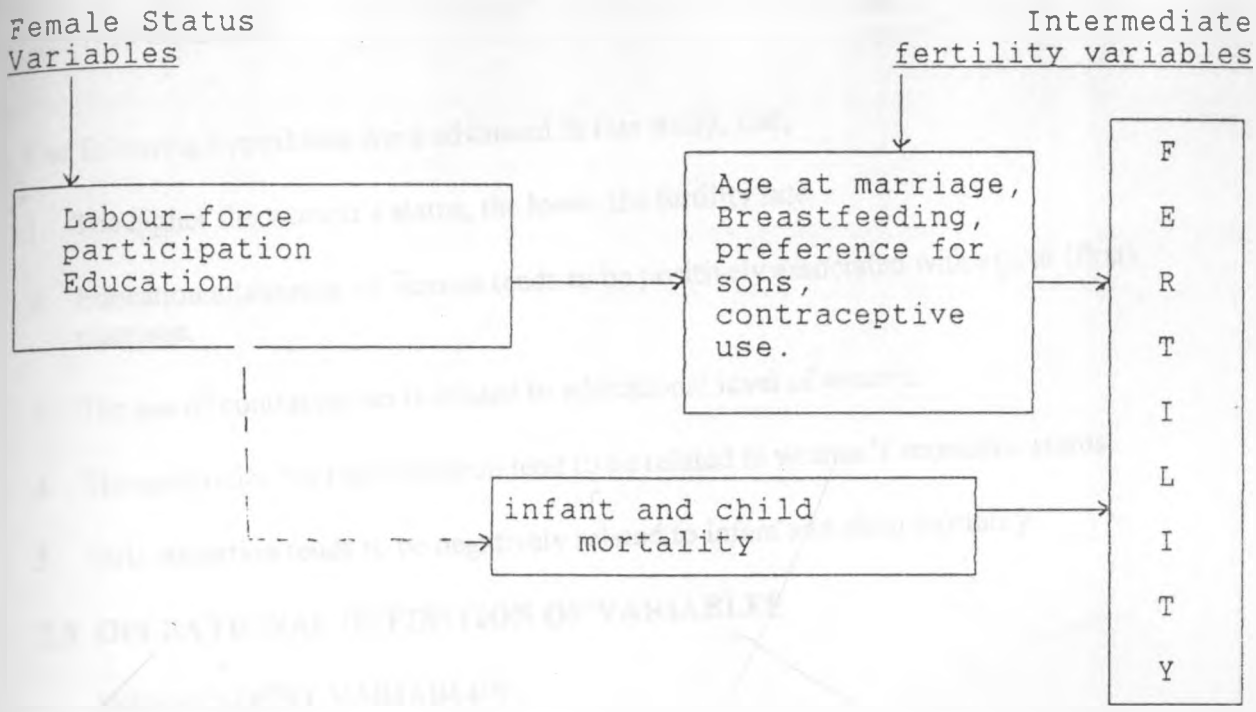
impact on the extent to which fertility decisions are made.

One is the idea that as husband and wife become more equal, the wife's fertility desires will play an increasingly strong role in fertility decisions. However, increased voice in fertility decisions may have little impact on fertility if women's fertility desires are similar to men's. Although some scholars argue that husbands and wives typically have different fertility desires (e.g Caldwell 1983), the evidence on this point is very mixed (Hollerbach 1983).[122]

The second idea as to how changed gender relations may change the terms of fertility decisions is closely linked to the first idea. The more egalitarian the relationship between the sexes is, the more likely is the weight given to the wife's health and well-being as factors in fertility decision making. Egalitarian couples are likely to worry about the health consequences for the wife of having an additional child, whereas men in male dominated families are likely to decide about additional children in terms of their own needs and interests.[123]

As shown in the conceptual model (figure 3), Female status variables such as labour-force participation and education affect the intermediate fertility variables: age at marriage, breastfeeding, preference for sons and the use of contraception which in turn affect fertility.

Figure 3: CONCEPTUAL MODEL SHOWING THE IMPACT OF WOMENS STATUS VARIABLES ON THE INTERMEDIATE FERTILITY DETERMINANTS.



----------→ Indicates only the impact of education on infant and child mortality.

These status variables also have an impact on infant and child mortality which affect the fertility rates. This conceptual model (fig. 3) together with the theoretical model shown in table 4 guided the entire study. The general assumption in this study is that any improvement in the status of women is expected to induce behavioural change that brings about a reduction in fertility.

2.7 HYPOTHESIS

The following hypotheses were advanced in this study, that;

1. The higher the women's status, the lower the fertility rate.
2. Education attainment of women tends to be positively associated with age at (first) marriage.
3. The use of contraception is related to educational level of women.
4. The preference for male children tend to be related to women's economic status.
5. Girls education tends to be negatively related to infant and child mortality.

2.8 OPERATIONAL DEFINITION OF VARIABLES

INDEPENDENT VARIABLES:

WOMEN'S ATATUS

Status is the position of an individual in relation to another. In this study, women's status is looked at in relation to the individual woman's' access to or control of resources within the family unit. To measure status of women, the present study examines two impirical indicators: level of women's education and employment or work status.

The relationship between these variables and fertility may not be a direct one and there are other intervening variables which might be confounding these relationships.

EDUCATION

Education is defined as a formal schooling and only ...../52

the level of education of women between age 15 and 49 was considered.

In this study, women's educational status was measured by the highest standard of formal education (class attended). To be included here are women who attended the following classes, adult education, primary and secondary school and college (diploma or university) - education, respectively.

Any women who never attended any of the mentioned class categories is considered to have no formal education.

WORK STATUS/EMPLOYMENT

This refers to any kind of economic activity from which income is generated.

Employment in this study is divided into two categories, self and wage employment. Self-employment here refers to a situation where one works on a family based firm or business from which income is generated, for example: selling clothes, shopkeeping and brewing among many others.

Wage employment on the other hand refers to a situation where one works in either a non-family or family based firm or business and is paid money either on a weekly or monthly basis.

The type of employment was measured by asking women where and whom they work for. Further, they were asked whether they are paid money on a daily,

weekly or monthly basis.

ECONOMIC STATUS

Economic status in this study refers to one's personal resources of money. The economic status of women is believed to be mainly determined by their total monthly income and not the income of the husband.

The economic status was measured by women's total income per month.

DEPENDENT VARIABLES

AGE AT MARRIAGE

The age at marriage is a major determinant of the completed family size since it affects the span of life and the decision making process that a married woman spends in childbearing. It usually has an inverse relationship to fertility presumably because it is correlated with other factors that independently tend to reduce the supply or demand of children.

Age at (first) marriage was determined by asking woman the year of their first marriage and for how long they have been in married life.

BREASTFEEDING PRACTICES

In this study, breastfeeding practices include both the intensity and duration of breastfeeding. The duration of breastfeeding was measured by asking the respondents how long (months and years) they breastfeed each child whereas the intensity was measured by asking all women how many times (in a day) they normally breastfeed.

CONTRACEPTIVE USE

Use of contraception refers to the conscious efforts of women to avoid conception through family planning methods such as oral pills, condoms, injection, withdrawal, rhythm and I.U.D among many others.

In this study, the use of contraception was measured by asking women which family planning method(s) they or their husbands were using upto the time of interview.

PREFERENCE FOR SONS

This is a practical advantage given to sons over daughters. In this study, the variable (preference for sons) is the number of male children desired by a woman as compared to female children.

The variable was measured by asking women how many sons they have living and how many more they would wish to have, as compared to daughters.

INFANT AND CHILD MORTALITY

Infant mortality refers to the death of children who have not survived to their first birthday. It was measured by asking the respondents the number of deaths of infants before age one.

Child mortality refers to the death of children between age 1 and 5. It was measured by asking respondents the number of deaths of children between age one and five.

IDEAL FAMILY SIZE

This refers to the total number of children a woman would wish to have at the end of her reproductive period.

FERTILITY

This is the reproductive performance of an individual woman.

DOMESTIC DECISION MAKING

In this study it refers to the extent to which family matters are decided upon within the family unit. To measure it (Domestic decision making), the extent of women's participation in four important domestic affairs were examined; the women's involvement in the decisions concerning the purchase of consumer goods within the household, her children's education, the number of children to be born and the use of contraception.

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CHAPTER THREE

3.0 METHODOLOGY

3.1 SITE SELECTION AND DESCRIPTION

The study covers two Nairobi estates, Komarock estate, a middle class residential place and the slum area of Mathare. The two estates were chosen for a comparative analysis of the impact of differential "status of women" on fertility.

Kamarock estate is situated in Komarock sub-location, Njiru location in Embakasi division about 3 miles to the East of Kariobangi and has nearly 20,000 people living within it.[123]

Most of the houses in Komarock are owner occupied. The rest are let at fairly high rents ranging between Ksh.5,000/- and 13,000/- per month. The estate has a good infrastructure, clean piped water, roads, electricity and a drainage system. The majority of the residents including women are in wage employment which generally reflects high educational attainment. However there are a few who run their own business.

Mathare valley is located in Mathare location, Kasarani division, four miles east of the town (Nairobi) centre and has nearly 85,000 people living within it.[124]

The boundaries of Mathare valley are clearly marked. To the north it is bordered by Mathare mental Hospital, on the east is Huruma estate.

Its Western and Southern boundaries are the once Asian neighbourhoods of Pangani and Eastleigh.

Housing is of poor quality and reflects the general poverty of the area. Most of them are makeshift structures of mud-walls cardboards, corrugated iron sheets and tins. The infrastructure is very poor and most of the houses lack basic facilities such as electricity and clean piped water.

As estimated by Nelson (1977), between 50 - 60% of the adult inhabitants living in Mathare are women out of which half are independent heads of households. This is an interesting reversal of the demographic pattern of most urban populations in Africa in general, and Kenya in particular.

The general education attainment of women is low. As a result, most women lack the necessary skills to obtain wage employment in the modern or formal sector. They are therefore forced to resort to petty commodity production characterized by small independent units, exchanging their products in a free market.

Hawking vegetables, retailing charcoal, dressmaking, selling Maize flour and Yeast, "busaa" brewing and maize roasting, are among the type of businesses Mathare women participate in. There are vast advantages of petty commodity production for women in Mathare.

First, there is the flexibility of the work hours and work place such that women with children

adjust their hours of work to fit the various duties and the small emergencies that arise in the family.

Second, the type of work women do can be performed in and around the house which means that a woman can comfortably take care of her child or have him or her near, as she works. This fact was often stressed by Mathare women as a definite advantage of brewing beer or running a shop (Nelson 1977)

3.2 METHOD OF DATA COLLECTION

The basic tool for data collection was the interview schedule. Once the sample of household units was selected, women were interviewed using the interview schedule.

Interviewing proved to be the most appropriate technique compared to any other technique because of the many open ended questions included which required alot of probing and which gave the respondents freedom of expressing their opinion on the key issue concerning status variables and fertility behaviour. The schedule also contained closed ended questions which helped limit the interview time.

Attempts were made to interview women away from their husbands to minimize their husbands' influence and interference. This was done by explaining to the husbands the intention of the study and requesting them to give the interviewer chance to freely conduct the interview.

The data derived from the interviews give an indication of the current status levels of women and their possible impacts on fertility in each estate. This information is important because no previous study of this nature has been carried out in Nairobi before and in the area of study in particular.

3.3 UNITS OF ANALYSIS AND SAMPLE SIZE

Although the individual household was used as the sampling unit in the two estates, the interview unit was the individual wife aged 15-49 years since reproduction outside this age bracket is generally insignificant. The focus was on the individual wife since the study intended to find out the impact of her status on fertility in relation to the husband's.

The proposed sample consisted of 200 women (100 from Mathare and 100 from Komarock estate). Equal samples from each estate gave an unbiased background for comparative analysis. The sample size i.e. 200 was considered adequate given the constraints of time, money and personnel. The proposed sample of 200 was achieved.

3.4 SAMPLING TECHNIQUES

In this study, the overall sample frame was decided on the basis of class . Komarock estate was chosen as a middle class residential place. Thus the estate represented the sampling frame.

The estate is physically and permanently divided into four homogeneous sectors (i. e sector 1, 2, 3 and 3A) which were used in the study as the...../63

sampling points - for spatial representation. For each sampling point, every housing unit had an equal chance of being selected in the sample.

The probability of a housing unit being included in the sample was worked out by dividing the number of housing units in each sampling point by the sampling frame (appendix A).

The probability of selecting a housing unit in sector 1,2,3B and 3A was 0.35, 0.12, 0.18 and 0.35, respectively.

Using the probability of a housing unit in each sector being included in the sample, the number of housing units in each sector to be included in the sample was calculated by multiplying the probability of a housing unit in each sector by the desired sample size of 100 (appendix B).

When this was done, the number of housing units in sector 1,2,3B and 3A were 35,12,18 and 35 respectively.

To get the sampling interval, the sample size from each sampling point was used as the denominator of the number of housing units in each sector (sampling point). For example, the number of housing units in each sector was divided by the sampling size (appendix C). The sampling interval in sector 1,2,3B and 3A was therefore 22,19,22 and 22 respectively.

Physically, all the houses in every sector are numerically and systematically numbered for easy identification. From these numbers, a table of random numbers was prepared (appendix D). With the guide of the sampling interval, the number of housing units required from every sampling point was systematically selected with a random start and the numbers selected were noted down (appendix D). From every housing unit selected, the interview unit was the individual woman aged 15 to 49 years. Where the individual woman was found missing, it was catered for by conducting the interview in the adjacent or neighbouring house unit. The house unit to be entered was randomly selected.

To get the required sample of 100 from Mathare estate, three base maps for the 1989 population census were used. The base maps are sub-divided into enumeration areas, each enumeration area consisting of between 50 to 100 housing units. The number of enumeration areas in each base map, 1,2 and 3 were 16, 29 and 20, respectively (appendix E).

These enumeration areas were the sampling points in this study.

To reach the 100 housing units to be included in the sample, the number of household units required from each base map was worked out (appendix F). From base map 1,2 and 3, the number of housing units selected were 25, 45 and 30, respectively.

Since the household units in each enumeration area

are haphazardly arranged, the decision to select (pick) a household unit for the purpose of interview was reached by using a random sampling method.

In each area covered by base map 1,2,and 3, 100 small cards were used, out of which 25, 45 and 30 (representing the desired sample) were marked with the symbol "✓", respectively.

From one enumeration areas to the other, the cards were confidentially carried in a small bag and the decision to enter the first house depended on the out come. For example, the bag was vigorously shaken and a card picked. If the card picked had the symbol "✓", then an interview was conducted. The reverse was the case if the card picked was blank.

In each enumeration area covered, the exercise was done continuously on approaching every single housing unit occupied, until the desired housing units were covered.

This method gave every respondent an equal chance of being selected and more so required a minimum advance knowledge of the population.

3.5 PROBLEMS ENCOUNTERED IN DATA COLLECTION

In Kamarock some of the housing units which fell in the frame were not occupied. In order to cater for this, interviews were carried out in the

adjacent or neighbouring housing units.

It also proved extremely difficult to locate most of women in Komarock since the majority work away from home. To cater for this, the respondents were contacted in the evening after work while in some cases appointments were made for weekends.

In Mathare, interview schedules were interfered with by policemen who were "combing" the area in search of "changaa" brewers. However, this problem was solved by making immediate revisits to complete the interviews.

3.6 DATA ANALYSIS TECHNIQUE

The main statistical techniques used in this study are percentages and tables. These statistical methods are used mainly for descriptive purposes.

To show further the strength of the relationship between the variables used in this study, the correlation coefficient is also used.

CHAPTER FOUR

4.0 PRESENTATION OF FINDINGS

4.1 INTRODUCTION

As stated in Chapter one, the aim of this study is to trace how women's status variables such as education attainment and work status affect fertility levels. The study attempts to show the direction and the strength of the relationship between each selected independent variable and the estimated family size. It further attempts to show how each selected independent variable affects the intermediate determinants of fertility.

Since the study is an attempt to explain fertility attitude and performance of women within the context of their status, it is considered appropriate to present the findings in the following order:

a) The status background of the respondents.

b) Fertility performance and attitude of the respondents, and

c) The relationship between independent and dependent variables (hypotheses testing).

The findings are presented mainly in tabular form. In some cases the correlation coefficient is used to show the strength of the relationship between independent and dependent variables.

4.2 THE BACKGROUND OF THE RESPONDENTS

Age

A description of age distribution of the respondents is very important for fertility analysis, since it determines the time of entry into marriage.

Table 5 gives the age distribution of the respondents by five year age groups.

Table 5: AGE DISTRIBUTION OF THE RESPONDENTS BY FIVE YEAR AGE GROUPS AND AREA. (PERCENTAGES).

AGE GROUP	AREA	
	KOMAROCK	MATHARE
< 19	0.0	9.1
20 - 24	24.0	39.4
25 - 29	44.0	26.3
30 - 34	21.0	13.1
35 - 39	10.0	6.1
40 - 44	0.0	3.0
45 - 49	0.0	3.0
50 - 54	1.0	0.0
TOTAL	100.0	100.0
SAMPLE (N)	(99)	(99)

The percentages have been calculated separately for women in each age group to show the distribution of women in the child bearing ages (15-49). The table shows that there were more women in some age groups by area than in others. For example, there were more women aged 20 - 24 in Mathare (about 39.0%) compared to Komarock (24.0%). The bulk of women (65.0%) in Komarock as

compared to about 40.0% in Mathare were in the mid child bearing ages.
Six percent of the respondents in Mathare were in their late child-bearing ages (40 - 49). Only one respondent in Komarock had gone beyond the child bearing age.

Generally, over 65.0% of the respondents in each estate are still exposed to the risk of child bearing for a relatively long period since they are still young (less than 29 years of age). Age is generally believed to be related to the number of children women have, their ability to have children and more so influences their attitudes regarding family size and planning.

The average fertility of women in each estate was also calculated and the findings were as shown in Table 6.

Table 6: AVERAGE FERTILITY OF WOMEN BETWEEN THE AGE 15 - 54 YEARS BY AREA.

AREA	Number of women	Number of total live births	Average No. of children born
KOMAROCK	95	223	2.4
MATHARE	90	244	2.7
TOTAL	185	467	2.5

The table shows that the average fertility of 2.7 in Mathare is slightly higher than that of 2.4 for Komarock. However the total average of 2.5 for the two areas is lower than the current average of 5.4 children for the entire nation (Kenya

Populaltion Census 1989). The low average fertility as recorded in the study areas is what would be expected of a population where the majority of the women have not been exposed to the risk of pregnancy for long, other things being equal.

Age at Marriage

Table 7 shows the distribution of the age at marriage in the two areas.

Table 7: AGE AT MARRIAGE (PERCENTAGES)

AREA	AGE AT MARRIAGE				
	Less than 13	14 - 18	19 - 23	24 - 28	TOTAL
KOMAROCK	3.3	10.7	62.8	23.2	100.00
MATHARE	2.2	49.3	42.8	5.7	100.10
TOTAL	KOMAROCK (N) = 92, MATHARE (N) = 89, TOTAL = 181				

The findings reveal that the majority (over 50.0%) of the respondents in Mathare married below the age of 19 as compared to only about 14.0% in Komarock. Over 80.0% of the women in Komarock married at the age of 19 and above.

The emphasis here is that over 90.0% of the women interviewed had been exposed to the risk of pregnancy since they had entered the reproductive period and if mortality does not set in, the majority of them are likely to be exposed to pregnancy risk during the whole period of their reproductive life. Since majority of the women in Mathare marry at an early age, a tentative conclusion could be drawn that this long exposure to pregnancy risk is likely to contribute towards very high fertility in future as compared to Komarock.

The medium age at marriage of 21.3 and 18.2 for Komarock and Mathare, respectively further shows that age at marriage for Mathare is relatively low compared to Komarock.

It has been argued by most scholars that all other things equal, young age at marriage for women leads to high fertility. The increased enrolment of women in secondary and higher education has probably contributed to the increasing proportion of women delaying marriage in Komarock as compared to Mathare. This proposition will later be tested in this study.

Education

For purposes of comparison, respondents were categorized in terms of their level of education as presented in table 8.

As the findings reveal, the level of schooling of the respondents in Komarock is by far higher than that of Mathare. Over 90.0% of the women in Komarock had secondary school education and higher education compared to only 27.0% in Mathare. Nearly 70.0% of the respondents in Mathare had adult and primary school education whereas 5.0% had no education.

Table 8: EDUCATION LEVEL OF RESPONDENTS (PERCENTAGES)

Level of Education	AREA	
	KOMAROCK	MATHARE
No Education	0.0	5.0
Adult	0.0	1.0
1 - 4	2.0	9.0
5 - 8	7.1	58.0
Form 1 - 2	11.1	16.0
Form 3 - 4	46.5	11.0
Form 5 - 6	23.2	-
DIPLOMA	7.1	-
UNIVERSITY	3.0	-
T O T A L	100.0	100.0
SAMPLE	(94)	(99)

The impression one gets from the findings is that of a highly educated female population in Komarock as compared to Mathare hence a reflection of a higher status level among them (Komarock women).

Occupational status

As the findings of the study reveal, about 70.0% and 46.0% of the women in Komarock and Mathare, respectively were employed whereas 30.0% and 54.0% respectively were not. When they were asked what kind of employment or occupation they were engaged in, the results were as shown in table 9.

Table 9: KIND OF EMPLOYMENT (PERCENTAGES)

Employment type	AREA	
	KOMAROCK	MATHARE
Unemployed	30.0	54.0
WAGE	49.0	6.0
SELF	21.0	40.0
T O T A L	100.0	100.0
SAMPLE (N)	(97)	(99)

It is evident from the table that the majority (54.0%) of the women in Mathare were not employed compared to only 30.00% in Komarock. Fourty nine and Fourty percent of the respondents in Komarock and Mathare respectively were wage and self-employed.

Only 21.0% of the respondents in Komarock were in self-employment. The proportion of Mathare women who were wage - employed was smaller (6.0%).

The self-employed women in Mathare participated in petty commodity production and business such as beer brewing, operating small food Kiosks, charcoal, flour and cloth selling, and green grocery on a small scale. "Changaa" and "Busaa" brewing and selling was more pronounced than any other economic activity. The majority of the wage employed worked as housemaids in the neighbouring Pangani, Muthaiga and Eastleigh Estates. The rest were reported as working in town as sub-staff (messengers and copy-typists) in various government ministries and organizations.

Except for "Changaa" and "Busaa" brewing and

selling, the self-employed women in Komarock engaged in similar economic activities to those of women in Mathare but on a higher scale. The wage-employment categories in Komarock included secretarial, teaching, banking, nursing and accountancy among many others.

It can be suggested that the low education attainment among Mathare women hinders them from engaging in wage employment since they lack the required skills that would allow them to compete in the skilled job market.

Income

Table 10 reveals the total monthly income of the respondents in the two study areas.

Table 10: MONTHLY INCOME DISTRIBUTION OF WOMEN (PERCENTAGES)

Income Level	AREA	
	KOMAROCK	MATHARE
< 999	2.9	14.9
1000 < 1999	1.5	27.7
2000 < 2999	14.7	4.2
3000 < 3999	17.7	4.2
4000 +	17.6	6.4
Can't tell	45.6	42.6
TOTAL	100.0	100.0
SAMPLE (N)	(68)	(47)

The table shows that women in Komarock had higher income levels. For instance, whereas only 4.4% in Komarock earned less than Kshs. 2000/= per month, the proportion for Mathare was higher (about 40.0%). More still a larger proportion of Komarock women (about 50.0%) earned over Kshs.

2000/= compared to only about 15.0% in Mathare. This can partly be explained by the fact that most of the women in Komarock are in wage employment which seemed to be more paying than self-employment. The Majority of the women in Mathare were engaged in self-employment (petty commodity production) which tends to have low returns.

As the results suggest, income levels of individual respondents are to an extent determined by the type of employment.

To further determine the couples' general economic status, the respondents were asked to state their husbands monthly income interms of money. The responses were recorded as indicated in Table 11.

Table 11: HUSBAND'S MONTHLY INCOME (PERCENTAGES)

Income level KSHS.	AREA	
	KOMAROCK	MATHARE
< 99	0.0	0.0
1000 < 1999	1.1	0.0
2000 < 2999	1.0	3.6
3000 < 3999	0.0	9.8
4000 +	44.4	4.9
Can't tell	53.4	79.3
T O T A L	100.0	100.0
SAMPLE (N)	(88)	(82)

As the findings reveal, 3.6% of the respondents in Mathare who reported their husbands income stated that they were in the low (between 1000 - 1999) and average (2000 - 2999) income brackets respectively. In Komarock, of all the women who reported their husbands income 44.4% stated that

their husbands fall under the high income bracket (4000/= and above) compared to only 4.9% in Mathare.

About 80.0% and 50.0% of the respondents in Mathare and Komarock either refused to disclose or genuinely did not know their husbands' monthly income.

The impression one gets from the findings in table 10 and 11 is that of a higher levels of income for Komarock couples than Mathare.

Assistance from Children

The respondents were further asked to state the extent to which they expect financial assistance from children. The findings were as shown in Table 12.

Table 12: TO WHAT EXTENT DO YOU EXPECT TO RELY ON CHILDRENS FINANCIAL ASSISTANCE? (PERCENTAGES)

Extent	AREA	
	KOMAROCK	MATHARE
Not at all	22.0	9.0
A little	68.0	37.0
A great extent	10.0	54.0
TOTAL	100.0	100.0
SAMPLE	(99)	(98)

The finding (in table 12) reveal that the majority (54.0%) of the respondents in Mathare stated that they expected to a greater extent, financial assistance from their children, compared to only 10.0% in Komarock. Similarly, a larger proportion

(22.0%) of the women in Mathare compared to only 9.0% in Komarock reported that they did not expect to get any financial assistance from children.

Apart from the little financial assistance expected from children by Komarock respondents the majority expected to rely heavily on income from business, savings and pensions, respectively.

4.3 FERTILITY PERFORMANCE AND ATTITUDE OF RESPONDENTS

Number of children

The number of children women had in the two estates is shown in table 13.

Table 13: Number of children (percentages)

Number of Children	AREA	
	KOMAROCK	MATHARE
None	5.0	7.0
1 - 2	59.0	49.0
3 - 4	28.0	31.0
5 - 6	7.0	6.0
6 +	1.0	7.0
TOTAL	100.0	100.0
SAMPLE	(99)	(99)

The table clearly shows that the respondents in general tend to have few children. For instance over 80.0% of the respondents in each estate had between 1 and 4 children. The proportion for women who had between 1 and 2 children was higher in Komarock (about 60.0%) than in Mathare (about 50.0%). Only one respondent in Komarock compared to 7 in Mathare had over 6 children. Those with more than 6 children tended to be mostly older

women (over 40 years of age) as is evident in table 14.

Table 14: Age versus number of children born. (percentages)

Age of Mother	AVERAGE NUMBER OF CHILDREN	
	KOMAROCK	MATHARE
15 - 19	0.0	1.2
20 - 24	1.2	1.8
25 - 29	1.5	2.6
30 - 34	3.5	3.1
35 - 39	3.8	4.6
40 - 44	0.0	5.0
45 - 49	0.0	7.0
50 - 54	6.0	0.0
T O T A L	3.2	3.6
SAMPLE	(99)	(99)
Correlation Coefficient (r)	.5847	.6614

The table shows that the age of the mother was important in explaining variations in the number of children. Whereas the majority of the younger women (15 - 29) had an average of about 2 children, the older ones (30 - 54) had an average of about 5 children. A correlation (r) of .5817 and .6614 for Komarock and Mathare respectively, further confirm the positive and strong relationship between age of the mother and the number of children born.

Ideal family size

Respondents were asked to state how many children they considered to be ideal for a couple and their responses were recorded as shown in table 15.

Table 15: IDEAL NUMBER OF CHILDREN DESIRED (PERCENTAGES)

Ideal number (response)	AREA	
	KOMAROCK	MATHARE
Decide after marriage	0.0	1.0
1 - 2	62.0	18.0
3 - 4	30.0	55.0
5 - 6	7.0	22.0
7 +	1.0	2.0
God Knows	0.0	2.0
TOTAL	100.0	100.0
SAMPLE	(95)	(97)

From the table, it is clear that the majority (62.0%) of the women in Komarock estate desired small family sizes (3 - 4) compared to only 18.0% in Mathare. Most respondents in Mathare (55.0%) indicated that they prefer an average family size of (5 - 6) compared to only 30.0% in Komarock. Eight and Twenty-four percent of the women in Komarock and Mathare respectively expressed their desire to have large family sizes (5 and above). A few (2.0%) of the respondents in Mathare expressed their view that the power to have children was divinely oriented.

The impression one gets from the findings is that women in Mathare desire more children comparatively.

On average, women in Komarock and Mathare considered 3.1 and 3.9, respectively to be the ideal family size, which is still below the average of 4.4 for the entire nation (KDHS 1989).

Family size preference declines with increased levels of education hence this would explain why family size preference for women in Komarock is slightly lower than that of Mathare.

Sex Preference

Table 16 shows the sex preference of children as expressed by the respondents.

Table 16: SEX PREFERENCE OF CHILDREN (PERCENTAGES)

Number	KOMAROCK		MATHARE	
	Sons	Daughters	Sons	Daughters
None	23.5	28.2	13.8	24.4
One	57.6	56.5	57.5	52.2
Two	16.5	11.8	14.9	17.8
Three	1.2	2.3	11.5	5.6
Four	1.2	1.2	2.3	0.0
T O T A L	100.0	100.0	100.0	100.0
SAMPLE	(85)		(90)	

The findings reveal that most (about 70.0%) of the women in each study area preferred between 1 to 2 children of either sex. The data further shows that preference for sons among women in the two estates was more or less the same although slightly higher among Mathare respondents. for instance, a smaller proportion (about 14.0%) of the respondents in Mathare compared to about 24.0% in Komarock reported that they did not need Male children. More so, about 14.0% and 2.0% in Mathare and Komarock respectively stated that they preferred between 3 to 4 sons.

It is suggested in this study that respondents, especially those in Mathare tended to prefer

slightly more sons to daughters for purposes of economic gain. The hypothesis that the preference for sons tends to be related to women's economic status will be tested in this study.

Family Planning knowledge and practice.
All the respondents interviewed had some knowledge of modern contraceptive methods and the sources of these methods. However, the proportion of women who have ever used a contraceptive method is much higher than those currently using.

The findings reveal that in Komarock and Mathare respectively about 70.0% and 41.0% of the respondents had at one time used the modern contraceptive methods.

Over 50.0% of the respondents in Komarock as compared to about 25.0% in Mathare reported that they were currently using modern contraceptive methods. The data shows that the pattern for the Komarock women was what would be expected because of their high levels of education.

The use of different Modern Contraceptive methods is recorded in table 17. The findings as shown in the table reveal that the most commonly used contraceptive is the pill (about 71.0%) in each estate. The use of injection was higher in Mathare (about 20.0%) than Komarock (about 8.0%) whereas the use of I.U.D was higher in Komarock (about 10.0%) compared to 5.0% in Mathare. About 3.0% and 4.0% of the respondents in Mathare and Komarock, respectively reported the use of condoms.

Table 17: USE OF MODERN CONTRACEPTIVE METHODS (PERCENTAGES)

Contraceptive Method	AREA	
	KOMAROCK	MATHARE
Pill	71.1	71.1
Injection	8.2	21.1
I.U.D	9.6	5.2
Condom	4.1	2.6
Others	7.0	0.0
T O T A L	100.0	100.0
SAMPLE	(73)	(73)

The findings reveal that the pill was more popular among women - for reasons that it was the most effective and the easiest to administer.

About 70.0% of the total respondents in each estate currently using modern contraceptive methods obtained their methods from the Family Planning Association of Kenya (FPAK) clinics. Twenty and 60.0% percent of the women in Komarock and Mathare respectively, obtained information from the government clinics and health centres, 6.3% and 10.9% from friends and relatives, whereas 2.5% and 6.3% obtained information from the media, respectively.

Further, the findings reveal that about 40.0% and 80.0% of the women in Mathare and Komarock, respectively jointly (with their husbands) reached the decision to use contraceptive methods.

Breastfeeding practices

Breastfeeding is universal in both estates. All

respondents reported that they breastfeed their babies. However, there were variations in the intensity and duration of breastfeeding.

In terms of intensity, about 65.0% and 80.0% of the respondents in Komarock and Mathare, respectively reported that they breastfeed their babies several times in a day. The rest (35.0% and 20.0%) breastfeed between 2 and 5 times daily. In all, breastfeeding intensity seemed to be higher in Mathare than in Komarock.

The findings on the duration of breastfeeding is shown in Table 18. As the findings reveal, over 50.0% of the respondents in each estate breastfeed their babies for a period of 2 years and more. About 20.0% and 30.0% of the women in Komarock and Mathare breastfeed for a period of 1 year and above but for less than 2 years, respectively. The proportion of women who reported that they breastfeed for a period of less than 1 year was higher in Komarock (about 25.0%) than in Mathare (about 14.0%).

Table 18: DURATION OF BREASFEEDING (PERCENTAGES)

Duration Months/Years	AREA	
	KOMAROCK	MATHARE
Don't Know	0.0	3.3
Few Months	24.7	13.5
1 - 2 years	20.2	28.1
2 +	55.1	55.1
TOTAL	100.0	100.0
SAMPLE (N)	(89)	(89)

The impression one gets from the data is that

there is no remarkable difference in the duration of breastfeeding expressed by women in the two estates. For instance, over half of the respondents in each estate reported that they breastfeed for a period of 2 years and above.

The respondents were asked whether they breastfeed their babies either at the place of work or in the house. All the women in Mathare reported that they breastfeed their babies at the place of work since it is closer to the house and more so because there is total freedom at the place of work to the extent that women carry their children along with them.

In Komarock about 90.0 and 10.0% of the respondents brestfeed their babies at home (in the house) and work place, respectively. The majority breastfeed at home especially in the evenings since they work far away from their areas of residence. The few who breastfeed at home are among the self-employed lot who equally enjoy a closer proximity to their children and freedom at the place of work.

Regarding distance of the work place from the house, most women in Mathare (about 80.0%) reported that they work á few metres away from the house. In Komarcok the proportion was smaller (20.0%). The majority in Komarock (about 50.0% and 30.0%) reported that they work a few kilometres (between 1 and 5 km) and very far away (more than 5km) respectively from their areas of residence.

Infant and Child Mortality

The findings reveal reports on infant and child

mortality as shown in table 19.

Table 19: NUMBER OF CHILDREN DEAD

Infant/child deaths (year)	AREA	
	KOMAROCK	MATHARE
Less than 1 year	3	22
Between 1 - 5 years	2	7
TOTAL	5	29

The findings clearly reveal that there are more than 5 times, children reported dead in Mathare than in Komarock, 29 and 5 respectively. The hypotheses that Education is negatively related to infant and child mortality will be tested in this study.

Diseases

Table 20 reveal most common diseases leading to the death of children as stated by the respondents.

Table 20: TYPE OF DISEASES (NUMBERS)

Disease	AREA	
	KOMAROCK	MATHARE
Malaria	2	-
Measles	-	6
Tetanus	-	1
Pneumonia	-	1
Diarrhoea	-	7
Meningitis	1	3
Kwashiorkor	-	3
Miscarriage	1	2
Accident	1	2
Don't Know	-	2
TOTAL	5	29

As the findings reveal, Measles, Diarrhoea, Meningitis and Kwashiorkor, respectively are the

most common diseases reported in Mathare.

4.4 HYPOTHESES TESTING

This section moves into the testing of the major hypotheses of the study in an attempt to establish the extent to which women's status variables influence their fertility behaviour. The major hypotheses in the study will be tested by cross-tabulating each independent variable with the dependent ones. In some cases correlation coefficients (r) will be used to measure the strength of the association between each set of variables.

HYPOTHESIS 1.

"The higher the status of women, the lower the fertility level"

In testing this hypothesis, the following are examined; the extent to which education and work status affect fertility. When the hypothesis was tested through the variables mentioned, the results were as shown in table 21.

Table 21: LEVEL OF EDUCATION AND AVERAGE NUMBER OF CHILDREN

Level of education	Average No. of children
Adult education	7.0
Std 1 - 4	3.0
Std 5 - 8	2.5
Form 1 - 2	2.4
Form 3 - 4	2.2
Form 5 - 6	1.9
Diploma	1.8
University	1.3

As the results of the study show, Education is

negatively related to the number of children born.

Further, there was a strong inverse relationship observed between education and number of children. ($r = .604$ and $r = .908$) for Mathare and Komarock, respectively).

While we accept that education is an important variable in influencing fertility, the argument further advanced in this study is that the relationship may not be a direct one and that there are other intervening variables which might be confounding this relationship.

Education attainment for example is not only related to employment (as shown in table 22) but also to women's domestic power.

The study further revealed that the type of employment also had an impact on the number of children born. On average, women in wage and self-employment, respectively had 2.3 and 3.2 children.

In families where women had more powers in domestic decision making and particularly on the number of children the average number of children born was 2.5 as compared to 3.2 in families where the husband had more powers. However, where there was an understanding between the couples on the number of children to have, the average number of children was lower (2.4).

These findings support the hypothesis that "the higher the status of women, the lower the

fertility."

HYPOTHESIS 2

"Education attainment of women is likely to be positively associated with age at first marriage."

In testing the hypothesis, the extent to which having gone to school affects age at marriage and women's domestic power - through employment are examined.

The literature in this study suggests that Female age at marriage, usually has an inverse relationship to fertility and that women's education has positive statistical relationship to woman's age at first marriage in developing countries.

When this hypothesis was tested, the results were as shown in table 22.

Table 22: LEVEL OF EDUCATION AND AGE AT MARRIAGE

Level of education	Average age at marriage
No education	14.2
Primary	16.3
Form 1 - 2	18.3
Form 3 - 4	20.6
Form 5 - 6	22.1
Diploma	22.7
University	25.0
T O T A L	19.4
SAMPLE	186

As the findings reveal, women who had the highest level of education (university) married the latest whereas those who had no education and primary school education married the earliest.

The results confirms the positive relationship between the level of education and the age at first marriage.

The correlation coefficient (r = 0.5317 and 0.2494) for Komarock and Mathare, respectively further confirms the positive relationship between education and age at first marriage.

The impact of education on age at Marriage is not a direct one. As the literature in this study suggests, education partly affects the age at marriage through other variables such as employment type and domestic decision making. Education is said to be positively related to women's participation in extra domestic employment (especially wage employment) something that inturn is thought to increase women's domestic power.

Since women's employment type is believed to be associated with their decision making power the impact of education on employment was further tested and the results were as follows:-

Table 23: EDUCATION AND TYPE OF EMPLOYMENT (PERCENTAGES)

Level of education	EMPLOYMENT TYPE			
	KOMAROCK		MATHARE	
	WAGE	SELF	WAGE	SELF
Primary	0.0	4.5	6.6	61.6
Secondary	59.6	24.0	4.4	27.4
Higher	10.4	1.5	0.0	0.0
TOTAL	70.0	30.0	11.0	89.0

As the findings reveal, a larger proportion

(70.0%) of the women in Komarock with secondary school and higher education were wage-employed. Only 30% were in self-employment out of which 4.5%, 24.0% and 1.5% had primary school, secondary and higher education, respectively. In Mathare, 89.0% of the respondents were self-employed out of which about 62.0% and 27.0% had primary and secondary school education. Only 11.0% were wage employed.

The impression one gets from the findings is that of a higher relationship between wage employment and increase in level of education (secondary and higher level). On the other hand, education upto primary school level as evidenced in Mathare seem to be highly related to self-employment.

The income that is associated with wage employment is likely to postpone early marriage since it may give women a taste of independence therefore fostering greater female autonomy and a later age at marriage. This argument only holds for Komarock where women have more opportunities of engaging in wage employment.

HYPOTHESIS 3.

"Women's level of education tends to be positively related to the use of contraception."

When the hypothesis was tested, the results were as shown in table 24.

Table 24: LEVEL OF EDUCATION AND CONTRACEPTIVE USE (NUMBERS).

Level of education	Users	Non users	T O T A L
Adult education	-	1	1
Primary	13	58	71
Secondary	67	32	99
Higher	7	2	9
T O T A L	87	93	180

It is evident from the findings that education has positive impact on the use of contraception. For instance, out of 71 women who had primary school education, 13 and 58 respectively, were using and not using contraceptives. Among those who had secondary school education, the number using contraceptives were 67 whereas those not using contraceptives were 32. Out of the nine women who had higher level of education 7 and 2 were reported using and not using contraceptives respectively.

The hypothesis that "women's level of education tends to be positively related to the use of contraception" is supported by the findings.

HYPOTHESIS 4.

"The preference for male children (sons) tend to be related to women's economic status."

In testing the hypothesis the following are examined. The emphasis put on the sex of children and the main source of help between sons and daughters.

As the findings in table 16 reveal, there was no

remarkable difference on preference for children of a particular sex in both estates. For instance about 70.0% of the women in each estate reported that they considered ideal between 1 to 2 sons or daughters.

Although there seem to have been a general desire for children of a balanced sex in the two estates, Mathare women tended to prefer more sons to daughters. For instance about 14.0% and 6.0% reported that they desired between 3 to 4 sons and daughters, respectively.

Asked to report on their husbands sex preference, the findings reveal that about 50.0% and 60.0% of the respondents in Mathare and Komarock expressed their husbands desires to have only one son or a daughter respectively - almost similar desires as expressed by women.

The extent to which the respondents expected financial assistance from the children (sons and daughters) was further tested in this study and the results revealed the following.

Table 25: WOULD YOU EXPECT MORE FINANCIAL ASSISTANCE TO COME FROM SONS OR DAUGHTERS? (PERCENTAGES).

AREA	Source of help			
	Sons	Daughters	Both	TOTAL
Komarock	24.0	31.5	45.0	100.0
Mathare	36.0	19.6	47.4	100.0
TOTAL SAMPLE	(196)			

The findings reveal that the majority of the respondents in Komarock (45.0%) and Mathare (about 47.0%) reported that they expected equal financial assistance from children of either sex. Slightly more respondents (36.0%) in Mathare than in Komarock (24.0%) expected financial support to come from sons. About 32% of the women in Komarock as compared to about 20.0% in Mathare reported that they expected financial assistance from the daughters.

The findings reveal that it is not only the need for sons that is related to women's economic status but more important the general need for children irrespective of sex.

In areas of low economic status (especially characterized by self-employment) as is the case of Mathare, there tended to be higher expectations of children's financial assistance. The fact of low economic status among women in Mathare could be an explanation to the slight difference in the emphasis put on sons. Women in Mathare seemed to be much more assured of their sons financial assistance as compared to their daughters. For instance a few women were reported as arguing:

"We would rather give birth to sons who will stay with us and provide us with permanent assistance interms of cash and labour."

Another woman was also reported as commenting:

"Whether employed or not, sons are better than daughters since they (daughters) get married and settle in their new homes, raise their own families and tend to completely forget about their parents."

However, as the findings reveal, it is the general

need for children irrespective of their sex that relate to womens economic status. However, to a smaller extent, low economic status among women as experienced in Mathare could be an explanation to the expressed need for more sons than daughters. In Komarock where women seemed to be economically stable, there was comparatively little emphasis put on the need for more sons as compared to daughters.

HYPOTHESIS 5.

"Female education tends to be negatively related to infant and child mortality."

Before testing this hypothesis, it is necessary to briefly present the findings on mortality as shown in table 26.

Table 26: INFANT AND CHILD MORTALITY (PERCENTAGES)

AREA	Proportion of children dying		
	Deaths before first birthday	Deaths from first to 5th birthday	TOTAL
Komarock	8.8	5.9	14.7
Mathare	64.7	20.6	85.3
TOTAL	73.5	26.5	100.0
SAMPLE	(188)		

All the children who were reported by the mothers to have died before age 1 were considered as cases of infant mortality whereas those who were reported to have died from age 1 and 5 were considered as cases of child mortality.

From table 26 it is shown that deaths before the first birthday is higher in Mathare than in Komarock. For instance about 65.0% of the

children in Mathare were reported to have died before age 1 compared to a smaller proportion of about 9.0% in Komarock.

Accordingly, the proportions of those reported to have died between age 1 and 5 was higher in Mathare than in Komarock.

In reference to these findings the impact of education on infant and child mortality is tested and the findings are as shown in Table 27.

Table 27: EDUCATION AND CHILD MORTALITY (PERCENTAGES)

Level of Education	DEATHS		
	Before age 1	Between age 1 - 5	TOTALS
Primary	58.7	20.7	79.4
Secondary	14.8	5.8	20.6
Higher	0.0	0.0	0.0
TOTAL	73.5	26.5	100.0

As the findings reveal, women with primary school education reported the death of more children (79.4%) as compared to women with secondary school education (20.6%). No woman with beyond secondary school education reported the death of any child.

These findings clearly show that a rise in the level of education reduces infant and child mortality hence the hypothesis that "female education tends to be negatively related to infant and child mortality" is supported.

CHAPTER FIVE

5.0 DISCUSSIONS AND CONCLUSIONS.

In General, it can be concluded that the findings of this study highly supported the major hypothesis stated in chapter one that - increase in level of women's status reduces their fertility level.

Considering individual status level it can further be deduced that women's education level seems to have significant influence on their status level which inturn affects their (women's) fertility attitude and performance . Women with beyond std.7 level of education may be less likely to experience infant or child mortality, marry in their late teens or early twenties, and more likely to use contraception than are less educated (those with below std.7 level of education). Also, women's education even if it is less than men's, on average is likely to give them knowledge and resources that may in turn increase their status. All these suggest that the variable may indeed be very powerful in influencing fertility.

On the other hand, the nature of women's occupational distribution, work distance and the income associated with their employment have some effects on child rearing, breastfeeding intensity and the preference and value placed on children, respectively. Self unlike, wage employment was found to have little incompatibility with child rearing, and increased desires by parents to have

more children especially sons.

On the whole, family sizes are generally considered to be small as the study findings reveal. Where large family sizes are encountered, this could be attributed to factors such as low educational level of women coupled with early age at marriage among other factors.

A brief discussion about some of the women's status and the intermediate fertility variables which were examined in this study forms an important section in the conclusion chapter.

From the findings of the study, it can be concluded that the majority of the respondents (women) are still young. About 65.0% are less than 25 years of age. This fact partly explains why the average fertility is still low (2.5 children) as compared to 5.4 children for the entire nation (Kenya Population Census 1989). The Majority of these women (respondents) have not been exposed to the risk of pregnancy for long hence an indication of high fertility in future - if no proper control measures are undertaken.

The age at marriage as argued in the earlier chapters of this paper, was found to have far reaching effects on the size of the family (as shown in Table 14). It affects the span of life and the decision making process that a married woman spends in child bearing. As the literature in this paper further suggests, it (age at marriage) has an inverse relationship to fertility presumably because it is correlated with other

factors that independently tend to reduce the supply of or demand for children.[125]

In this study Education of women was found to be positively related to their (women's) age at first marriage (as shown in Table 22). The correlation coefficient (r=0.5317 and r=0.2494) for Komarcok and Mathare respectively confirms the positive relationship. As the results show, women who spent more years in school tended to marry at a later age. As they further expressed, their main reason for the delayed marriage was the desire to achieve socio-political and economic independence in life. Those (women) who never went beyond primary school education stated that pressure from their parents to get married and the idleness faced at their parental homes were the main reasons for marrying early.

From the findings above, it is justified to deduce that increased education of women to some extent gives them (women) power that would enable them resist the pressure from their parents to marry early.

Education also had significant impact on women's powers concerning important decision making. Major domestic decisions such as the contraceptive method to use, the number of children to be born and nutritional habits had far reaching effects on fertility. As the findings of the study reveal, the majority (70.0%) of the women in Komarock as compared to only 40.0% in Mathare jointly ...../99

reached on the decisions concerning the major domestic issues mentioned above. The lack of equal or joint decision making partly explains the low use of contraception use in Mathare since as the results indicate, husbands appear to have more powers when it comes to family planning affairs.

Employment type was also found to be related to women's status. As the findings (in table 10) reveal women in wage employment earned higher income compared to those in self employment. The higher participation in wage employment tended to increase the status of women which in turn negatively influenced their demand for more children. With increased status of women, children's value for economic reasons (for example as a source of labour, wealth, household help or sources of economic support) tended to decrease. The majority (54%) of the women in Mathare all of whom are in self-employment stated that they highly expected financial assistance from their children.

Bringing fertility down demands more than just making contraceptives available to the people. Change in the status conditions becomes important components of efforts to bring down fertility rate. However, given the existing status conditions of women especially in the slum areas, those who think they are at disadvantage economically might want more children (especially sons) because they provide an opportunity of getting more money and extra labour.

The fact of employment type was found to have no remarkable impact on the duration of breastfeeding

(as shown in table 16). As the findings further reveal the location of work had some impacts on the intensity of breastfeeding. However the effect of the location of work on the intensity of breatfeeding has to do with the difficulties of feeding a baby while working rather than having to do with the status of women or inequality between the sexes. Further, the study found no remarkable difference in the duration of breastfeeding in the two areas in spite of the differential education background, hence it would be wrong to generalize that the association between women's education and beastfeeding is consistently negative across the developing countries as expressed by Nag (1983).

The knowledge of the Modern Contraceptive Methods was found to be universal in the study areas. However, the majority (70.0%) of the women in Komarock had once used modern contraceptive methods as compared to only 41.0% recorded in Mathare. As the results in Table 24 show, education of women was once again found to be positively related to the use of contraception. Education is believed to be instrumental in enhancing the knowledge and use of contraception since it increases the awareness and access to modern institutions where the modern contraceptives can be acquired. It (education) also raises women's effectiveness in the selection and use of the best contraceptive method to be adopted. As the findings earlier revealed, selection and the administration of the best contraceptive methods was one of the more reasons which contributed to the low use of contraception in Mathare.

Further, the study revealed that women in general expected financial assistance from their children. However, women in low status tended to expect more help (financial assistance) from their children especially sons than those in higher status. As reported by one woman in Mathare at the root of a stronger preference for male children is the need for economic support.

"I would rather give birth to a son who will ..... assist interms of cash and labour."

Income earning in slum areas such as Mathare requires the assistance of children. This tends to agree with the previous studies done by Cain 1982 and Caldwell 1983 who found out that income earning requires the assistance of children either on job (if the mother is self-employed) or in the home. In poorer populations such as that of Mathare, children especially sons are looked at as a source of economic support.

Finally, increased level of women's education was found to reduce infant and child mortality. As the findings of this study show , educated women are more likely to use contraception which may inturn lengthen birth interval thus reducing infant and child mortality. More so educated women are believed to be generally aware of the need for hygienic forms of child care and proper medical services. It is common knowledge that where deaths are high, parents are likely to respond to the problem by increasing their numbers of birth as an attempt to guarantee that the number of births outnumber the number of deaths.

In summary, education was found to have a negative relationship to the number of children born (r = -604 and r = -908) for Mathare and Komarock, respectively. From the findings, it can therefore be concluded that low education among women is an explanation for high fertility.

The association of women's status indicators with fertility via their effects on the intervening factors affecting fertility as the study finding reveal is summarized in table 28. The findings tend to support the synthesis model of fertility determination by Easterlin and Crimmins, 1985.

Table 28: EFFECTS OF WOMEN STATUS INDICATORS ON INTERVIEWING VARIABLES.

INTERMEDIATE VARIABLES	WOMEN INDICATORS		
	EDUCATION	EMPLOYMENT	DOMESTIC DECISION MAKING
Age at Marriage	+	+	*
BREAST FEEDING			
(i) Duration	*	*	*
(ii) Intensity	*	*	*
Desired family size	-	-	-
Value of children	-	-	*
Sex preference	*	-	*
Methods known	+	+	+
Use of contraceptive	+	+	+

(+) Positive impacts

(-) Negative impacts

(*) No or unclear impacts.

As the findings in the table reveal, any improvements in the status of women (education, employment and family structure) would have a negative impact on fertility. Such improvements in the status of women would on balance lower the demand for children, raise potential supply and reduce regulation costs.

CHAPTER SIX

6.0 RECOMMENDATION

The status of any particular group in society is greatly influenced and sometimes determined by views members of the society have on that specific group. Traditional cultures and attitudes influence contemporary life, and men have been known to resort to traditional ways in order to put women down.

No level of modernization scientific or technological advancement will elevate the status of women as long as cultural attitudes continue to degrade and demean them, and as long as men present, perpetuate and reinforce the existing status quo of the stereotypical inferior image of women.

It must be recognized that tangible accomplishments will only be attained when all the talents, capabilities, abilities and intelligence of the various groups of women have been tapped and harnessed in a united front after a common stand has been identified. With the repeal of section 2A of the Kenyan constitution, the freedom that characterizes democratic rule should enable several women organizations to emerge. Through these organizations women in ...../105

future will be able to question and challenge fully those social values and structures which undermine their role in society. The emerging organizations, together with the already existing ones such as the National Committee on the status of women (NCSW), women's voters league, mothers in Action, Federation of the National Women's lawyers, Kenya chapter (F.I.D.A), National committee for the Advancement of women among others will be able to mobilize and create solidarity with women from all over the country, to enable them discuss common issues of concern and more to agitate for the improvement of their (women's) status in all spheres; political, social and economic.

The existing efforts aimed at raising the status of women must be intensified by raising a national consciousness on the status of women at all levels and especially at the grassroot level as it is through the grassroots woman that women can develop a wide spectrum of pressure groups which can be felt at the national level.

Society must be made aware that discrimination against women on any basis should be discouraged and shunned in any free and democratic society. Cultural practices and attitudes that women are inherently inferior should be attacked and redressed as a matter of urgency with a view to sensitising all members of society to have positive attitudes towards women. The factor most consistently argued in this study to involve women's status and to influence their fertility is women's education. Since education is found to have the most significant influence on women's status, all the development efforts geared towards the improvement of education of women

should be seen as a positive move geared towards the improvement of the general status of women.

The Government of Kenya through the Ministry of Education and in liaison with various Non-Governmental Organizations (NGOs) should build more primary and secondary schools especially for girls in areas where no schools or a few existed before. It is common knowledge among Kenyans that in the rural and slum areas, few or no such institutions exist. The existence of separate schools for girls would act as an impetus and a motivating factor to the young school going girls and their parents who associate such schools with high discipline and academic excellence.

There should also be equal enrolment for both boys and girls at all levels of education especially in the institutions of higher learning (Polytechnic, Technical training colleges, institutes of science and technology, teacher training colleges and the universities) which are marked with low enrolment of females. Enrolment in such institutions should be based on qualifications and not sex.

Public awareness should be created and parents motivated so that the already existing educational institutions especially those in the rural and slum areas are made maximum use of. In areas where socio-cultural factors hinder parents from sending their daughters to school such parents should be educated in order to perceive sending their daughters to school as a good "investment".

As the statistics from the economic survey (1991)

reveal, a number of girls drop out of school earlier than boys due to increasing incidence of teenage pregnancies. Since the schooling period is a line of growth both physically, socially and psychologically, proper guidance and counselling in all aspects of family life should be strengthened. An emphasis should be put on sex education and be taught at all levels of schooling and not only in primary and secondary schools.

There is no doubt that the Kenyan Youth should be aware of the importance and problems or implications of rapid population growth in the country. Provided with information on how population changes and the measures which an individual, the family and the community can take to slow the high rate of population growth, the youth will no doubt be more aware about population growth and will be included to do something about it. In view of this the following general policies are recommended.

Integration of certain study units of population education in existing courses at all levels of schooling emphasizing population change processes (i.e fertility, mortality and migration), and the consequences of such changes to the individual, community, and the nation, the implications of unplanned parenthood for the families and the youthful parents themselves. The population education should aim at reinforcing the youths to appreciate a small family and what this means for both national and individual development. The teacher training curriculum in particular should incorporate strong population education section

that will enable the teachers to get acquainted with relevant population knowledge and enable them to offer required courses at the various levels of schooling. The Ministry should also run in-service courses and seminars for teachers dealing specifically with population matters.

In developing population education content for integration into the existing curricular, deliberate effort should be made to ensure that this is reflected in examinations along with other subjects.

The Ministry of education should ensure that all institutions of higher learning undertake to incorporate population education in their syllabi. In the slum areas where women do not have the required skills or finance to enable them compete in the skilled job market or commercialized business, small scale business enterprises organized and sponsored by various government ministries and NGOs should be promoted. Since women also form a small portion of the work force in the formal sector which is the major source of wage employment in Kenya , the government should formulate employment policies based on qualifications and not on sex. Such policies would improve women's status and their general participation in national development.

The government through the relevant Ministries should undertake a massive development programme in all areas contributing to poor or ill health in the slum areas. Social amenities and public utilities such as pit latrines, health facilities,

and cleaned piped water should be provided. Such improvements would reduce the high cases of infant and child mortality.

It is vital to caution here that women are at crossroads. They might either move forward or regress to the marginalized status that has characterized them since the pre-colonial era. We therefore join Oppong (1978) in asking the following unanswered questions. Will the existing political parties fulfil people's wish to uplift women's status or will they continue to hoodwink a few women by tokenism while ignoring the more pressing needs for women? Will the women once and for all bury their personal differences in favour of a more pressing goal - that of improving their overall status in society? And finally, will they, as their economic position improves rest upon their laurels and fail to exercise the rights won by a former generation?

With the repeal of section 2A of the Kenyan constitution and the freedom that characterised democratic rule it is hoped that women will be able to question and fully challenge those social values and structures which undermine their role in society.

In all, equality should remain as a central concept in development planning. The opportunities that should be examined in terms of development should pertain to women's general access to and control of resources; education, employment, politics and adequate health care.

Finally, it is hoped that this paper can provide

an impetus and some guidelines to those interested in conducting future research and to policy makers.

APPENDIX A

THE PROBABILITY OF SELECTING A HOUSING UNIT IN EACH SECTOR

The housing units = 2,147 (representing sample frame).

Housing units in each sector i.e

Sector 1	=	765
Sector 2	=	226
Sector 3B	=	396
Sector 3A	=	760

The probability of including a housing unit in each sector i.e

Sector 1	=	765/2147	=	0.35
Sector 2	=	226/2147	=	0.12
Sector 3B	=	396/2147	=	0.18
Sector 3A	=	760/2147	=	0.35
Total probability			=	1.0.

APPENDIX B

THE NUMBER OF HOUSING UNITS IN EACH SECTOR

Total sample size = 100.
Total probability = 1.0

Probability sample in each sector i.e.

Sector 1 = 0.35
Sector 2 = 0.12
Sector 3B = 0.18
Sector 3A = 0.35

Number of housing units in each sector

Sector 1 : If 1.0 = 100 (total sample)

.. 0.35 = ?
=0.35 x 100 = 35 units

Sector 2 : =0.12 x 100 = 12 units

Sector 3B : =0.18 x 100 = 18 units

Sector 3A : =0.35 x 100 = 35 units

Total Sample = 100 units

APPENDIX C

SAMPLING INTERVAL

Sampling point	Total number of housing units	Sample size	Samp inte
Sector 1	765	35	
Sector 2	226	12	
Sector 3B	396	18	
Sector 3A	760	35	
T O T A L	2147	100	

APPENDIX D

TABLE OF RANDOM NUMBERS: SELECTED HOUSING UNIT

1	2	3	4	5					10	11		13	14	15	16	17	18	19	20	21	22
23	24	25	26	27		29		31	32	33		35	36	37	38	39	40	41	42	43	44
45	46	47		49		51		53	54	55		57	58	59	60	61	62	63	64	65	
67	68	69	70	71		73	74		76	77	78		80	81	82	83	84		86	87	88
89	90	91	92	93		95		97	98	99		101	102	103		105	106	107	108	109	110
111	112	113	114	115	116			119	120	121			124	125	126	127	128	129	130	131	132
133	134	135	136	137		139			142	143		145	146	147	148	149	150	151	152	153	154
155	156	157	158	159			162	163		165		167	168	169	170	171	172	173	174	175	176
177	178		180	181		183	184	185	186			189	190	191	192	193	194	195	196	197	198
	200	201	202	203		205	206		208	209		211	212	213	214	215	216	217		219	220
221	222	223	224	225		227	228	229		231	232		234	235	236	237	238	239	240	241	242
243	244	245	246	247		249	250	251		253		255	256	257	258	259	260	261	262	263	264
265	266	267	268	269		271	272	273		275		277	278	279	280	281	282	283	284	285	286
287	288	289	290	291		293	294	295	296			299	300	301	302	303	304	305	306	307	308
309	310	311	312		314	315	316	317			320	321	322	323	324	325	326	327	328	329	330
331	332	333	334	335		337	338	339		341		343	344	345	346	347	348	349	350	351	352
353	354	355	356	357		359	360		362	363		365	366	367	368	369	370	371	372	373	374
375	376	377	378	379		381	382	383		385	386		388	389	390	391	392	393	394	395	396
397	398	399	400			402	403	404	405		407	408	409	410	411	412	413	414	415	416	417	418
419	420	421	422	423		425	426	427		429	430	431	432	433	434	435	436	437	438	439	440
441	442	443	444	445		447	448	449		451	452	453	454	455	456	457	458	459	460	461	462
463	464	465	466	467		469	470	471		473	474	475	476	477	478	479	480	481	482	483	484
485	486	487	488	489		491	492	493	494		496	497	498	499	500	501	502	503	504	505	506
507	508	509	510	511		513	514	515	516	517		519	520	521	522	523	524	525	526	527	528
529	530	531	532			535	536	537		539	540	541	542	543	544	545	546	547	548	549	550
551	552	553	554			557	558	559		561	562	563	564	565	566	567	568	569	570	571	572
573	574	575	576	577		579	580	581		583	584	585	586	587	588	589	590	591	592	593	594
595	596	597	598	599		601	602	603		605	606	607	608	609	610	611	612	613	614	615	616
617	618	619	620	621		623	624	625		627	628	629	630	631	632	633	634	635	636	637	638
639	640	641	642	643		645	646	647		649	650	651	652	653	654	655	656	657	658	659	660
661	662	663	664	665		667	668	669		671	672	673	674	675	676	677	678	679	680	681	682
683	684	685	686	687			690	691		693	694	695	696	697	698	699	700	701	702	703	704
705	706	707	708	709		711	712	713		715	716	717	718	719	720	721	722	723	724	725	726
727	728	729	730	731		733	734	735	736		738	739	740	741	742	743	744	745	746	747	748
749	750	751	752	753		755	756	757		759	760	761	762	763	764	765					

SELECTED HOUSING UNITS IN EACH SECTOR

KEY

Sector 1 = 35
Sector 2 = 12
Sector 3B = 18
Sector 3A = 35

APPENDIX E

ENUMERATION AREAS FOR MATHARE VALLEY: 1989 POPULATION CENSUS:

	SHEET NO. 1	SHEET NO. 2	SHEET NO. 3
1.	0062	0292	0882
2.	0072	0302	0872
3.	0122	0312	0892
4.	0152	0322	0722
5.	0172	0332	0862
6.	0182	0342	0732
7.	0142	0372	0852
8.	0162	0352	0742
9.	0132	0362	0842
10.	0082	0382	0832
11.	0092	0452	0752
12.	0192	0462	0822
13.	0102	0392	0762
14.	0202	0532	0812
15.	0112	0542	0772
16.	0212	0402	0802
17.		0482	0782 total = 20
18.		0472	0792
19.	TOTAL = 16	0502	0902
20.		0152	0912
21.		0492	
22.		0415	
23.		0552	
24.		0572	
25.		0562	
26.		0522 total = 29	
27.		0422	Source:Population
28.		0442	Census 1989:CBS.
29.		0432	

Source: Population census 1989: CBS

APPENDIX F

HOUSEHOLD UNITS FROM EACH BASE MAP.

Total sample = 100
Enumeration ares i.e
Base Map 1 = 16
Base Map 2 = 29
Base Map 3 = 20
Total enumeration areas = 65

Base Map 1: If 65 EA's = 100 (total sample)
.. 16 = $\frac{16 \times 100}{65}$ = 25 units

Base Map 2: = $\frac{29 \times 100}{65}$ = 45 units

Base Map 3: = $\frac{20 \times 100}{65}$ = 30 units

TOTAL = 100 units

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Q U E S T I O N N A I R E

No.....

Name: .....

Tribe .....

Estate .....

House No. .....

1. a) How old are you?

b) In which year were you born?

2. a) Are you?

Single? 1
Married? 2
Separated? 3
Divorced? 4
Widowed? 5

b) If married, in which year was it? .....

c) How old were you when you got married? .....

d) Why did you marry at that age? (mentioned in c above)

.....

Had desire for children 1
Marriage arranged by parents 2
Spent long time in school 3
Was still committed to work 4
Had desired to earn money
and lead an independent life..... 5
Was forced to marry 6
Others (specify) 7

c) Do you have any reasons for having not married? (Only for those who are not Married)
Yes ..... 1 No 2
Specify .....

3. a) Have you ever gone to school?
Yes ..... 1 No 2

b) If yes how many years of schooling have you had?

Adult education 1
Standard 1-4 2
" 5-8 3

Form 1-2 4
" 3-4 5
" 5-6 6
Diploma 7
University 8
Others (specify) 9

4. a) Do you have any children? Yes ..... No .....

b) If yes, how many?

One..... 1
Two..... 2
Three..... 3
Four..... 4
Five..... 5
Six..... 6
Over Six..... 7

c) Would you like to have the same number, fewer or more than you currently have?

Same number..... 2 Fewer..... 2
More..... 3 Don't know..... 4

d) What would you consider to be the ideal number of children to have?.....

e) Does your husband consider the same number of children (in d above) to be the most ideal size?

Yes..... 1 No..... 2

f) If No, why?.....

5. a) How many sons do you have living?

One.....1 Two .....2 Three..... 3 Four..... 4
Five ..... 5 Over five 6

b) How many daughters do you have living?

One .....1 Two .... 2 Three ..... 3 Four 4
Five ..... 5 Over five 6

c) How many daughters/sons would you wish to have?

Sons ..... 1 Daughters..... 2
Why? .....

d) How many daughters/sons would your husband wish to have?

Sons ..... 1 Daughters 2
Why? .....

e) Do you ever discuss with your husband the total number of children you desire?

Yes ..... 1 No 2

f) If NO, why? .....

6. a) Have you ever heard of the phrase "Family Planning"?
Yes ..... 1 No 2

b) Have you ever used any family planning method?
Yes ..... 1 No 2

c) If No, Why?.....

d) If Yes, which family planning methods have you ever used?
Pill.... 1 Injection .... 2 Loop.... 3 Condom ... 4 Foam ... 5
Others (specify) .....

e) Are you currently using any of the family planning methods in (d) above? Yes 1
No..... 2

f) If Yes, from where did you first get the information?
.....

g) If No, why did you stop using the method?
.....

h) Do you ever discuss family planning issues with your husband?
Yes ..... 1 No..... 2

i) If Yes, does he recommend the use of the family planning method you are currently using?
Yes.....1 No..... 2

j) If No, why? .....

7. a) Are you currently employed?
Yes ..... 1 No 2

b) If Yes, what kind of employment?

Wage Employment ..... 1 Self Employment 2

c) Do you work near or away from home?

Near home ..... 1 Away from home 2

d) What is your:

Daily income? ..... Kshs.....

Weekly income? ..... Kshs.....

Monthly income? ..... Kshs.....

e) Is your husband employed? Yes.... 1 No..... 2

f) If yes, specify .....

g) What is your husbands'

Daily income? ..... Kshs.....

Weekly income? ..... Kshs.....

Monthly income? ..... Kshs.....

h) Is there anybody else working in the family?

Yes..... 1 No..... 2

i) If Yes, do they contribute towards household expenses i.e. on food, rent, etc? Yes ..... 1 No..... 2

j) If Yes, how much?

Daily ..... Kshs.....

Weekly..... Kshs.....

Monthly..... Kshs.....

Total income per month ..... Ksh.....

8. a) Do you expect to rely on the children financial help; A good deal, a little or not at all?

A good deal 1

A little 2

Not at all 3

b) What means of old age support do you think you might have when you get old?

Income from business 1

Savings 2

Pension 3

Help from children 4

Others (specify) .....

c) Do you expect the help from children to come more from the sons or daughters?

Sons ..... 1 Daughters 2

d) Why? .....

e) What kind of help do you expect from answer to question c) above?
.....

f) Who buys the household goods (food) in the house?

Husband ..... 1 Wife .....-2 Children 3

9. a) Do you ever breastfeed your child (ren) after birth?

Yes..... 1 No..... 2

b) If Yes, how many times in a day do you breastfeed?

.....

c) How long in (months) do you breastfeed? .....

d) Do you usually breastfeed your child at home or at your place of work?

At home..... 1 Place of work 2

e) How far is the place of work from your house?

A few metres away .... 1 A few kilometres away 2

quite a distance from the house 3

f) Approximately how many hours do you spend in a day at your place of work?
.....

g) Do you go with your child to the place of work?

Yes ..... 1 No 2

h) Why? .....

i) If you don't go with your child to the place of work, do you often take a break off to go home and breast feed? Yes..... 1 No.....2

j) If Yes, how Often? Not quite... 1 More often 2

Several times 3

10. a) Has any of your children died? Yes.... 1 No..... 2

b) If Yes, how many? Sons..... Daughters .....

c) At what age did the Sons(s)/Daughter(s) die?

	Sons	Daughters	Age died/Months Year.
1.			
2.			
3.			

4.

5.

d) What was the cause of the death of your son(s) or daughters(s) mentioned in C) above?

.....

.....

e) Do you ever take your children to the dispensary (hospital) when they are sick?

Yes..... 1 No.....2

f) If No, why? .....

g) When you are expecting a child do you ever attend a clinic?

Yes ..... 1 No..... 2

h) If No, why? .....

i) Do you ever go to the dispensary/hospital?

Yes..... 1 No..... 2

j) If No, why? .....

II. a) Do your children go to school. Yes.... 1 No..... 2

b) Between you and your husband, who decides in which school the child (ren) should go?

Husband 1

Wife 2

Both 3

c) Who pays school fees for the child(ren)?

Husband 1

Wife 2

Both 3

E N D