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AGE AT FIRST MARRIAGE AND FERTILITY IN KENYA

BY

KIHUHA, ANNEBELL WAMBUI (MRS)

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ACCEITANCE

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Supervisor of Thesis .....

Dr. S.C. Okoye

September, 1992.

DECLARATION

I hereby declare that except for references to other people's work which have been duly acknowledged, this is the result of my own research and that it has neither in part nor in whole been presented for another degree.

Signed .....

Kihuha, Annabell W. (Mrs.)

(Candidate)

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Kihuha, Annebell (Mrs)

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The institution of marriage has been a major foundation of the social fabric. As the initial step of family formation, many aspects of social life are directly or indirectly related to this institution. According to Radcliffe-Brown[1] marriage is a rearrangement of the social structure, which is an arrangement of persons in institutionalized relationships. In a similar manner the United Nations[2] defines marriage in a traditional manner as the start of socially approved exposure to sexual relations and much more importantly, it legitimates parenthood and ensures that "no child (in the kin) should be brought into the world without a man assuming the role of a sociological father".

In Africa, marriage has a definite meaning which varies among different cultural groups of people. This variation is due to the emphasis of certain cultural practices and this makes it difficult to formulate a general definition for marriage in Africa. Customary marriage is the type most frequently encountered and recognized in most African societies.

In African societies marriage was mainly for procreation and a marriage was only recognized when the birth of a child

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1. Radcliffe-Brown, A.R., and Forde, C.D. (eds) African Systems of Kinship and Marriage, Oxford University Press, London 1950, p. 44-49.

2. United Nations, First Marriage: Patterns and Determinants, Department of International Economic and Social Affairs, ST/ESA/SER. R/76, New York, 1986.

occurred. As Radcliffe-brown[1] observes marriage in Africa is not an event but a process with the most important stage being the birth of the first child. This makes it difficult to determine when marriage actually begins in the African systems. Demographers, are interested in the relationship of marriage and fertility and therefore recognize any union (heterosexual) as marriage since any such union will influence fertility.

In the traditional setting of most African communities in Kenya, marriage is and was an obligatory experience for an adult. Teenagers were encouraged to marry due to pressure from parents, peer groups and the society registered its approval of this in diverse manner. This has an effect on lowering the age at marriage as in most African countries. Fortes[2] observed that in Ghana a Tallensi woman is married as soon as she is nubile which results in few fertile women reaching age twenty without having had at least one pregnancy. Marriage is still a universal cultural institution used in Kenya to regulate and sanction the cohabitation of couples and their consequent fertility performance. It is governed by various marriage laws namely muslim, customary, christian and hindu.

Fertility which is defined as the actual reproductive performance, is mainly within marriage and fertility is

1. Radcliffe-brown, Op.cit.

2. Fortes, M., "Kinship and Marriage among the Ashanti" in Radcliffe-brown, A.R. and Forde, D (eds) African Systems of Kinship and Marriage, Oxford University Press, London 1950, p. 276.

etermined by various factors both biological and cio-cultural. Within marriage a woman is regularly exposed the risk of childbearing. Duration of marriage therefore comes an important determining factor of fertility. Age at rriage is an important factor in determining duration of posure to the risk of childbearing, bearing in mind that the productive period of a woman is more or less constant and es within the age range of 15-49 years. As such age at rriage is inversely related to duration of exposure and ertility.

In Kenya age at first marriage is low and almost iversal. In the KDHS[1] 1989 it was observed that more than per cent of the women married under the age of 20 years .e. 54 per cent) and only 3.1 per cent married at the age of years and over. Only 2% per cent of the women had never rried.

.2 Statement of the Problem

Kenya is a country that has experienced very high pulation growth ever since the first national census was nducted in 1948. The total population then was estimated at 6 million and by 1979 the population had almost tripled at .3 million. The growth rate has been high and increased to 1 per cent in 1984 as observed in KCPS[2] data (highest ever corded in the world). This rapid growth has already started owing its effect through population pressure in terms of

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Kenya, Demographic and Health Survey, 1989.

Kenya Contraceptive and Prevalence Survey, 1984.

rising unemployment, underemployment food shortages and land encroachment to marginal areas.

This rapid population growth rate in Kenya, could be explained by the high fertility observed. Fertility levels since 1977 show a declining trend (see table 1).

Table 1.1
Total Fertility Rates for Censuses and Survey 1977-1989

Year	Surveys/Census	TFR
1977	NDS	8.0
1978	KFS	7.9
1979	Census	7.6
1984	KCPS	7.7
1989	KDHS	6.7

Source: KDHS 1989 Table 3.1 p.18.

Fertility is a major dynamic element determining the demographic character of a population. High fertility with other things remaining constant will result in a very young population as is the situation in Kenya where about 52 per cent of the population is aged under 15 years. This is a large dependent population which raises government's concern.

Marriage as a social institution governing childbearing has a great influence on level of fertility. Various demographic studies have shown that marriage is early and nearly universal in Kenya. In a society like Kenya where modern contraceptive use is low as observed in the recent KDHS 1989 (at about 27 per cent) then duration of marriage becomes

very important in determining fertility. Age at first marriage determines onset of regular exposure to risk of childbearing. As such early marriage, other things remaining constant will ultimately lead to high completed fertility.

Variation in age at first marriage has been observed among different ethnic groups, religious groups, regions, place of residence and level of education. Low age at marriage has been observed among the Mijikenda ethnic group, rural residents, coast region people, low education category and among the muslims and fertility has been observed to be high among women who marry early especially when fertility depressing factors are absent.

Low age at marriage is a problem that has been recognized by the government particularly because it is associated with the high female drop outs especially in primary and lower secondary. Age at menarche has been used in many societies as an indication of maturity and in most cases girls were prepared for marriage immediately after on set of menarche in the tradition society. In Kenya, age at menarche has been observed to be declining due to improved nutrition. If early menarche is coupled with early marriage, then fertility is expected to increase.

The question therefore arises; Are there marked differences in age at marriage among Kenyan females? If there are, what are the factors influencing such differences? To what extent do these differences affect fertility? Are there

other factors that intervene between age at first marriage and fertility? These are some of the questions that this study will attempt to answer.

1.3 Rationale

Extensive research has been done on age at first marriage and fertility in many Asian and Latin American countries where a negative relationship has been observed. However, little has been done in Africa and in particular sub-Saharan Africa. In Kenya as is typical of sub-Saharan Africa very little attention has been given to this relationship.

Age is an important demographic variable as many physiological and physical changes take place by age of an individual. Previous studies focusing on fertility and marriage have ignored the age at which marriages begin, which has important implications on completed fertility. In a society like Kenya where fertility has been observed to be high and contraceptive use is low then, marriage becomes an important determining factor in fertility, especially since it has been observed that marriages are nearly universal in Kenya.

Early marriage has been observed to influence fertility indirectly through other factors; like it means that the women have low education attainment, less mature which are factors that influence decision making about family size.

Since age at marriage has been observed to be not only a major determining factor in fertility but little of this kind of study has been done in Kenya, this study becomes very timely. An investigation in the age at first marriage and

fertility in Kenya will therefore advance an understanding of the relationship. Such information will be useful during policy formulation.

1.4 Objectives

The ultimate objective is to provide information relating to effect of age at first marriage and fertility in Kenya, which may be useful to decision makers in formulating policies aimed at reducing fertility.

Specific objectives include:

(i) To explore the socio-economic and demographic differentials of age at first marriage in Kenya.

(ii) Examine the relative influence of age at first marriage on fertility and in the process see the relative importance of a few other variables.

1.5 Literature Review

Majority of studies so far carried out on the relationship between age at first marriage and fertility have shown that age at first marriage is probably the most important variable associated with fertility change.

Adioetomo[1] using data drawn from the Indonesian Fertility Survey found that women who married before their 15th birthday had on the average, twice as many children as those who married at age 25 years or older. He also observed that women marrying in these extreme ages have longest birth

1. Adioetomo, S.M., "Age at Marriage and Fertility in Java-Bali, a question of natural or controlled fertility" Indonesian Journal of Demography, 1989 Dec., 10(20) IV-V, 49-72.

intervals. The interval decreases with age to minimum at age 22-24 years old and then rises again.

In his study among currently married women in rural Egypt, Kafafi[1] using a rural fertility survey, observed that women married at age 21 years or above had on average 2.3 fewer children than those married under the age of 15 years. More-over women who had a child that had died had an average of 3.5 children more than those who had not lost a child. He therefore concluded that age at first marriage has a direct negative effect on family size and an indirect effect via child mortality since child mortality was observed to be negatively related to age at first birth.

Loza[2] studied the effect of age at marriage on fertility in 5 socio spatial environments in Egypt. For the cohort 30-34 years of age, the difference in average parity between women who married below age 16 years compared with those who married at age 19-21 years in urban villages, 3 births in industrial workers residences, 2.1 births in semi-urban cities and 1.3 births in urban cities. The average number of births of the same cohort was lower with higher age

1. Kafafi, L.H., Age at Marriage and Cumulative fertility in rural Egypt, Durham, N.C. Duke University, 1983, p. 140.

2. Loza, S.F., "Differential age at marriage and Fertility in Egypt", in Determinants of Fertility in some African and Asian Countries, Cairo, Egypt, Cairo Demographic Centre, 1982, 51-66 (CDC Research Monograph Series No. 10).

at marriage in all 5 environments studied. The differences were not much when duration of marriage was controlled.

Lee[1] analysing the 1974 Korean National Survey and 1971 Fertility -Abortion Survey observed that women with higher education levels had fewer children because they married late and not because they bear fewer children.

Place of residence was found by Patnaik[2] to have an effect on age at marriage. He observed the rural female spouses has lower median age at marriage than urban female spouses, negative relationship between age at marriage and fertility and mean parity tend to decline with increasing age at marriage. The mean children ever born was 5.06 for those spouses who married under 15 years, 4.4 for those who married in age group 15-19, 3.31 children for those who married in age group 20-24 and 2.91 children for those married at age 25 years and over. He concluded that late marriage is one of the most important factors effecting a change in fertility.

Mohamed[3] used two sets of multivariate analyses to examine the interactions between age at first marriage and fertility as dependent variables and age, province, rural-urban residence, wife's educational status, husband's occupation as

1. Lee, B.S. Development of an Economic Fertility Model for Less-Developed Countries an examination of Fertility, Age at marriage and Female labour Force Participation in Korea, Final Report (Unpublished), 1981, May 415 p.

2. Patnaik, M.M., "Age at Marriage and Fertility Behaviour", Indian Journal of Social Work, 1981 Oct. 42(3): 239-46.

3. Mohamed, A., "Age at First marriage and Cumulative Fertility in Pakistan", in Multivariate Analysis of Nuptiality and Fertility for Selected ESCAP Countries, (Asian Population Studies Series No. 59).

independent variables. He observed that the mean number of children is higher (4.3) for urban areas than rural areas (4.14) and age at marriage is also higher for educated women. The higher parity can be explained by the migration of rural women to urban areas and partly by the rural characteristics of urban areas. He further observed that increasing age at marriage significantly reduces fertility.

Ethnicity is another factor associated with age at marriage. As was observed in the Kenya contraceptive and prevalence survey[1] of 1984 the Mijikenda ethnic group of Kenya had the lowest SMAM while the Kikuyu ethnic group had the highest. The same data showed that the Luo ethnic groups who have a high prevalence of polygyny have a low age at marriage as compared to the Kikuyus who are highly monogamous. It was however observed that completed fertility among the two ethnic groups was not very different. This can be explained by the practice of long period of abstinence among the Luos which is either absent or very short among the Kikuyus. This shows that fertility is not affected by age at marriage because of intervening factors.

Chen[2] analysing a sample of women married below age 50 from a survey data of Xian city, China, observed that median age at first marriage increased from 21.6 in 1962 to 25.5 in

1. Kenya, Contraceptive and Prevalence Survey, 1984.

2. Chen, C.H., Feng, Z., Rochat, R.W., Effect of Age at Marriage on Fertility in Xian City the People's Republic of China, (Unpublished) 1983 23 p.

1981. The analysis showed that an increase of 1 year in age at marriage decreased the number of livebirths by .10.

Ogawa[1] applying the multivariate analysis on World Fertility Survey data for selected ESCAP countries observed that age at marriage has a strong effect on mean parity. He observed a difference of 2.3 children between those married under 15 and those married at ages 22-24 years.

Sinha[2] in his study in Eastern Rajasthan observed that an average of 1.3 additional live births or an average of 0.7 addititional living children were reported for women who had completed their family size (age 40-49) and who were married before age 19 as compare to those who had married later.

Pemagbi,[3] found that the higher the education the higher the median age at marriage and this is even higher for those in urban than in rural background in Greater Freetown, Sierra Leone. She further established that age at first marriage is influenced by educational status which seems to determine marital fertility in Greater Freetown. On average, women with primary education were found to have their first birth earlier than those in other educational categories.

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1. Ogawa, N, Rele, J.R. "Age at Marriage and Cumulative Fertility in Sri Lanka, in ESCAP 1981 227-66 (Asian Population Studies Series; No. 49).

2. Sinha, R.K., "Impact of Age at Marriage on Fertility and Completed Family Size in Eastern Rajasthan" Journal of Family Welfare, 1967 Sept. 34(1): 32-40.

3. Pemagbe Jeneh, B., "Female Education and Fertility in Greater Freetown, Sierra Leone" M.A. Thesis (Unpublished), RIPS, University of Ghana, Sept. 1989.

Khuda[1] also observed this negative relationship in age at marriage and mean children ever born in Bangladesh. He observed that the mean children ever born to ever married women was 4.96 children for those who married under age 16 years and only 3.38 fpr those who married after their 16th birthday. The mean number of children was also positively and significantly related to the duration of marriage. The study demonstrated that age at marriage does have an effect on fertility.

Age at marriage is an important determinant of fertility even in less-developed societies which generally have high fertility. Bhargava[2] in his study of slum dwellers in Greater Bombay observed that average number of children ever born was 3.50 for those who married below 13 years of age, 3.04 for women marrying at ages 13-15 years, 2.56 when marriage occured at 16-18 years, 2.41 among those marrying at 19-21 years, 2.34 when marriage occured at 22-24 years, 2.19 among women marrying at 25-27 years and only 0.94 among those who married at 28 years of age and above.

Bhatia[3] using multivariate analysis to examine the effect of age at marriage on the fertility of a sample of rural Ghanian women observed a statistically significant negative

1. Khuda, B., "Age at Marriage and Fertility in a Rural Area of Bangladesh", Asian Profile 1985 Dec. 13(6): 541-53.

2. Bhargava, P.K., "Changes in the Age at Marriage and its Effects on Fertility: a Study of Slum dwellers in Greater Bombay", Journal of Family Welfare, 1984, Sept. 31(1): 32-6.

3. Bhatia, J.C. "Age at Marriage and Fertility in Ghana (West Africa)" Demography India 1983, July-Dec., 12(2) 185-93.

relationship between female age at marriage and fertility. The inverse relationship between age at first marriage and fertility was most pronounced for the total sample as well as for different age groups.

Omideyi[1] using data from Eastern Nigeria observed that postponement of marriage does not reduce fertility if there are intervening factors like replacement of breastfeeding by bottlefeeding. She observed that although educated women tended to postpone age at marriage, the fertility of these women at longest durations of marriage, was not significantly different from that of women who married earlier.

Henry-Pietrow[2] using data from Asia, Middle East, Africa and Latin America, observed that women who marry in their mid or upper 20s tend to have fewer children than women who marry earlier.

An inverse relationship between fertility and age at first marriage was observed by Senlajwe[3] in Western Nigeria. This, as had been observed by Omideyi in Eastern Nigeria, was due to intervening factors which he explained as short birth spacing among women who married late in life.

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1. Omideyi, A.K., "Age at Marriage and Marital Fertility in Eastern Nigeria" Genus 1983, Jan-Dec. 39(1-4): 141-54.

2. Henry, A., Pietrow, P.T., Age at Marriage and Fertility Baltimore, Maryland, John Hopkins University, Population Information Programme, 1979 Nov. 55 p. (Population Reports Series M. No. 4).

3. Senlajwe, 1., "Effect of Age at Marriage, Number of Wive's Type of Marital Union on Fertility", Journal of Biosocial Science 11(3):341-351, July 1979.

In his study in Egypt, El-Guindy[1] observed that in Egypt age at marriage is important where few people use birth control method, because it prolongs the childbearing period. He observed that the singulate mean age at marriage increases by 1.2 years within a 13 years period and all age specific marriage rates except for women aged 45-49 declined from 1947 to 1960.

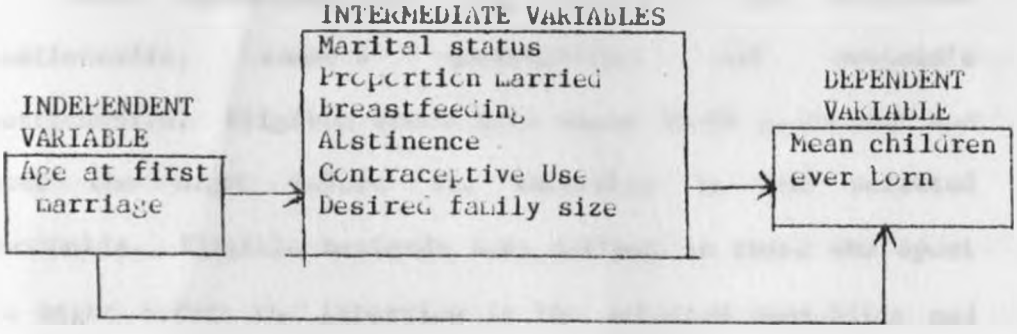
1. El-Guindy, M.H., "Age at Marriage in Relations to Fertility in Egypt" in Fertility Trends and Differentials in Arab Countries, Cairo, Cairo Demographic Centre, 1971, p. 107-115.

1.6 Conceptual Framework

The review of literature in the preceding section has revealed that age at marriage is a major determinant of fertility and it influences fertility both independently and through a number of intermediate variables such as contraceptive use, breastfeeding, abstinence, marital status, proportion married, postpartum susceptibility and desired family size. The relationships are shown in Fig. 1 and will be examined in this study.

Figure 1

Conceptual Framework for the analysis of Age at First Marriage and Fertility



1.7 Hypothesis

The relationship in the framework suggests the following hypothesis:

1. Women who use modern contraceptives are likely to have less number of children.
2. Women who desire small families are likely to have fewer children.
3. Age at marriage is inversely related to fertility.

1.5 Methodology

1.5.1 Sources of Data

The study is based on data from the KDHS that was conducted between December 1988 and May 1989. The survey was designed to collect data on fertility, family planning and maternal and child health.

The KDHS was a national survey in coverage except for the exclusion of North Eastern Province and four Northern districts which together account for only 5 per cent of Kenya's population. The sample was designed to produce completed interviews with 7,500 women aged 15-49 and a sub-sample of 1000 husbands of these women.

Three questionnaires were utilised, the household questionnaire, woman's questionnaire and husband's questionnaire. Eligible women were women 15-49 years who had spent the night before the interview in the selected households. Eligible husbands were defined as those who spent the night before the interview in the selected households and whose wives were successfully interviewed. 7,150 eligible women and 1,116 eligible husbands were successfully interviewed with a high response rate.

The survey was intended to serve as a source of population and health data for policy makers and for the research community. One of the main objectives of the survey was to measure changes in fertility and contraceptive prevalence and at the same time study the factors which affect these changes such as marriage patterns, urban/rural residence, availability of contraceptives, breastfeeding habits and other

socio-economic factors.

Marital status was recorded as at the time of the survey. There were never married, currently married (which included "living together" and "married"). A third category was "ever married" which included widowed, divorced or no longer living together.

Maternity histories were recorded from which retrospective and current fertility were obtained.

1.6.2 Limitations of Data

The survey did not cover North Eastern Province and four Northern districts which together account for about 5 per cent of the total population. This is because they were not included in the National sample survey and Evaluation Programme (NASSEP) master sample which was maintained by the Central Bureau of Statistics (CBS).

Age misstatement is a common problem with African data and the KDHS is no exception. This is because in Africa people do not attach much importance to ages at which events take place. This results in age heaping at some preferred ages or ending digits. Although in the KDHS consensual unions were included as marriages, there is a likelihood of omitting such non-formal unions especially if they took place before a marriage was formalised, which would lead to overstatement of age at first marriage.

Cumulative fertility is subject to errors of omission of births especially if a death occured early in life, grown up children who are living elsewhere may be omitted, memory recall

problem. Errors of addition are likely through inclusion of still births and children of relatives.

Some independent variables are recorded as at the time of the survey such as highest educational level attained which could have been attained after marriage and therefore do not influence age at first marriage and consequently achieved fertility.

1.8.3 Method of Analysis

Various methods will be used in the analysis. Such methods include cross-tabulations of social and economic characteristics such as education, religion, ethnicity, duration of marriage and place of residence.

The contribution of age at first marriage to variation in fertility will be investigated by a regression analysis in which the relative contributions of some other variables will also be seen, for example education, religion, ethnicity, place of residence, marital status, age at first marriage, regions of residence, breastfeeding, abstinence, desired family size and contraceptive use.

$$Y_1 = B_o + B_1X_{12} + B_2X_{22} + \ldots + B_nX_{n2} + E_1$$

where Y_1 is the dependent variable

B_o is a constant

B_2 is a coefficient of regression

X_{n2} is independent variable.

The unit of analysis will be the individual women. The measure of fertility will be the mean children ever born.

CHAPTER TWO

BACKGROUND CHARACTERISTICS OF THE RESPONDENTS

Behaviour of an individual is very much determined by his/her characteristics and the general characteristics of the environment around him or her. This section will examine some selected socio-economic characteristics of the respondents. Distribution of the respondents by these socio-economic characteristics is expected to throw some light on the relationship between age at first marriage and fertility to be examined in subsequent analysis.

2.1 Distribution of Respondents by Age

Age is a very important demegraphic variable. Various biological changes take place as one matures in age and these have various demographic implication. For instance age at menarche could influence age at first birth, age at marriage and even socially, one is recognized as an adult and can participate in adult activities like dances or social gatherings. Social relations are greatly affected by population entering at each age; for instance age will influence population that will enrol to enter school, marriage, labour force, retirement and many others.

Table 2.1
Percentage Distribution of Respondents by Age

Age	Number of Women	Percentage	Cumulative Percentage
15-19	1497	20.9	20.9
20-24	1321	18.5	39.4
25-29	1334	18.7	58.1
30-34	981	13.7	71.8
35-39	898	12.6	84.4
40-44	674	9.4	93.8
45-49	445	6.2	100.0
Total	7150	100.0	

Source: Computed from KDHS Data File.

It is clear from Table 2.1 that more than half of the respondents were under the age of 30 years. This group contributed 58 per cent of the sampled women. It is also clear that there is a decreasing trend in proportion with age, with the largest proportion in the lowest age group 15-19 years. This is in line with the general distribution of the population in the country where it was observed in the 1979 census that the population pyramid is broad based. The proportion under 35 years is 72 per cent and this has serious fertility implications considering that highest fertility in a woman's reproductive years is in age 15-34 years.

2.2.1 Type of Place of Residence

The environment in which one lives has an important role to play in influencing behaviour of an individual.

Table 2.2
Percentage Distribution of Respondents by Type of Place of Residence by Age

Age	Urban	Rural	Total
15-19	22.3	20.6	20.9
20-24	26.3	16.8	18.5
25-29	20.9	18.2	18.7
30-34	13.8	13.7	13.7
35-39	8.7	13.4	12.6
40-44	5.0	10.3	9.4
45-49	3.0	6.9	6.2
Total	100.0	100.0	100.0
N	1236	5914	7150
%	17.6	82.7	100.0

Source: Computed from KDHS Data File.

Table 2.3 clearly shows that Kenya is predominantly rural with 83 per cent of the sampled women from rural areas. Of the women found in the urban areas, the proportions under age 35 years are higher than those in rural areas while after age 35 years the proportions are higher in the rural areas which means that urban population is predominated by young people concentrated at ages below 35 years. The highest proportion is at ages 20-24 years which can be explained by rural urban migration. This is the age when most young people finish secondary school and move to urban areas for economic reasons. This also explains why the proportion 15-19 years is slightly lower; it is likely that many of the women in this age group are still in school outside the urban areas.

Among those in rural areas there is a gradual decrease in proportion. It is also clear that above age 30 years the proportions are higher in rural areas. This means that older women tend to live in the rural areas.

2.2.2 Childhood Place of Residence

The environment in which one grows up greatly determines one's behaviour in life and it is felt that childhood residence is one of the environmental factors which influence ones behaviour.

Table 2.3
Percentage Distribution of Respondents by Childhood Place of Residence by Type of Place of Residence

Type of Place of Residence	Childhood Place of Residence		
	Urban	Countryside	Total
Urban	43.5	13.1	17.3
Rural	56.5	86.9	82.7
Total	100.0	100.0	100.0
N	978	6168	7146
%	13.7	86.3	100.0

Source: Computed from KDHS Data File.

It is clear from Table 2.3 that majority of the sampled women (86 per cent) had lived in the countryside in their childhood. However, it is observed that of those who had urban childhood residence, a larger proportion is living in the rural areas which could be explained by the fact that urban areas have better hospitals and women from rural areas tend to move to the urban areas for delivery and then move back to their usual rural residence. Such children born in urban hospitals are likely to be erroneously reported as having had urban childhood residence. Of those who had countryside childhood residence majority (83 per cent) were still living in the rural areas. Only a small proportion had migrated to the urban areas. This is also because the sample was dominated by rural women.

2.3 Age Characteristics of Regions

Kenya is divided into 8 provinces administratively and all except North-Eastern were covered in the KDHS. The different regions vary in terms of economic activities which are influenced by climate, altitude, soil and physical features.

Table 2.4
Percentage Distribution of Respondents by Region of Residence by Age

	REGION OF RESIDENCE							
Age	Nairobi	Central	Coast	Eastern	Nyanza	Rift Valley	Western	Total
15-19	22.1	22.0	16.8	21.8	20.5	20.1	21.3	
20-24	20.8	19.3	16.2	16.2	17.8	17.0	19.1	
25-29	20.0	18.1	17.0	16.8	17.5	20.0	17.0	
30-34	13.9	11.8	16.4	11.5	15.4	13.7	14.3	
35-39	6.8	11.9	16.0	13.9	13.4	12.9	10.3	
40-44	5.8	9.1	7.5	10.9	9.2	9.7	10.7	
45-49	2.6	7.2	5.5	7.0	6.2	6.0	6.8	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
N	554	1120	498	1209	1210	1519	971	7150
%	7.7	15.7	7.0	17.0	17.0	21.2	13.6	

Source: Computed from KDHS Data File.

Table 2.4 shows that there is not much variation in the age structure among the regions. However, Nairobi has the highest proportion in ages below 35 years (83 per cent) while all the other regions had proportions below 75 per cent. This is possibly because Nairobi being the capital city is purely urban and as earlier observed, urban residents are predominantly young people below age 35 years. Table 2.4 also shows that there is an increase in proportion aged 25-29 years in the Rift Valley province, breaking the decreasing trend with increase in age. This may reflect a particular pattern of age mis-reporting rather than a genuine divergence.

Nairobi province also has the lowest proportion aged 40-49 years which reflects effect of return migrants (urban-rural migration) on retirement.

The same KDHS data also show that apart from Nairobi which is purely urban and Coast province which has a large proportion urban (38 per cent), the rest of the regions had very low proportions that were urban with Nyanza (15.2 per cent) the others had less than 10 per cent. Eastern province has the lowest urban proportion (0.8 per cent). This just supports the earlier observation that Kenya is predominantly rural.

It is also observed in the KDHS that urban women have a higher contraceptive use than rural women. Among regions, Eastern and Central have highest level of contraceptive use.

2.4 Ethnicity

Kenya is a country of diverse ethnic group. In the KDHS classification, small ethnic groups that were closely related were grouped together and 10 categories were formed. Different ethnic groups have unique characteristics, traditions, norms, values beliefs and practices.

Table 2.5
Percentage Distribution of Respondents by Ethnic Groups

Ethnicity	Number of Women	Percent	Cumulative Percent
Kalenjin	607	8.5	8.5
Kamba	918	12.8	21.3
Kikuyu	1706	23.9	45.2
Kisii	405	5.7	50.9
Luhya	1217	17.0	67.9
Luo	1039	14.5	82.4
Meru/Embu	463	6.5	88.9
Mijikenda/Swahili	307	4.3	93.2
Somali	10	0.1	93.3
Other	478	6.7	100.0
Total	7150	100.0	

Source: Computed from KDHS Data File.

It is clear from Table 2.5 that Kikuyus form majority of the respondent (24 per cent) while the Somali form the smallest group with a proportion of 0.1 per cent. The sample has four major ethnic groups, Kikuyu, Luhya, Luos and Kambas,

It was also observed in the data, that there is a close link between regions and ethnicity, where each region is found to be predominanted by one ethnic group.

Table 2.6
Percentage Distribution of Respondents by Ethnicity by Region of Residence

	REGION OF RESIDENCE							
Ethnicity	Nairobi	Central	Coast	Eastern	Nyanza	Rift Valley	Western	Total
Kalenji	0.5	0.3	0.4	0.1	0.1	36.4	1.5	
Kamba	12.3	3.0	3.5	62.6	0.2	0.6	0.1	
Kikuyu	31.2	92.3	2.8	2.4	1.1	28.7	0.6	
Kisii	1.5	1.1	0.3	-	26.1	2.4	0.4	
Luhya	18.4	0.9	3.4	-	3.6	16.0	82.5	
Luo	26.2	1.4	7.5	-	62.8	2.2	4.4	
Meru/Embu	1.2	0.4	0.6	35.1	-	0.3	-	
Mijikenda/ Swahili	1.2	-	59.2	0.1	0.3	0.3	-	
Somali	0.6		0.3	0.1	0.1	0.3	-	
Other	7.6	0.7	22.0	0.3	4.6	10.9	10.6	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
N	554	1120	498	1269	1218	1519	971	7150
%	7.7	15.7	7.0	17.8	17.0	21.2	13.6	100.0

Source: Computed from KDHS Data File.

Table 2.6 clearly reflects the close link between region and ethnicity. Each region has one ethnic group predominanting except in Nairobi where there are significant proportions of several ethnic groups. Kikuyus form the largest proportion (31 per cent), Luo (26 per cent) Luhya (18 per cent) and Kamba (12 per cent),

The Central region is dominated by the Kikuyus (92 per cent), Coast by the Mijikendas (59 per cent), Eastern by Kambas (62 per cent) with a large Meru/Embu component (35 per cent) Nyanza by the Luos (63 per cent) with a large Kisii component (28 per cent), Rift Valley by the Kalenjins (38 per cent) and Kikuyu (29 per cent) with a significant Luhya minority (16 per cent) and Western region by Luhya (63 per cent).

Region of residence is likely to determine the inhabitants through what it offers in terms of socio-economic activities. The Luo for instance, whose main activity is fishing, are likely to inhabit lake shore areas like western Kenya while the Kikuyus who are mainly farmers will tend to inhabit areas with rich agricultural soils like the Eastern highlands of Central Province.

2.6 Marital Status

Marital status is an important demographic variable in determining fertility. In a country like Kenya which is typical of most African countries, marriage is almost universal and is used to sanction reproductive performance. Proportions currently married will therefore have significant influence on fertility with all other things remaining the same.

Table 2.7
Percentage Distribution of Respondents by Current Marital Status by Age

	MARITAL STATUS					
Age	Never Married	Married	Widowed	Divorced	Separated	Total
15-19	64.2	5.8	0.3	7.6	6.7	
20-24	22.6	17.4	4.4	16.0	29.0	
25-29	7.7	23.2	10.3	21.8	17.0	
30-34	2.9	17.5	10.3	23.9	21.1	
35-39	1.5	16.4	21.5	15.3	12.0	
40-44	0.5	12.1	28.2	9.1	11.6	
45-49	0.6	7.7	25.0	6.3	2.5	
Total	100.0	100.0	100.0	100.0	100.0	
N	1861	4768	196	221	104	7148
%	26.0	66.7	2.7	3.1	1.5	100.0

Source: Computed from KDHS Data File.

From Table 2.7, it is clear that majority of the sampled women were currently married (67 per cent) in the KDHS the married category included those who were living together. A large component of the women were never married (26 per cent).

Among the never-married group, there is a decreasing trend with increase age with 87 per cent never married in the ages under 25 years. These are likely to be the women who are still in school.

Among the married category, the lowest proportion is in age 15-19 years and highest in age 25-29 years. However, it is clear that those currently married concentrated in the age range 20-39 years. This has serious fertility implications in that this is the age range within which most childbearing occurs.

Dissolution of marriages is very low in Kenya with only 7.3 per cent either widowed, divorced or separated. The widowed category increases with age as expected. Divorced and

separated decrease with age which means that older people's marriages tend to be more stable and divorce and separation are characteristic of young people.

2.6 Type of Marital Union

In the survey, the respondents were asked how many other wives their husbands had. Those whose husbands had no other, were grouped as monogamous and for purposes of this study all those who reported one or more are grouped as polygynous marriages.

Table 2.8
Percentage Distribution of Respondents by Type of Marital Union by Ethnicity

	TYPE OF MARITAL UNION			
Ethnicity	Monogamous	Polygamous	Total	N
Kalenjin	81.0	19.0	100.0	430
Kamba	81.4	18.6	100.0	584
Kikuyu	92.1	7.9	100.0	992
Kisii	74.1	25.9	100.0	255
Luhya	75.5	24.5	100.0	879
Luo	64.1	35.9	100.0	785
Meru/Embu	77.6	22.4	100.0	275
Mijikenda/ Swahili	57.2	42.8	100.0	228
Somali	92.3	7.7	100.0	8
Other	60.4	39.6	100.0	329
Total	3643	1114		4767
%	76.6	23.4	100.0	

Source: Computed from KDHS Data File.

Table 2.8 shows clearly, that in Kenya marriages are mainly monogamous (77 per cent). However, there are variations in the level of marriage types among the various ethnic groups with Kikuyus having the highest proportion of monogamous

marriages and the Mijikendas having the highest proportion of polygynous marriages. The Luos and the other categories also have a large component of polygynous marriages.

The same data shows that Central province had the highest proportion of monogamous marriages (92 per cent) which could be because it is predominated by the Kikuyus, while Nyanza and Coast region have highest proportions of polygynous marriages (37 per cent and 34 per cent respectively). These areas are predominated by Luhyas and Mijikendas respectively. It is also observed in the same KDHS data that polygyny is common among older than younger women, which may reflect a trend away from this traditional practice.[1] It is also observed from the same table 2.3 of KDHS that polygyny is common in the rural areas than in urban areas. Considerable variation in polygyny is also observed according to age of woman. In Nyanza province, 29 per cent of women aged 15-19 years per cent are in polygynous union while only 4 per cent of the same cohort women in Rift Valley. In Coast province, of the women age 40-44 years, 54 per cent are in polygynuous unions while they form only 16 per cent in Nairobi.

Monogamous marriages are known to have higher fertility than polygynous marriages and this distribution is likely to influence fertility in Kenya if all other things are held constant. It was however observed in the KDHS[2] that Eastern and Central province have the highest level of current

1. Kenya, DHS Table 2.3 p. 12.

2. Ibid P. 36.

contraceptive use (43 per cent) followed by Nairobi (34 per cent), Rift Valley 30 per cent. These are the areas dominated by Kamba, Kikuyu, Kalenjin all of who are highly monogamous. On the other hand, low contraceptive use is observed in regions dominated by ethnic groups that have a relative high prevalence of polygyny. Coast province had 18 per cent level of current contraceptive use, Nyanza and Western had 14 per cent. However, considering that the general level of contraceptive use in the whole sample is low at 27 per cent, then, it may have only a slight effect on fertility.

2.7 Education

Education is an important social variable which through expansion of the knowledge horizon influences behaviour. Kenya has made tremendous progress in education since independence especially in female education. In the KFS[1] it was observed that the percentage of females attending primary education increased from 34 per cent in 1963 to 47 per cent in 1977, while those in secondary increased from 32 per cent to 36 per cent in the respective years. It is also observed in a comparison table in KDHS[2] table 1.2 that there is a strong increase in the education attainment of women over time. The proportion of women with 5 to 8 years of education is higher in

1. Kenya Op.cit. P. 16-17.

2. Kenya Op.cit. p. 5-7.

1989 (43 per cent) than in 1984 (32 per cent) and 1977/78 (27 per cent). The data also show that women in the urban areas are considerably more educated than rural women.

Table 2.9
Percentage Distribution of Respondents by Education Current by Age,

Age	HIGHEST EDUCATION LEVEL None	Primary	Secondary +	Total
15-19	3.0	28.4	22.6	
20-24	6.3	19.1	31.6	
25-29	13.5	16.4	25.7	
30-34	20.1	11.5	11.7	
35-39	21.3	11.6	6.0	
40-44	18.9	7.8	2.1	
45-49	16.6	3.8	0.7	
Total	100.0	100.0	100.0	
N	1797	3887	1456	7141
%	25.2	54.4	20.4	100.0

Source: Computed from KDHS Data File.

Table 2.9 shows that there is a decreasing trend in proportion with age. Of the uneducated women only 9 per cent were below 25 years compared to 35 per cent in those above 40 years. More than half of the sampled women (54 per cent) had primary education while only 20 per cent had secondary or higher education. Those with primary or secondary education are mainly in the ages below 30 years. This shows that in Kenya female education only became effective recently after independence.

Among the regions, the data shows that Nairobi has the smallest proportion of uneducated women (9 per cent) while Coast Province had 47 per cent and 13 per cent in Central

province. The KDHS data also shows that educational achievemenet of women is highest in Nairobi while Central province shows the highest among all other provinces, with little variation among the other provinces.

2.8. Religion

Religious faith has been observed to influence people's attitude towards certain values and beliefs in life. For instance, some religions condemn some traditional practices like polygyny while others allow it which greatly influences behaviour. In the KDHS, religion was classified into five categories; Catholic, Protestant, Muslim, other and no religion.

Table 2.10
Percentage Distribution of Respondents by Religion

Religion	Number of Women	Percent	Cumulative Percent
Catholic	2480	34.7	34.7
Protestant	4107	57.5	92.3
Muslim	253	3.5	95.8
Other	115	1.6	97.4
No religion	11	2.6	100.0
Total	7150	100.0	

Source: Computed from KDHS Data File.

Table 2.10 clearly shows that Kenya is predominantly christian (92 per cent). The christians were grouped into Catholics and Protestants (non Roman Catholics). The commitment to ones religious faith is likely to influence one's behaviour. For example the Catholic faith prohibits polygamy

and use of contraceptives while protestants allow use of contraceptives; Muslims allow polygyny while christians prohibit it. Given the above distribution, it is clear why Kenya is also highly monogamous.

The KDHS also shows that Muslims and the "no religion" category had the highest proportion with no education; (46 per cent and 81 per cent respectively) while Protestants had the highest proportion with secondary or higher education.

The Muslims were also found to have a large proportion in the urban area 33 per cent simply because they are predominantly found in the Coast Province which is largely urban.

In terms of contraceptive use the data shows that Protestants had the highest (41 per cent) while those with no religion had lowest (28 per cent).

2.9 Work Status Before Marriage

In the KDHS, women were asked whether they worked before marriage. Here, work mainly refers to wage employment. To secure reasonable wage employment one needs to acquire skills through education. Proportion educated will therefore very much determine work status. Job opportunities is another factor that will determine whether one works.

Table 2.11
Percentage Distribution of Respondents by Work Status before Marriage by Type of Place of Residence

Occupation	PLACE OF RESIDENCE		TOTAL	
	Urban	Rural	N	%
No	70.4	78.9	4074	77.5
Yes	29.6	21.1	1181	22.5
Total	100.0	100.0	-	-
N	853	4402	5255	-
%	16.2	83.8	-	100.0

Source: Computed from KDHS Data File.

It is clear from Table 2.11 that majority of the women sampled had not worked before marriage (78 per cent). Among the urban residents 30 per cent had worked before marriage compared to 21 per cent among the rural residents. The low proportion of those who had worked before marriage can be explained by low percentage of women who had secondary or higher education. Majority of the women had only primary education which is not enough to secure wage employment. This, coupled with the fact that majority of the women were from rural areas where wage employment is very scarce, explains the low proportion of those who worked before marriage. In the urban areas there are likely to be more job opportunities. This, coupled with the fact that those with higher education are likely to come from urban areas indicates that more urban women were likely to have worked before marriage.

The KDHS also shows that among the ethnic groups, Kikuyu contributed the largest proportion of those who had worked before marriage (27 per cent) while Somalis and the Mijikendas had the lowest (0.1 per cent and 2.3 per cent respectively).

It is also observed from the data that of those who had worked before marriage Rift Valley had the highest contritution and lowest was from the Coast at 5 per cent. This can be explained by the fact that Coast is dominated by Muslims who have been observed earlier to have relatively low education and high prevalance of polygyny.

Summary

This chapter has attempted to show the characteristics of the sampled women. They were young (more than half were under 30 years), mainly from the rural areas and had rural childhood residence. This age category comprise of women at their most fertile period and coupled with their rural environment are likely to have high fertility. Majority were currently married had low education attainment with 54 per cent having only primary education. It is also observed in the KDHS that despite the high level of contraceptive knowledge the level of current use is very low at 27 per cent which is mainly by the urbanites who are few, very few women had worked before marriage which could be explained by the low education level of the women and lack of job opportunities in the rural areas where majority of them are located. Lack of occupation after school leaves the woman with little alternative but to follow the tradition customs which favour early marriage and childbearing.

CHAPTER THREE

AGE AT FIRST MARRIAGE AND ITS SOCIO-ECONOMIC CORRELATES

Although menarche indicates in most cases that a girl is about to become able to bear children, the start of actual childbearing depends on subsequent exposure to sexual intercourse. Having a sexual partner is approximated by marriage in most societies, as it is within marriage that most sexual intercourse occurs and many religions forbid premarital sex. Age at first marriage, may therefore be taken to indicate the beginning of exposure to sexual intercourse. Marriage is still an important institution in Kenya used to regulate and sanction the cohabitation of couples and their subsequent fertility performance. The existence of different cultures has brought about various types of marriages; customary, religious, civil , polygamous and monogamous marriages. Different culture groups will lay more emphasis on various aspects of marriages and in most cases the marriage goes through many defined stages before it is fully formalised which could take a very long time. This makes it difficult to determine precisely when marriage actually begins.

In some cultures like among the Akamba society of Kenya, pre-marital sex was a must before marriage . This means that in such a cases, age at first marriage is not synonymous with first exposure to risk of childbearing. A live birth could occur before marriage if no preventive measures are taken.

Page[1] in his analysis on the WFS data applied to Kenya observed that in many areas of Tropical Africa, a couple may start having sexual relations several months before celebrating a formal marriage ceremony or starting to live together.

Data on age at first marriage is therefore likely to suffer from errors due to problems of marriage dating. However, age at first marriage still remains an important if incomplete determinant of the average length of time a woman is exposed to the risk of childbearing while age at first birth determines the beginning of childbearing.

3.1 Age

Age, as was earlier mentioned, is important in determining behaviour like entry into marriage, onset of child bearing and termination of childbearing.

Table 3.1
Percentage Distribution of Respondents by Age at First Marriage by Current Age

Current Age	AGE AT FIRST MARRIAGE							Mean Age at First Marriage
	<15	15-17	18-19	20-24	25+	Total	N	
15-19	17.3	59.1	23.6	-	-	100.0	302	-
20-24	8.2	37.8	29.9	24.1	-	100.0	901	17.7
25-29	17.3	31.4	24.3	22.3	4.7	100.0	1191	17.7
30-34	24.2	29.2	18.0	23.4	5.1	100.0	928	17.3
35-39	20.6	32.8	20.2	20.6	5.8	100.0	869	17.5
40-44	24.0	32.4	19.8	18.8	5.0	100.0	664	17.1
45-49	17.8	28.4	21.3	23.4	9.1	100.0	434	18.3
Total	18.4	33.4	22.6	20.9	4.3	100.0	-	17.5
N	973	1767	1197	1106	226	-	5269	-

Source: Computed from KDHS Data File.

1. Page, H.J., "The Proximate Determinants of Fertility and their Effect on Fertility Patterns: an Illustrative Analysis Applied to Kenya" Scientific Report No. 71, Dec. 1984.

Table 3.1 shows that marriage is early in Kenya with over half (52 per cent) of the ever married women, marrying before the legal (age 18 years according to the Kenya marriage Act)[1]. Over three quarters of the women were first married before age 20 years and over 95 per cent before age 25 years showing, that marriage is early and nearly universal in Kenya. The mean age at first marriage using simple arithmetic mean is 17.5 years. Nyanga[2] using a more sophisticated method of life table trimean using KDHS data, observed that the mean age at marriage is 18.5 years. However, this is close to the estimate according to the Kenya fertility survey at 18.4 years. This is low compared to Ghana's mean age at marriage whose trimean according the the Ghana Fertility Survey was 19.3 years and according the the Ghana Demographic and Health Survey it was 20.2 years. It is however, clear from table 3.1, that age at first marriage tends to rise with decreasing age with a rise from 17.1 years for the cohort aged 40-44 years to 17.7 years for the cohort aged 20-24 years. This is possibly because many of the young women are staying longer in the school system and therefore delaying marriage. This is made clear by the concentration of the proportions of the never married in the ages below 20 years.

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1. Maina Kose, Muchai, V.W., GHDS S.BO. "Law and the Status of Woman in Kenya" in Law and the Status of Women, and International Symposium, United Nations, Columbia Human Rights Law Review, 1977, U.S., Vol. 8; No. 1.

2. Nyanga Regina W., Age at First Birth and Fertility (unpublished) M.A. Thesis, KIPS University of Ghana, 1991.

The mean age at first marriage for the cohorts in the ages 15-19 years is excluded because it is likely to give unrepresentative results, since most of the the women are likely to be still in school and therefore unmarried. The age group 45-49 years was earlier observed to be possibly affected by age misreporting errors and problem of dating of marriage especially because most of these women, had no education.

3.2.1 Place of Residence

Place of residence is likely to influence ones behaviour towards marriage. Urbanization erodes traditional customs and through its exposure to new ideas people change attitudes and values.

Table 3.2
Percentage Distribution of Respondents by Age at First Marriage by Place of Residence

Place of Residence	AGE AT FIRST MARRIAGE							Mean Age at First Marriage
	<15	15-17	18-19	20-24	25+	Total	N	
Urban	14.0	30.4	23.1	25.2	6.2	100.0	858	18.2
Rural	15.2	34.4	22.5	19.9	3.9	100.0	4431	17.4
Total	18.4	33.4	22.6	20.9	4.3	100.0		17.5

Source: Computed from KDHS Data File.

Table 3.2 clearly shows that the sampled women are predominantly rural. It is clear that marriage is earlier in rural areas than in urban areas. Over 50 per cent rural women first marry under age 18 years while in urban areas it is only 44 per cent. By age 20 years, over 75 per cent of the rural women are married while in the urban areas it is only 67 per

cent. The proportions marrying below age 20 years is higher in rural than in urban. The mean age at first marriage is higher for urban women (19 years) compared to the mean for rural women (17.4 years).

The above observations can be explained by the economic differences in urban and rural areas. Urban women are likely to remain longer in the school system, have modern sector employment preoccupations and hence face problems of housing and acquisitions of basic property before marriage, hence likely to delay marriage. Their rural counterparts are less educated, hold more to traditional values and are involved in traditional systems of production which favour early marriage.

3.2.2 Childhood Place of Residence

Behaviour in early years of life is usually copied from the elder people and therefore behaviour of the people where one was brought up during childhood is likely to determine ones behaviour in life.

Table 3.3
Percentage Distribution of Respondents by Age at First Marriage by Childhood Place of Residence

Childhood Place of Residence	AGE AT FIRST MARRIAGE							Mean Age at First Marriage
	<15	15-17	18-19	20-24	25+	Total	N	
City	16.4	26.1	23.5	27.5	4.5	100.0	317	17.9
Town	20.2	36.3	15.5	18.8	5.3	100.0	374	17.2
Countryside	18.4	34.0	22.8	20.6	4.2	100.0	4597	17.5
Total	18.4	33.4	22.6	20.9	4.3	100.0	5288	17.5

Source: Computed from KDHS Data File.

From table 3.3 it is clear that most of the women (87 per cent) had countryside childhood residence. There is a tendency to marry later among women who had city childhood residnece. City childhood residence thus appears to have some influence on the age at which a woman enters into marital union; while three quarters of those with rural or town childhood residence, were first married by age 20 years, only 60 per cent of those with city childhood were first married then.

The mean age at first marriage for those who had countryside childhood residence 17.5 years is the same as for entire population (17.5 years). This is because they form the largest proportion of the women (87 per cent), hence have a greater influence on the grand mean age at first marriage.

3.3 Region of Residence

Table 3.4
Percentage Distribution of Respondents by Age at First Marriage by Region

Region	AGE AT FIRST MARRIAGE <15	15-17	18-19	20-24	25+	Total	N	Mean Age at First Marriage
Nairobi	11.2	30.7	22.9	28.9	6.3	100.0	380	18.6
Central	10.4	25.1	28.4	30.0	6.1	100.0	741	18.6
Coast	30.7	35.0	17.2	14.7	2.5	100.0	398	16.3
Eastern	12.1	25.3	28.2	29.1	5.4	100.0	894	18.5
Nyanza	27.0	40.8	16.8	12.6	2.8	100.0	978	16.4
Rift Valley	20.8	36.9	20.9	17.0	4.4	100.0	1133	17.3
Western	16.2	39.5	23.2	18.2	3.0	100.0	764	17.3
Total	18.4	33.4	22.6	20.9	4.3	100.0	5289	17.5

Source: Computed from KDHS Data File.

Table 3.4 clearly shows existing variations in age at entrance to marital unions among regions. Coast province exhibits the highest proportions (31 per cent) who are married before their 15th birthday. While over 65 per cent are married before age 18 years in Coast and Nyanza provinces, the proportion is less than 60 per cent for all other regions. Proportions marrying at age 20 years and above are below 20 per cent for most regions except Nairobi, Central and Eastern provinces. By age 25 years, 95 per cent of the women are already married in all the regions. It is evident therefore that marriage is early generally in Kenya.

The mean age at first marriage for the regions seem to fit in three categories; Nairobi, Central and Eastern at above 18.5 years Rift Valley and Western at 17-18 years while Coast and Western are below 17 years. The low mean in Western and Coast provinces could be explained by the fact that the two regions have many muslims who tend to have low age at marriage. The muslim religion allows polygynuous unions which were earlier found to have low age at marriage. Western is highly rural while Coast though more urban is predominated by the Mijikendas who have low age at marriage and low education. Child marriage common at the Coast is allowed by the muslim religion although sexual relations do not start until the girl is sexually mature. Such early reported marriages are likely to pull down the mean age at marriage for such regions. This is rather misleading because cohabitation starts much later

after marriage. According to the KDHS data, the level of education is higher in Nairobi, Central and Eastern provinces than in all other regions. As such women in these regions are likely to delay marriage. Nairobi, being the capital city is also highly urbanized hence the experience of late marriages.

3.4 Ethnicity

Table 3.5
Percentage Distribution of Respondents by Age at First Marriage by Ethnicity

Ethnicity	AGE AT FIRST MARRIAGE <15	15-17	18-19	20-24	25+	Total	N	Mean Age at First Marriage
Kalenjin	20.1	39.5	15.4	16.1	4.9	100.0	451	17.2
Kamba	15.2	22.5	28.9	28.9	6.5	100.0	655	18.4
Kikuyu	11.2	27.0	27.8	28.3	5.7	100.0	1130	18.4
Kisii	21.3	34.7	18.2	22.7	3.2	100.0	296	17.2
Luhya	17.1	38.9	22.5	16.3	3.2	100.0	964	17.3
Luo	27.1	44.1	17.6	8.7	2.4	100.0	852	16.2
Meru/Embu	7.3	31.2	24.6	32.9	4.0	100.0	308	18.6
Mijikenda	38.9	30.8	15.7	13.1	1.5	100.0	254	15.7
Somali	18.1	56.6	11.0	-	14.2	100.0	9	17.9
Other	19.9	33.7	18.3	22.8	5.4	100.0	300	17.5
Total	18.4	33.4	22.6	20.9	4.3	100.0	5289	17.5

Source: Computed from KDHS Data File.

Table 3.5 shows that as observed among regions, variations in age at first marriage exist within ethnic groups. Different ethnic groups have certain values and practices that influence age at first marriage. The Mijikendas have the highest proportion marrying before age 15 years (39 per cent) while the Meru/Embu have the lowest (7.3 per cent). Most of the ethnic groups have most first marriages occuring at ages 15-17 years except Kamba and Kikuyu among whose most first marriages occur at ages 18-19 years and among Embu/Meru at 20-24 years.

The mean age at first marriage for the regions ranges from 15.7 years among the Mijikendas to 18.6 years among the Meru/Embu group. Looking at the means, one sees a close link between ethnicity and region of residence. The Kikuyu, Kamba and the Embu/Meru occupy the Central and Eastern regions which were observed previously to be characterised by relatively high age at first marriage. The Mijikendas are predominant at the Coast region which was found to experience low age at first marriage. Nairobi is heterogeneous in ethnicity, highly urbanized hence bound to experience late age at marriage. The other ethnic groups are distributed in the other regions that had mean age at marriage at around 17 years.

The Kikuyu, Kamba and Meru/Embu are shown in the KDHS data to have relatively higher education level than other ethnic groups while the Mijikendas have the lowest. The Mijikendas are most likely affected by the early truncation of schooling to get married which is usually arranged by parents. This is a common practice among the Mijikendas who are also highly muslim in affiliation.

3.5 Type of Marital Union

Table 3.6
Percentage Distribution of Respondents by Age at First Marriage by Union Type

Type of Marital Union	AGE AT FIRST MARRIAGE							Mean Age at First Marriage
	15	15-17	18-19	20-24	25+	Total	N	
Monogamous	15.6	34.2	24.7	21.7	3.7	100.0	3643	17.7
Polygamous	25.8	33.6	17.1	18.4	5.1	100.0	1114	17.0
Total	18.0	34.1	23.0	20.9	4.1	100.0	4757	17.5

Source: Computed from KDHS Data File.

Table 3.6 shows that marriages in Kenya, are predominantly monogamous (77 per cent). This is possibly because the population is highly christian (92 per cent) which prohibits polygamous marriage. It is only the Muslim law and customary law that allow polygamous marriages, which form a very small proportion of the population.

Within the two types of marriages there are some variations in age at first entrance into marital union. While over a quarter of the women in polygynous unions are married by age 15 years, only 16 per cent are married among those in monogamous unions. By age 20 years, 60 per cent of women in polygynous unions are already married, while barely 50 per cent are married among those in monogamous unions.

The mean age at first marriage is at a low level of 17 years for polygynous unions and 17.7 years for monogamous marriages. The large representativeness of the monogamous marriages influences the grand mean which is at 17.5 years (closer to the mean for monogamous unions than to that of polygamous unions).

The distribution of the women is such that of the women married under age 15 years, a much larger proportion is from those in polygynous unions (26 per cent). Only few marriages take place after 17 years for polygynuous unions and a steep decline in proportion is observed from 34 per cent for those marrying at ages 15-17 years to only 17 per cent for those marrying at ages 18-19 years. The decline among those in monogamous marriages is not as great, with a decline from 34 per cent in ages 15-17 years to 25 per cent in ages 18-19 years.

It is clear from the means that polygynous unions have an influence on age at first marriage, but their unrepresentativeness (only 23 per cent) makes their effect on the grand mean very minimal. Further evidence from the KDHS data files, show that monogamous marriages predominate in most ethnic groups with only the Mijikendas and Luos showing significant proportions of polygynuous unions. The two groups are mainly found at the Coast and Nyanza provinces respectively which are regions found earlier to be characterised by a low age at first marriage.

3.6 Education

Education, through knowledge expansion helps one to appreciate new things and makes one more flexible to changes. One can adapt easily to new environment, culture and therefore education can very much influence one's behaviour in life.

Table 3.7
Percentage Distribution of Respondents by Age at First Marriage by Education Level

Education	AGE AT FIRST MARRIAGE <15	15-17	18-19	20-24	25+	Total	N	Mean Age at First Marriage
None	30.0	33.5	17.1	14.8	4.6	100.0	1701	16.6
Primary	15.9	39.3	23.8	17.8	3.3	100.0	2710	17.4
Secondary +	3.4	17.4	29.6	42.6	7.0	100.0	871	19.8
Total	18.4	33.8	22.6	20.9	4.3	100.0	5571	17.5

Source: Computed from KDHS Data File.

Table 3.7 shows that age at first marriage is positively related to education. While mean age at first marriage is 16.6

years for the uneducated women it is 19.8 years for those with secondary or higher education. Marked variations in age at first marriage are observed among the different marriage cohorts. While 36 per cent of the uneducated women are married by age 15 years, only 3.4 per cent are, among the women with secondary or above education. However, primary education alone has little effect on age at first marriage and, while over 55 per cent of those with primary or no education, are married by age 18 years, the proportion is barely 20 per cent for those with secondary or above education. Table 3.7 also show that most marriages among those with secondary or higher education take place at ages 20-24 years while for those with less than secondary education are mostly at ages 15-17 years. This shows that secondary or higher education is necessary and acts as a pre-requisite for changing attitudes towards early marriage.

To achieve secondary or higher education one has to stay longer in the school system, which also gives one an opportunity to mature and learn more about life. With high educational level, one becomes well equipped with skills necessary for wage employment and has better chances for career development. Staying longer in school means postponing marriage since marriage is not commensurate with education particularly in Africa where marriage is meant for procreation. It is therefore clear even from the same table that those with secondary or higher education marry much later than the uneducated. While over 80 per cent of those with only primary education or are uneducated are already married by age 20 years, barely 50 per cent of those with secondary education are.

The KDHS data also shows that women with secondary or higher educational level tend to be young (under 35 years), are likely to live more in urban areas and generally from regions experiencing late marriage.

3.7 . Religion

In Kenya there is freedom of worship and therefore almost everybody belongs to a certain religious affiliation with only 3.4 per cent of the women reporting that they belonged to no religion. Religious affiliations, have their marriage laws that determine minimum legal age at first marriage. As such religion has a very important role to play determining age at first marriage. For any marriage to be recognized in Kenya it has to have passed through either religious, customary or civil law.

Table 3.8
Percentage Distribution of Respondents by Age at First Marriage by Religion

Religion	AGE AT FIRST MARRIAGE							Mean Age at First Marriage
	<15	15-17	18-19	20-24	25+	Total	N	
Catholic	19.0	31.5	23.0	22.0	4.4	100.0	1836	17.5
Protestant	16.7	35.2	23.1	20.7	4.3	100.0	2994	17.6
Muslim	32.3	29.6	19.2	15.8	3.0	100.0	197	16.6
Other	16.9	31.1	23.2	23.1	5.8	100.0	88	18.5
No Religion	26.8	41.8	14.1	15.4	1.8	100.0	165	16.4
Total	18.4	33.8	22.6	20.9	4.3	100.0	5280	17.5

Source: Computed from KDHS Data File.

As had been earlier observed, Table 3.8 shows that in Kenya people are predominantly christians (92 per cent).

Christians prohibit child marriage and polygynuous marriages which are likely to lower age at marriage. On the other hand, muslims allow them hence the low mean age at marriage for muslims (16.6 years). Customary law also allows child marriage and polygamous marriage and is likely to be used by the no religion category which further explains the reason for their low age at first marriage (16.4 years). The high predominance of christians however, influence the grand mean greatly.

3.8 Occupational Status before Marriage

Occupation meaning wage employment requires educational skills which means that one has to remain in the school system longer. Therefore, female occupation status before marriage can determine age at first marriage.

Table 3.9
Percentage Distribution of Respondents by Age at First Marriage by Work before Marriage

Work	AGE AT FIRST MARRIAGE						N	Mean Age at First Marriage
	<15	15-17	18-19	20-24	25+	Total		
No	20.4	36.7	22.2	17.6	3.2	100.0	4074	17.1
Yes	11.2	23.9	24.5	32.4	3.0	100.0	1181	19.0
Total	18.4	33.4	22.6	20.9	4.3	100.0	5255	17.5

Source: Computed from KDHS Data File.

Table 3.9 clearly shows that wage employment before marriage has a positive effect on age at first marriage. While mean age at first marriage is 17 years for those who had not worked before marriage, it is 2 years higher (19 years) for

those who had worked. Since wage employment goes with educational level, then those who had worked before marriage are likely to have at least secondary education, are likely to be living in the urban areas and are likely to be young. The ones who did not work before marriage are however, likely to be older, less educated and living in rural areas and therefore tend to adhere strongly to the traditional customs which favour early marriage.

Marked variations are observed in proportions marrying among different marriage cohorts for the two categories of work status. While 80 per cent of those who did not work before marriage, had been married by age 20 years, less than 60 per cent had done so among those who had worked before worked. It is therefore clear that work before marriage affects age at first marriage. However, due to the low educational level of most women and their rural predominance, few (23 per cent) were able to secure jobs before marriage. Therefore they have very little effect on the grand mean which balances at a level close to that of the larger group that had not worked before marriage.

3.9 Age at First Sexual Intercourse

Demographic factors can also influence ones behaviour. Age at menarche denotes a transition from childhood to adulthood. In many African societies, once a girl gets her first menstruation, she starts being prepared for marriage. One such preparations is introduction to sexual intercourse. This is usually done after female initiation rites have been done. In the traditional society this was done without high

incidences of premarital pregnancy. However, in contemporary Kenya, where traditions are eroding fast, it is impractical to prohibit premarital sex, which has resulted in high incidences of pre-marital pregnancies and births as was observed by Gyepi[1] in his study on adolescent fertility.

Table 3.10
Percentage Distribution of Respondents by Age at First Marriage by Age at First Sexual Intercourse

Age at First Sexual Relation	AGE AT FIRST MARRIAGE							Mean Age at First Marriage
	<15	15-17	18-19	20-24	25+	Total	N	
<14	33.0	36.1	16.0	12.9	2.0	100.0	700	15.5
14-15	4.9	51.5	24.6	16.0	3.0	100.0	1690	17.4
16-17	-	33.9	42.3	21.2	2.5	100.0	1206	18.1
18-19	-	-	43.5	52.0	4.5	100.0	733	19.7
20+	26.2	24.0	11.9	31.3	6.6	100.0	1210	17.1
Total	18.4	33.8	22.6	20.9	4.3	100.0	5541	17.5

Source: Computed from KDHS Data File.

Table 3.10 shows that age at first union increases with age at first intercourse. This trend is broken by those who reported age at first intercourse as at 20 years and above. The same table also shows that, of those who had first sexual experience at age 20 years or over, 60 per cent had their first marriage long before which implies tendency to delay first intercourse within marriage even for marriages occuring after age 15 years. This is obviously impractical and clearly indicates effect of reporting errors that were not removed at the file cleaning stage. Further analysis of the KDHS data on

1. Gyepi Garbrah, Adolescent Fertility in Kenya The Pathfinder Fund, Nairobi, 1985.

age at first intercourse by age at first birth, indicates incidence of births occuring before first intercourse which is impossible. Questions on sexual relations are very sensitive and people are shy to report early sexual experiences. So in this analysis, first sexual intercourse at age 20 years or above will be ignored.

The same table also show that most Kenyan women have their first sexual relation at ages 14 and 15 years while first marriages peak at two or more year later (15-17 years). That first intercourse, precede first marriage was also observed by Ocholla-Ayayo and Muganzi[1] when they observed that timing of marriages with chances of pregnancy is practiced by certain societies in Kenya. In the traditional society, to have sexual relations when still uncircumcised or to become pregnant before female initiation rites were performed, was regarded as near sinful. This helped to delay onset of sexual relations hence marriage and childbearing. In contemporary Kenya, female circumcision is prohibited and with fast eroding traditions and the rapid rate of modernization, the youth are indulging in sexual activities early. Modernization, has made this easy through boarding schools away from home and parents supervision, exposure through mass media through books, magazines, films peer groups and availability of conducive environment for heterosexual activities like hotels,

1. Ocholla-Ayayo, A.B.C, Muganzi, Z., Field Work Report on Marriage Patterns as Fertility Determinants with Differential Effects among Kenya Ethnic Groups, PSRI, Research Programme, 1986.

lodges, guest houses and boys dormitories. Early sexuality is usually followed by early pregnancy which in Kenya leads to expulsion from school. Early termination of schooling and early onset of motherhood leaves the girl with little option than to marry early so as to settle.

Summary

This section has looked at the socio-economic factors influencing age at first marriage in Kenya. It was observed that there is a tendency to delay marriage among the younger cohorts. The factors that affect age at first marriage are mainly education, religion and place of residence. Secondary education was found to be necessary before age at first marriage can rise significantly. Monogamous marriages have a higher prevalence of late marriages than polygynous ones. Urban women were found to experience late marriages, they tend to be also more highly educated than their rural counterparts and they are also likely to be in wage employment which all have positive effects on age at first marriage. It was also observed that in Kenya, age at first marriage is not synonymous with first sexual intercourse.

It is therefore hoped that as more women acquire secondary education and Kenya becomes more urbanized, age at first marriage in Kenya will rise.

CHAPTER FOUR

AGE AT FIRST MARRIAGE AND ITS RELATIONSHIP WITH FERTILITY IN KENYA

Kenya is one of the African countries that has experienced exceptionally high fertility and population growth rates. According to the 1962 census data, the total fertility rate (TFR) was estimated at 5.3 children per woman and by 1977-79 it had reached a maximum of 8.0 children per woman then it started declining and by 1989 it had reached 6.7 children according to the KDHS. The momentum for high fertility appears to have started long before the Second World War but no reliable data have been collected for this period. After the Second World War, marked fertility increase was observed which could be attributed to the availability of more and better quality food. The colonialists introduced better farming methods and high yield crops. By working in the farms for the white man, the Kenyans learned these techniques and when the colonialists left, the white highlands were taken by the Kenyans who were able to produce more food. Improved health services helped reduce mortality particularly of infants and pregnancy wastage. As a result, fertility remained high while mortality was declining which resulted in high population growth rate which reached 3.3 per cent per year according to the 1962 census data. This growth rate was alarming and the government of Kenya realised that it was not commensurate with the economic growth and development of the country. It then became necessary to reduce fertility and the family planning

programme was launched in 1967 in Kenya.

The aim of the family planning programme was to reduce fertility and it was not very kindly received by the Kenyans who were still tound to their traditional beliefs and norms of large families. Traditionally, childbearing particularly of many children was equated to "righteousness" and so women would find it difficult to control fertility. The rural women were even more negative about it and therefore the programme had very little impact and fertility continued to rise. It was then felt that education was necessary for people to change attitudes and values. Improved educational status and in particular female education was necessary for fertility to decline. This was given a lot of campaign after independence in the 1960s and it is possible that by the late seventies some of the women who had benefited from this campaign had attained secondary education, and had started regulating their fertility. Female education has made tremendous progress in Kenya and more and more women are receiving formal education. This has in effect raised the age at first marriage which is a major determinant of fertility.

In the previous chapter, beginning of marriage was found to vary across various socio-economic groups. This chapter will look into fertility by age at first marriage while controlling for selected socio-economic variables that have been found to be important.

4.1 Fertility Levels and Differentials by Age at First Marriage

Table 4.1
Age-Specific Fertility Rates and Mean Children Ever Born by Current Age, KDHS, 1989

Age	Age-Specific Fertility Rate	Mean Children Ever Born
15-19	0.152	0.3
20-24	0.314	1.5
25-29	0.303	3.4
30-34	0.255	4.9
35-39	0.183	6.4
40-44	0.099	7.1
45-49	0.035	7.7
All Ages	6.7 (TFR)	3.5

Source: KDHS, 1989.

In Table 4.1 it is clear that fertility in Kenya is high. By the end of her reproductive period an average Kenyan woman is expected to have had 6.7 children if she experiences the prevailing age specific fertility rates in Kenya. The observed cumulative fertility is 7.7 children per woman who has virtually completed her reproductive period (age 45-49 years). However, a look at the age specific fertility rates shows that there is a declining trend in fertility towards the younger woman, women age 15-19 years have an age specific fertility rate of 152 children per 1000 women while among the older women aged 35-39 years the age specific fertility rate is 183 children per 1000 women. The fertility of the women is highest among those in ages 20-34 years. This is the age when most women are in their early marriage life and are likely to reproduce fast. As the age advances from 34 years, the rates start declining. The same table also shows that the mean

parity increases with increase in age of woman. This is because as a woman's duration of marriage lengthens, the cumulative fertility increases if all things remain equal.

Table 4.2
Mean Children Ever Born by Age at First Marriage by Current Age

Current Age	N	AGE AT FIRST MARRIAGE < 17	17-19	20+	All Ages
15-19	301	1.2	0.8	-	1.0
20-34	3019	4.5	3.4	2.7	3.6
35-49	1966	7.8	7.1	6.1	7.1
All Ages	5286	5.5	4.4	4.1	4.8

Source: Computed from KDHS Data File.

Table 4.2 shows that fertility decreases as age at first marriage increases for women of the same age. This shows that beginning of marriage is an important determinant of fertility. The mean parity of the women aged 35-49 years is 7.8 children for the women who married at ages below 17 years while it is 6.1 for those of same age cohort who married at age 20 years and over. This shows a reduction of 1.7 children when age at first marriage is raised from below 17 years to above 19 years. This decline is observed for all ever married women in the same age cohort. In short, age at first marriage is inversely related to fertility.

4.2 Age at First Marriage and Fertility with Place of Residence as Control

The mean age at first marriage was found to be at least 0.8 years earlier in rural areas than in urban areas. It is therefore expected that with all things remaining equal, fertility will be higher in rural areas than in urban areas. Table 4.3 shows clearly that fertility varies by place of residence. The women who had urban residence have on average of 2 children less than the rural women. The differentials persist even when age at first marriage is controlled.

Table 4.3
Mean Children Ever Born by Age at First Marriage by Type of Place of Residence

Age at First Marriage and Place of Residence	N	CURRENT AGE 15-19	20-34	35-49	All Ages
<17 years	2112	1.2	4.5	7.8	5.5
Urban	290	0.9	3.6	6.3	3.8
Rural	1822	1.3	4.7	7.9	5.8
17-19 years	1844	0.8	3.4	7.1	4.4
Urban	289	0.5	2.7	5.9	3.0
Rural	1555	0.9	3.6	7.2	4.7
20+ years	1332	-	2.7	6.1	4.1
Urban	279	-	2.0	3.9	2.5
Rural	1054	-	3.0	6.4	4.4
All Ages	5289	1.0	3.6	7.1	4.6
Urban	858	0.8	2.7	5.3	3.1
Rural	4431	1.0	3.9	7.3	5.1

Source: Computed from the KDHS data file.

It is also clear that fertility varies with age at first marriage. As age at first marriage increases fertility decreases. Women aged 35-49 years who have virtually completed

child bearing and married at ages under 17 years have mean parity of 1.7 children more than their age mates who married at age 20 years or above. The decrease in fertility by increase in age at first marriage is even greater for urban women. While the mean parity for urban women aged 35-49 years, who married at ages below 17 years is 6.3 children, it is only 3.9 children for those married at 20 years and above. For the rural women in same age cohort fertility decreases from 7.9 children for those who married at ages below 17 years to 6.4 children for those who married at ages 20 years and above, a decrease of 1.5 children.

It is therefore clear that age at first marriage is negatively related to fertility even when type of place of residence is controlled. Urban residence has a negative effect on fertility and helps to lower the fertility further after the effect of late age at first marriage. However, it is clear that age at first marriage is more important in fertility reduction because women who marry early have very high fertility irrespective of whether in urban or rural areas.

4.3 Age at First Marriage and Fertility with Childhood Residence as Control

In the previous chapter rural childhood residence was found to be characterised by low age at first marriage. It is therefore expected that the fertility of women who had rural childhood, will tend to have higher fertility if all things remain the same. Table 4.4 clearly shows that fertility is

higher among women who spent their childhood in rural areas than those who spent it in urban areas. For the urban women aged 35-49 years, mean parity is 6.0 children while that of the women who had rural childhood in the same age is 7.2 children.

Table 4.4
Mean Children Ever Born by Age at First Marriage by Childhood Place of Residence

Age at First Marriage and Childhood Residence	N	CURRENT AGE 15-19	20-34	35-49	All Ages
< 17 years	2111	1.2	4.5	7.8	5.5
Urban	273	1.1	4.1	6.7	4.3
Rural	1838	1.2	4.6	7.9	5.7
17-19 years	1844	0.8	3.4	7.1	4.4
Urban	226	1.0	3.2	6.0	3.4
Rural	1618	0.7	3.5	7.2	4.6
20+ years	1332	-	2.7	6.1	4.1
Urban	191	-	2.0	5.1	2.6
Rural	1141	-	2.9	6.2	4.3
All Ages	5288	1.0	3.6	7.1	4.8
Urban	690	1.0	3.2	6.0	3.6
Rural	4597	1.0	3.7	7.2	5.0

Source: Computed from the KDHS data file.

A look at fertility by age at first marriage controlling for childhood residence shows that fertility decreases with increase in age at first marriage among women with same childhood residence; while the mean parity of the urban women aged 35-49 years is 6.3 children for those who married under 17 years, it is only 3.9 children for those who married at age 20 years and over, a decline of 2.4 children. The same trend is observed among the rural women. While mean parity among rural

women aged 35-49 years is 7.9 children for those who married below 17 years, it 6.4 children for those who married at age 20 years and over a decline of 1.5 children.

This shows that while fertility is lower for urban women, it is even lower when age at first marriage is higher. Even among the rural women who married late, fertility is much lower. Late age at marriage tends to reduce the duration of exposure to risk of childbearing as well as giving the woman an opportunity to advance in education and become more mature. This exposes the woman to modern ideas and she begins to change values and attitudes on family size. So late marrying women are likely to control their fertility performance in order to have fewer children.

4.4 Age at First Marriage and Fertility with Education as Control

Education has been observed to delay marriage and the beginning of childbearing.

Table 4.5
Mean Children Ever Born by Age at First Marriage by highest Education Level

Age at First Marriage and Education	N	CURRENT AGE 15-19	20-34	35-49	All Ages
17 years	2110	1.2	4.5	7.8	5.5
None	500	1.5	5.0	7.8	6.4
Primary	1108	1.1	4.3	7.7	5.0
Secondary+	103	1.8	3.5	7.2	3.9
17-19 years	1841	0.8	3.4	7.1	4.4
None	471	0.5	4.2	7.2	5.5
Primary	1033	0.8	3.4	7.2	4.3
Secondary+	337	0.6	2.9	5.6	2.9
20+ years	1331	-	2.7	6.1	4.1
None	330	-	3.4	6.1	5.3
Primary	570	-	2.9	6.7	4.3
Secondary+	432	-	2.4	4.4	2.8
All ages	5282	1.0	3.6	7.1	4.8
None	1701	1.3	4.5	7.2	6.2
Primary	2709	1.0	3.7	7.3	4.6
Secondary+	872	0.8	2.7	5.0	3.0

Source: Computed from the KDHS data file.

Table 4.5 clearly shows that fertility decreases as woman's education increases. However, it is observed that in most cases women with primary education tend to have higher fertility than those with none. For the women age 35-49 years and married at age 20 and above years, mean parity is 6.1 children for the uneducated, 6.7 children for those with primary education and 4.4 children for those with secondary or higher. This therefore means that secondary education is necessary for significant decline in fertility considering the fact that a decline of 1.7 children is achieved when level of education rises from none to secondary.

Table 4.4 also shows that fertility varies by age at first marriage across the various education categories. Mean parity for uneducated women aged 35-49 years, who marry under age 17 years is 1.7 children higher than for those who marry after 19 years. Mean parity of the women aged 35-49 years who had primary education decreased by 1 child when age at first marriage increased from below 17 years to over 19 years, while for the women with secondary education, the decrease is even higher at 2.6 children.

The great decline in fertility among women with secondary education as age at first marriage increases can be explained by the observation that more of the women with secondary education marry after age 19 years since secondary education requires many years of schooling. This helps delay marriage and in most cases childbearing. The women who are more educated will tend to use contraceptive more to reduce fertility. However, it is clear that whatever the level of education, age at first marriage is still very important in determining fertility.

4.5 Age at First Marriage and Fertility with Husband's Education as Control

In most traditional African societies, the husband is the decision-maker in the family and is therefore likely to influence the fertility behaviour of the wife. Consequently, it is necessary to examine the relationship between husband's education and fertility.

Table 4.6
Mean Children Ever Born by Age at First Marriage by Husband's Highest Education Level

Age at First Marriage and Husband's Education	N	CURRENT AGE 15-19	20-34	35-49	All Ages
17 years	2007	1.2	4.5	7.8	5.5
None	420	1.5	4.6	7.6	6.4
Primary	1140	1.2	4.7	8.0	5.7
Secondary+	447	1.2	3.9	7.2	4.2
17-19 years	1773	0.8	3.4	7.2	4.4
None	247	1.3	3.5	7.2	5.5
Primary	886	1.0	3.6	7.4	5.0
Secondary+	640	0.5	3.1	6.4	3.2
20+ years	1275	-	2.7	6.1	4.1
None	189	-	4.1	6.1	5.4
Primary	540	-	2.9	6.6	4.6
Secondary+	546	-	2.4	5.1	3.0
All Ages	5054	1.0	3.6	7.1	4.6
None	856	1.4	4.3	7.2	5.9
Primary	2566	1.1	4.0	7.4	5.3
Secondary+	1632	0.9	3.0	6.1	3.4

Source: Computed from the KDHS data file.

Table 4.6 shows that women whose husband's are highly educated tend to have lower fertility than those whose husbands are either uneducated or with only primary education. Mean parity is highest among women whose husbands are uneducated and lowest among those whose husbands had secondary education.

A look across the age at first marriage categories shows that fertility decreases with increase in age at first marriage irrespective of the education category of husbands. For the women aged 35-49 years, mean parity decreases when age at first marriage increases from under 17 years to over 19 years by 1.5 children for those women with uneducated husbands, 1.8 children for those whose husbands had primary education and by 2.1 children for those whose husbands had secondary or higher

education. Highly educated husbands are likely to marry women who are highly educated too and are advanced in age far beyond puberty. They are likely to desire fewer children and therefore urge their wives to use contraceptives to regulate fertility. However, it is clear that even among women whose husbands have same education, fertility varies by age at first marriage. This clearly indicates that age at first marriage has to increase for fertility to decline significantly.

4.6 Age at First Marriage and Fertility with Work Status before Marriage as Control

Employment in the formal sector of the economy is incompatible with childbearing. Table 4.7 shows that women who had worked before marriage have a mean parity which is one child less than women who did not work.

Table 4.7
Mean Children Ever Born by Age at First Marriage by Work Status Before Marriage, KDHS, 1989

Age at First Marriage and Work before Marriage	N	CURRENT AGE 15-19	20-34	35-49	All Ages
<17 years	2097	1.2	4.5	7.8	5.5
No	1800	1.2	4.5	7.9	5.7
Yes	297	1.2	4.2	7.1	4.9
17-19 years	1834	0.8	3.4	7.1	4.4
No	1428	0.8	3.5	7.0	4.5
Yes	406	0.8	3.1	7.6	4.1
20+ years	1324	-	2.7	6.1	4.1
No	847	-	2.8	6.3	4.4
Yes	477	-	2.7	5.6	3.6
All Ages	5255	1.0	3.6	7.1	4.8
No	4074	1.0	3.8	7.2	5.0
Yes	1181	1.0	3.2	6.7	4.1

Source: Computed from the KDHS data file.

The same table 4.7 shows that fertility decreases with an increase in age at first marriage irrespective of work status before marriage. Of the women aged 35-49 years who have virtually completed childbearing, mean parity decreases when age at first marriage rises from under 17 years to over 19 years by 1.6 children for those who did not work and 1.5 children for those who had worked before marriage.

In the KDHS occupation status was not classified and women were just asked if they had worked before marriage in which case the answer was either "yes" or "no". Work here is therefore taken to mean any type of wage employment. Therefore the women who had worked before marriage are likely to be more educated and more of them living in the urban areas. They are also likely to have married late and consequently started childbearing late. Little variation in fertility is observed across work status category. However, fertility decreases with increase in age at first marriage when work status is controlled. This indicates that whatever the background characteristics, for fertility to decline significantly, age at marriage has to increase.

4.7 Age at First Marriage and Fertility with Type of Marital Union as Control

In the previous chapter, age at first marriage was found to be earlier in polygynous unions than in monogamous ones. This is expected to influence fertility. The results of table 4.8 show some relationship between fertility and type of marital union. Of the women aged 35-49 years who have

virtually completed childbearing, mean parity is lower for women in polygynous unions than those in monogamous unions, However, for the entire population, polygamous unions show higher mean parity. This is most likely due to the small sample size of the polygynous unions.

Table 4.6
Mean Children Ever Born by Age at First Marriage by Type of Marital Union

Age at First Marriage and Union Type	N	CURRENT AGE 15-19	20-34	35-49	All Ages
<17 years	1886	1.2	4.6	7.9	5.6
Monogamous	1339	1.1	4.5	8.3	5.5
Polygamous	547	1.5	4.8	7.4	5.8
17-19 years	1084	0.7	3.5	7.3	4.5
Monogamous	1379	0.7	3.5	7.4	4.4
Polygamous	305	0.9	3.6	6.8	5.0
20+ years	1187	-	2.7	6.2	4.1
No	926	-	2.7	6.2	4.1
Yes	251	-	2.7	6.2	4.2
All Ages	4757	1.0	3.7	7.3	4.8
No	3644	0.9	3.6	7.4	4.7
Polygamous	1113	1.3	3.9	7.0	5.2

Source: Computed from the KDHS data file.

However, when the relationship is controlled for type of marital union, it is observed that great variation in fertility exists across age at first marriage categories. As age at first marriage increases, fertility decreases. Mean parity among women aged 35-49 years decreases when age at first marriage increases from under 17 years to over 19 years by 2.1

children for women in monogamous unions and by 1.2 children for women in polygamous unions. This indicates that age at first marriage is important in determining fertility irrespective of type of marital union.

4.8 Age at First Marriage and Fertility with Marital Status as Control

It is within marriage that most childbearing takes place and therefore it is expected that marital stability will influence fertility performance.

Table 4.9
Mean Children Ever Born by Age at First Marriage by Current Marital Status

Age at First Marriage and Marital Status	N	CURRENT AGE 15-19	20-34	35-49	All Ages
<17 years	2111	1.2	4.5	7.8	5.5
Married	1890	1.2	4.6	7.9	5.6
Widowed	99	1.0	4.2	7.6	6.7
Divorced/Separated	121	1.3	3.5	4.9	3.7
17-19 years	1844	0.8	3.4	7.1	4.4
Married	1687	0.7	3.5	7.3	4.5
Widowed	49	-	4.3	6.8	5.9
Divorced/Separated	108	1.2	2.5	4.4	2.8
20+ years	1332	-	2.7	6.1	4.1
Married	1188	-	2.7	6.2	4.1
Widowed	48	-	2.6	6.5	6.0
Divorced/Separated	96	-	2.7	3.2	2.8
All Ages	5287	1.0	3.6	7.1	4.8
Married	4795	1.0	3.7	7.3	4.8
Widowed	196	1.0	4.0	7.1	6.3
Divorced/Separated	325	1.2	2.9	4.2	3.2

Source: Computed from the KDHS data file.

Results of the analysis in Table 4.9 show that among women aged 35-49 years who have virtually completed childbearing, there is a tendency of mean parity to decrease with marital dissolutions. The divorced or separated women show lowest fertility in all marriage cohorts. The widowed although few in number, show high fertility close to that of those in marriage. This could be attributed to the earlier findings, that the widowed women were mostly older women who had virtually completed childbearing and so the loss of husband did not make much difference to their fertility. Of the women aged 35-49 years, those who were either separated or divorced, had about a 3.0 children less than those who were either married or widowed. However, greater decline in fertility is observed when age at first marriage increases. Women in ages 35-49 years show a decline in fertility (when age at first marriage increases from under 17 years to above 19 years) of 1.7 children for the married category, 1.1 children for the widowed and 1.7 children for the divorced or separated category.

The fact that increase in age at first marriage shows a marked decline in fertility irrespective of marital status, implies that it is an important fertility determinant.

4.9 Age at First Marriage and Fertility with Contraceptive Use as Control

Table 4.10
Mean Children Ever Born by Age at First Marriage by Current Contraceptive Use, KDHS, 1989

Age at First Marriage and Union Type	N	CURRENT AGE 15-19	20-34	35-49	All Ages
17 years	2111	1.2	4.5	7.8	5.5
No Method	1668	1.1	4.4	7.6	5.3
Any Method	443	1.8	4.9	8.3	6.3
17-19 years	1845	0.8	3.4	7.1	4.4
No Method	1277	0.7	3.4	6.9	4.1
Any Method	568	0.9	3.6	7.6	5.0
20+ years	1337	-	2.7	6.1	4.0
No Method	939	-	2.6	6.2	3.9
Any Method	393	-	3.2	5.9	4.4
All Ages	5287	1.0	3.6	7.1	4.8
No Method	3884	1.0	3.6	7.0	4.6
Any Method	1403	1.2	3.9	7.3	5.2

Source: Computed from the KDHS data file.

The analysis in Table 4.10 shows that women who were using any method of contraceptive had slightly higher fertility than those who were not using any method regardless of current age. This is contrary to the expectation that fertility would be lower for those who are contracepting than for the non-contraceptors. This could be attributed to a possibility that women who were contracepting are those who were already victims of short breastfeeding period, amenorrhoea and short birth intervals or that contraceptives are being used for birth spacing by women who started childbearing early and not for reducing fertility. It is also possible that the women started

using contraceptives only after they had the number of children they wanted, which is usually high.

Table 4.10 also shows that fertility declines by age at first marriage irrespective of whether contracepting or not. Mean parity for women aged 35-49 years declines when age at first marriage increases from under 17 years to over 19 years by 1.4 children for non-contracepting women and by 2.4 children for those who were using any method of contraception. The great difference due to age at first marriage among the contraceptors is because the women who married late are likely to have higher education than their counterparts who married early. Those who married early are likely to start using contraceptives only after they have had many children. Therefore late marriage is the one important factor here necessary for fertility to decline.

4.10 Age at First Marriage and Fertility with Ideal Number of Children as Control

Table 4.11
Mean Children Ever Born by Age at First Marriage by Ideal Number of Children

Age at First Marriage & Ideal Number of Children	N	CURRENT AGE 15-19	20-34	35-49	All Ages
≤17 years	2111	1.2	4.5	7.8	5.5
<4 children	254	1.0	3.8	6.9	4.3
4 Children	753	1.3	4.1	7.5	5.1
>4 Children	1104	1.2	5.0	8.0	6.1
17-19 years	1845	0.8	3.4	7.1	4.4
<4 Children	342	1.0	2.9	6.0	3.4
4 Children	787	0.7	3.2	7.1	4.1
>4 Children	714	0.7	4.0	7.2	5.2
20+ years	1332	-	2.7	6.1	4.1
<4 Children	313	-	2.1	4.4	2.8
4 Children	587	-	2.7	6.4	4.0
>4 Children	431	-	3.4	6.6	5.1
All Ages	5287	1.0	3.6	7.1	4.8
<4 Children	909	1.0	2.8	5.8	3.5
4 Children	2127	1.0	3.4	7.0	4.4
>4 Children	2249	1.0	4.3	7.5	5.6

Source: Computed from the KDHS data file.

Table 4.11 clearly shows that achieved fertility increases with increased ideal family size. The women who desired less that 4 children have 2.1 children less than those whose ideal number of children was more than 4. Ideal family size is, therefore positively related to fertility. The relationship remains within age at marriage categories and becomes even more pronounced at marriages above 19 years.

As age at first marriage increases fertility decreases for all ideal number of children. The greatest decline in mean parity is observed among the women who desired less than four children. As age at first marriage increases from under 17 years to over 19 years, mean parity for women in ages 35-45 years decreases by 3.4 children for those who felt that less than 4 children was the ideal number, by 0.5 and 0.3 children for those who felt 4 and greater than 4 children respectively was ideal.

The women who feel that fewer than four children are ideal are likely to be women in career, or wage employment who find it difficult to cope with child bearing and rearing. They could also be women who have higher aspirations for their children and are therefore likely to find many children expensive to cater for.

4.11 Regression Analysis

The multivariate analysis done so far in this chapter show that various socio-economic factors are important in explaining the fertility behaviour of the study population. It was also observed that most of these socio-economic variables are interrelated and their interaction are likely to affect fertility. In order to make more meaningful analysis, the effects of all selected socio-economic variables taken simultaneously are examined through the use of a multivariate regression method. The analysis will give us the estimates of

the effect of the selected socio-economic variables on fertility.

Fifteen independent variables were used of which all the socio-economic variables including age at first marriage were considered as categorical variables. For each variable, one category is treated as a reference category (R.C) and the other categories are represented by a dummy variable each. The reference category gets value zero while all the other dummy variables get the value one. The demographic variables except age at first marriage were treated as continuous variables and included children ever born which is the dependent variable, age at first birth, ideal number of children and age at first intercourse.

A correlation matrix revealed that current age and duration of marriage are highly correlated. In the presence of current age in single years, age at first marriage in single years showed an insignificant positive relationship with children ever born contrally to the expected. It was therefore necessary to categorise age at first marriage which made it not only negatively related but also significant.

Table 4.12
Regression Results of the Relationship between Fertility and Some Selected Socio-Economic Variables

Variable Name	Dummy Variable	b-Coefficients	t-Statistic	Sig. t.
Age at first Intercourse	V525	-0.002	-2.577	0.0100
Ideal Number of Children	V613	0.005	3.661	0.0003
Age at first birth	V212	-0.25	-25.209	0.0000
Current Age	V012	0.26	72.456	0.0000
Age at first marriage	<17yrs	0.25	2.895	0.0038
	17-19yrs	0.26	3.673	0.0002
	20+yrs	R.C		
Region of Residence	Nairobi	-0.17	-1.376	0.1690
	Central	R.C.		
	Coast	-0.03	-0.272	0.7859
	Eastern	-0.94	-1.014	0.3106
	Nyanza	0.15	1.666	0.0919
	R. Valley	0.16	1.776	0.0755
	Western	0.44	4.846	0.0000
Place of Residence	Rural	0.46	5.627	0.0000
	Urban	R.C		
Childhood Place of Residence	Rural	R.C		
	Urban	-0.17	-2.301	0.0214
Highest Level of Education	None	0.05	0.761	0.4465
	Primary	R.C.		
	Sec+	-0.21	-2.753	0.0059
Husband's highest Education Level	None	-0.06	-0.780	0.4355
	Primary	R.C		
	Sec+	-0.20	-3.289	0.0010
Worked before marriage	No	R.C.		
	Yes	-0.17	-2.677	0.0074
Union Type	Monogamous	R.C		
	Polygynous	-0.31	-4.736	0.0000
Current Marital	Married	R.C		
	Widowed	-0.74	-5.526	0.0000
	Div./Sep.	-1.30	-12.216	0.0000
Contraceptive Use	No Method	R.C.		
	Any Method	0.30	4.896	0.0000
Religion	Christian	R.C.		
	Muslim	0.32	2.758	0.0058
Constant		.67	2.379	0.0174

Multiple R = 0.79805, R square = 0.63689, F Statistic = 355.85623, Sig.F = .0000

The results in Table 4.11 show that 65.65 per cent of the variation in children ever born is explained by the 15 variables selected. The b coefficients are made from the reference category. The regression results show the following observations.

Current Age

Results in Table 4.12 show that there is a positive relationship between age and CEB. This is expected because the older the woman the longer she is likely to have been exposed to the risk of childbearing hence the higher the number of children ever born. The relationship is highly significant. For every one year increase in age, there is an increase of children ever born by 0.26 of a child.

Age at First birth

The results in Table 4.12 show that age at first birth is negatively related to CEB. The higher the age at first birth the lower the number of CEB. This is expected especially when childbearing is confined to marriage, the lower the age at motherhood will mean longer duration to risk of childbearing and consequently high completed fertility. For every one year

rise in age at first birth there is a reduction of children ever born by 025 of a child. The relationship is highly significant.

Ideal Number of Children

Results in Table 4.12 show that ideal number of children is positively related to CEB. There is a significant increase in mean children ever born as the ideal number of children increases. There is a .005 of a child increase in CEB when ideal number of children increases by one child.

Age at First Marriage

Table 4.12 shows that there is a significant decrease in CEB as age at first marriage decreases. However, the increase in CEB is much higher (0.26 of a child) when age at first marriage decreases from 20 years and above to 17-19 years than when it decreases from 20 years and above to less than 17 years (0.25 of a child). This is expected because those who marry while too young usually suffer from adolescent infecundity hence tend to have few CEB despite their early entry into marriage.

Place of Residence

The findings show that there is a significant increase in CEB as women live in rural areas. The CEB of rural women is 0.46 of a child higher than for urban women. This is as expected from earlier findings that urban women are more educated and are likely to be employed which makes childbearing difficult for them. Urbanization is also

likely to change traditional customs and values to those favouring small family sizes.

Education

The regression results in Table 4.12 show that there is a significant reduction in fertility as woman's level of education increases from primary to secondary and higher. A 0.21 of a child decline in CEB is observed when education increases from primary to secondary and higher. However, an insignificant increase in fertility is observed when education decreases from primary to no education. This shows an inverse relationship between education and fertility.

Husbands also play a role in fertility determination and their behaviour and characteristics are important. The findings show that there is a significant 0.2 of a child decline in CEB when husband's education rises from primary to secondary and higher. An insignificant decline is observed when education decreases from primary to no education.

Education operates through other factors to affect fertility. Higher education means longer stay in the school system which delays age at first marriage and sometimes age at first birth. Through expansion of the knowledge horizon education helps change attitudes of large families to smaller families hence the need to use contraceptives more.

Work Status

Results in Table 4.12 show that women who had worked before marriage have a significantly fewer CEB than those who had not worked. There is a 0.17 of a child difference in CEB for the women who had worked before marriage. This is possibly because of the time and commitment required in the formal sector employment which is incompatible with childbearing. Women who had worked before marriage are also likely to be more educated and are therefore likely to desire fewer children.

Union Type

Results in Table 4.12 show that polygynous unions have a significantly lower fertility than monogamous marriage. A 0.51 of a child difference in CEB is observed. Possibly because in polygynous unions women tend to observe prolonged periods of abstinence and breastfeeding.

Current Marital Status

The results in Table 4.12 show that there is significant decline in CEB when women are not in marital union. A reduction of 0.74 of a child reduction in CEB is observed when marriage is dissolutioned by death of husband. The reduction is even greater when dissolution is by divorce or separation. This can be explained by the earlier findings that divorced are older women who are likely to have virtually completed their fertility, while separation and divorce are common among the younger women who are likely to have borne very few children.

Contraceptive Use

The results show that there is a significant increase in fertility with use of contraceptives. This is contrary to the expected, but confirms earlier findings. This is only probably because some women use contraceptives after having fallen victims of short birth intervals and only use contraceptives for birth spacing of subsequent children and not for fertility reduction.

Religion

The results in Table 4.12 show that Muslims have higher fertility than christians. This is contrary to the observed results earlier. This may be explained by the interplay of other variables in the equation. Muslims have been observed to suffer from adolescent infecundity due to early age at first marriage, they have low education and low contraceptive use all of which all are likely to increase fertility.

Summary

In this chapter the relationship between age at first marriage and fertility was examined while controlling for various socio-economic variables. The multivariate analysis results show that education, place of residence, work status before marriage and age at first marriage are the major determinants of fertility. Fertility was observed to decline as level of education increases. Urban women were observed to have lower fertility than rural women a difference of 2

children and women who had worked before marriage were observed to have one child less than those who had not worked.

However, even for women in the same socio-economic background, fertility was observed to decrease as age at first marriage rises. This therefore means that age at first marriage remains a major fertility determinant.

CHAPTER FIVE

SUMMARY AND CONCLUSION

5.1 Summary

This study aimed at two main objectives. The first was to examine the socio-economic and demographic differentials in age at first marriage as a preliminary to the second objective. To achieve this objective, the researcher has used bivariate analysis to establish the relationship. The study has established that age at first marriage is influenced by type of place of residence, level of education, work status before marriage and religion. The second objective was to examine the influence of age at first marriage on fertility. To achieve this objective multivariate analysis method was applied. It was observed that fertility is greatly determined by age at first marriage, type of place of residence, level of education of woman and that of husband, work status before marriage and religion.

From this first analysis it was observed that age at first marriage is generally low in Kenya (17.5 years) and nearly universal where over 95 per cent of the women are married by age 25 years. However, the results show an increasing trend in age at first marriage as age of women decreases. Women with secondary or higher education are observed to have highest age at first marriage (mean 19.6 years) while uneducated women have a mean age at marriage of 16.5 years. Urban women have been observed to marry one year later than rural women and women who had worked before marriage

have a mean age at first marriage of 19 years which is 2 years later than those who had not worked before marriage.

However, problems of location of exact date of marriage and of premarital fertility are weakening the overall effect of age at first marriage and fertility relationship even though the broad patterns still appear to be significant.

The multivariate analysis have shown that fertility is inversely related to age at first marriage as had been hypothesised earlier. The lower the age at first marriage the higher the mean children ever born. However, various socio-economic factors intervene and reduce the effect of age at first marriage on fertility. For example, the difference in achieved fertility for women in urban areas is not very different across marriage cohorts when current age is controlled. This is because urbanization tends to erode traditional customs and changes people's attitudes towards large family size. Urban women tend to desire small families and use contraceptives to regulate fertility as required, such that women who marry late will have short birth intervals while those who marry early truncate childbearing early. Fertility of women in age 35-49 years who have virtually completed childbearing has been observed to decrease from 6.7 children to 5.1 children in urban and from 7.9 children to 6.2 children in rural areas when age at first marriage increases from under age 17 to 20 years and over respectively.

Secondary education has been observed to be a major determinant of fertility decline. It has been observed that secondary or higher education and late marriage reduces fertility a great deal. A difference of 4 children has been

observed between uneducated women who marry under age 17 years and women with secondary or higher education who marry at ages 20 years or over. A similar trend is observed among women who had worked before marriage.

The multiple regression results show that place of residence, education, ideal number of children, current age, age at first birth, education and work status before marriage are the major correlates of fertility. For instance CEB decreases by 0.21 of a child when education increases from primary to secondary or higher. However, there is an insignificant increase when education decreases from primary to "none". The results also show that there is a significant increase in CEB as age at first marriage decreases. An increase in CEB of 0.26 of a child is observed when age at first marriage decreases from above 19 years to 17-19 years. Children Ever Born among rural women is 0.46 of a child more than among urban women. Ideal number of children has been observed to have a significant positive relationship with CEB as had been hypothesised earlier. However, contraceptive use has been observed to show a significant positive relationship with fertility. The findings show that women who are contracepting have 0.3 of a child more CEB than non-contracepting women. This contradicts the hypothesis which has to be rejected.

5.2 Conclusion

The study has revealed that fertility is still high in Kenya and that increasing socio-economic development is highly correlated with lower fertility. As more women become educated and become elected in the formal sector of the economy, they will begin to change attitudes against early marriage and large family size. Marriage and childbearing will be postponed to allow for career development. As Kenya becomes more urbanised the standards of living will improve and women will begin to value other goods in life in place of children. It is therefore hoped that if the same trend continues, fertility may continue to decline in Kenya.

In the regression analysis the selected variables explain up to 64 per cent of the fertility variation. There is need therefore for more research into this area in order to understand the source of other variation.

Given that the above implications of late entry into marriage have been frustrated by the prevalence of premarital births among late marrying women, it is necessary to look into what causes it and hence how it can be prevented. Sex education in schools should be taught by professionals like those from the family planning organisation and not the regular teachers. This may have a better impact as was observed by Diamond [1] et.al. in their paper on "Choosing and Using Contraceptives". They observed that teenagers prefer to be taught sex education by other professionals other than their regular teachers.

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1. Diamond, I. et.al. Choosing and Using Contraceptives, Winchester, Wessex RHA, 1992.

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