ESTIMATES OF FERTILITY LEVELS IN NYERI DISTRICT: EVIDENCE FROM 1979 CENSUS.

BY

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This Project is submitted in partial fulfilment of the requirement for the Post Graduate Diploma in Population Studies of the university of Nairobi.

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DECLARATION

This project is my original work,and to the best of my knowledge has not been presented for a degree in any other University.

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DEDICATION

TO

My dear mother Rose Muthoni Njomo

who loved me so dearly.

ACKNOWLEDGEMENT

I wish to express my sincere gratitude and appreciation to t University of Nairobi for offering me an opportunity to undertal Population Studies Diploma Course.I am also grateful to a individuals who contributed to the success of this course.

I thank the Ford Foundation for offering me the one ye scholarship that enabled me pursue the course . I am great indebted to my two supervisors:Prof.J.A.M. Ottieno a Prof.A.B.C.Ocholla Ayayo for their guidance and scholar criticism. I also acknowledge the general assistance accorded me by Mr.Kimani, Mr.Koyugi and Miss Weru the Librarian of t Population Studies and Research Institute.

My unreserved gratitude goes to my dear husband Kihuha Wawe and children Waweru, Nungari and Muthoni for their gre perseverance.

Last but not least, I acknowledge Wamalwa who tiressly typ this work.

ABSTRACT

The objective of this study was to estimate fertility levels and differentials in Nyeri District by Division. The differentials studied include place of residence, marital status and level of education of mothers. Data used was from the 1979 National Population Census.

Fertility levels have been estimated at national, provincial and district levels in Kenya by applying the Coale Trussell P/F ratio method and the Gompertz Relational Model. Fertility levels by various variables have also been estimated but only at national levels due to lack of enough data.

Method of data analysis used is the unadjusted method for calculating the Total Fertility Rate(TFR).

The findings show that fertility is higher for women living in rural areas than for those living in urban centres,it is lowest for women with secondary plus education as compared with that of women with lower levels of education and women in married unions have highest fertility as compared to the others while single mothers have lowest fertility.The results on fertility levels show that differences in fertility levels in Kenya still persist among divisions in Nyeri District.They range between below six (Mathira,Tetu) and above six almost seven (Kieni East,Kieni West,Mukurweini and Othaya).

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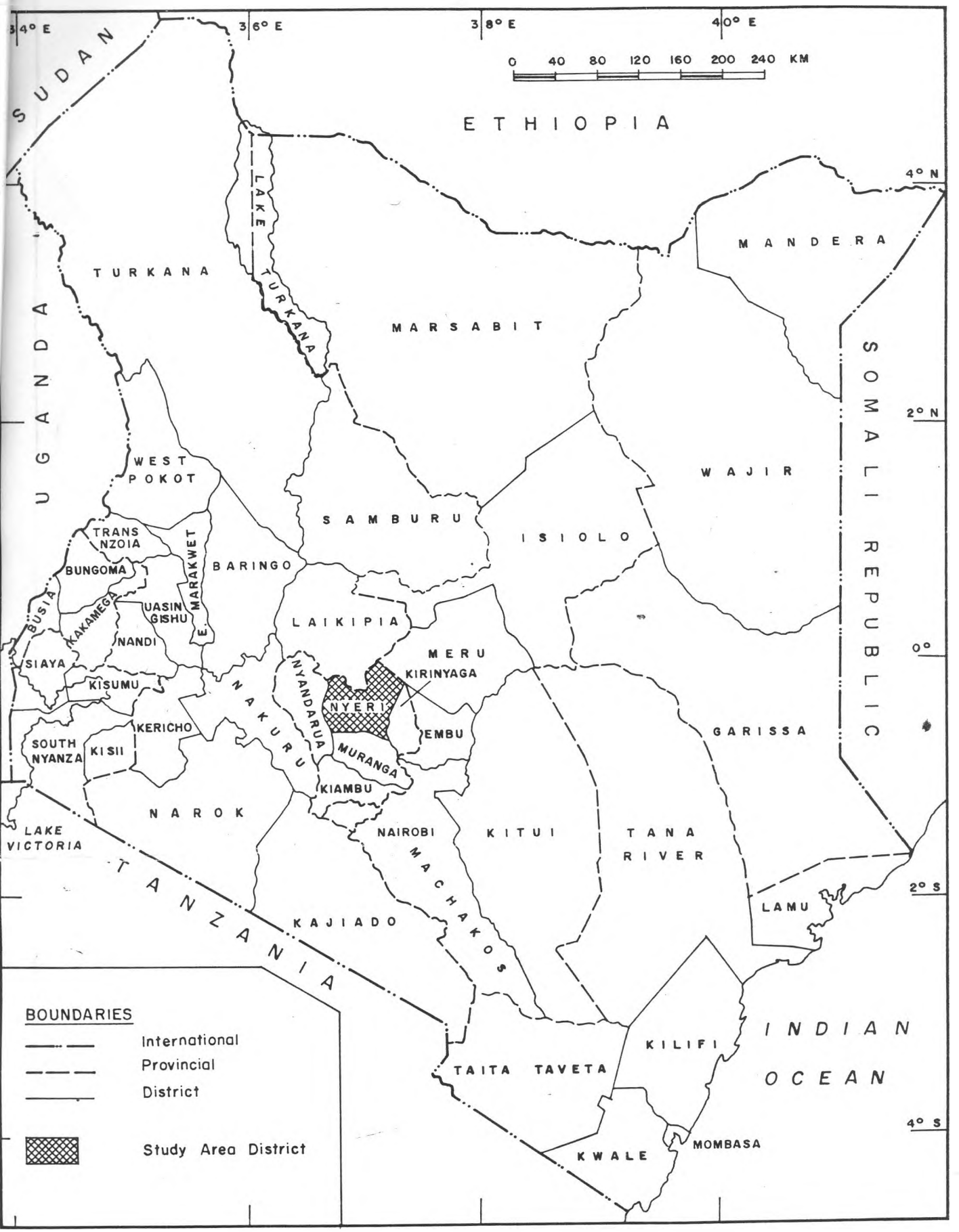

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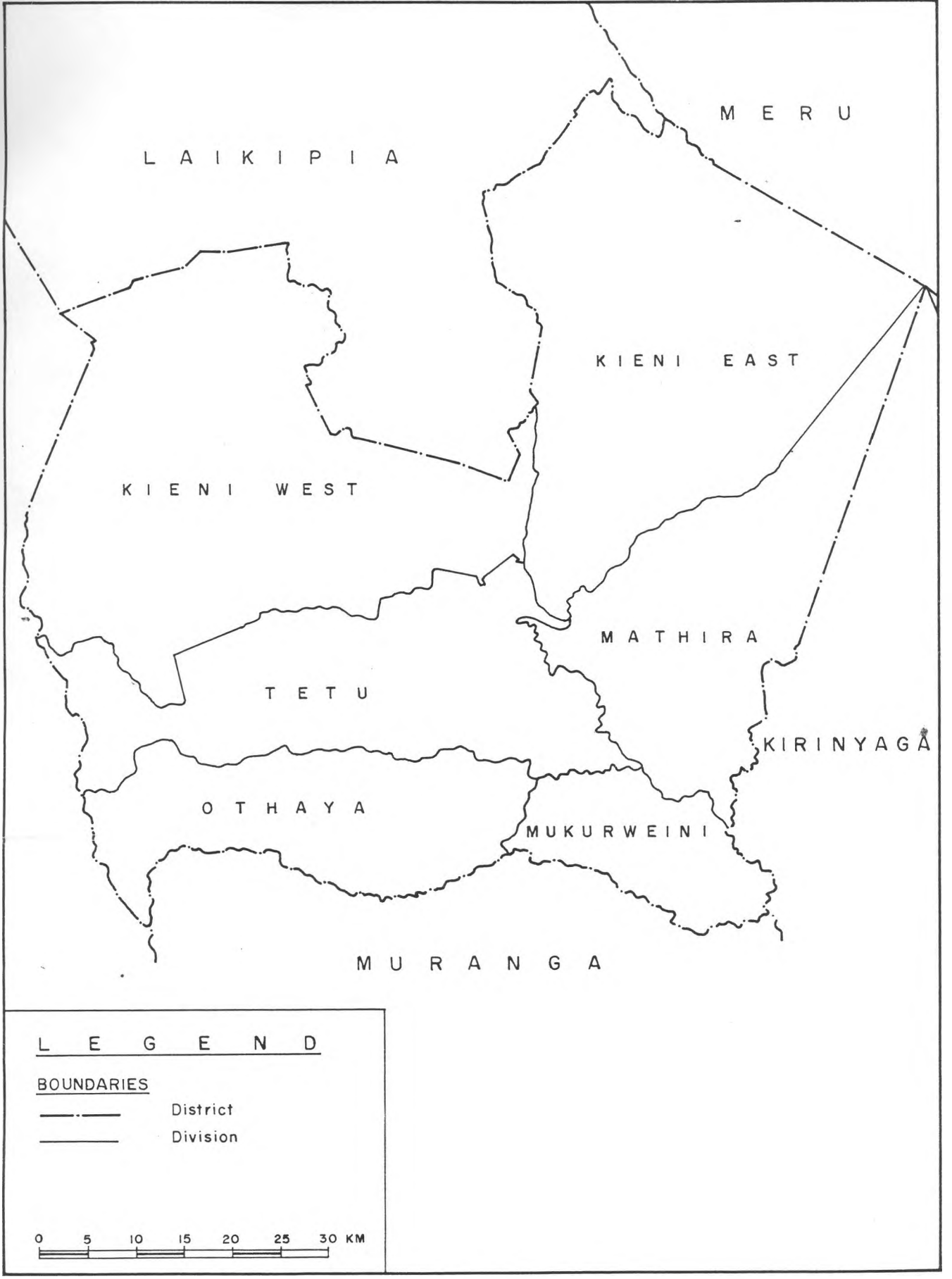

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CHAPTER ONE

1.0 GENERAL INTRODUCTION

1.1 Introduction and statement of the problem

Kenya's population has been increasing rapidly. The growth rate has also been increasing from 3.3% per year in 1948 to 3.9% per year in 1979. Demographic surveys that were conducted in 1973, 1977 and 1978 also point to the fact that the trend is likely to continue upto the end of the century and beyond. In Kenya the gap is widening between fertility (which is high and stable) and mortality (which is low and still on a gradual decline) which means that the population is expected to grow in size for a number of years. (Z. Muganzi, 1988).

The study of the estimation of the levels and differentials of fertility is a means of explaining in terms of the social, economic, cultural, environmental and demographic factors, the fertility differences in Kenya. The 1974 Bucharest world Population plan of Action clearly, emphasized the need for such studies (U.N 1974). The plan of action mainly emphasized research dealing with relationship between socio-economic and demographic factors, especially in the developing countries.

The study of fertility levels and differentials among the various regions and groups in the country is an important aspect of demographic research. Studies carried out in Kenya indicate that fertility in Kenya has been rising since the first census in 1948.

The first estimation using the 1948 and 1962 census data by Som (1968) found the total fertility rate in Kenya to be 6.4 births. Blacker using the 1969 census (1971) found the total fertility rate to be 7.6 births. The National Demographic and Health Survey (1977) and the Kenya Fertility Survey (1977/78) show total fertility to have been 8.1 births. Mwobobia using the 19 79 census data estimated the total fertility rate at 8.2 births. Fertility in Kenya has therefore been rising over time. This with the corresponding increase in annual population growth rate cause serious socio-economic problems in the country especially in provision of essential services such as health, education and food.

Even though the total fertility rate of the whole country is high, the rates aren't uniform across regions and groups in the country. It is therefore important to study the relationship between fertility and the socio-economic, socio-cultural and environmental factors.

Earlier studies on fertility levels and differentials have been done upto district level. It becomes important to study the levels and differentials at lower administration units like divisions, locations and sub-locations to find out whether differences also exist, and how they compare with the national fertility level.

1.2 Background of the study area

Nyeri district is one of the five districts in Central province and forms part of Kenya's eastern highlands. It covers an area of 3,284 sq. km. The main physical features of the District

are mount Kenya (5199m) to the East and the Aberdare Range (3999m) to the west. These mountains both of volcanic origin, determine relief, climate and soils, and as a consequence, the agricultural potential of the District.

A great part of the district consist of resent volcanic rock, except for the extreme south eastern part with its small ancient basement rock formation. The soils are mainly red clays and red humid clays which are relatively deep and generally well drained and fertile.

The pattern of rainfall is typically equatorial for the district is situated within the highland equatorial zone of Kenya. There are two rainfall maxima; long rains, from March to May and short rains from October to December.

Over the past twenty years, certain areas of the District (Kieni) have been experiencing increased levels of population pressure due to migration from the high potential areas. Previously, these areas were able to sustain a number of large ranches due to extensive use of grassland and sparse vegetation. However, due to subdivision of the ranches into small holdings and the resultant removal of vegetation cover the fragile ecosystem of Kieni has suffered a great deal of degradation. Hence afforestation for fuel use and orderly water use are important conservative measures in the areas of most recent settlement.

Forest resources, both indigenous and plantations, are also under increasing pressure. Nyeri district possess a total of 100,000 hectares of gazetted forest. Approximately 66% of these is

indigenous or catchment protection forest, mainly of a mountain nature reserved for water catchment and wildlife.

Tourism forms an important part the natural resource base. The district earns a considerable amount of foreign currency from tourism industry, particularly from its town hotels, National parks, spectacular waterfalls, public campsite, fishing lodges and television and film making activities.

Administratively, Nyeri district is divided into seven divisions namely; Othaya, Mukurweini, Mathira, Kieni East, Kieni West, Municipality and Tetu which are further sub-divided into twenty four locations and one hundred and fifty six sub-locations. Nyeri district has four local authorities: Nyeri county council, Nyeri municipal council, Karatina Town council and Othaya urban.

Health

There are fairly good health facilities in Nyeri district. Most of the population benefit from the medical services provided. The health facilities are provided by the gorvernment, church missions, private institutions and individuals. The government provides free services through a network of rural health units. The integrated rural survey showed that in 1983 12% of the households were just over 12km from rural health facilities, 21% were within 5km and 76% were between 3 to 12km. This accessibility data pertained to the populous divisions of Tetu, Othaya, Mathira and Mukurweini. Only Kieni East and Kieni West divisions are worse off. There the available health facilities are not within the effective reach of the rural population. This is partly due to under-

utilisation of health centres and partly due to lack of information on how to utilize properly the available preventive/promotive and curative facilities and also due to inadequate personnel, medicine, laboratory facilities etc.

Before the 1984-88 District Development Plan, there were 986 beds in the district's health facilities, which were very (few) inadequate, causing congestion in all sections of the then only hospital, particularly the maternity section. now there has been increase in bed capacity by extending Provincial General Hospital (PGH) and upgrading 3 health centres namely Karatina, Othaya and Mukurweini to hospital status.

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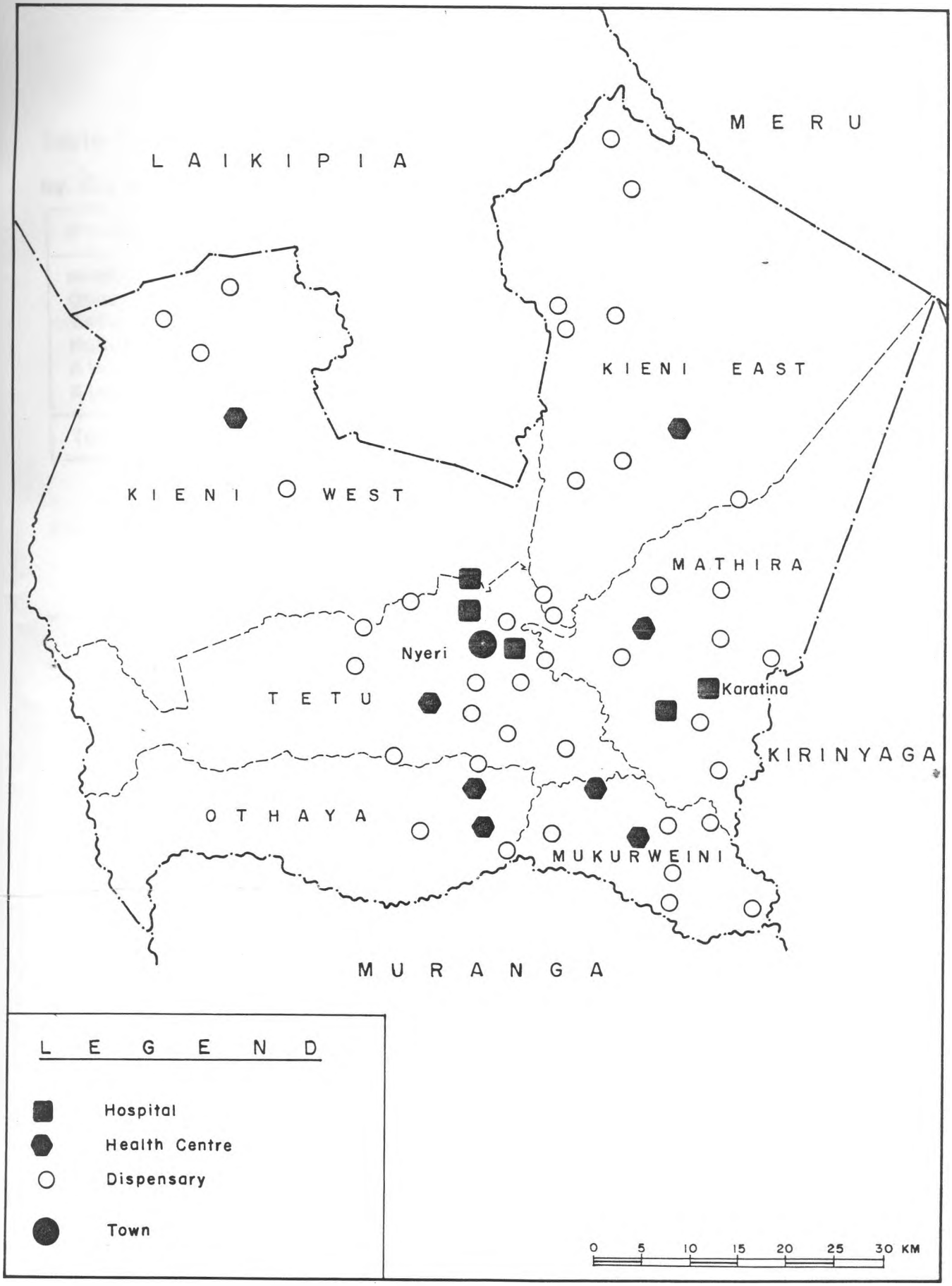


Fig. 3 : DISTRIBUTION OF HEALTH FACILITIES IN NYERI DISTRICT

Table 1: Distribution of Health Centres and Maternity/Nursing Homes by Division

Division	Homes/Beds	Population	Population/Bed
Mathira	2/20	138,289	6,914
Othaya	3/42	76,832	1,829
Tetu	4/45	158,030	3,112
Mukurweini	4/58	86,240	1,487
Kieni East	1/18	42,214	2,345
Kieni West	2/33	52,600	1,594
Total	16/214	560,205	2,618

Source: MOH (Nyeri)

Although there are several dispensaries in Othaya, Tetu and Mukurweini, the population densities in these divisions are very high.

Inorder to reduce the rate of child mortality the MOH recommends stepping up child welfare clinics. Diarrhoeal diseases in the Kieni East and Kieni West divisions where clean water supply is inadequate.

The family health programmes continue to aim at reducing maternal, perinatal, infant and child mortality. The newly settled divisions of Kieni East and West require full water supply, sanitation and health education more than any other part of the district. Preventive measures are given first priority.

DEMOGRAPHIC AND SETTLEMENT PATTERNS

According to the National census of 1969 and 1979, the population of Nyeri district grew from 360,845 to 486,477 people at an annual growth rate of 3.03%. 8.4% of the districts population

Currently the classified road network is approximately 1704 km. The classified road network is concentrated on the traditional southern divisions (Nyeri municipality, Mathira, Othaya and Mukurweini). In Kieni east and Kieni west the road network system does not properly meet the needs of the population.

The 1989-93 Development plan undertakes to improve the road network in the two Kieni's as the two divisions have now become economically productive (wheat, maize and horticultural crops) and the population is increasing at a fast rate as a result of resettlement from other divisions.

The unclassified road network is denser in the more populated areas of the south (viz Mathira, Othaya, Mukurweini and Tetu) where more socio-economic activities take place, as opposed to the two Kieni's where the population becomes relatively sparse and therefore less socio-economically active. Another reason for the light road network in the two Kieni's is that it is here that most of the national parks and forests are situated.

Schools are fully utilized and in some cases over utilized in divisions like Mathira, Othaya, Tetu and Mukurweini. There are 346 primary schools with an optimum pupil/teacher ratio of 30:1. In the Kieni's the schools are under utilized due to either under enrolment due to low population density or lack of education facilities as a result of recent resettlement.

There are two primary teacher training colleges at Kamwenja and Kagumo. There are 112 secondary schools, with optimal student/teacher ratio of 18:1. Schools facilities are under

utilized due to lack of sufficient school facilities.

1.3 Objective of the study

The main objective is to estimate fertility levels and differentials in Nyeri district by divisions.

Specifically, the study will estimate the relationship between education, marital status and place of residence and fertility levels and trends.

1.4 Methodology

There are a number of demographic techniques for estimating fertility. These methods fall under two categories. These are those that are based on children ever born(CEB) data and those that depend on age structure along with mortality level. For the first category there are methods such as Brass P/F ratio,Coale-Trussell method and Gompertz Relational model.For the second category, we have the Reserve survival methods.

The assumption made here is that the fertility and mortality schedule are constant. However, under changing conditions a number of modifications have to be done. For the first category we can apply Zlotnik and Hill's method known as the hypothetical cohort approach. This method requires two sets of data to obtain a third set. For the second category Coale (1981),Ventakacharya (1983) developed techniques for non-stability assumptions.

The techniques based on CEB, Births Last Year (BLY) for every five-year age groups.

Thus parity P(i) is defined by

$$P(i) = CEB(i)/FPop(i)$$

Where (i) refers to the iths age group.

For current fertility f(i) we get F(i) and thus we get P/R ratio method Coale-Trussell and Gompertz Model use this P/F ratio in calculating TFR. By so doing f(i) is analyzed.

However in our study, we shall not use these methods to adjust current age specific fertility rates f(i). Instead we shall use the unadjusted f(i) which is simply defined as

$$f(i) = BLY(i)/FPop(i).$$

CHAPTER TWO

2.0 LITERATURE REVIEW AND THEORETICAL FRAMEWORK.

2.1 Literature review

Studies on fertility levels and differentials in Kenya are quite recent. Kangi (1978) used the 1969 census data and recommended that the provision of just primary school education for girls is enough to reduce fertility in Kenya even more than secondary education. However, Cochrane (1979) and Henin argued that just primary education for girls would lead to higher fertility levels. Mwobobia (1982) also used the 1979 census data and concluded that Kenya's move to free primary education would lead to a rise in total fertility rate. The study also found that the mean age at first marriage works in the same direction and magnitude with primary level of education. He also recommended a reduction of illiterate women in the urban areas. Cochrane (1983) found that although the effect of female education reduces fertility by one child, male education by one third as large and urban residence by two third. Total fertility rate for rural areas in Kenya, 8.4 births but 6.1 births when all women are considered. But when only ever married women are considered, it is 8.0 births and 6.5 births respectively.

Osiemo (1986) also recommended that secondary education for girls in Kenya is necessary for any substantial reduction in fertility. The study further found out that urban fertility is not very much different from rural fertility in Kenya. 1

Formal education is said to help in the achievement of female fertility reduction. Caldwell (1980) says that the impact of education on fertility is not direct but acts through other mechanisms. He concluded that formal education rather than duration of schooling among those who have attended school is the most important force behind fertility decline. This is particularly so, he added, when it involves the majority of the populace especially females.

Kerkar (1978) was a predecessor of Henin and Cochrane. He investigated the effect of housewives education on fertility in Sierra Leone and held that those with primary education had more children than those with none.

Henin (1973) did a study in Tanzania and found out that more years of education results in lower fertility for single women. When education for all women was considered those women with 1-4 years of education had a higher fertility than women with no education. Fertility only declined after the fourth year of education. In this study professional women had the highest fertility while agricultural paid workers had the lowest fertility level. When women economic status was controlled, the higher the economic status of the husband the higher the fertility of the wife. An uncommon finding in this study is that fertility tends to rise as women move up the socio status ladder.

Malnos (1973) on cultural practices of the East African tribes found out that sex preference for sons was practiced by all tribes, a factor which can influence fertility. Studies have shown that urbanization makes people drop or loose contact with their cultural

beliefs and practices, this is a fact that could affect fertility.

Anker and Knowles (1980) support this in their study which showed an inverse correlation between fertility and urbanization.

Anker and Knowles (1977) found out that total fertility rates in urban areas were reasonably lower than they were in the surrounding rural areas. They showed that Nairobi had a total fertility rate of 5.5 while the surrounding area of Central province had 8.5. In Kenyan urban areas, the main ideal family size was found to be 6.79 while that of the rural Kenya was 7.84 children. The two authors concluded that Kenya has a definite rural-urban fertility differential.

Gaitta (1982) using data from 1977/78 KFS found that working women were proportionately more educated and more urbanized, had late age at marriage, desired smaller family and had highest use of contraceptives. Marital stability was found to affect fertility performance.

Omagwa (1985) found that the major factors which influence the levels of fertility are education, mortality and immigration.

Osiemo (1986) used the 1969 and 1979 census data and found out that fertility levels are quite high in Kenya and have been increasing. These levels varied with education, marital status and residence. He recommended that secondary education for girls in Kenya is necessary for substantial reduction in fertility.

Ong'uti (1987) used data from KCPS 1984 and 1979 census. He also found that fertility varies by education, residence, marital status, religion and regions. From the fertility trends in Kenya,

from 1962 upto 1984, there are signs that Kenya's fertility has started to stabilize.

Bogue (1969) concluding from his surveys in the United States found that through out the world, there seems to be strong inverse relationship between the amount of educational attainment and the level of fertility (1969:693)." In his study, Bogue found that rising educational levels, school attendance and elimination of early marriages are much more powerful in promoting fertility reductions than simple urbanization and rising levels of income.

Hiesel (1968) using the 1962 census data found that women with higher levels of formal education in any given age group have lower fertility. He also showed that the desired family size decreased with increased survival rates of children.

Studies done in developing countries have shown that an urban-rural fertility differential exists. In Latin America it has been shown that the rural women are more fertile than the urban women (United Nations, 1973). While doing a study in Mexico, Burnight (1965) showed that differences in fertility existed between the rural and urban communities with the urban centers having a lower fertility than the rural areas. At a later date Robinson (1960) came to the same conclusion but demonstrated that the gap between urban and rural fertility differentials in Mexico had narrowed considerably due to the increase in fertility in the urban centers. Zarate 1967 attempted to explain the observed rural urban differentials in Mexico. He came to the conclusion that these fertility differentials were due to variations in age at marriage,

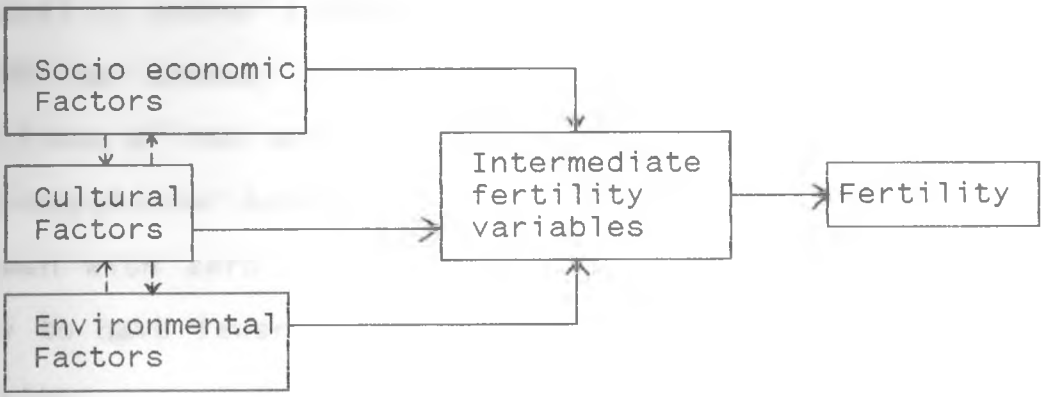
percentage of married women and the literacy levels of these married women.

2.2 Conceptual framework

Bongaarts in his conceptual framework illustrates that socio-economic factors influence the proximate determinants of fertility. The proximate determinants of fertility are those factors that affect fertility directly like use of contraceptives, biological factors like the duration of breastfeeding, child-spacing, infant and child mortality. The socio-economic variables are factors like level of education of the mother, mother's income and place of residence.

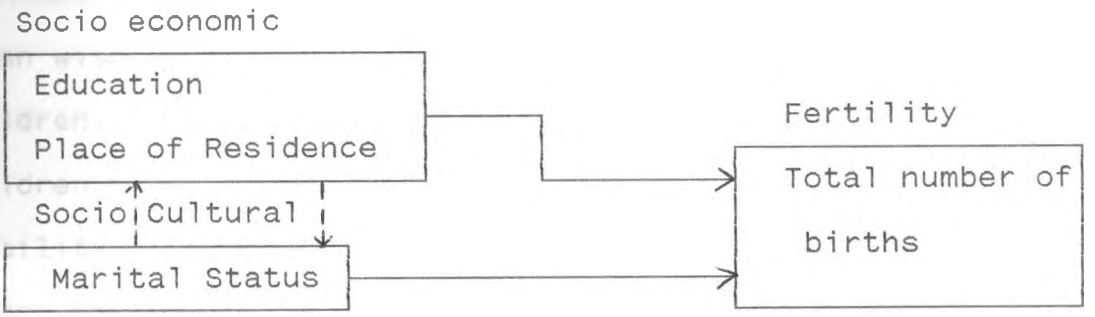
Fig 4. Bongaarts Model.

2.2a **Conceptual Framework of Fertility Determinants.**



Source: Bongaarts J. (1978).

2.2b Operational Model



2.2.1 Conceptual hypotheses

(i) Level of mother's education is likely to affect fertility.

(ii) Marital status is likely to affect fertility.

(iii) Place of residence is likely to affect fertility.

2.2.2 Operational hypotheses

1. Women with zero or few years of education upto 4 years are likely to have fewer number of children than those with primary education.

2. Women with secondary education and above are likely to have the least number of children. Lower than those with zero education.

3. Women with primary education are likely to have highest number of children. So primary education is positively related to number of children.

4. Fertility of women in urban centers is likely to be lower than for those living in the rural areas.

5. Women in unstable unions (divorced, separated and widowed) are likely to have a lower fertility than those in stable unions.

CHAPTER THREE

RESULTS AND DISCUSSION

3.0 Introduction

In the following discussion of fertility in Nyeri district by division, we have used the unadjusted technique to estimate the fertility levels. Which is obtained from the formula

$$f(i) = ASFR(i) = \frac{BLY(i)}{FPop(i)} \quad \ldots\ldots\ldots\ldots\ldots\ldots (3.1)$$

Where ASFR is the age specific fertility rate, BLY is the births in the last year and FPop is the female population. All this refer to the i^{th} age group. Since ASFR is unadjusted, the Total Fertility Rate TFR is obtained by

$$TFR = 5*\Sigma ASFR(i) \quad \ldots\ldots\ldots\ldots\ldots\ldots (3.2)$$

Table 1 below shows the data used to obtain the TFR for Kieni East (Rural)

Table 3: **Kieni East (Rural) Fertility level.**

(1)	(2)	(3)	(4)	(5)
Age	FPOP	CEB	BLY	f(i)
15-19	1985	439	181	0.091184
20-24	1279	2316	374	0.292416
25-29	1077	4031	337	0.312906
30-34	1013	5507	247	0.24383
35-39	896	5883	164	0.183036
40-44	694	4788	67	0.096542
45-49	485	3392	24	0.049485
			TOTAL	1.269398
			TFR = 5 x 1.269398 =	6.346991

Column (1) represents the age of mothers stated in five-year age groups, column (2) is Female population for each age group, column (3) is number of children ever born per each age group, column (4) is number of births twelve months before the census and column (5) is the age specific fertility rate (given by column (4) divided by column (2) for each age group). Sum of column (5) multiplied by 5 (size of age group) gives the TFR.

The data used as stated earlier is from the 1979 census. The study is therefore based on the administrative divisions that are available. Nyeri municipality is missing and the estimates have been calculated exclusive of it.

3.1 Fertility level by divisions

Table 4: TFR by Division

Division	TFR
Kieni East	6.35
Kieni West	6.55
Mukurweini	6.86
Mathira	5.80
Tetu	5.93
Othaya	6.39

Fig. 5 : NYERI DISTRICT — TOTAL FERTILITY RATE

Of the six divisions studied, Mukurweini has the highest fertility for all combined cases, with a TFR of 6.86, while Mathira has the lowest fertility in general with TFR of 5.8.

The district as a whole has a relatively low fertility. The fertility range within the district is also low with a range of about one child (5.8-6.86).

The district has high potential areas for agricultural development. Most of this has been fully exploited especially in high density areas like Mukurweini. The main cash crops in the area are coffee and tea. These are income generating and have contributed a lot to the economic development of the district.

The level of education is relatively high in Nyeri district. In addition to the formal education of primary and secondary schools there are facilities for professional and adult education thus enhancing the high level of literacy. This could be one factor contributing to relatively low fertility compared to the national level of 8.1 in 1979.

3.2 Differential by residence

Table 5: TFR by mother's residence

Division	RURAL	URBAN
Kieni East	6.35	
Kieni West	6.55	
Mukurweini	6.86	
Mathira	5.90	3.21
Tetu	6.37	5.00
Othaya	6.46	4.65

In the table 3 above it is clear that Nyeri District at the time of the census 1979, not all the divisions were classified into rural and urban. Three of the divisions, Kieni east and west and Mukurweini were classified as just rural. However the results obtained of the fertility conform with the expected. Fertility of mothers in urban centers is lower than for those mothers in rural areas. This can be explained by the differences in socio-economic situation in urban and rural areas. In urban areas basic services are provided for but life is expensive because one has to pay for these services. The more the number of children the more the spending hence the need to have smaller families. Due to the accessibility of basic services more people in urban areas are educated and hence there is more child survival and the people start valuing other goods more than many children. All these coupled with the fact that most urban women are employed and can not afford a lot of time in rearing children, leads to lower fertility. In urban areas there is high contraceptive use due to accessibility while in the rural areas, the reverse is true. The fertility is higher than for those in urban areas. This could be due to the fact that most of these mothers are engaged more in farming, majority have their husbands working in the urban centers leaving all the farm work to her. This makes the mothers need more children to assist in the farm where necessary. There is also low contraceptive use in the rural centers due to lack of time to attend the clinics and also inaccessibility of these clinics.

Table 6: **Differential by mother's marital status**

Division	Single	Married	Widowed	Divorced/ separated
Kieini East	3.21	8.35	4.11	5.77
Kieni West	4.02	8.45	8.58	7.71
Mukurweini	3.04	9.36	3.88	7.08
Mathira	2.64	8.47	3.09	4.04
Tetu	2.81	8.28	4.20	5.52
Othaya	2.92	8.75	3.46	5.12

In the above table marital status is categorized into single, married, widowed and divorced or separated. A lot of variation in fertility exists within the District especially among the widowed in Nyeri District the TFR is 8.58 in Kieni West. It is 3.09 in Mathira, and among the Divorced/separated TFR is 7.71 in Kieni West and 4.04 in Mathira. Among the single and the married the variation is not great. The highest fertility among the single is in Kieni West (4.02) and among the married is in Mukurweini (9.36) while the lowest are in Mathira (2.64) for single and Tetu (8,28) for married.

Fertility differentials in Nyeri District conforms with the pattern observed in various other studies except for Kieni West where the widowed have higher fertility than the divorced or separated. This could be due to the influence of migration where widows after migrating co-habit and get more children while still identifying themselves with the late husband. The other possibility is that the female population being considered is very small hence the number of widows is also small and tends to exaggerate the TFR.

Table 7: Differential by Education

Division	None	Primary	Secondary plus
Kieini East	6.95	6.61	3.21
Kieni West	6.83	6.92	4.70
Mukurweini	7.55	7.07	5.33
Mathira	6.20	6.06	4.82
Tetu	6.21	6.47	4.16
Othaya	6.44	6.72	4.94

In the table 7, above education of the mother is classified into those with none, primary and secondary plus. Many scholars have shown that an inverse relationship exists between fertility and the level of education. According to Kangi, the mean number of children women in childbearing period have and desire to have, she observed a decline according to their level of education. According to Kangi in Central province there is widespread illiteracy and primary education has greater influence in depressing fertility than secondary education. However in Nyeri district as can be seen from the table above there is little difference between those with no education and those with primary education. Secondary education seems to have a great effect on depressing fertility. The difference in fertility between women with primary education and those with secondary education is about 2 children while that between those with none and those with primary education is less than 0.1 children. The effect of secondary education in Nyeri could be explained with the number of primary and secondary schools in the districts. Other professional colleges are also present.

Summary

The above mentioned tables can be summarized into the following table which shows fertility estimates by various differentials.

Table 8: Summary of TFR by various differentials

Variable	Kieni East	Kieni West	Mukurweini	Mathira	Tetu	Othaya
Residence						
Rural	6.35	6.55	6.86	5.9	6.37	6.48
Urban				3.21	5.0	4.65
Marital Status						
Single	3.21	4.02	3.04	2.64	2.81	2.92
Married	8.35	8.49	9.36	8.47	8.28	8.75
Widowed	4.11	8.58	3.88	3.09	4.20	3.46
Divorced/ separated	5.77	7.71	7.08	4.04	5.52	5.12
Education						
None	6.95	6.83	7.55	6.2	6.21	6.44
Primary	6.61	6.92	7.07	6.06	6.47	6.72
Secondary plus	3.21	4.70	5.33	4.82	4.16	4.94

For the combined cases Mukurweini has the highest fertility and Kieni east has the lowest. By education women with primary education have the highest fertility except in Kieni east, Mukurweini and Mathira.

Rural fertility is higher than urban fertility. Fertility of the married women is the highest whereas for the single it is the lowest

CHAPTER FOUR

4.0 SUMMARY AND CONCLUSION

4.1 Summary.

The main objective of this study was to estimate the fertility differentials in Kenya by division. The source of data in this study has been the census of 1979. The data however had only three differentials which were not enough to account for the fertility differentials. The method used was the unadjusted one which involved dividing births last year with the female population. The errors found in the data were mainly due to misreporting of age and marital status.

The estimation of the TFRs by the three differentials showed that differences within each of them were very stricking. In education women with no education and those with primary education had slightly higher TFR. This means that women's education upto primary level is not enough to change their perceptions towards large families.

There is a significant decline in fertility for women with secondary plus education. This could be due to the fact that these are women likely to have married late due to time spent in school, they are likely to get paid jobs and hence value other goods in place of many children. They are also likely to have higher income and access to family planning services which are factors likely to suppress fertility.

In general although women's fertility declines as the women's

level of education increases, the magnitudes of the differences are very small. This agrees with a study by the United Nations (United Nations, 1984: pp.235) that differences in fertility are greatest in countries that have had substantial fertility decline. The present results show that differences in fertility are greatest when women with no education are compared with those having secondary plus education.

Fertility rates by place of residence showed that for those women residing in rural areas were higher than for those in urban areas. This higher fertility in rural areas could be due to the fact that children are looked at as the source of labour and as security in old age because enough social amenities have not affected the rural people.

Fertility rates by marital status also showed some variation. The women who were single had lowest fertility while the fertility of the married women was the highest. Those in unstable marriages (widowed, divorced or separated) had their fertility rates intermediate between the single and the married. This could be due to much time spent outside the marital unions. The widowed and the divorced have an economic burden to look after their children and also earn income. This economic burden is in terms of time spent looking after children instead of selling their labour in the market. This is likely to make them have fewer children than the ones in constant marital unions. This is also a clear indication that remarriages or inheriting a widow is dying out in the district.

4.2 CONLUSIONS.

4.2.1 RECOMMENDATIONS

(i) Universal secondary education for females

(ii)The number of secondary schools should be increased and should be well equipped.

(iii)Health facilities should be increased in the district, should be distributed evenly and should offer family planning services.

(iv)When the policies are being made culture of the society should be taken into account so that the policies can have the intended impact.

4.2.2 FURTHER RESEARCH

We recommend further research to be done in these areas:

(i) Study the fertility differentials in Nyeri Municipality

(ii)Study the effect of in-migration on fertility levels at location level in Nyeri and in particular Kieni East and Kieni West.

(iii)Socio-economic and cultural determinants of high and low fertility areas in Nyeri District.

(iv)Adolescent fertility in Nyeri district and its determinants.

(v)Fertility among the widowed in Kieni West.

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APPENDIX

NYERI DISTRICT : RURAL/URBAN RESIDENCE

Kieni East (Rural)

Age	F Pop	CEB	BLY	f(i)
15-19	1985	439	181	0.091184
20-24	1279	2316	374	0.292416
25-29	1077	4031	337	0.312906
30-34	1013	5507	247	0.24383
35-39	896	5883	164	0.183036
40-44	694	4788	67	0.096542
45-49	485	3392	24	0.049485
				Σf(i) = 1.269398
			TFR =	5*Σf(i) = 6.346991

Kieni West (Rural)

Age	F Pop	CEB	BLY	f(i)
15-19	2291	455	177	0.077259
20-24	1308	2351	379	0.289755
25-29	1079	4202	361	0.334569
30-34	1075	6194	266	0.247442
35-39	1033	7198	208	0.201355
40-44	746	5478	87	0.116622
45-49	558	4230	24	0.043011
				Σf(i) = 1.310013
			TFR =	5*Σf(i) = 6.550066

Mukurweni (Rural)

Age	F Pop	CEB	BLY	f(i)
15-19	4182	738	325	0.077714
20-24	2217	3808	722	0.325665
25-29	1998	7622	657	0.328829
30-34	1907	10502	563	0.295228
35-39	1529	9839	303	0.198169
40-44	1379	9393	140	0.101523
45-49	1111	7378	50	0.045005
				Σf(i) = 1.372132
			TFR =	5*Σf(i) = 6.860662

Mathira (Rural)

Age	F Pop	CEB	BLY	f(i)
15-19	7349	1220	440	0.059872
20-24	3895	6098	1065	0.273427
25-29	3398	12232	1009	0.296939
30-34	3323	17813	805	0.242251
35-39	2678	17300	477	0.178118
40-44	2267	15441	203	0.089546
45-49	1677	11667	67	0.039952
			Σf(i) =	1.180106
			TFR = 5*Σf(i) =	5.900529

Mathira (Urban)

Age	F Pop	CEB	BLY	f(i)
15-19	135	34	14	0.103704
20-24	223	279	39	0.174888
25-29	212	516	36	0.169811
30-34	145	534	24	0.165517
35-39	61	211	0	0
40-44	36	147	1	0.027778
45-49	12	51	0	0
			Σf(i) =	0.641698
			TFR = Σf(i) =	3.208490

Mathira

Age	F Pop	CEB	BLY	f(i)
15-19	7484	1254	454	0.060663
20-24	4118	6377	1104	0.268091
25-29	3610	12748	1045	0.289474
30-34	3468	18347	829	0.239043
35-39	2739	17511	477	0.174151
40-44	2303	15588	204	0.08858
45-49	1689	11718	67	0.039668
			Σf(i) =	1.15967
			TFR = 5*Σf(i) =	5.798351

Mathira (Rural)

Age	F Pop	CEB	BLY	f(i)
15-19	7349	1220	440	0.059872
20-24	3895	6098	1065	0.273427
25-29	3398	12232	1009	0.296939
30-34	3323	17813	805	0.242251
35-39	2678	17300	477	0.178118
40-44	2267	15441	203	0.089546
45-49	1677	11667	67	0.039952
			Σf(i) =	1.180106
			TFR = 5*Σf(i) =	5.900529

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20-24	223	279	39	0.174888
25-29	212	516	36	0.169811
30-34	145	534	24	0.165517
35-39	61	211	0	0
40-44	36	147	1	0.027778
45-49	12	51	0	0
			Σf(i) =	0.641698
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35-39	2739	17511	477	0.174151
40-44	2303	15588	204	0.08858
45-49	1689	11718	67	0.039668
			Σf(i) =	1.15967
			TFR = 5*Σf(i) =	5.798351

Tetu (Rural)

Age	F Pop	CEB	BLY	f(i)
15-19	6059	1042	396	0.065357
20-24	3460	5849	1017	0.293931
25-29	2927	11051	956	0.326614
30-34	2536	14062	647	0.255126
35-39	2220	14869	432	0.194595
40-44	1858	12288	188	0.101184
45-49	1508	9928	56	0.037135
			Σf(i) =	1.273942
			TFR = 5*Σf(i) =	6.369712

Tetu (Urban)

Age	F Pop	CEB	BLY	f(i)
15-19	2095	545	173	0.082578
20-24	2011	2766	415	0.206365
25-29	1580	4654	373	0.236076
30-34	1010	4531	192	0.190099
35-39	659	3557	102	0.15478
40-44	435	2687	32	0.073563
45-49	337	1988	19	0.05638
			Σf(i) =	0.999841
			TFR = 5*Σf(i) =	4.999203

Tetu

Age	F Pop	CEB	BLY	f(i)
15-19	8154	1587	569	0.069782
20-24	5471	8615	1432	0.261744
25-29	4507	15705	1329	0.294875
30-34	3546	18593	839	0.236605
35-39	2879	18426	534	0.185481
40-44	2293	14975	220	0.095944
45-49	1845	11916	75	0.04065
			Σf(i) =	1.18508
			TFR = 5*Σf(i) =	5.925402

Othaya (Rural)

Age	F Pop	CEB	BLY	f(i)
15-19	3872	625	249	0.064308
20-24	2189	3687	644	0.294198
25-29	1909	7403	613	0.321111
30-34	1639	9110	447	0.272727
35-39	1430	9644	296	0.206993
40-44	1128	4411	112	0.099291
45-49	1000	6949	38	0.038
			Σf(i) =	1.296628
			TFR = 5*Σf(i) =	6.483139

Othaya (Urban)

Age	F Pop	CEB	BLY	f(i)
15-19	101	20	7	0.069307
20-24	120	164	28	0.233333
25-29	99	283	13	0.131313
30-34	59	273	7	0.118644
35-39	30	159	9	0.3
40-44	34	191	0	0
45-49	13	95	1	0.076923
			Σf(i) =	0.929521
			TFR = 5*Σf(i) =	4.647603

Othaya

Age	F Pop	CEB	BLY	f(i)
15-19	3973	645	256	0.064435
20-24	2309	3851	672	0.291035
25-29	2008	7686	626	0.311753
30-34	1698	9383	454	0.267373
35-39	1460	9803	305	0.208904
40-44	1162	4602	112	0.096386
45-49	1013	7044	39	0.0385
			Σf(i) =	1.278386
			TFR = 5*Σf(i) =	6.391928

NYERI DISTRICT : MARITAL STATUS

Kieni East (Single)

Age	F Pop	CEB	BLY	f(i)
15-19	1644	144	69	0.041971
20-24	401	343	65	0.162095
25-29	142	317	23	0.161972
30-34	92	325	13	0.141304
35-39	69	300	4	0.057971
40-44	34	155	2	0.058824
45-49	29	98	0	0
			Σf(i) =	0.624136
		TFR = 5*Σf(i) =		3.120681

(MARRIED)

Age	F Pop	CEB	BLY	f(i)
15-19	315	279	107	0.339683
20-24	844	1888	301	0.356635
25-29	885	3529	306	0.345763
30-34	835	4741	216	0.258683
35-39	743	5138	149	0.200538
40-44	573	4088	62	0.108202
45-49	385	2836	23	0.05974
			Σf(i) =	1.669244
		TFR = 5*Σf(i) =		8.34622

(WIDOWED)

Age	F Pop	CEB	BLY	f(i)
15-19	3	2	1	0.333333
20-24	6	17	0	0
25-29	9	35	1	0.111111
30-34	27	154	6	0.222222
35-39	37	235	4	0.108108
40-44	42	286	2	0.047619
45-49	46	308	0	0
			Σf(i) =	0.822394
		TFR = 5*Σf(i) =		4.111969

(DIVORCED/SEPARATED)

Age	F Pop	CEB	BLY	f(i)
15-19	15	13	4	0.266667
20-24	28	68	8	0.285714
25-29	41	150	7	0.170732
30-34	56	274	12	0.214286
35-39	47	210	7	0.148936
40-44	44	253	1	0.022727
45-49	22	138	1	0.045455
			Σf(i) =	1.154516
			TFR = 5*Σf(i) =	5.772582

KIENI WEST

(Single)

AGE	F Pop	CEB	BLY	f(i)
15-19	1972	158	79	0.040061
20-24	464	463	68	0.146552
25-29	179	389	28	0.156425
30-34	123	494	17	0.138211
35-39	100	516	13	0.13
40-44	60	254	6	0.1
45-49	43	194	4	0.093023
			Σf(i) =	0.804272
			TFR = 5*Σf(i) =	4.021359

(Married)

Age	F Pop	CEB	BLY	f(i)
15-19	294	274	89	0.302721
20-24	795	1756	296	0.372327
25-29	819	3484	310	0.37851
30-34	847	5107	220	0.25974
35-39	826	5977	177	0.214286
40-44	561	4425	71	0.12656
45-49	412	3342	18	0.043689
			Σf(i) =	1.697834
			TFR = 5*Σf(i) =	8.489168

(Widowed)

Age	F Pop	CEB	BLY	f(i)
15-19	9	10	5	0.555556
20-24	11	34	3	0.272727
25-29	15	70	5	0.333333
30-34	28	148	10	0.357143
35-39	54	379	9	0.166667
40-44	65	431	1	0.015385
45-49	63	447	1	0.015873
			Σf(i) =	1.716683
		TFR = 5*Σf(i) =		8.583417

(Divorced/Separated)

Age	F Pop	CEB	BLY	f(i)
15-19	12	12	4	0.333333
20-24	34	88	12	0.352941
25-29	65	258	18	0.276923
30-34	77	445	19	0.246753
35-39	53	326	9	0.169811
40-44	59	358	8	0.135593
45-49	38	246	1	0.026316
			Σf(i) =	1.541671
		TFR = 5*Σf(i) =		7.708356

MUKURWEINI(SINGLE)

Age	F Pop	CEB	BLY	f(i)
15-19	3861	410	197	0.051023
20-24	854	701	149	0.174473
25-29	253	500	42	0.166008
30-34	125	367	13	0.104
35-39	54	130	0	0
40-44	36	121	3	0.083333
45-49	34	95	1	0.029412
			Σf(i) =	0.608249
		TFR = 5*Σf(i) =		3.041246

MARRIED

Age	F Pop	CEB	BLY	f(i)
15-19	301	312	120	0.398671
20-24	1302	2991	562	0.431644
25-29	1675	6876	600	0.358209
30-34	1680	9659	525	0.3125
35-39	1363	9059	288	0.211299
40-44	1180	8295	131	0.111017
45-49	916	6325	44	0.048035
			Σf(i) =	1.871374
			TFR = 5*Σf(i) =	9.356871

(WIDOWED)

Age	F Pop	CEB	BLY	f(i)
15-19	3	0	0	0
20-24	9	18	1	0.111111
25-29	25	91	6	0.24
30-34	45	224	10	0.222222
35-39	76	489	9	0.118421
40-44	139	863	6	0.043165
45-49	122	752	5	0.040984
			Σf(i) =	0.775903
			TFR = 5*Σf(i) =	3.879517

(DIVORCED/SEPARATED)

Age	F Pop	CEB	BLY	f(i)
15-19	14	16	8	0.571429
20-24	50	94	10	0.2
25-29	45	155	9	0.2
30-34	56	247	15	0.267857
35-39	34	150	6	0.176471
40-44	23	114	0	0
45-49	39	206	0	0
			Σf(i) =	1.415756
			TFR = 5*Σf(i) =	7.078782

MATHIRA(SINGLE)

Age	F Pop	CEB	BLY	f(i)
15-19	6860	591	232	0.033819
20-24	1841	295	218	0.118414
25-29	696	1252	89	0.127874
30-34	443	1259	50	0.112867
35-39	228	802	17	0.074561
40-44	144	554	7	0.048611
45-49	81	328	1	0.012346
			Σf(i) =	0.528492
			TFR = 5*Σf(i) =	2.642459

(MARRIED)

Age	F Pop	CEB	BLY	f(i)
15-19	581	629	216	0.371773
20-24	2296	4812	866	0.377178
25-29	2763	11014	935	0.3384
30-34	2826	16167	757	0.26787
35-39	2278	15527	447	0.196225
40-44	1901	13491	185	0.097317
45-49	1343	9826	62	0.046165
			Σf(i) =	1.694928
			TFR = 5*Σf(i) =	8.474639

(WIDOWED)

AGE	F Pop	CEB	BLY	f(i)
15-19	5	8	0	0
20-24	21	73	4	0.190476
25-29	46	182	11	0.23913
30-34	84	427	5	0.059524
35-39	143	846	8	0.055944
40-44	167	1105	9	0.053892
45-49	206	1318	4	0.019417
			Σf(i) =	0.618384
			TFR = 5*Σf(i) =	3.091921

(DIVORCED/SEPARATED)

Age	F Pop	CEB	BLY	f(i)
15-19	27	26	6	0.222222
20-24	66	157	16	0.242424
25-29	102	296	10	0.098039
30-34	112	494	17	0.151786
35-39	88	405	5	0.056818
40-44	82	418	3	0.036585
45-49	54	262	0	0
			Σf(i) =	0.807875
			TFR = 5*Σf(i) =	4.039375

TETU(SINGLE)

Age	F Pop	CEB	BLY	f(i)
15-19	7175	740	273	0.038049
20-24	2363	1871	260	0.11003
25-29	897	1775	121	0.134894
30-34	471	1410	54	0.11465
35-39	254	896	22	0.086614
40-44	163	710	11	0.067485
45-49	98	407	1	0.010204
			Σf(i) =	0.561925
			TFR = 5*Σf(i) =	2.809625

(MARRIED)

Age	F Pop	CEB	BLY	f(i)
15-19	922	799	285	0.309111
20-24	2978	6469	1138	0.382136
25-29	3418	13252	1180	0.345231
30-34	2865	16189	756	0.263874
35-39	2365	16091	486	0.205497
40-44	1852	13881	197	0.106371
45-49	1518	10985	65	0.042819
			Σf(i) =	1.65504
			TFR = 5*Σf(i) =	8.275198

(WIDOWED)

Age	F Pop	CEB	BLY	f(i)
15-19	7	11	1	0.142857
20-24	29	80	5	0.172414
25-29	38	168	8	0.210526
30-34	86	467	10	0.116279
35-39	146	863	17	0.116438
40-44	193	1290	9	0.046632
45-49	227	1501	8	0.035242
			Σf(i) =	0.840389
		TFR =	5*Σf(i) =	4.201945

(DIVORCED/SEPARATED)

Age	F Pop	CEB	BLY	f(i)
15-19	27	36	10	0.37037
20-24	92	192	28	0.304348
25-29	150	505	20	0.133333
30-34	118	440	19	0.161017
35-39	113	573	9	0.079646
40-44	78	376	3	0.038462
45-49	60	373	1	0.016667
			Σf(i) =	1.103843
		TFR =	5*Σf(i) =	5.519214

OTHAYA(SINGLE)

Age	F Pop	CEB	BLY	f(i)
15-19	3575	287	126	0.035245
20-24	881	730	117	0.132804
25-29	272	532	36	0.132353
30-34	116	358	11	0.094828
35-39	78	255	4	0.051282
40-44	33	122	2	0.060606
45-49	26	72	2	0.076923
			Σf(i) =	0.58404
		TFR =	5*Σf(i) =	2.920201

(MARRIED)

Age	F Pop	CEB	BLY	f(i)
15-19	367	341	125	0.340599
20-24	1359	2991	540	0.397351
25-29	1642	6813	568	0.34592
30-34	1468	8515	426	0.290191
35-39	1257	8835	286	0.227526
40-44	996	7256	108	0.108434
45-49	857	6186	35	0.04084
			Σf(i) =	1.750861
			TFR = 5*Σf(i) =	8.754303

(WIDOWED)

Age	F Pop	CEB	BLY	f(i)
15-19	4	6	0	0
20-24	10	24	1	0.1
25-29	28	134	7	0.25
30-34	56	296	9	0.160714
35-39	76	518	11	0.144737
40-44	109	690	2	0.018349
45-49	105	659	2	0.019048
			Σf(i) =	0.692847
			TFR = 5*Σf(i) =	3.464237

(DIVORCED/SEPARATED)

Age	F Pop	CEB	BLY	f(i)
15-19	16	11	5	0.3125
20-24	52	104	13	0.25
25-29	63	207	15	0.238095
30-34	58	212	8	0.137931
35-39	47	214	4	0.085106
40-44	24	134	0	0
45-49	24	124	0	0
			Σf(i) =	1.023633
			TFR = 5*Σf(i) =	5.118163

NYERI DISTRICT : EDUCATION

KIENI EAST (none)

Age	F Pop	CEB	BLY	f(i)
15-19	87	60	15	0.172414
20-24	167	424	51	0.305389
25-29	285	1333	91	0.319298
30-34	394	2222	92	0.233503
35-39	462	3027	97	0.209957
40-44	420	2855	39	0.092857
45-49	320	3400	18	0.05625
			Σf(i) =	1.389668
		TFR =	5*Σf(i) =	6.948338

(primary)

Age	F Pop	CEB	BLY	f(i)
15-19	1242	311	135	0.108696
20-24	744	1520	235	0.31586
25-29	675	2601	221	0.327407
30-34	563	3105	148	0.262877
35-39	395	2665	65	0.164557
40-44	254	1824	27	0.106299
45-49	140	1027	5	0.035714
			Σf(i) =	1.321411
		TFR =	5*Σf(i) =	6.607056

(secondary plus)

Age	F Pop	CEB	BLY	f(i)
15-19	649	68	31	0.047766
20-24	349	315	86	0.246418
25-29	112	269	24	0.214286
30-34	43	145	6	0.139535
35-39	28	119	0	0
40-44	13	53	0	0
45-49	15	35	0	0
			Σf(i) =	0.648005
		TFR =	5*Σf(i) =	3.240024

KIENI WEST

(none)

Age	F Pop	CEB	BLY	f(i)
15-19	65	47	8	0.123077
20-24	130	323	36	0.276923
25-29	234	1015	90	0.384615
30-34	351	2068	77	0.219373
35-39	579	3977	115	0.198618
40-44	468	3437	55	0.117521
45-49	352	2628	16	0.045455
			Σf(i) =	1.365583
			TFR = 5*Σf(i) =	6.827914

(primary)

Age	F Pop	CEB	BLY	f(i)
15-19	1469	337	136	0.09258
20-24	788	1605	259	0.32868
25-29	733	2906	244	0.332879
30-34	672	3919	173	0.25744
35-39	430	3083	91	0.211628
40-44	258	1934	31	0.120155
45-49	194	1539	8	0.041237
			Σf(i) =	1.384599
			TFR = 5*Σf(i) =	6.922997

(secondary plus)

Age	F Pop	CEB	BLY	f(i)
15-19	745	68	31	0.041611
20-24	366	363	84	0.229508
25-29	105	264	25	0.238095
30-34	45	171	15	0.333333
35-39	22	124	1	0.045455
40-44	19	103	1	0.052632
45-49	11	56	0	0
			Σf(i) =	0.940634
			TFR = 5*Σf(i) =	4.703168

MUKURWEINI

(none)

Age	F Pop	CEB	BLY	f(i)
15-19	108	70	18	0.166667
20-24	267	602	96	0.359551
25-29	459	1948	151	0.328976
30-34	614	3600	188	0.306189
35-39	743	4691	140	0.188425
40-44	785	5241	89	0.113376
45-49	720	4668	34	0.047222
			Σf(i) =	1.510406
			TFR = 5*Σf(i) =	7.552028

(primary)

Age	F Pop	CEB	BLY	f(i)
15-19	2469	489	218	0.088295
20-24	1254	2497	461	0.367624
25-29	1274	4985	416	0.326531
30-34	1206	6524	351	0.291045
35-39	760	5006	160	0.210526
40-44	578	4026	51	0.088235
45-49	385	2700	16	0.041558
			Σf(i) =	1.413814
			TFR = 5*Σf(i) =	7.06907

(secondary plus)

Age	F Pop	CEB	BLY	f(i)
15-19	1590	175	86	0.054088
20-24	664	616	162	0.243976
25-29	259	683	89	0.343629
30-34	80	340	23	0.2875
35-39	22	136	3	0.136364
40-44	15	77	0	0
45-49	4	10	0	0
			Σf(i) =	1.065557
			TFR = 5*Σf(i) =	5.327785

MATHIRA

(none)

Age	F Pop	CEB	BLY	f(i)
15-19	148	116	11	0.074324
20-24	245	637	76	0.310204
25-29	479	1945	131	0.273486
30-34	860	4666	216	0.251163
35-39	987	6338	187	0.189463
40-44	986	6205	87	0.088235
45-49	849	5587	45	0.053004
			Σf(i) =	1.239879
		TFR =	5*Σf(i) =	6.199397

(primary)

Age	F Pop	CEB	BLY	f(i)
15-19	3971	803	309	0.077814
20-24	2201	4202	705	0.320309
25-29	2449	9194	719	0.293589
30-34	2352	12649	561	0.23852
35-39	1648	10623	273	0.165655
40-44	1246	8961	111	0.089085
45-49	790	5819	22	0.027848
			Σf(i) =	1.212821
		TFR =	5*Σf(i) =	6.064106

(secondary plus)

Age	F Pop	CEB	BLY	f(i)
15-19	3337	332	133	0.039856
20-24	1626	1404	322	0.198032
25-29	660	1563	191	0.289394
30-34	231	849	46	0.199134
35-39	86	447	17	0.197674
40-44	51	284	2	0.039216
45-49	35	190	0	0
			Σf(i) =	0.963306
		TFR =	5*Σf(i) =	4.816532

TETU

(none)

Age	F Pop	CEB	BLY	f(i)
15-19	200	108	25	0.125
20-24	345	818	99	0.286957
25-29	621	2390	173	0.278583
30-34	879	5095	198	0.225256
35-39	1225	8035	214	0.174694
40-44	1211	8679	128	0.105698
45-49	1067	7465	49	0.045923
			Σf(i) =	1.24211
		TFR = 5*Σf(i) =		6.210551

(primary)

Age	F Pop	CEB	BLY	f(i)
15-19	4243	1014	360	0.084846
20-24	2881	5718	897	0.31135
25-29	2883	10911	888	0.308012
30-34	2308	12230	576	0.249567
35-39	1524	9853	314	0.206037
40-44	1006	7214	99	0.09841
45-49	744	5657	26	0.034946
			Σf(i) =	1.293168
		TFR = 5*Σf(i) =		6.465838

(secondary plus)

Age	F Pop	CEB	BLY	f(i)
15-19	3677	461	182	0.049497
20-24	2181	1898	434	0.198991
25-29	978	2329	262	0.267894
30-34	333	164	63	0.189189
35-39	111	435	10	0.09009
40-44	56	282	2	0.035714
45-49	28	109	0	0
			Σf(i) =	0.831375
		TFR = 5*Σf(i) =		4.156877

NYERI DISTRICT: FERTILITY ANALYSIS

General

Division	TFR
Kieni East	6.35
Kieni West	6.55
Mukurweini	6.86
Mathira	5.8
Tetu	5.93
Othaya	6.39

By Place of Residence

	TFR	
Division	Rural	Urban
Kieni East	6.35	
Kieni West	6.55	
Mukurweini	6.86	
Mathira	5.9	3.21
Tetu	6.37	5
Othaya	6.48	4.65

By Marital Status

	TFR			
Division	Single	Married	Widowed	
Kieni East	3.21	8.35	4.11	5.77
Kieni West	4.02	8.49	8.58	7.71
Mukurweini	3.04	9.36	3.88	7.08
Mathira	2.64	8.47	3.09	4.04
Tetu	2.81	8.28	4.2	5.52
Othaya	2.92	8.75	3.46	5.12

By Level of Education

	TFR		
Division	None	Primary	Secondary Plus
Kieni East	6.95	6.61	3.21
Kieni West	6.83	6.92	4.7
Mukurweini	7.55	7.07	5.33
Mathira	6.2	6.06	4.82
Tetu	6.21	6.47	4.16
Othaya	6.44	6.72	4.94