SOCIO-CULTURE DETERMINANTS OF FERTILITY IN MOROGORO DISTRICT, TANZANIA

BY

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ABSTRACT

High fertility is among the dominant demographic features of the developing countries including those in Sub - Saharan Africa despite measures to control it. The average Total Fertility Rate for the period between 1975 and 1980 was 7.0 and 5.5 between 2000 and 2007. Tanzania has high TFR although there are signs of fertility decline from 7.0 to 5.4 in the years 1970 and 2007 respectively. The main objective of the study is to determine the influence of socio-cultural factors on fertility. Specifically the study estimates the mean number of children ever born per woman, shows how sex preference affects fertility, shows how value of children affects fertility, associates fertility levels and status of women and shows linkage between fertility levels and religiosity. This cross sectional study uses quantitative data collected from a randomly selected sample of 110 women aged 15-49 years and four group discussions within the same age range. The key findings indicate that there is a positive relationship between socio-cultural determinants and fertility in Morogoro District. The TFR in the area of study is 6.1 which is higher than the regional and national fertility. The mean number of children ever born in the area of study is 8.0. Sex preference within the area of study is strongly related to fertility. Value of children has positive effects on number of children. Highly religion affiliated respondents have high number of children. Status of women has positive effects on number of children. Low status women have higher number of children. The study argues for family planning program for men and women. Men should be given explanations on advantages of discussing with their wives/partners on reproductive matters. To the women focused in this study, women should stand firm in decision making particularly on reproductive matters.

DECLARATION

I, Beatrice John, do declare to the Senate of Sokoine University of Agriculture that this dissertation is my own original work and it has not been nor currently being submitted for a higher degree award in any other University.

_____ _____

BEATRICE JOHN Date
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The above declaration is confirmed

_____ _____

Prof. E. A. Mwageni
(Supervisor) Date

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DEDICATION

To my mom Odilia William, because all success depended much on the foundation I got from her. I also dedicate it to the Morogoro District women with the aim of activating them on the use of contraceptives, stand firm to their families in terms of decision making with their partners/husbands so as to lower fertility in the district.

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LIST OF ABBREVIATIONS AND SYMBOLS

AIDS	Acquired Immune Deficiency Syndrome.
ARU	Ardhi University
ASFR	Age Specific Fertility Rate
CPS	Contraceptive Prevalence Survey
DSI	Development Studies Institute
DHS	Demographic Health Survey
FGDs	Focused Group Discussions
HIV	Human Immunodeficiency Virus
IDRC	International Development Research Centre
KDHS	Kenya Demographic and Health Survey
MDGs	Millennium Development Goals
MNCB	Mean Number of Children Born
MNCEB	Mean Number of Children Ever Born
NBS	National Bureau of Statistics
NFPP	National Family Planning Programme
NGOs	Non- Government Organizations
NSGRP	National Strategy for Growth and Reduction of Poverty
PRB	Population Reference Bureau
PSI	Population Services International
PSP	Population Strategy Programme
SUA	Sokoine University of Agriculture
SPSS	Statistical Package for Social Sciences
TDHS	Tanzania Demographic Health Survey

TFR	Total Fertility Rate
TKAPS	Tanzania Knowledge, Attitudes and Practices Survey
TRCHS	Tanzania Reproductive and Child Health Survey
UDSM	University of Dar es salaam
UMATI	Umoja wa Malezi bora Tanzania (Family Planning Association of Tanzania)
UN	United Nations
UNESCO	United Nations Education, Scientific, and Cultural Organization
UNICEF	United Nations Children Fund
URT	United Republic of Tanzania
US	United States
WFS	World Fertility Survey
WHS	World Health Survey

CHAPTER ONE

INTRODUCTION

1.1 Background information

Fertility is one of the most important components of population change hence it is an important subject for demographic analysis. Other components of population change are deaths and migration. Historically, the rapid population growth experienced by many developing countries has been a result of high and relative constant fertility and rapid decline of mortality (PRB, 2005). The rate at which a country's population grows and change over a period of time, accompanied by other demographic processes, has a bearing on development prospects. Fertility refers to the number of live births women have. It differs from fecundity, which is defined as the physiological capacity of woman to reproduce which may lead to or may not lead to live birth (PSP, 2003; PRB, 2007).

The maximum number of children an average woman can reproduce is about 15, if she starts childbearing as soon as possible after menarche which occurs around ages 12-14 and continues until menopause in middle or late forties (McFalls, 2003). Some women are for various reasons unable to bear any children while according to the Guinness Book of Records the greatest number officially recorded is 69 whereby a woman living near Moscow during the 18th century had 16 pairs of twins, seven sets of triplets and four sets of quadruplet (Newell, 1988).

Davis and Blake (1956) cited by Heer (1987) and in PSP (2003), identified a set of eleven intermediate variables that influence fertility which are grouped into three main categories. Factors that influence the frequency of sexual relations, factors

that affect the chances of conception and factors related to the outcome of pregnancy. In 1984 demographer John Bongaarts compressed these variables into eight proximate determinants as he termed them in order to facilitate quantification and accounting of the respective contribution of each variable in determining fertility levels (MacFalls, 2003). Bongaarts' list of proximate variables include the proportion of women married or in sexual unions, contraceptive prevalence, induced abortion, lactation infecundity, frequency of intercourse, natural sterility, spontaneous intrauterine mortality and pathological sterility (duration of the fertile period). Bongaarts quantified each variable and observed its contribution to the total fertility that are accounted for by four main variables or proximate determinants namely the proportion of women married or in sexual union, the percentage of women using contraception, the proportion of women who are in fecund or lactation and the level of induced abortion (Handwerker, 1986; PSP, 2003).

McFalls (2003), argues that, the importance of the intermediate variables differ around the world because of cultural practices and beliefs that affect peoples' behaviour. He continues that, in many African countries women marry young and rarely use contraceptives yet fertility is kept to six child average through cultural factors. In accordance with ancient traditions and beliefs women in many African societies breast feed their babies until age two or three thus prolonging the infecund period following child birth (postpartum amenorrhea). In some African societies mothers are expected to abstain from sex for up to two years after child birth especially while they are breastfeeding (MacFalls, 2003). The proximate determinants however have a direct biological effect on fertility. Sub-Saharan

Africa has the world's highest rate of natural increase in population, 2.5 percent per year. Its population is projected to grow by 132 percent by 2050, from about 700 million to 1.6 billion people. This large growth stems from the high total fertility rate (TFR) in Sub – Saharan Africa of 5.6 children per woman which is twice the world average, (Jones, 2002). The global trend of fertility decline in the last 50 years is much less pronounced in Africa. According to Jones (2002), the TFR for the entire continent (i.e. Sub –Saharan Africa and Northern Africa) fell from 6.6 children per woman in 1950 to 5.2 in 2002 (Zlider *et al.,* 2003). Caldwell (1968) and Faruque (1983) explained socio- cultural factors as the main indirect determinants of fertility in Africa. Among the factors explained include sex preference, value of children and religiosity.

Goliber (1997) documents that, the race between population growth and economic development in sub-Saharan Africa is one of the greatest dramas of the modern world. Highest rates of population increase and slow growing or stagnating economies throughout much of the region have the wanted modernization and development efforts. Against this back drop, the drama remains as engaging and intense as ever. The nations are struggling to provide education, housing, jobs and health care for their burgeoning populations, while trying to compete in the world economy and cope with internal political conflicts.

Tanzania in particular experiences a relatively high fertility rate, although there are signs of fertility decline over time; by considering current fertility levels for Tanzania as whole, for urban and rural areas on the Mainland, and for Zanzibar. The TFR is 5.7 births per woman, which is considered to be among the highest

rates in sub-Saharan Africa. The TFR in mainland rural areas is 6.5 compared with 3.6 in urban areas. Rural women have, on average, three more births than their urban counterparts. The TFR in Zanzibar is 5.3. It has been estimated that, the annual population increase is about births with the average growth rate of 2.7 (URT, 2002). At this rate of growth, it is estimated that by the year 2025 the population will be about 60 million on the assumption of a slight decline in fertility offset by continued falling mortality.

It is against this background that the government of the United Republic of Tanzania formulated the 2006 National Population Policy. Among other things, the policy encourages a reduction of fertility (Planning Commission, 1992, cited by Ngalinda, 1996).The revised National Population Policy of 2006 aims to enable Tanzania achieve improved standard of living and quality life including good health and education, adequate food and housing, stable environment, equity, gender equality and security of individuals.

The government through its different departments together with the various local and international non-government organizations (NGOs) is working hard in different established development programmes such as to raise the standards of living of the people in Morogoro District. the campaign and establishment of family planning programmes. For example the Ministry of Health has a national planning programmes supported by NGOs e.g. UMATI. Despite these campaigns made by the government and the NGOs yet the fertility is still high in the district (IDRC, 1999).

The fertility levels and trends in Morogoro as it had been done by census in the years of 1967 and 2002 show that the region has high slightly declining TFR. The TFR are as follows; in the year 1967 the TFR was 6.0, 1978 was 6.3, 1988 was 6.3 (constant growth) and in the 2002 census was 5.9 births per woman. Like other countries in Sub- Saharan Africa, the high fertility levels pertaining in Tanzania is an outcome of a number of socio-economic and socio-cultural factors. This study examines the role of the latter. This is because they are country and locality specific.

1.2 Problem statement

The high population growth has some adverse effects on social and economic life or well being of the people. Some of the adverse effects are the presence of low per-capita income, high percentage of illiteracy and low education level, poor health and high level of dependants among many families (PSP, 2003). High fertility is one feature associated with poverty (URT, 1999). It is known fact that as life standard increases, population decreases.

The high level of fertility in Tanzania can be attributed to socio- cultural determinants. Most of which are unique because they are locality specific and the information (at local levels) on how they affect fertility is scanty. It is known that most of the studies so far conducted in Tanzania concerning fertility focus on the direct effect of socio – economic factors such as income, education and the like instead of balancing a combined approach for both socio- cultural, economic and proximate determinants. This claim can be evidenced by the lack of case studies in Tanzania (Marcella, 1994). This study therefore tries to show the impact of sex

preference, value of children, religiosity and status of women on the prevailing level and pattern of fertility. It is expected that the study will add a theoretical knowledge concerning Tanzania's socio- cultural determinants of fertility.

1.3 Problem justification

The government of the United Republic of Tanzania considers the population growth rate (caused mainly by high fertility levels) to be very high. Population growth is linked to poverty. It has been demonstrated that the rapid population growth in Tanzania has negative effects on the economy, health, education employment, agriculture, environment and urbanization Ngalinda (1998).

This study is in line with the national population policy under section 2.3.4 says that Factors which contribute towards high fertility are rooted in the socio-cultural value –system and these are: value of children as a source of domestic and agricultural labour and old –age economic and social security for parents, male child preference, and low social and educational status of women in society which prevents them from taking decisions on their fertility and use of family planning services, large age differentials between spouses which constrain communication on issues related to reproductive health and socio-economic and gender roles (URT, 2006).

The national population policy encourages the regulation of population. The international policy which is MDGs goal number one encourages the reduction of extreme poverty and hunger, lower fertility and slow population growth. Tanzania Development Vision 2025 and the 'National Strategy for Growth and Reduction of

Poverty that aim at achieving high quality of livelihood. This study is in line with these efforts.

The need for more information on fertility issues is that, the findings of this study will bring a ground for further studies on the effects of sex preference, value of children, religiosity and status of women on fertility in this country.

1.4 Objectives

1.4.1 General objectives

The general objective of the study is to determine the socio- cultural factors influencing fertility in Morogoro District.

1.4.2 Specific objectives

Specifically the study intended to:

a) Estimate the mean number of children born per woman.

b) Determine how sex preferences affect fertility

c) Shows the linkage between value of children and fertility

d) Associate fertility levels in the district and religiosity

e) Determines how the status of women affects fertility

1.5 Conceptual framework

Conceptual frame work shows the fertility as the dependent variable as being affected by social- cultural determinants namely sex preference, value of children, religiosity, status of women these factors interact with socio-economic determinants which are education, occupation and policies. The proximate determinants based on Davis-Blake and Bongaarts models. The proximate

determinants include age at entry into union, proportion of women engaged in sexual intercourse, age at first birth, contraception, sterility and postpartum infecundability. This study is going to deal with socio-cultural determinants of fertility rather than socio-economic determinants and proximate determinants (Fig.1).

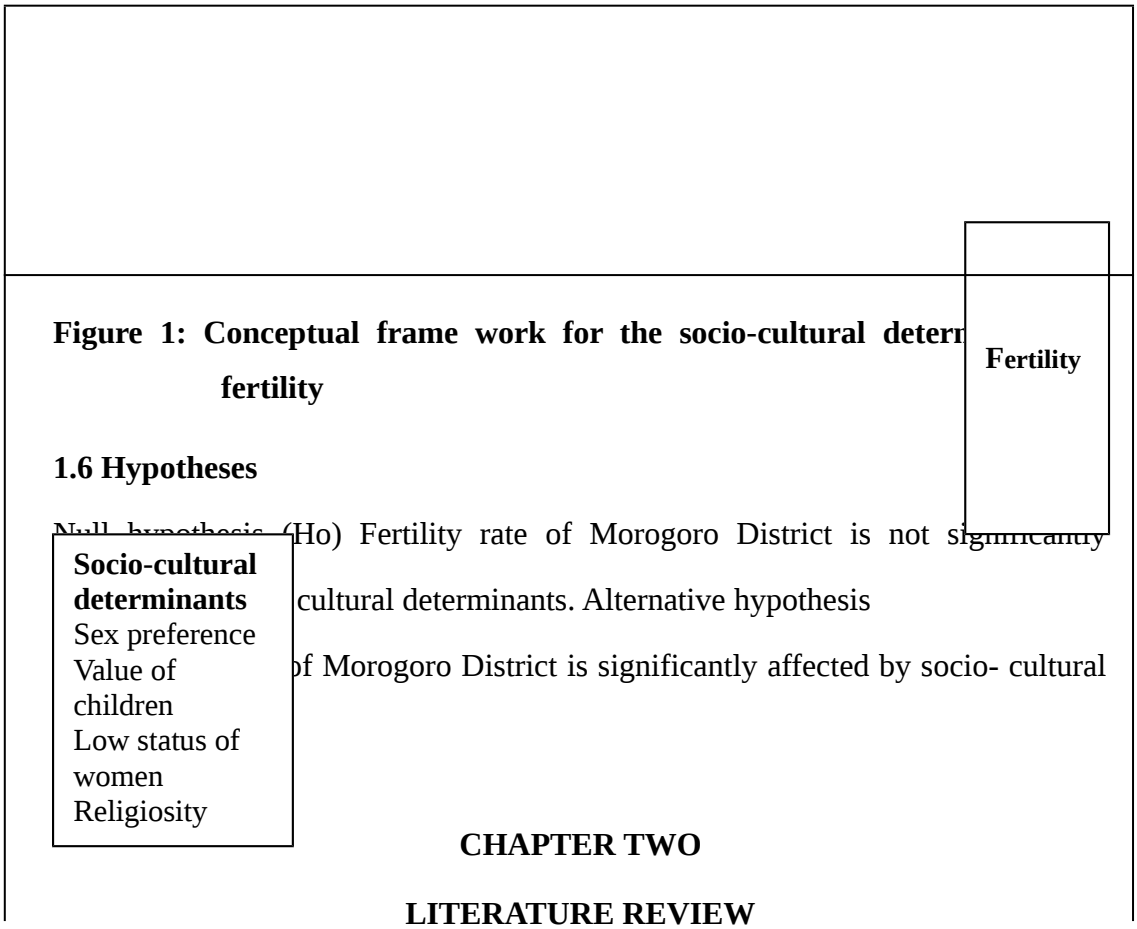


Figure 1: Conceptual frame work for the socio-cultural determinants of fertility

1.6 Hypotheses

Null hypothesis (Ho) Fertility rate of Morogoro District is not significantly affected by socio- cultural determinants. Alternative hypothesis

(Ha) Fertility rate of Morogoro District is significantly affected by socio- cultural determinants.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

This chapter reviews literature related to population growth in general and in particular the concepts of the factors leading to population growth in the regions of the world. It begins by reviewing the history of fertility as the major factor for rapid population growth globally and in Africa. It also reviews studies on

population growth particularly on fertility and its determinants, fertility models and the status of research on socio-cultural determinants of fertility in Tanzania.

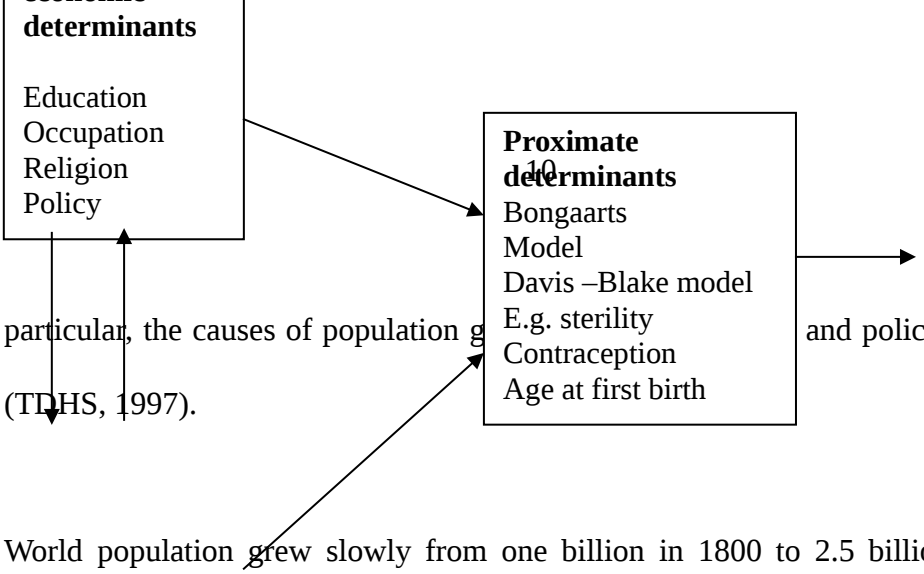
2.2 Fertility

Fertility measures lifetime reproductive capacity of a woman. Therefore, fertility is demographic phenomenon observed in terms of live births. However, the number of births a woman will bear during the whole period of her reproduction carreer is a result of a complex and dynamic interaction of a biological process with socio-cultural, economic and environmental factors (Bongaarts, 1978). Fertility is one of the most important components of population change hence; it is an important subject for demographic analysis. Other components are deaths and migration (PRB, 2005).

2.2.1 Fertility levels around the world

2.2.1.1 General fertility levels and trends

Over the past few decades, the world has experienced more rapid and more extensive demographic change than in any other comparable period in history. The best known example of this change is the rapid increase in human numbers. The world population today stands at 6.5 billion, which is four billion more than in 1950, and growth will continue for several more decades. There are also a number of other important demographic trends. Around the world, women are having fewer children, people are living longer and healthier lives, increasing numbers of migrants are moving from one country to another, family and living arrangements are becoming increasingly diverse, urbanization is proceeding at a very rapid pace, and populations are aging. This note discusses several of these developments, in



particular, the causes of population g and policy responses (TDHS, 1997).

World population grew slowly from one billion in 1800 to 2.5 billion in 1950. Since then, population growth accelerated and today we stand at 6.5 billion and the UN expects this total to grow to 9.1 billion in 2050. The absolute increments in world population size remain large, about 75 million a year. Population trends vary widely among regions. Virtually all future growth will occur in the developing world, that is, Africa, Asia, and Latin America, while the developed world is expected to see little change. Asia is, by far, the largest region. It had a population of about 1.3 billion in 1950. Today, it stands at about 3.7 billion-almost tripling-and it is expected to add another 1.5 billion people in the next 50 years, primarily in already very densely populated South Asia. Africa was one of the smallest world regions in 1950, but nearly quadrupled in size to three-quarters of a billion, and it is expected to double again by 2050. This growth is projected to occur despite Africa's large AIDS epidemic. Latin America is smaller than the other two regions in the developing world, yet it has experienced rapid growth in the past, which will continue for decades.

In contrast, the population of the developed world as a whole is expected to remain near its current size in the future, with modest increases in the U.S. being offset by declines in Europe and Japan. These differential growth rates among regions imply that the world will become increasingly African, Asian, and Latin American, and the proportion of the world's population in Europe, North America, and Japan will

decline (ib.id). Table 1 summarises the regional demographic dynamics in the world.

Rapid urbanization is another key trend in the developing countries. In the past, most of the population lived in rural areas, but rural-to-urban migration is now so rapid the rural population is expected to level off in the developing world in the next few decades. The 6.5 billion people that were added to the planet in the past were absorbed in both the developed and developing worlds, and within these regions, growth occurred in rural and urban areas. Therefore, the next 2.6 billion people to be added to the planet will end up in cities in the developing world, and many of those inhabitants will live in shantytowns and slums in very difficult conditions and with very limited infrastructure and services.

Table 1: Demographic data and estimates for the regions of the world

	Population mid2007 (millions)	Deaths per 1,000 population	Births per 1,000 population	Natural increase (%)	Projected (millions) mid-2025	Projected (millions) mid-2050	Projected population change (millions) 2007-2050 (%)	TFR
World	6 625	9	21	1.2	7 965	9 294	40	2.7
More Developed	1 221	10	11	0.1	1 254	1 259	3	1.6
Less developed	5 404	8	23	1.5	6 711	8 036	49	2.9
Less Developed (excl. China)	4 086	9	27	1.8	5 235	6 599	61	3.3
Africa	944	14	38	2.4	1 359	1,953	107	5.0
Sub-Saharan Africa	788	16	41	2.5	1 160	1,716	118	5.5
Northern Africa	195	7	26	1.9	253	310	59	3.1
Western Africa	283	15	42	2.7	419	616	118	5.7
Eastern Africa	294	15	41	2.5	438	650	121	5.5
Middle Africa	118	18	46	2.8	191	315	167	6.3
Southern Africa	55	1 624	24	0.8	58	62	13	2.8
Northern America	335	8	14	0.6	387	462	38	2.0
South America	381	6	21	1.5	463	528	38	2.4
Asia	4 010	7	19	1.2	4 768	5 378	34	2.4
Asia (Excl China)	2 692	23	7	1.5	3 292	3 941	46	2.4
East Asia	1 550	7	12	0.5	1 705	1 632	5	1.6
Western Asia	223	26	6	2.0	292	367	367	3.4
South central Asia	1 662	8	25	1.7	2 080	2 601	56	3.0
Europe	733	11	10	-0.1	719	669	-9	1.5
Northern Europe	98	10	12	0.2	104	108	11	1.5
Western Europe	187	9	10	0.1	191	187	0	1.6
Eastern Europe	295	14	10	-0.4	271	229	-22	1.3
Southern Europe	153	9	10	0.1	153	144	-5	1.4
Oceania	35	18	7	1.0	42	49	41	2.1

Source: PRB (2007)

2.2.1.2 Fertility levels and trends in Sub-Saharan Africa

The study of fertility in sub-Saharan Africa has been an area of interest for at least the past two decades. Since the early 1980s serious efforts were made to try to understand fertility trends and differentials in this part of the developing world. Surveys such as the CPS, WFS, and DHS have made a major contribution to the study of fertility in this region (Guttmatcher, 1994). For a large number of African countries fertility rates are very high (above 6.5 births per woman) and the use of modern contraceptive is very low (below 10%). Many analysts find it difficult to understand why massive further growth will take place in the future despite sharply declining fertility rates. There are three reasons:

First, the large decline in fertility since the 1960s still leaves fertility about 50 percent above the two child level needed to bring about population stabilization. With more than two surviving children per woman, every generation is larger than the preceding one and as long as that is the case population growth will continue. Fertility rates remain a driving force for population growth, particularly in sub-Saharan Africa where fertility is higher than in Asia and Latin America. This high fertility can, in turn, be attributed to two distinct underlying causes: unwanted childbearing and a desired family size above two surviving children. About one in five births is unwanted and a larger proportion is mistimed. In addition, an estimated 25 million abortions are performed each year in less developed countries-many of them under unsafe conditions. Many couples continue to want large numbers of children, in part because of fears of child mortality and the need for a sufficient number of surviving children to assist them in family enterprises and

support them in old age. In sub-Saharan African countries, desired family size is typically more than four children.

Second, declines in death rates-historically the main cause of population growth-will almost certainly continue. Higher standards of living, better nutrition, greater investments in sanitation and clean water supplies, expanded access to health services and wider application of public health measures such as immunization, will insure longer and healthier lives in most countries. The exceptions will be mostly in South African countries, where the AIDS epidemic is severest.

The third growth factor is what demographers call “population momentum.” This refers to the tendency for a population to keep growing even if fertility could immediately be brought to the replacement level of two children per woman with constant mortality and zero migration. Due to a young population age structure, the largest generation of adolescents in history is now entering their childbearing years. Even if each of these young women has only two children, they will produce more than enough births to maintain population growth over the next few decades. Population momentum is the most important of these three factors expected to contribute to continued growth. It accounts for about half of the expected future growth in the developing world as a whole and for an even larger proportion in Asia and Latin America. Further large increases in the population of the developing world are therefore virtually certain (Table 1).

2.3 Determinants of fertility

2.3.1 Proximate determinants of fertility

It may seem superfluous to state that a birth is the result of the exposure to intercourse, the successful conception, gestation and parturition. In particular, fertility is directly determined only by a few variables: provide a link between social, cultural and economic factors on one hand, and the physiological process which ultimately determines fertility on the other hand. As noted by Freedman, the proximate variables stand between fertility and all other proceeding variables. They immediately determine fertility, and all other variables act through combinations of them (Freedman, 1986). Davis and Blake (1965) and Bongaarts (1978 and 1982) proposed sets of these variables.

2.3.1.1 Basic fertility model

Fertility results from biological and behavioral factors which are intermediate fertility variables or proximate determinants or direct factors. These factors are shaped by socio-economic, cultural and environmental variables or indirect determinants/factors (Fig. 2).

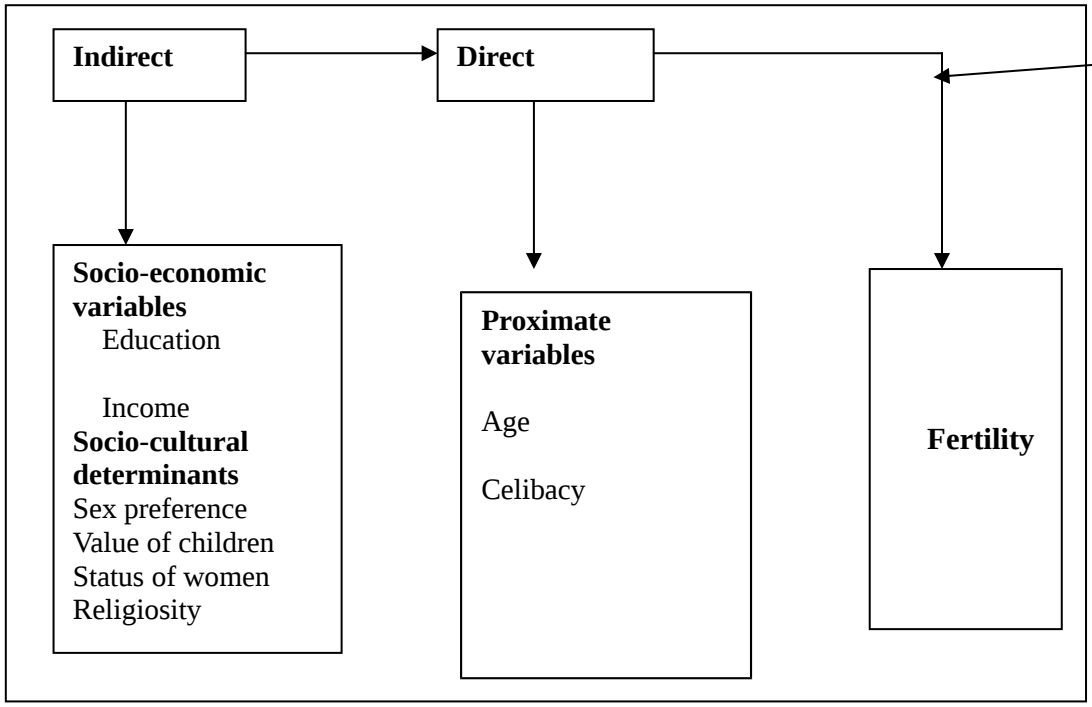


Figure 2: Basic fertility model

2.3.1.2 Davis – Blake model

Davis and Blake (1956) proposed a set of 11 variables that influence fertility. Variables were grouped into three categories and these include: Factors affecting/ influencing exposure to intercourse (six), these include factors like age at entry into sexual union, proportion of women who enter into sexual union, reproductive periods spent after or between unions (divorces, separations and widowhood), voluntary sexual abstinence, (postponements of sexual union), involuntary sexual abstinence (due to journeys, impotence and war) and frequency of sexual intercourse. Factors affecting chance of conception (two), these include contraception and sterility; and factors relating to outcome of a pregnancy (three) i.e. miscarriages, still births and foetal mortality due to involuntary causes (induced abortion). Davis and Blake were first to introduce direct determinants of fertility model.

2.3.1.3 Bongaarts model

Bongaarts described eight factors (proportion of women married or in sexual unions and frequency of intercourse). Deliberate marital fertility control factors (lactational infecundity amenorrhea and breast feeding), natural sterility (duration of fertile period), contraceptive use, and induced abortion. He continues to argue that four factors are most important in many societies. These they include: the proportion of women of reproductive age that is regularly engaged in sexual intercourse is believed to be the major determinant of high fertility in sub- Saharan Africa since contraceptive use is still low (Hinde, 1994). The only sub-group of women whom we can assume to be sexually active is the currently married women, Post partum infecundability; the primary cause of prolonged post partum infecundability is breastfeeding, which results in lactational amenorrhea. It is known that breastfeeding has an influence on fertility by lengthening the period of postpartum infecundability (Bongaarts and Potter, 1993). In societies where breast feeding is generally prolonged and universal and contraceptive use is rare, the primary determinant of birth interval length is the duration of breastfeeding), contraceptives use has been described as the most important proximate determinant of fertility (Sherris *et al.*, 1985; Mauldin and Segal, 1988 as cited by Ngalinda, 1998). Robey and his colleagues have shown that differences in the levels of contraceptive use explain 92 % of the variation in fertility among the 50 countries they studied (Robey *et al.*, 1992).

Bongaarts also showed how each of the four factors inhibits fertility using an index ranging 0 to 1 and the following formula was developed: TFR = Cm *Cc*Ca*Ci*TF.

Where as: Cm = represents percentage of married couple

Cc = represents percentages of people not using contraceptives

Ca = represents percentage induced abortion

Ci = represents percentage lactation in fecund

TF = Hypothetical total fecundity estimated to be 15.3.

This formula allows showing impact of each factor to fertility and variation in any of determinants changes fertility levels.

2.3.1.4 Davis –Blake and Bongaarts models comparison

Both models look into factors influencing fertility in a society, both have classified factors into three categories, both models show that fertility has to be explained through direct and indirect factors.

The two models have also different ideas. When we look at Davis –Blake model; it is more qualitative unlike Bongaarts which is more quantitative. Davis –Blake model is more detailed; it has 11 variables where as Bongaarts has fewer variables which are eight variables. Davis- Blake model put emphasis on all 11 variables where as Bongaarts put emphasis on only four variables. Davis – Blake explains this as a process unlike Bongaarts who explains this as factors that affect fertility. Davis –Blake focus on all women while Bongarts focuses only on married women. Lastly but not least, Bongaarts introduces an additional variable, lactational amenorrhea, whereby Davis- Blake do not.

2.3.2 Socio-economic determinants of fertility

These affect fertility indirectly through proximate determinants thus they have to be explained through proximate factors. Socio-economic factors include education, residence status, occupation, urbanization, income.

2.3.2.1 Education

Education provides people with the knowledge and skills that can lead them to a better quality of life. Education is correlated with the health of mothers and their children. The level of education of women is a factor which can play a significant role in reducing fertility. Educated women postpone their first marriage, prefer smaller family sizes, are aware and use of contraception and have greater negotiation skills on reproductive matters (Hinde, 2001).

In many countries, education, particularly women's education has been demonstrated to have a significant effect on fertility. Education brings in a new outlook on life as well as skills for taking advantage of new opportunities. A rise in the level of women's education leads to a rise in age at first marriage and age at first birth and consequently to a decline in fertility. Studies done in Latin America have shown that education is probably the most important socio-economic variable associated with greater occupational differentiation and social mobility both of which can affect nuptiality and the reproductive behaviour in various ways (Weinberger *et al.,* 1989).

Women with higher educational levels are more likely to break with tradition patterns including early marriage and child bearing. Education indirectly influences

age at first birth, and change in the traditional work role. Women with gainful employment may be more likely to postpone marriage and even child bearing within marriage (Ngalinda, 1998). With regard to education, Gaisie (1984) found that the median age at first birth for women with secondary education was 25 years to 19 years for the middle and primary school leavers. Similar studies in Kenya by Konogolo (1985) confirmed that post-primary schooling (especially of 9 or more years) has a strong effect in postponing the onset of fertility often by three to four years.

The spread of education and literacy among women is believed to be fundamental to changes in the reproductive behaviours. The effect of women's education on fertility in less developed countries is found to be curvilinear, i.e. fertility tends to rise first with no education and then decreases sharply once a certain level of education is attained (Cochrane, 1979). The argument is that education is positively associated with improved health, lower level of infertility, abandonment of traditional constraints upon sexual behaviours and practice of breastfeeding, all of which are known to raise fertility levels. As the educational level increases, marriage tends to be postponed which causes negative effect on fertility and counteracts the initial effect of fertility increase. Moreover, educated women desire relatively fewer children. They have high contraceptive prevalence and high chance of working outside their homes. All of these factors are known to lower fertility levels (Cochrane, 1979). However, there is also a possibility of the reverse causation which is less documented, i.e. the initiation of child bearing causing the termination of education (Cochrane, 1979).

2.3.2.2 Residence status

Place of residence is a useful measure or indicator of the degree of change from traditional or rural behaviour to a modern or urban behaviour. Significant rural – urban differences in marriage and fertility timing are partly the result of the greater impact of education on age at first marriage, and the incidence of cohabitation and first birth in urban areas in comparison with those in rural areas (Laurie, 1986). Urban marriage, cohabitation and first birth distribution appears to be more dispersed than the rural distributions. Urban women have greater heterogeneity in their marriage and fertility pattern.

Generally, fertility is higher for women residing in rural areas compared with those residing in urban areas. Higher levels of education, occupation, a more modern environment, and aspirations for higher levels of living are among the factors which can cause fertility among rural women (Stolnitz, 1983 cited by Ngalinda, 1998). Also, it is assumed that urban women have a better knowledge of / and access to modern contraception than women in rural areas (Cohen, 1993). A recent demonstration has shown that rural fertility is substantially higher than urban fertility in every African country included in the analysis. Studies have also indicated the powerful effect of urban residence in accounting for lower fertility levels. Urban residence may occur in the early stages of a woman's life or at later times, and the length of exposure or living in an area may also be of critical consideration (Goldstein and Goldstein, 1983).

2.3.2.3 Occupation

The demographic transition theory serves as the major framework for most macro-level investigations of fertility dynamics (Findley, 1982). This classic interpretation of the European fertility transition suggests that non-agricultural labour-force participation intervenes between economic development and fertility. Economic development is associated with an increase in education and occupational opportunities for women that compete with fertility-inhibiting factors to influence fertility. This relationship between female employment and fertility holds in developing countries, although regional variations are noticeable (Anker and Knowles, 1982). Together with other aspects of the development process, such as migration, these opportunities are expected to affect fertility via the proximate determinants.

Labour force participation and work status can be used in assessing fertility and migration jointly, although research findings on these variables have failed to point to a clear and consistent relation among them (Bongaarts, 1982). This is largely because of differences in definitions used in different places, especially between the developing and developed areas, and because, even when definitions are similar, they may have assumed that similarly categorised activities are in fact comparable in different perspectives (Arnold and Blanc, 1990). However, this is not always so.

2.3.2.4 Urbanisation

A study conducted in Kenya by KDHS show that migrant have a higher mean number of children ever born than non-migrants although the difference is not large

and narrows considerably using the standardised figures. This may be attributed to the effect of age because migrants are older than the general population. Furthermore, the fertility level of migrants may be influenced by the characteristics of rural-rural migrants, migrating for marriage and hence influencing the overall fertility of migrants when combined. However, the fertility patterns between migrants and non-migrants are found to differ within their sub categories.

Comparison among the different sub-categories show that urban natives have the lowest mean children ever born followed by urban-urban migrants, rural-urban migrants, urban-rural migrants, rural natives and rural-rural migrants in that order. Rural-rural migrants have the highest mean number of children ever born. This may be because women in this group disproportionately undertake ‘marriage-migration’ because of the persistent cultural support of high fertility still prevalent in the rural areas of Kenya. Urban-rural migrants have a mean number of children ever born falling between rural-urban and rural-rural categories, implying some effect of both origin and destination on fertility behaviour of migrant women. Among the never-migrant categories, rural natives have the highest mean number of children ever born. The existing pattern seems to imply the influence of place of residence and especially place of destination on fertility behaviour; region/province of residence; level of education; ethnicity; contraceptive use; marital status; type of marriage; frequency of marriage; work status and age at first sexual intercourse.

In general, within each of the residential categories, the standardised mean number of children ever born is higher for the migrants than the non-migrants. Rural regions have higher fertility relative to urbanised regions For instance Nairobi

Province has the lowest mean number of children ever born while Western Province has the highest. The fertility levels of other provinces fall in between. Furthermore, irrespective of education status, migrants have a higher mean number of children ever born than non-migrants. Ethnicity has also been found to be one of the underlying factors in differentiating fertility behaviour among different ethnic groups and regions in Kenya. Among those who are using modern contraceptive, migrants have higher mean number of children ever born than non-migrants.

Migrants have a higher fertility than non-migrants in the never-married category. However, among the married and widowed category, never-migrants had the highest fertility. In both polygynous and monogamous categories, never-migrants have higher mean number of children ever born than migrants. Never-migrant women who have married more than once are found to have a higher fertility than those who have married once. Migrants who work have a lower mean number of children ever born than never-migrants who work. However, among the not working category, non-migrants have the lower mean number of children ever born.

There is evidence in the literature suggesting that migration may interfere with sexual behaviour and patterns among women or couples because of the move itself, or due to the circumstances of their move such as during the settling in period (Goldstein and Goldstein, 1983). However, migration has been found to result in the relaxation of cultural and/or customary restrictions on sexual behaviour (Brockerhoff and Yang, 1995). The effect of migration on sexual behaviour may

depend on the extent to which migrants effectively replace the traditions and/or restrictions.

Social –cultural determinants of fertility include value of children; (source of cheap labour, provide security during old age, mortality risks, and enhance physical security and social influence.), low status of women, sex preference and religiosity. These factors will be discussed in section 2.5 of this chapter.

2.3.3 Socio-cultural determinants of fertility

Socio- cultural factors are indirect determinants factors, which affect fertility through direct (proximate) variables. Culture is the central concept in anthropology denoting man's distinctive quality setting him apart from all other life forms. Simply defined, culture may be considered as the total way of life or the design for living characterizing each human society. It includes in a complex integrated whole all learned and shared behaviours stemming from themes or values within an emotional matrix or ethos. Animal behavior seems to be dominated by instincts which in man are greatly modified by cultural influences (Jennings, 1970). Even with improved economic conditions, nations, regions and societies will experience different demographic patterns due to varying cultural influences. The value placed upon large families (especially among underprivileged rural populations in less developed countries who benefit least from the process of development), the assurance of security for the elderly, sex preference, the ability of women to control reproduction, and the status of women within families and within societies are among significant cultural factors affecting family size and the demand for family planning services

2.3.3.1 Value of children

Gulhat (1983) documents that, large numbers in a family may be the only guarantee of security in fragmented, traditional societies where governments have not yet established the protective cover via the rule of law enforced effectively by a mobile, non – partisan, police force. While Cadwell (1968) documents that, having a big family is important because it will help during old age in the house and also for a family prestige. He continues to document that the primary cause of sub-Saharan Africa's high fertility can be found in its social and family patterns. Central cultural precepts include the notions that many descendents must be produced to ensure the survival of lineage, the equation of female virtue with the production of a large number of children, the stronger influence of the lineage than the nuclear family, and a belief in the power of ancestral spirits.

Given the overriding importance of lineage and relative weakness of emotional and economic conjugal links, the factors believed to contribute lowered birth rates in developed countries e.g. the high costs of child raising and the negative impact of large family size on the standard of living in that family are not operable in sub-Saharan Africa. Most African fathers receive far more from their children, in terms of loyalty and support, they expend their current economic independence into domain of reproduction represents the most likely source of change in sub-Saharan Africa's fertility patterns.

2.3.3.2 Mortality risks

Desire for many children is a characteristic of the African household that has direct bearing on demand for children is its durability. It is generally accepted that lineage

does not die; members die and replaced through births. Consequently, there is a need to ensure that fertility levels remain higher than mortality levels if the lineage is not ultimately to disappear. Considerable expansion of membership enhances the power and prestige of the lineage and reduces the likelihood of extinction through death.

Moreover, enormous weight maintained to family continuity because each new birth in the lineage is regarded as providing a vehicle for the return of ancestor. Hence to prevent a birth is viewed as tantamount to consigning an ancestor to oblivion (Bleek, 1987; Makinwa, 1992; Natural Research Council 1993; Cadwell and Cadwell 1987). Desire to perpetuate the lineage results in large kinship networks. (Isingo and Abanike, 1985; and Bledsoe and Isingo, 1989) explain that resulting differentials in costs of children to a conjugal pair may lead to differences in the demand for children and high fertility levels.

The economic theory of fertility assumes that the household demand for children is determined by family preferences for a certain number of surviving children (usually make more children than they actually desire) in the expectation that some will survive some will not survive), by the “price or opportunity cost” of rearing these children and by levels of family income. Children in poor societies are seen partially as return in the form of both child labour and the provision of financial support for parents in old age. Children are prolific because under economic and social interests in more children families children are used as a supply of family labour, children are as a pool for a genetic lottery, and as a matter of economic and

social security they provide security in a wealthy organized, non-protecting society (Todaro, 2003).

2.3.3.3 Sex preference

The preference of couples to have a child of particular desired sex is called sex preference. In some societies parents are said to prefer sons to daughters, while in others it is vice versa. But the existing literature shows that sons' preference is common, particularly in Asian countries like Bangladesh, China, Korea, Pakistan (Ahmed, 1998; Arnold and Zhaoxing, 1986; Anord, 1985; Farooqui, 1990; Das, 1987; Zafar, 1994 as cited by Mwageni, 1996).

While there exist many studies on sex preference in most parts of the world, few such studies have focused on African societies. However, there is evidence of sex preference in African societies, and sons are reported to be preferred more than daughters (Bhatia, 1984; McCarthy and Oni, 1987; Campbell, 1981; Olunloyo, 1993 as cited by Mwageni 1996). Furthermore most of these studies have observed a relationship between the number of living children and the desire for sons (Bhatia, 1984; Adamchak and Adebayo, 1987; Campbell, 1991 as cited by Mwageni, 1996). Rural families with no sons were looked down upon. Sons were expected to carry on the family lineage, increase the reputation of the family, and protect the family's interests. The lack of sons was a sign of humiliation and a curse.

2.3.3.4 Religiosity

Religiosity is an important aspect of religion which often is viewed as the intensity of religious beliefs and participation (Myers, 1996). Religious beliefs are, notably,

beliefs in hell, heaven, and an afterlife. Religious participation includes such behaviors as church attendance, participating in church-related activities, viewing/listening to religious broadcasts, and reading the holy books of the religion (Barro and McCleary 2003; Corijn, 2001; Myers, 1996). Strong religiosity usually is marked by strong daily influence of religious beliefs on individual decisions and frequent participation in religious activities.

Although previous religious studies mainly focused on examining fertility differences among religious groups, empirical analyses have shown some evidence that religiosity impacts demographic behavior. In terms of the effect of religious participation on fertility and fertility-related behavior, researchers observe that religious participation among young people is linked strongly to more positive attitudes towards marriage and having children (Marchena and Waite, 2001). Analyzing the 1985 and 1999 Spanish fertility Surveys, Adsera (2007) shows that in Spain, church participation plays an important role in shaping people's fertility behavior. Individuals who seldom participate in church activities are found tend to delay significantly their timing of first parenthood, controlling for all other factors

2.3.3.5 Status of women

Women often bear the disproportionate burdens of poverty, poor education, lack of jobs and limited social mobility. In many cases, their inferior roles, low status, and restricted access to birth control are manifested in their high fertility. According to this argument, population growth is a natural outcome of women's lack of economic opportunity. If women's health, education, and economic wellbeing are improved along with their role and status on both the family and community, this

empowerment of women will inevitably lead to smaller families and lower population growth. This was the principle message of the United Nations International Conference on Population and Development held in Cairo 1994 (Todaro, 2003).

On the basis of Change in African Family Project in Nigeria (CAFN) Caldwell (1987) advanced the argument that men and their lineages rule over reproduction and decide on matters of family size in Nigeria and elsewhere in Africa. Although no study has evaluated that hypothesis with empirical data, the view continues to persist that men are dominant decision makers on fertility matters in Africa (Makinwa, 1995). Yet several studies show women's subordinate status underlines low contraceptive prevalence and high fertility in Africa. In 1991 Kritz and Makinwa conducted a survey of women's status and fertility which has data on marriage couples in four Nigerian ethnic groups, namely the Hausa, Ibo, Ijaw and Kanuri. Several studies emanating from this survey look at several dimensions of women's decision making and spousal communication and agreement on the desire for more children and wife say on the family planning (Kritz and Makinwa, 1994, 1995, 1999, 2000; Makinwa and Jensen, 1995; Makinwa and Kritz, 1997). The studies confirm that levels vary sharply across ethnic groups in which women's status in their respective societies. For instance, spouse from groups in which women's status is lowest for example the Kanuri and the Hausa have higher levels of disagreement on fertility desires than those from ethnic groups in which women's status is higher (Yoruba, Ibo and Ijaw). Moreover, higher levels of decision making and joint making are recorded among the Yoruba, Ibo and Ijaw in contrast with the Kanuri. Overall, women's disadvantage by lack of education,

legal rights, and inheritance rights reinforces a culture that place very great value on high fertility in African societies.

2.3.3.6 Ethnicity

Ethnicity is associated with age at first birth, as one of the main functions of culture is to maintain the biological continuity of members of the society. This is supported by Ohadike's (1979) argument that although natural fertility variations are primarily determined by biological process, it might be modified by socio-cultural factors. Every cultural group has its own socio-cultural ideologies of biological functions and their social accommodation (socio-continuities). These ideologies are comprised of the norms, beliefs and values as well as the practices that are likely to affect positively or negatively the reproductive performance of a given society. It is likely that each cultural group may stress certain aspects in their reproductive institutions. These may serve to explain fertility differentials and levels to a greater or lesser extent from the fertility levels of other cultural groups.

Religion plays an influential role when three conditions are satisfied: first, religion articulates behavioral norms with a bearing on fertility behavior (Ankomah *et al.*, 1994 as cited by Mwageni, 1996); second religion holds the means to communicate these values and promote compliance; and third, religion forms a central component of the social identity of its followers (McQuillan, 2004). Religion has an influence on human sexuality and reproduction as it promotes or discourages certain types of behavior. The relationship between religion and contraceptive behavior is explained in terms of specific attitudes in religion as well as the doctrine in particular religion towards fertility.

Studies done in India indicate that Hindus marry and bear children at younger ages than non –Hindus (Bloom and Reddy, 1986). Hinde and Mturi (1994) document that in Tanzania religion influences age at first marriage and of course age at first birth in religions such as Islam religion that encourages early marriage. This will ultimately mean early age at first birth. The main reason for this encouragement (for Moslems to marry early) is the emphasis the Islam religion puts on premarital virginity. However religion can also influence the level of contraceptive use and therefore has an effect on age at first and subsequent births. Some religions like Catholicism have negative attitudes towards the use of modern contraceptives while others for example Protestantism have amore liberal stand. In societies where traditional norms and values are fading away, Catholics are likely to have low ages at first birth and sort intervals between subsequent births. Thus fertility might be high for Catholics. This statement was confirmed by a study carried out in Sierra Leone by Gage (1986) who noted that Catholics had a lower age at first birth than Moslems.

Fertility will be lowered as a result of delaying exposure to intercourse, e.g. through later marriage for those who experience their sexual intercourse in marriages. Other forms of consensual unions, where the partners do not live together, limit the risk of being exposed to sexual disruption, can also lower fertility. The use of contraception including abortion, postpartum infecundability and non-susceptible due to breastfeeding, and sexual abstinence may on the other hand lower fertility for those who are sexually active. In terms of policy making, the indirect determinants of fertility have relevance for policy makers because they provide mechanisms susceptible to be influenced by official policy however, the

change in these variables does not necessarily change fertility levels. The direct determinants, on the other hand, influence fertility directly but do not have relevance to policy makers. The changes in one or more of these variable changes fertility unless another variable offsets the effect. The direct determinants in general sense are biological and / or behavioral in nature.

2.4 Status of research on socio-cultural determinants of fertility in Tanzania

2.4.1. Fertility levels and trends in Tanzania

Sources to assess fertility trends include comparison with estimates obtained in earlier surveys, censuses, or vital registration data. Data in Table 2 show fertility rates estimated from a series of surveys conducted in Tanzania since 1991 and the most recent census. These sources include the 1991-92 TDHS, the 1996 TDHS, the 1999 TRCHS, the 2002 Tanzania Population and Housing Census, and the 2004 -05 TDHS. The TFR estimated in 1991-92 was 6.3 children per woman. However, the 2004 - 05 TDHS TFR of 5.7 is statistically at the same level as rates estimated by the 1996 TDHS (5.8 births) and the 1999 TRCHS (5.6) births. Thus, there is no evidence of fertility decline in Tanzania over the last eight years. Although the 2002 Population and Housing Census TFR is 6.3, higher than all three DHS surveys since 1996, the Census TFR is calculated using indirect methods and, thus, comparison is difficult (URT, 2004).

Table 2: Fertility levels and trends in Tanzania

Age group	TDHS 1991/92	TDHS 1996	1999 TRCHS	2002 Housing Census	2004-05 TDHS
15-19	144	135	138	113	136
20-24	282	260	268	290	274
25-29	270	255	240	287	254
30-34	231	217	213	248	218
35-39	177	167	138	185	156
40-44	108	87	78	96	79
45-49	37	42	37	34	18
TFR	**6.3**	**5.8**	**5.6**	**6.3**	**5.7**

Source: URT (2004)

2.4.2 Proximate determinants of fertility

2.4.1.1 Proportion of women engaged in sexual relations

The frequency of sexual intercourse is the underlying variable of interest, but information on this is rarely available. The proportion of women of reproductive age that is regularly engaged in sexual intercourse is believed to be the major determinant of high fertility in Sub-Saharan Africa since contraceptive prevalence is still low (Hinde, 1994). Various measures of marital status are used as proxies for this concept. A few studies have been able to employ direct data on coital frequency (Brunborg, 1983 as cited by Ngalinda, 1998), but so far these attempts have been limited to only a few developed countries. The only sub-group of women whom we can assume to be sexually active is the currently married women. In the past, marriage was thought to be universal (Bongaarts *et al.,* 1984; Page, 1988), and postponement of first marriage has been outlined as the main determinant of fertility decline observed (Cleland *et al.,* 1994). But marital dissolution through divorce or widowhood is a common phenomenon (Blanc and Rutenberg, 1990).

In studying recent trends in age at first marriage using data from 14 regions in Tanzania, Van de Walle observed that the proportion of women never marrying progressively along age distribution. This influenced him to conclude that ‘the Tanzanian data suggest the old norm of universal female marriage may change’ (Van de Walle, 1993). Furthermore, the definition of marriage is problematic in Africa. Usually marriage in African societies is ‘a process’. There is some ambiguity in determining exactly when a couple is getting married change’ (Van de Walle, 1993). This implies that the magnitude of the proportion of married women will depend on the indicator of marriage used. The use of the data of the proportion of married women is misleading because there is a rise in premarital sexuality and child bearing in Sub-Saharan Africa (Meekers, 1994), which waters down the use of the ‘proportion of married women’ variable in the study of proximate determinants of fertility.

2.4.1.2 Age at first birth

Age at first birth in a non-contracepting society becomes an important determinant of the length of reproductive life and thus is highly and negatively correlated with fertility. Late age at first birth shortens the reproductive period of a woman, which will consequently reduce the total number of children ever born (and vice versa). This pattern holds for age at first marriage, and age at first sexual intercourse except for the pattern given for women aged less than 25 years in the table. But if we remove the current age effect (Table 4), again it shows the same pattern.

Table 3: MNCEB by age at first intercourse/union in Tanzania

Characteristics	Age of women 15-24	25-34	35-49	15-49
Age at first sexual Intercourse at first union				
<15	1.356	3.596	6.386	3.449
15-17	1.177	3.539	6.290	3.268
18-19	1.018	3.083	6.204	3.004
20-21	1.086	2.762	4.780	2.580
22-24	0.746	1.863	4.382	2.346
25 +	0.777	1.272	3.617	2.088

Source: TDHS as cited by Ngalinda (1998)

The data of older Tanzanian women at the age of 35-49 show that women who engaged in sexual intercourse earlier than age 15 had approximately three births more than those who had first sex experience at age 25 or more. A similar pattern is repeated for women who started child bearing before age 15, they have about three births more than women married after age 24. Exposure to the risk of child bearing at very early age can be associated with high fertility as compared to the late entry for all three broad age groups. On the other hand, early exposure to the risk of child bearing could have a negative effect on the level of fertility because physical maturity especially of the pelvis often lags behind the ability to conceive. As such,

the pelvis and other reproductive organs may not be mature enough for delivery of the foetus when conception takes place.

Table 4: MNCEB by age at first birth in Tanzania

Characteristics	Age of women			
	15-24	**25-34**	**35-49**	**15-49**
Age at first Birth				
<15	2.691	5.316	7.458	5.868
15-17	1.874	4.418	7.138	4.632
18-19	1.508	3.668	6.663	3.830
20-21	1.318	3.110	6.193	3.535
22-24	1.073	2.662	5.289	3.501
25+	-	1.763	4.208	3.232

Source: TDHS as cited by Ngalinda (1998)

2.4.1.3 Contraception

Use of contraception has been described as the most important proximate determinant of fertility (Sherris *et.al.,* 1985). Some studies have indicated that differences in levels of contraception explain 92% of the variation in fertility (Robey, *et al.,* 1992). This implies that where use of contraception is widespread, fertility is low. It is therefore unsurprising that a major cause of the declining fertility in Tanzania during the 1990s is thought to have been the slow but the study shows that there is an increase in use of contraceptive. This was demonstrated by Larsen, (1997), who showed, using data from the 1991-92 TDHS, those women

who had ever used contraception had longer waiting times to conception (median 22 months) than other women (median 15 months). Only 23% of women however, had ever used a method of family planning, and only 10.4 percent of women aged 15-49 years were using a contraceptive method at the time of the 1991-92 TDHS (Ngallaba *et al.*, 1993). The current use rate doubled to 22% by the time of the TRCHS in 1999 (NBS and Macro International Inc., 2000). The use of modern method used by Tanzanian men and women include injectables, the pill and (male) condom.

As contraception is not widespread in Tanzania, fertility could, among other factors, be mostly determined by age at sexual intercourse as well as the duration of exposure to the risk of pregnancy, age at first marriage, frequency of intercourse, and age at first birth. Behavioural factors that may be modified by the level of education, religion, place of residence may also play a key role in determining fertility. Studies have hypothesized that women who start child bearing at an early age especially in the non- contraception societies are likely to end up with higher completed family size than their counterparts who start at later age provided other fertility depressing factors do not intervene.

2.4.1.4 Sterility

Sterility, whether primary or secondary, has been known to affect fertility particularly in areas where there is high incidence of sterility. In Gabon for example, the key determinant of the exceptionally low fertility (TFR 4.1) was noted to be widespread pathological sterility (Bongaarts and Frank, 1988). If sterility is reduced, fertility is likely to rise this is the trend in countries where the prevalence

of sterility is high. However, sterility seems to be relatively lower in East and West Africa compared with Central Africa. Larsen (1977) has argued that ‘sub-fertility is prevalent in Tanzania’ and that ‘the prevalence of infertility is relatively high in Tanzania, compared with neighbouring countries’. It seems that most of this sub-fertility and infertility takes the form of secondary sterility, as only two percent of women aged 40-49 in 1996 had borne no children (NBS and Macro International Inc., 1997). There is some evidence that fertility varies regionally within the country: Southern regions of Lindi and (especially) Mtwara, for example, have the lowest fertility rates in the country outside Dar es Salaam, but are far from having the highest rates of contraceptive use. They do, however, have high rates of self-reporting of sexually transmitted disease among them (Hinde and Mturi, 2001)

2.4.1.5 Post –partum infecundability

The primary cause of prolonged post partum infecundability is breastfeeding, which results in lactational amenorrhea. It is known that breastfeeding has an influence on fertility by lengthening the period of postpartum infecundability (Bongaarts and Potter, 1993). In societies where breast feeding is generally prolonged and universal and contraceptive use is rare, the primary determinant of birth interval length is the duration of breastfeeding.

The mean duration of breastfeeding observed in Kibaha, Tanzania was between 18 and 19 months and the mean duration of amenorrhea were between seven and ten months for different educational groups (Kamuzora and Komba, 1988 as cited by Ngalinda, 1998). The general observation is that the duration of breastfeeding declines with development. In particular, breastfeeding declines with urbanization

and education (Lesthaege *et al.*, 1981). Therefore breastfeeding is still a potential factor in reducing fertility in sub-Saharan Africa.

In many African cultures, the resumption of intercourse is linked with weaning. Breastfeeding and sex are considered to be incompatible since sperms are believed to poison the mother's milk. Therefore prolonged durations of postpartum abstinence are observed in Sub-Saharan Africa. However in Kibaha, Tanzania the period recorded ranged from 8.4 months for women with at least nine years of schooling to 10.6 months of illiterate women (Kamuzora and Komba, 1988 as cited by Ngalinda, 1998). The most notable observation is that the period of postpartum sexual abstinence is becoming shorter, especially in East Africa, and this is likely to raise fertility. However, the demographic role of abstinence is much reduced by relative stability of lactation. Sterility and contraception are explained in the previous sections of 2.4.1.5 and 2.4.1.4.

2.4.2 Socio-economic determinants of fertility

The spread of education and literacy among women is believed to be fundamental to changes in reproductive behaviour. While analysing the relationship between fertility and levels of education in sub-Saharan Africa, Cohen (1993) has shown that fertility is either curvilinear or negative related with education but does not appear very responsive to few years of education. A more recent comparative study has shown that higher education of women is consistently associated with lower fertility (Martin, 1995). The mechanism through which education affect fertility includes postponement of age at first marriage, reduction of family-size preference and rise in contraceptive use. The 1999 TRCHS, for example, shows that women

with no education had a TFR of 6.5 where as those who completed primary education had a TFR of 4.9. Any effort geared on educating women especially if they complete primary education can have a significant effect in reducing fertility. The spread of education and literacy among Tanzanian women is believed to lead to fundamental changes in their reproductive behaviour. Data in Table 5 show that cumulative fertility decreases as the mother's level of schooling increases. Older women (35-49 years old) show that women without education have an average of seven children per woman compared to five children for women with secondary education. The pattern for young women is not clear perhaps because they have just started the reproductive process.

Table 5: MNCEB by level of education in Tanzania

characteristics	**Age of women**			
	15-24	**25-34**	**35-49**	**15-49**
Women's level of education				
No Education	1.071	3.995	6.633	4.567
Primary incomplete	0.584	3.876	6.693	3.159
Primary complete	0.805	3.201	5.334	2.289
Secondary +	0.392	2.425	4.804	1.779

Source: TDHS as cited by Ngalinda (1998)

The reason sometimes stated to be associated with high fertility in sub- Saharan Africa is large desired number of children. Some writers have suggested that African women prompt to invoke the will of God when they say their desired

number of children (Caldwell and Caldwell, 1987). This implies that a woman will have as many children as she is biologically capable to bear. For the case of Tanzania, the 1991-92 TDHS showed that only 14 % of women gave a non – numeric response such as “up to God” as many as possible”. The proportion for 1994 TKPS was 7%, the 1996 TDHS was 8 % and it was 3% in 1999 TRCHS. It seems therefore that the proportion of women in Tanzania giving a non- numerical response is low and it is declining. However, on the average, Tanzanian women would ideally like to have five children (NBS and Macro International Inc., 2000). This indicates that large family norm is practiced in Tanzania and is likely to influence actual fertility levels.

Another recent factor affecting fertility is economic hardship. A number of authors have invoked economic hardship as contributing to fertility decline in other sub-Saharan African countries (Rutenberg and Diamond, 1993 as cited by Ngalinda 1998). It is possible that economic hardship was important in initiating Tanzania’s fertility decline. Tanzanians experienced economic difficulties in 1970s and 1980s. Already feeling the pinch of the hike in oil prices in the mid -1970s, the economy was subjected to further strain in 1978 by the Tanzania- Uganda war, which cost about US$ 500 million, and disrupted trade. Foreign aid (especially from the World Bank and International Monetary Fund) was frozen. Given that around 80% of the government’s budget depended on the foreign aid, the import of many goods became impossible, and the shops were empty. It is widely believed in the country that economic hardship resulted in couples attempting to postpone or prevent further child bearing, especially at parities above three or four. It is possible that economic difficulties have also contributed to the rising age at marriage.

Caldwell (1997) argues that high fertility is economically rational in traditional African economies where land is held by the lineages and increasing numbers provide the best form of investment available to control the land and its products. The tendency of most young people to take non-agricultural jobs, not only because of modernization, but also because of reduction in the size of land holding with time due to scarcity of land, would appear to contradict this argument. For instance, the increasing scarcity of land in Northern Tanzania meant that landholding were broken down so that most sons could inherit land; in consequence land litigation among kinsmen increased, and the value of land in the highlands rose by 700 percent (Maro, 1974). However, Caldwell (1977) makes the point that even when children take jobs in non-agricultural sectors, the family ties lead them to remit money back to their families. Indeed, having many children increases the chance that one will do well in the non-agricultural sectors and help keep the family.

The cultural set up of the family structure which gives husbands the power of reproductive decision making, whilst placing most of the economic burden for raising children on mothers (Caldwell and Caldwell,1987), together with responsibility for agricultural production (Boserup, 1985 as cited by Ngalinda, 1998) have been outlined as the major factors influencing high fertility in sub-Saharan Africa. The argument is that, since husbands receive the advantages of status and prestige from paternity as heads of households, whilst not to bear any economic burdens, they are encouraged to opt for large families. It can be concluded therefore that both the family structure and its consequences for power and decision making and the fact that children provide old-age security for their

parents are the major socio-cultural factors causing high fertility in sub-Saharan Africa. However, the magnitude of these factors and how they change with time in a specific setting is not easily quantified.

2.4.3 Research gaps

Unfortunately, nationally representative studies on socio-cultural determinants are inadequate. This problem may be quite serious because fertility levels are increasing due to socio-cultural determinants as this study shows. The studies so far conducted explain about direct determinants of fertility or proximate determinants of fertility.

Issues like sex preference, value of children, status of women and religiosity have strong effect on the status of fertility in Tanzania. Lack of adequate information on these socio-cultural factors of fertility makes other studies lack references.

CHAPTER THREE

METHODOLOGY

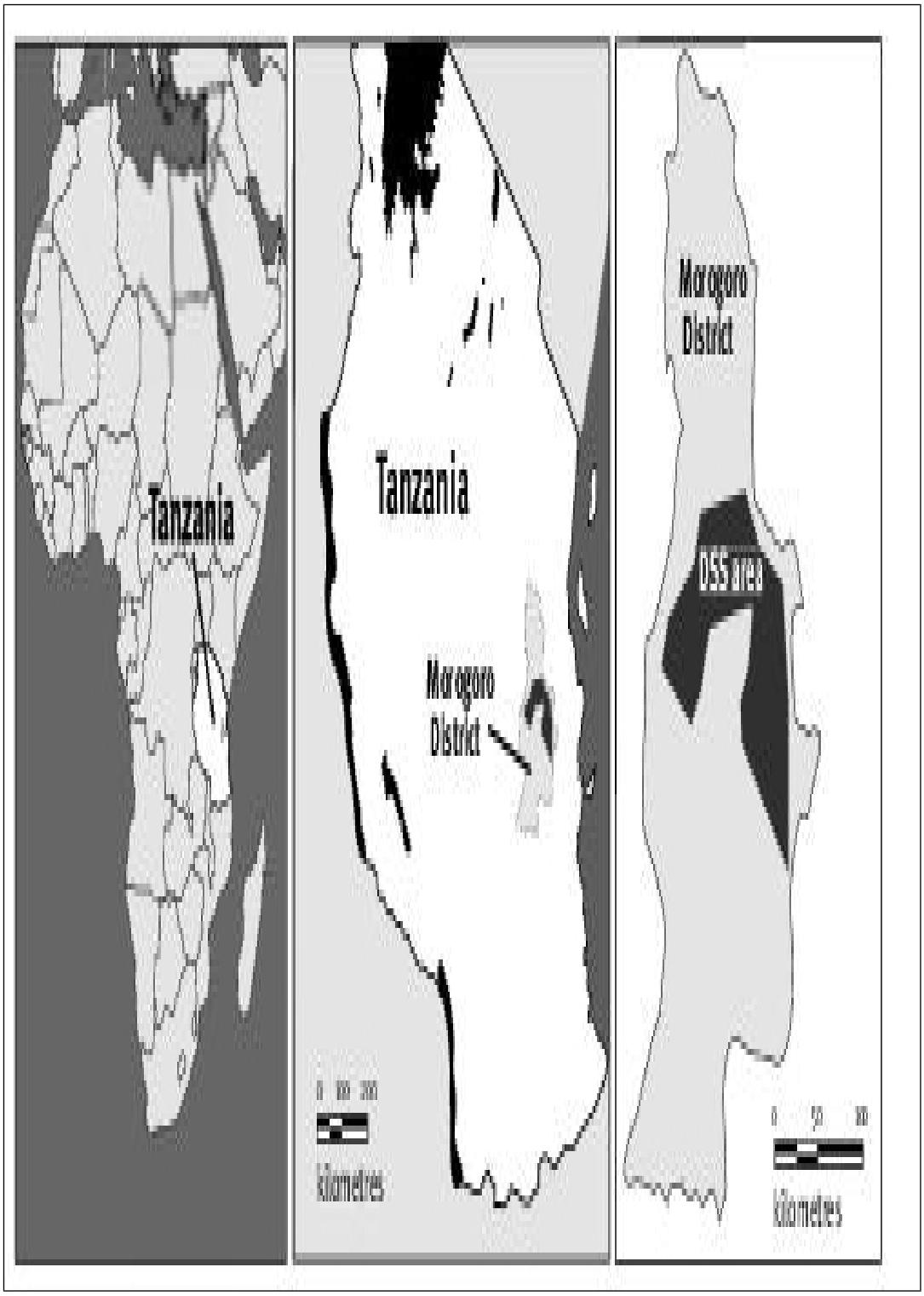
3.1 Overview

The previous chapter has reviewed related literature on the concepts of fertility, levels and trends of fertility globally, in sub- Saharan Africa and Tanzania. It has also reviewed the status of research on socio-cultural determinants of fertility as well as the data gaps that need to be filled. This chapter presents the research methodology used for this study. It shows the study area and the target population, nature of data collection, the type of data collected and the sampling methods used when selecting samples. It also describes the methods used in analysing the data collected.

3.2 Description of the study area and justification for its selection

3.2.1 Geographical description of study area

The research was conducted in Morogoro District in Morogoro Region which is about 180 kilometers from Dar es Salaam. The area has a mixed topography which includes mountains and plains. It covers an area of 70 799 sq km and population density of twenty five persons per kilometer square (URT, 2002). The district lies between latitudes 6.60 and 7. 295’S and longitudes 37.35 and 38.30’E. The area covers a wide area including the lowlands and slopes of the Uluguru Mountain range. The most isolated villages (Kidunda and Usungura) are close to the Selous Game Reserve (IDRC, 1999) Morogoro District is bordered by Pwani Region to the East, to the South by Morogoro Urban and to the West by Mvomero District. (Fig. 3).



Source: IDRC, 1999

Figure 3: Location of the Morogoro District, Tanzania

3.2.3 Population characteristics of the Morogoro District

The area has a population of 263 920 URT (2002) and an annual growth rate of 3.6 (IDRC, 1999). The house hold size average is 4.7 URT (2002). A household is defined as “people eating from the same cooking pot”. The area is generally poor, rural and among the 50% deprived regions in Tanzania, according to the poverty and welfare indicators for 1999 of the Vice President’s Office.

3.2.4 Socio-cultural aspects

The main ethnic groups are the Luguru, Sagara and Pogoro. The population participating in surveillance, however, comprised a wide mixture of ethnic groups. The religious groups in the area are Muslims (57%), (Christians 41%) and others (2%). Indigenous languages are commonly spoken in the villages but the national language Kiswahili is widely understood and spoken (IDRC, 1999).

3.2.5 Socio-economic aspects

The main occupation of all ages in the area is farming, including 45.2% of males and 52.7% of females. The proportion of girls attending schools is slightly higher than that of boys for all ages up to 14 years. The proportion of people from age 15 stating that they had no formal education is 65% for women but only 35% for men (IDRC, 1999) According to IDRC (1999) about 40% of the households in the Morogoro District use tap water (34.8% public tap, 2.7% neighbour’s tap, and 3.2% own tap; 32.3%, river or rain water; and 26.9%, wells. More than 90% use pit latrines. Transportation in the district is mainly by road. The roads from Dar es

Salaam to Dodoma and Iringa pass through the district. Most of other roads are unsealed and difficult to travel along during the rainy season.

3.2.6 Justification for selection of Morogoro District

Morogoro District was selected for this study because the district has high fertility rate of 4.8 close to that of the national level which is 5.4 (PRB, 2007). Most of social – cultural determinants are unique because of their locality specific.

3.3 Research design

The design used is cross-sectional survey for collection of data for this study. This design is used on the basis that, it allows collection of data on different groups of respondents at one time. According to IDRC (2003), the method can be used for descriptive study as well as for determination of relationships between variables. The design also was considered to be favorable because of time and limit resources available for data collection.

3.4 Population and sampling procedures

The target population of the study was women aged 15 and above years in Morogoro District.

3.4.1 Sample size

Sample size was 110 respondents of the reproductive age of 15-49 from two selected wards and each ward provided one village and each village provided 55 respondents. The sample constituted different ethnic groups i.e. different marital status, religion and different tribes.

3.4.2 Sampling methods

Simple random sampling was employed to select sample for this study (IDRC, 2003). In Morogro Region, one district was purposely selected. The wards selected in Morogoro District included Mikese and Mkambarani. From Mikese ward Fue village was randomly selected while in Mkambarani, Mkono wa Mara was randomly selected. Each village provided 55 respondents. Steps used in sampling are presented

in Fig. 4.

3.5 Data collection and instrumentation

3.5.1 Primary data collection

A structured questionnaire with open ended and closed ended questions was developed and administered to the selected household respondents for collection of primary data. Focused group discussions were also conducted and a total of four FGDs were conducted in both wards of Mikese and Mkambarani involving 48 participants targeting rural women. FGDs were made in the open space. The researcher was the facilitator of discussion assisted by one assistant researcher. The FGDs were guided by focused topics including attitude towards status of women, value of children, religiosity and the sex preference. The tools used during data collection are in appendix ii to v.

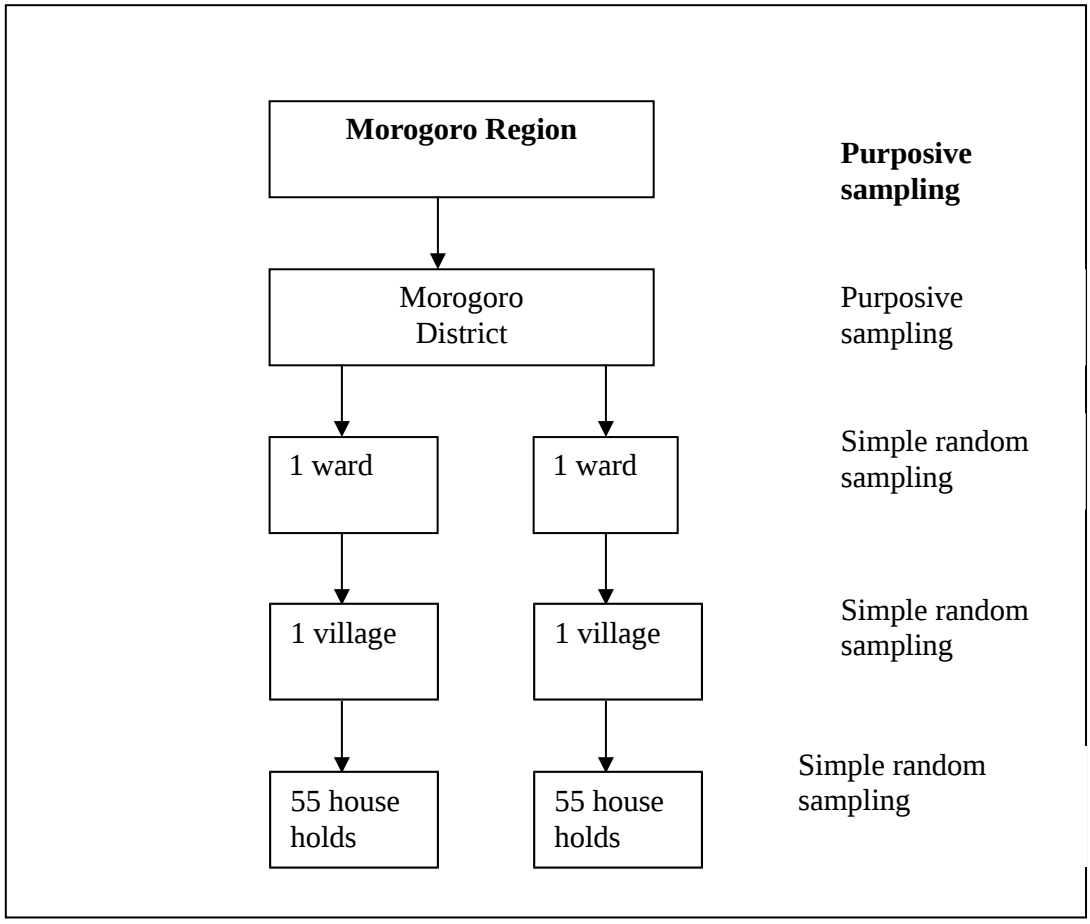


Figure 4: Schematic presentation of the sampling schedule

3.5.2 Secondary data collection

Secondary data of this study were obtained from population census reports and National Population Policy. Other information were obtained from the internet sources and from Demographic Training Unit at the University of Dar es Salaam.

3.6 Data management procedures

3.6.1 Data processing

The data was checked for completeness and edited in the field by the researcher. The data was then coded, entered, verified and cleaned before analysis. Data was processed at SUA PC Laboratory using the Statistical Package for Social Sciences

(SPSS) software. The researcher did all the coding, data entry, cleaning and editing of the data.

3.6.2 Data analysis

3.6.2.1 Quantitative data analysis

The analysis of quantitative data was done by employing descriptive statistics to obtain frequencies and percentages, histograms and statistical means. Frequency distribution, which is important for drawing frequency distribution tables and graphs, was calculated. Cross tabulation were used to test association between variables, and to qualify associations existing between different variables and socio-cultural determinants of fertility. Cross tabulation is both a powerful way of communicating information and the commonest form of data presentation (Casley and Kumar, 1998).

3.6.2 Qualitative data analysis

Qualitative data collected was subjected to content analysis and in many cases respondents' actual words have been reported. Qualitative data results are reported concurrently with quantitative data, that is, are used to support results obtained from the former.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Overview

The previous chapter has discussed the methods and procedures used to collect and analyse data for this study. This chapter presents the results and discussion of the findings. The first section of this chapter presents the overview and the general socio-demographic characteristics and socio-economic characteristics of the respondents are presented in second section. The subsequent sections of this chapter present the results of the study based on the objectives. Where as section three presents the results on the estimate of the number of children born per woman (fertility), section four presents the results on how sex preference and family composition affect fertility, section five shows the determination on how low status of women affects fertility, section six presents the linkage on the value of children to fertility, section seven shows the association of fertility levels in the area of study and religiosity.

4.2 Background characteristics of respondents

The background characteristics of respondents include demographic information of the respondents such as age, and marital status, while socio-economic information include education level of respondents, religion, occupation and, ethnicity. These parameters were used to describe the sample population and are summarized in Tables 6 and 7.

4.2.1 Demographic characteristics

According to Table 6 most of the respondents fall in the age group 25-29. The minimum age was 15 and the maximum age was 49 years these represent 33.9% of the respondents. The mean age was 28.6 years this is the young and active group of reproduction whereby reproductive age is between 15-49 years (Bongaarts, 1978) while age group 44 and above is the age at which some of the women attain (reach) menopause stage. In terms of distribution data in Table 7 reveal that there are surprisingly fewer women in age groups 35-39 and 40-49. This can be due to age data misreporting of respondents. URT (2004) discovered that some respondents have the tendency of age data misreporting for some people do prefer certain numbers for example zero, five, six, seven and others do prefer even or odd numbers. Therefore, due to this certain age group might have large number compared to another group.

In terms of marital status majority of respondents (65.5%) are married. The results from Table 6 support the statement which says that rural youths are more likely to be married than those in the urban areas probably because in the rural areas traditions and norms towards marriage are stronger than in the urban areas (Mwageni, 1996).

4.2.2 Socio-economic characteristics of respondents

4.2.2.1 Education level of respondents

Data in Table 7 indicate that majority of respondents (42.7%) did not go to school at all; one third completed their primary education and only 2.7% attained secondary education. When we put together those with incomplete education with

those with no education at all it is slightly two thirds with low level of education. The reasons on why the level of education is low in the area of study are as explained in Table 7. Most of the respondents did not go to school others did not complete primary education because of marriage (45.9%). Not only marriages but also premarital pregnancies are among the reasons that led them not to complete their primary education. It is therefore evident that out of the women who enrolled in primary school one third have completed seven years of schooling but most of them do not reach secondary school.

Table 6: Demographic characteristics of respondents (%)

Category (N=110)	**Percent**
Age	
15-19	10.0
20-24	11.7
25-29	33..9
30-34	10.8
35-39	5.4
40-44	7.2
45-49	20..9
Mean age	28..9*
Marital status	
Married	65.5
Single	12.0
Living together	8.2
Separated	8.2
Widowed	6.4
Divorced	0.9

*** Mean age of respondents is an exact value not percent**

4.2.2.2 Religion of respondents

As it is indicated in Table 7 more than three quarters are Muslims (78.2%) the remaining quarter represents Roman Catholics and other Christians. This shows that the area is predominantly occupied by the Muslims. The religion of

respondents was asked in order to associate religion and fertility because some like Catholics are conservative on the use of unnatural birth controls such as condoms and pills while on the side of the Muslims they are trying to protect their daughters from premarital pregnancy by encouraging early marriages.

4.2.3 Ethnic group of respondents

The area is predominantly occupied by Luguru. The Luguru are more than half (53.6%) of the respondents who where interviewed in the area. These are followed by Zigua (14.5%) and Kwere (13.6%).

4.2.4 Occupation of respondents

Occupation wise many of the respondents (41.8%) are house wives largely concerned with reproductive activities like taking care of the family, fetching water, cleaning the house and feeding their babies. The remaining part are engaged in activities such of selling food along the road, selling of fruits and vegetables or farm activities.

4.3 Determining fertility status

The aim of this sub – section of the study is to provide an estimate of fertility. Fertility was estimated at two levels, namely as ASFR, TFR and MNCEB average number of children, based on birth history of the respondents. All females age 15-49 years were asked to state the number of children they had ever given birth to by sex of the children and by whether children were still living at home, living elsewhere, or had died. Another question, which was asked to females aged 15 – 49 years that would be used to derive fertility indices, was about the number of children born alive to them in the last 12 months. The answers to the first set of

questions give information on lifetime fertility, and those to the second set help us to determine current fertility.

Table 7: Socio –economic characteristics of respondents (%)

Category (N=110)	Percent
Education level	
None	42.7
Complete primary	30.0
Incomplete primary	24.6
Secondary education	2.7
If not attended or incomplete primary *	
Marriage	45.9
Pregnancy	21.7
Poverty	16.2
Other	16.2
Religion	
Muslims	78.2
Other Christians	11.8
Roman Catholic	10.0
Ethnic group	
Luguru	53.6
Other	18.2
Zigua	14.5
Kwere	13.6
Occupation	
House wives	41.8
Farming	20.9
Business	20.9
Other	14.5

*** The sample is 74**

4.3.1 Total fertility rate (TFR)

TFR is calculated using Age-specific fertility rates (ASFR) is expressed as the number of births per thousand women in the age group and represents a valuable measure for assessing the current age pattern of childbearing. TFR is defined in terms of the number of live births during a specified period to women in the

particular age group divided by the number of woman years lived in that age group during the specified period.

The total TFR is defined as the total number of births a woman would have by the end of her childbearing period if she were to pass through those years bearing children at the currently observed age-specific fertility rates. The TFR is obtained by summing the age-specific fertility rates and multiplying by five.

Formula for the estimation of TFR used as it is shown below:

$$ASFR = \frac{\text{Births to women in age group a}}{\text{Female population in age group a}} \times 1000$$

$$TFR = 5\Sigma fa$$

That is; the sum of ASFR * 5

Where fa is ASFR of women age group (a)

ASFR show low contribution of fertility to women in ages 15-19 years; Fig. 6 shows that the peak is in women aged 20-29 years. The peak starts to decelerate at 30-49 years. But the TFR in the area of study using ASFR is 6.1. The ASFR and TFR in the study area are presented in Table 8 and. Low fertility in age group 30-34 is probably due to misreporting.

Table 8: Total fertility rate

Age group	Number of women	Births in past 12 Months	ASFR
15-19	11	1	0.091
20-24	13	4	0.308
25-29	26	8	0.308
30-34	12	2	0.167
35-39	17	3	0.176
40-44	8	1	0.125

45-49	23	1	0.043
Total	**110**	**20**	**1.218**

The sum of ASFR is 1.218

TFR = 1.218 * 5 = 6.1

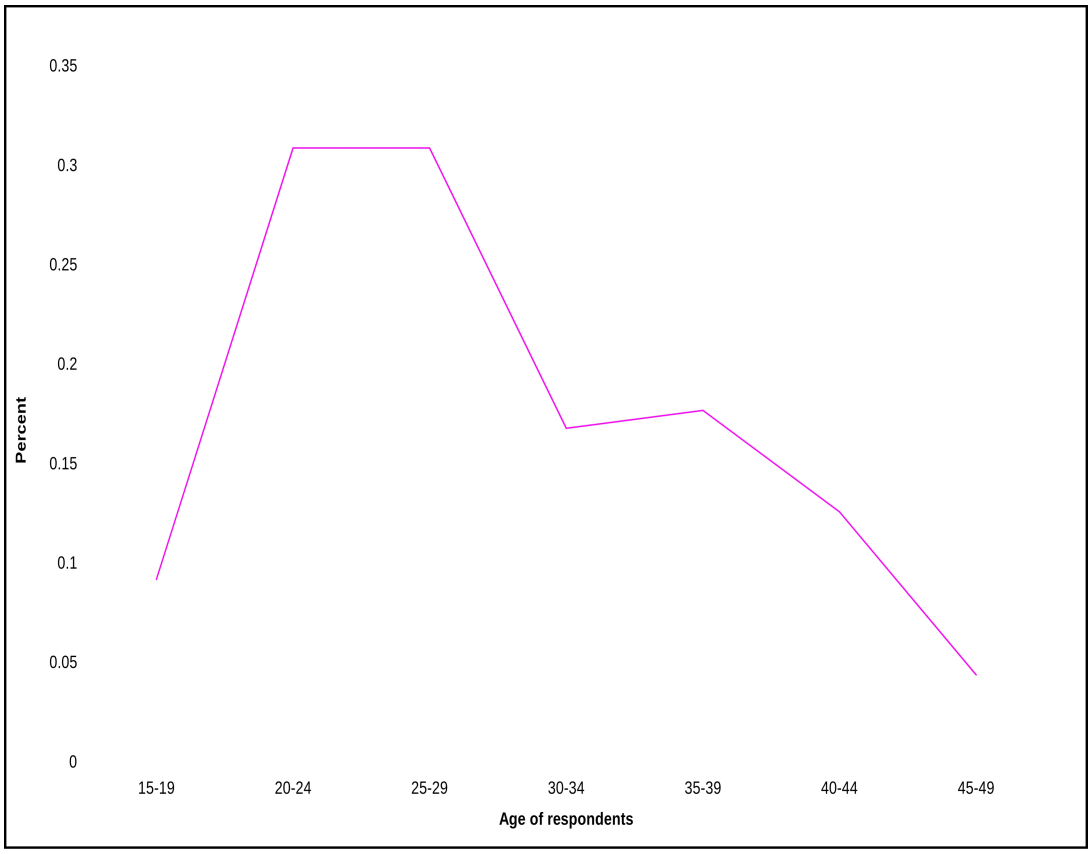


Figure 5: ASFR by age

4.3.2 Mean number of children ever born (MNCEB)

Estimations on the number of children ever born per woman were done by grouping age of respondents into five years intervals. The MNCEB by each age group in the area of study is shown in Table 9. The results in Table 9 reveal further that the mean number of children ever born increases monotonically with age as expected, even at older ages where memory lapse is expected to be higher. As years

increase MNCEB becomes higher. The MNCEB from the time of reproduction to the end of reproductive age is 8.0. Therefore, number of children varies significantly by age.

Table 9: Mean number of children ever born/MNCEB

Age group	Number of women	Number of births	MNCEB
15-19	11	24	2.2
20-24	13	33	2.5
25-29	26	75	2.9
30-34	12	37	3.1
35-39	17	79	4.6
40-44	8	62	7.8
45-49	23	185	8.0
Total	**110**	**495**	

4.3.3 Average number of children per woman

The average number of children born per woman at the time of survey was 4.5. This was obtained by dividing the total number of children born to the number of women. The total number of children born per woman was used to compare with various Socio-cultural factors as presented in the subsequent sub-sections. (Table 10).

Table 10: Average number of children

Number of children	Number of women	Total Number of children
1	**7**	**7**
2	**10**	**20**
3	**22**	**66**

4	**14**	**56**
5	**25**	**125**
6	**26**	**156**
7	**7**	**49**
8	**2**	**16**
Total	**110**	**495**

Average number of children born per woman 4.5

4.4 Effect of sex preference on fertility

4.4.1 Sex composition

Sex preference was measured by reading a series of questions on various family compositions they would like to have. The composition included more number of boys than girls, and vice versa, neutral choices (equal number of children), those who did not respond preferred not to have children. Data in Table 11 show how the respondents who chose the combination of sex preference.

In order to determine the general sex preference of the respondents further analysis of data presented in Table 11 was done. Responses given in table 12 were combined into five categories as follows: those who preferred boys, those who preferred girls, those who preferred same number of boys and girls, those who preferred not to have children and those who did not respond. The summary is presented in Table 12.

As it is indicated in Table 12 and Fig. 7 within the area of study there is higher boy preference than preference for girls. Half (50.0%) of the sample preferred boys to girls, one third (30.0%) did not respond to any of the alternatives while others

made neutral decision on sex preference, they make a quarter (25.0%) of the respondents. According to these data we can judge that the area is highly dominated by boys preference to girls. Rural families with no sons are looked down upon. Sons are expected to carry on the family lineage, increase the reputation of the family, and protect the family's interests.

Table 11: Sex preference

Sex preference (N=110)	**Percent**
Category	
If you could have only 3 children which composition would you choose?	
3 girls, 0 boys	10.8
I boy and 2 girls	11.7
2 boys, 0 girls	27.0
3 boys, 1 girl	41.4
NR	8.1
2 boys and 1 girl	56.7
3 girls, 0 boys	30.6
NR	11.7
2 boys 1 girl	54.9
1 girl 2 boys	31.5
NR	12.6
Not to have children	1.82
3 boys, 0 girls	61.2
3 girls, 0 boys	25.2
NR	10.8
3 boys, girls	54
3 girls, 0 boys	31.5
NR	13.5
3 boys, 0 girls	53.1
2 girls and 1 boy	27.9
NR	18.0
In case you could only choose one of the following combinations of children, which one could be your choice?	
No children	4.5
1 boy and 2 girls	33.3
3 boys and 3 girls	10.8
NR	50.4
Suppose that you could only choose between having either no children or having equal number of girls and boys, which one would you choose?	
No children	17.1

2 girls and 2 boys	33.3
NR	47.7
1 girl and 1 boy	20.7
3 girls and 3 boys	27
NR	51.3
No children	9.0
4 girls and 4 boys	30.6
NR	59.4

Mean number of children = 4.5

Data in Table 13 present the results of the findings on the effect of sex preference on fertility. The results explain that the respondents with boy preference have strong effect on fertility in the area of study. Women who prefer boys have higher MNCB than those with girls preference or with neutral preference. Boys' preference women have about six children higher than girls preference (four children) while those with neutral preference have about three children. Women who preferred boys to girls have higher number of children than their counterparts who preferred girls (and those who preferred neutral sex of children) due to the need of more sons. Fig. 8 shows the relationship between sex preference and MNCB per woman.

Table 12: Summary for the sex preference of respondents

Sex preference (N=110)	Percent
Who preferred boys to girls	50.0
Who did not respond to any of the alternatives	30.9
Who preferred girls to boys	25.5
Who preferred equal number of children	22.7
Who preferred not to have children	8.2

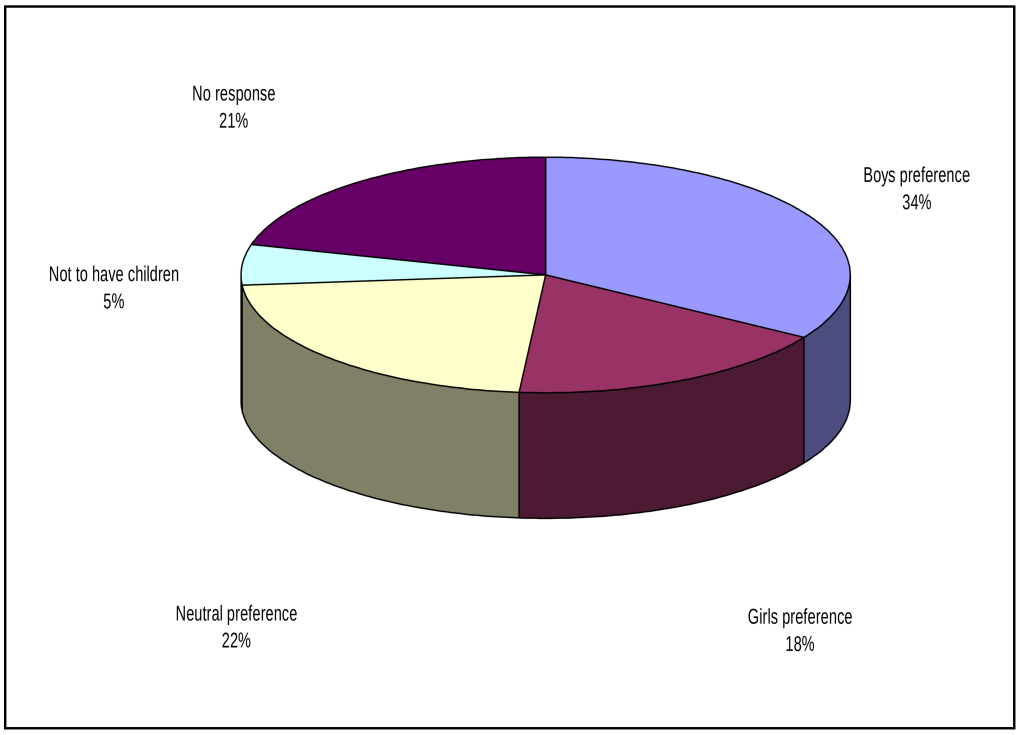


Figure 6: Family composition and sex preference

Table 13: Summary for the sex preference and MNCB

Sex preference (N=110)	MNCB	F-value	P
Who preferred boys to girls	5.9		
Who preferred girls to boys	3.6		
Who preferred not to have children	3.3	32.001	0.000
Who did not respond to any of the alternatives	3.2		
Who preferred equal number of children	2.9		

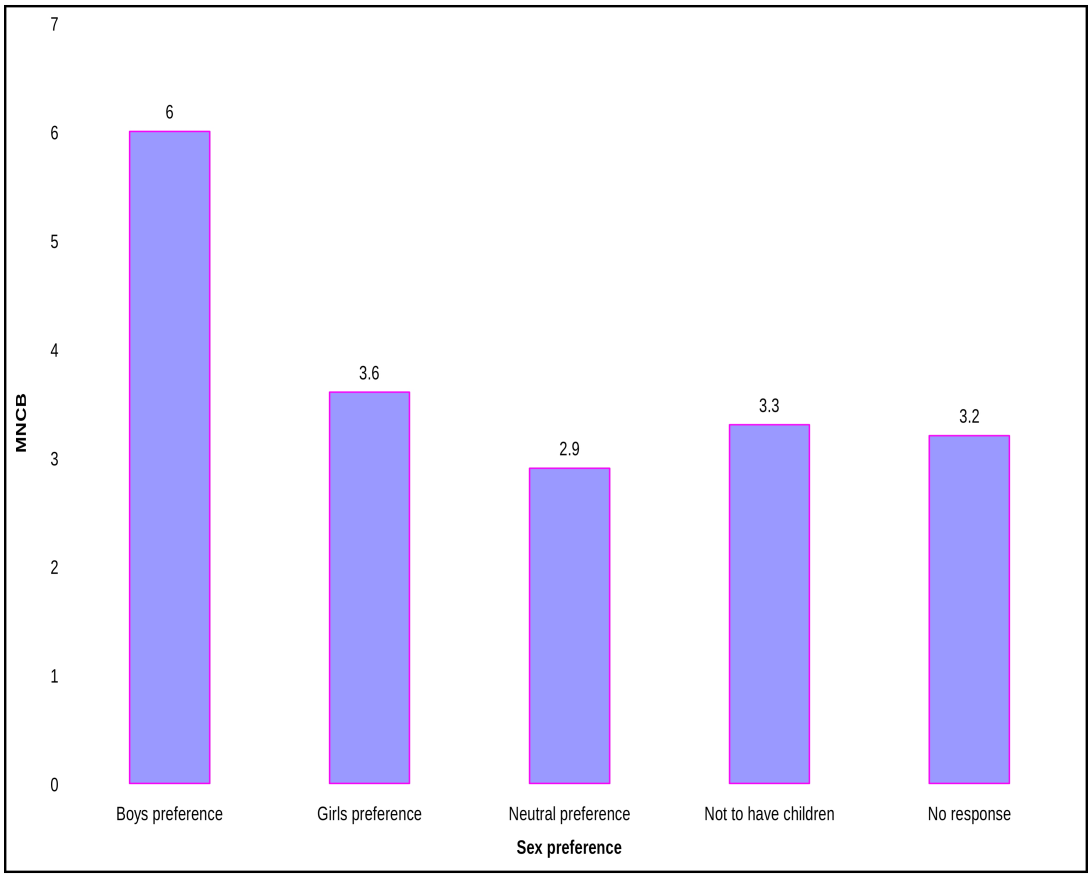


Figure 7: Relationship between sex preference and fertility

4.5 Status of women and fertility

To ascertain the status of women in making decisions for the family, respondents were asked whether they have ever discussed with their husbands or partners during the past twelve months about reproduction aspects, economic or production matters and about social aspects. The summary of these findings is presented in Table 14.

Then, the single responses on whether these women have ever discussed with their husbands or partners in family decision making process were combined to form an index of status of women.

Data in Table 14 indicate that more than half of the women (54.9%) in the area of study had ever discussed with their husbands or partners in the past 12 months in making decision about business for the family, least (16.2%) of them had ever These results show that women within this area are given little chance of making decision in the family not only in reproduction attributes but also in production, reproduction matters also in social aspects.

Table 14: Husband and partner discussions on family matters (%)

Items discussed (N=110)	Percent
Women who have ever discussed with partners in the past 12 months	
Reproduction matters	
Family planning	36.9
To have a baby or not	33.3
Space between one child and another	25.2
Number of children	24.3
Sex of the baby	16.2
Production matters	
Business for the family	54.9
Income distribution for the family	22.6
Total year income obtained in the family	22.6
Social Matters	
Sending children to school	29.9
Burial activities, sickness in the community	23.5
Buying things for the family	21.1

4.5.1 Index of status of women

For each selected item/response, ‘1’ was given for ‘yes’ response and ‘0’ for ‘no’ response or any other response (Table 15). An index with extreme low value of

zero and extreme high value of 11 was obtained. Then the scores were established to measure the status of women into high, moderate or low status (of women).

The ranges used to get the status of women were; zero to five were known as low status category, those who scored six were considered as moderate or neutral category, women with scores ranging from seven to eleven were at high status category. The third category shows that they have a high chance of discussing with their husbands/partners in making decisions in the family.

Results in Table 16 and Fig.8 show the values/scores obtained to measure status of women. The cumulative scale was made so as to obtain ranges which made categories in order to know the status of women within the area of study. About 71.6% of the respondents scored between zero to five and they were put into low category and being considered to have low status, those who scored six were considered to have neutral attitude towards the status of women and be put into moderate category; they make 10.9% of the respondents while 17.6% of the respondents were placed into high category for they scored between seven to eleven.

Table 15: Items for the status of women

Item discussed (N=110)	**Value**

Women who have ever discussed with partners in the past 12 months on		
Reproduction matters		
Family planning	Yes =1	No =0
To have a baby or not	Yes =1	No =0
Sex of the baby	Yes =1	No =0
Number of children	Yes =1	No =0
Space between one child and another	Yes =1	No =0
Production matters		
Business for the family	Yes =1	No =0
Total year income obtained in the family	Yes =1	No =0
Income distribution for the family	Yes =1	No =0
Social Matters		
Sending children to school	Yes =1	No =0
Burial sickness funerals in the community	Yes =1	No =0
Buying things for the family	Yes =1	No =0

Table 16: Status of women

Item	**Percent**
High	17.6
Moderate	10.8
Low	71.6

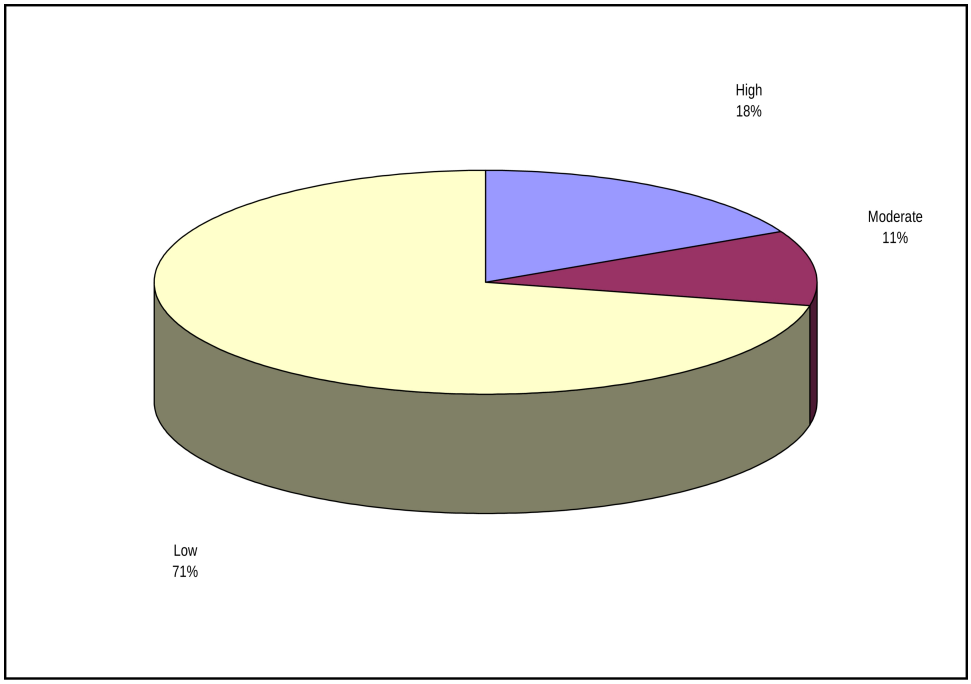


Figure 8: Status of women

As presented in Table 17 and Fig. 9 the lower the status of women the higher the fertility. Women with low status have about three times more children than those in

the high status category. This shows that there is inverse relationship between status of women and fertility. Thus, status of women has a negative impact on fertility.

Table 17: Relationship between status of women and MNCB

Category	MNCB	F - value	P
Low	5.8		
Moderate	3.3	29.9	0.000
High	2.3		
Mean number of children	**4.5**		

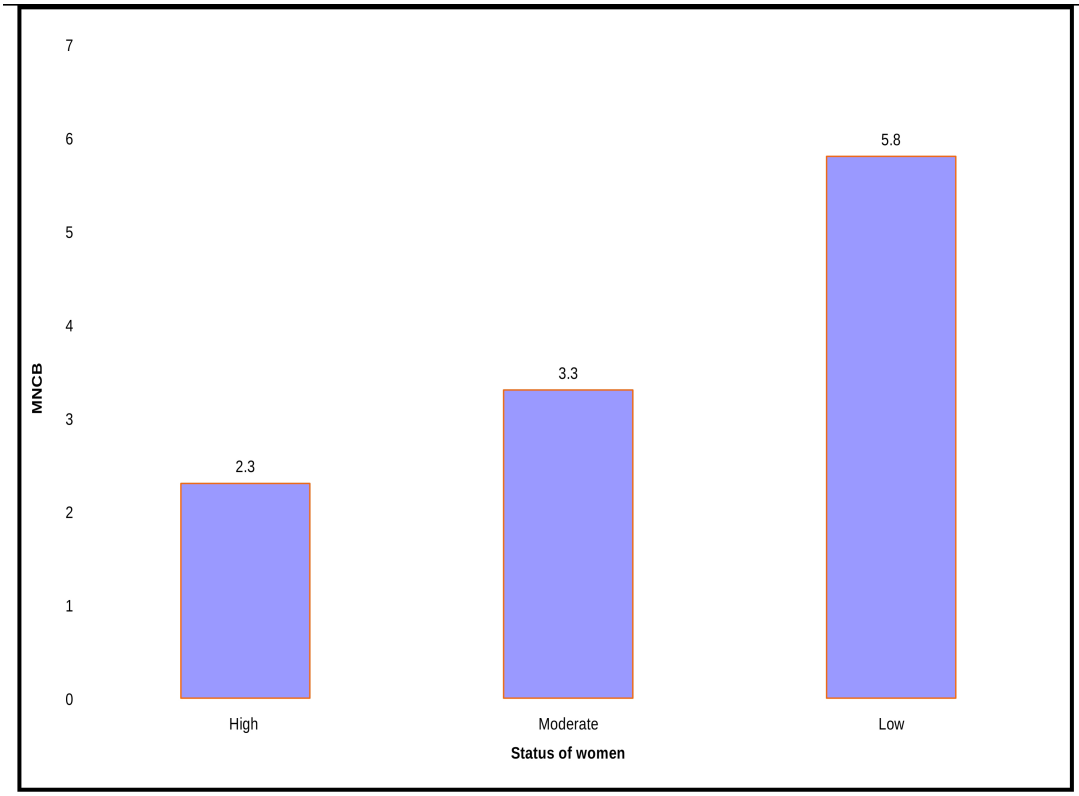


Figure 9: Relationship between status of women and number of children

In FGDs most of the participants in the area of study reported that they do not have the habit of discussing with their husbands or partners about either reproductive issue, economic or social matters in the family. When asked by the researcher what could be the reasons, majority said that due to the low levels of education they have their husbands do not consider them as important creatures to discuss with or in

making decisions of the family. They continued to say that their husbands or partners are not ready to discuss with them about anything in the family.

"What! Asking my husband on family planning, sex of the baby, whether to add a baby in the family or not, wee! You will create quarrel and no one is going to dissolve it. When you try to explain to him that the number of babies we have is enough because lie is difficult now days compared to our times he says go and pack your things. I will take another woman who will obey my rules and principles and regard me as her husband and the head of the house. What do you want to do with the small number of children, you are uneducated you can not go to the office to work, your office is here and I am the boss of this office. Do what I want and not what you want. What is your value, you are nothing here take me as your head.……" (A rural woman aged 40-45).

Another woman said, *".....these men are not like normal people, when you try to talk with them you create a conflict that will reach to the point of no return. I one day tried to tell my husband on the effects of giving birth to many children without an ample time to rest and he replied, ' if your parents could have the habit that you are using to think you would not be under this sun today, you could have been in hell'.*

Most of the participants agreed and said that there is no peace at all if you try to explain this matter. Others do not even try to discuss with their husbands or partners.

"My husband threw my things out when I tried to explain these things to him. I told him that officers at the clinic taught us matters concerning reproductive health, contraception methods and their advantages and disadvantages of each method, you know what? he pulled me out of the house locked the door threw my things and went away without saying a word. He went to the mosque and talked to their elder Sheikh. After some hours they came home furiously and what they told me that day still pains to date. I promised myself not to tell anything to him again. I am tired of giving birth every day but what could I do so that I can escape all the troubles I get." (One rural woman residing at Mikese).

Economic wise still men are rude and selfish. They do not want to share anything with their families especially the wives or their partners. They are selfish. They still consider women as no body; women are given low status in the society. Men dare to hate their wives/partners because they are trying themselves to run businesses for their families. One woman said;

"My husband does not want me to be involved in any of our income matters. He says, a woman's place is at her husband's home and no to follow what the husband is doing. The husband is looking for the money for you to use and not to know the amount or know what he has planned to start. Sit down and take care of the children……"another woman from Fulwe village said, that my husband started business for me. He gave me the initial capital but the trouble began when I asked him to give me money for the family to buy food and school equipments for the children. (One rural woman residing at Fulwe villge).

"He says, 'you have a business so what do you want from me, control your income, I gave you the capital, use your common sense, do not follow my business……' Since my husband gave me capital to start the shop he does not want me to ask him for money for the meals, children and the like. He gets a lot of money by selling vegetables and fruits in Morogoro market but I and my family do not enjoy the money. Soon after the selling he goes straight to the bar with his friends and relatives. Our life here at home is terrible; no help comes from him; it is like hell."

Despite the predominance of the low status of women in the study area, minority are given the chance in the family to make decision and discuss about distribution of income, discuss on the total annual income. One woman said,

"My man is not rude to that extent; he feels my presence in the family hence gives me the chance to discuss with him. He distribute the money we get from selling our crops, some puts on his account, some for me and some on our two kids' account". . (One rural woman residing at Mkono wa Mara villge).

Surprisingly most women are still not given the chance to make decision in the family. Women are not involved in social matters like sending the kids to school, buying things for the family go and be involved in matters like funerals and go and visit the sic, make decision for the sick and where and when to burry the dead if it has occurred and the husband is not around or has already died. Men do believe that a woman can not decide on anything even on marriage arrangements are not allowed to talk. Men are still ruling over women.

“My husband in front of his relatives asked me to sit down when I was trying to protect my child from getting married before she completes the school. He said I have nothing in my head thus I have to take my seat back. ‘You are not allowed to stand and talk.” (One rural woman residing at Mkono wa Mara villge).

4.6 Value of children and fertility

The aim of this subsection of the study is to show the linkage between value of children and fertility. Respondents were asked a series of questions in order to ascertain/ determine their attitude towards value of children. The response to the questions were recorded into a Likert – scale format and they where asked to indicate whether they ‘strongly agree’ ‘agree’ ‘undecided’ ‘disagree’ or ‘strongly disagree’ for each statement asked.. The analysis of the single items is presented in Table 18.

The findings shown in Table 18 of the single statements given by respondents regarding their attitude towards value of children show that majority of the respondents from the area of study strongly agreed with the statement favouring value of children. This is an indication that women do prefer to have many children due to some aspects like survival for the lineage, family prestige, and guarantee of security, help in the house and help during old ages as well as help in doing house works. As indicated earlier, attitude towards value of children is higher in the area of study. Majority strongly agreed on the attitudinal aspects towards value of children. For example 32.7% of them strongly agreed that they prefer many

children because they provide security in the family. Among them 43.6% also strongly agreed on the statement that many children are helpful during old age. Near half of them (46.4 %) strongly agreed with the statement that children are valued for the lineage to survive. More than one third (39.1%) strongly agreed that children are born many because children are used as cheap labour for farm activities and they provide house help. Others (32.7%) supported the statement that children are born many for family prestige. About 42% strongly agreed that it is good to have many children to overcome mortality risks.

Table 18: Value of children and fertility (%)

	Response				
Attitudinal aspect (N=110)	**Strongly agree**	**Agree**	**Undecided**	**Disagree**	**Strongly disagree**
Guarantee of security	32.7	17.3	22.7	7.3	10.9
Help during old age	43.6	12.7	26.4	8.2	9.1
Survival for the lineage	46.4	17.3	21.8	6.4	8.2
Help in the house	39.1	20.9	17.3	8.2	14.5
Many children for prestige	44.5	26.4	17.3	1.8	21.8
Mortality risk	41.8	22.7	19.1	5.5	8.2

Then, the single responses on to whether these women strongly agreed, agreed, undecided, disagreed or strongly disagreed on the statements concerning values of

children were combined to form the scale of value of children. Those who strongly agreed scored five, who agreed scored four, who undecided scored three, who disagreed scored four and who strongly disagreed scored one. The range of scores were six to 30 whereby the lowest score was six and highest was 30. Those who scored 6 to 14 were placed in the low rank and considered to have negative attitude towards value of children. Those with 15 scores were at the moderate rank with neutral attitude towards value of children. Last rank was of those who were at the high position with scores between 16 to 30. They were considered to have positive attitude towards value of children. (Table 20 and Fig.10). Two thirds of respondents (61.0%) scored between 16 to 30, they were placed into high category referred to have positive attitude towards the value of children. More than one fifth had 16 scores and considered to have neutral attitude towards the value of children where as those at the lower rank scored between six to 30. They represented slightly one tenth (11.2%) of the respondents. These are considered to have negative attitude towards the value of children.

Table 19: Scale for the value of children

	Value				
Attitudinal aspect (N = 110)	**Strongly agree**	**Agree**	**Undecided**	**Disagree**	**Strongly disagree**
Guarantee of security	5	4	3	2	1
Help during old age	5	4	3	2	1
Survival or for the lineage	5	4	3	2	1
Help in the house	5	4	3	2	1
Many children for prestige	5	4	3	2	1

Mortality risk	5	4	3	2	1

Table 20: Category for the value of children

Category (N=110)	Percent
High	61.8
Moderate	27.0
Low	11.2

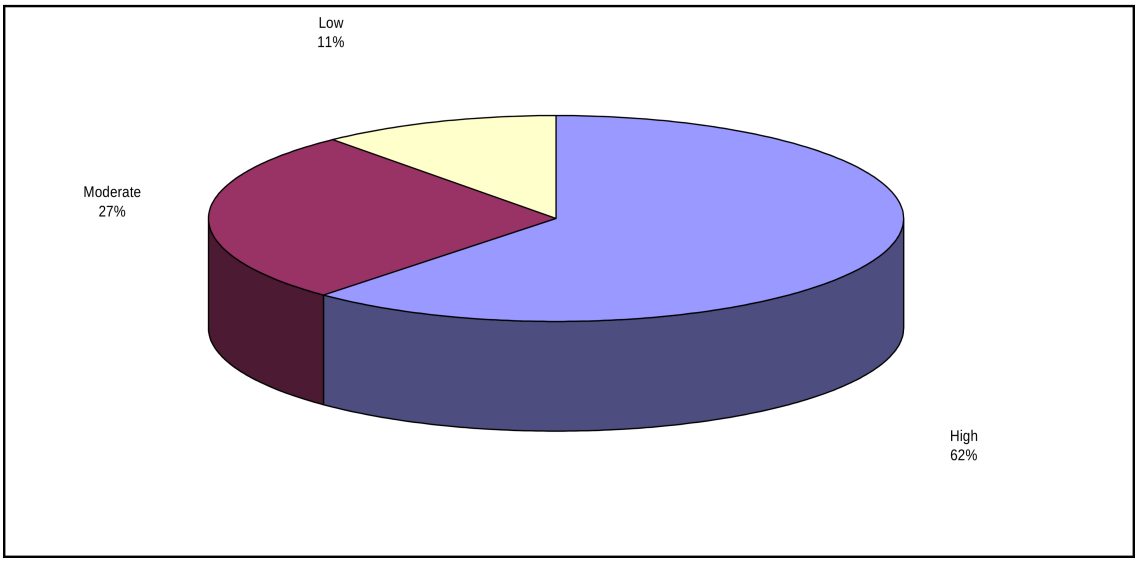


Figure 10: Value of children

Data in Table 21 reveal that there is a strong linkage between value of children and fertility in the area of study. From the table we can see that women with positive attitude towards value of children have three times more children than those with negative attitude towards value of children. This shows that there is a significant relationship between value of children and fertility. That is to say that the value of children has positive effects on fertility. (Fig.11).

Table 21: Relationship between value of children and MNCB

Category (N=110)	MNCB	F-value	P
High	6.4		

Moderate	5.9	44.8	0.000
Low	2.2		
Mean number of children	**4.5**		

In FGDs, participants were asked about their attitude towards value of children, survival for the lineage was found to be the major reason of having many children in the family. Participants in these groups reported to prefer many children for the survival of their lineage.

"In order for my clan to grow we have to maintain the big number of children. We need our lineage to grow, become big and strong. Many children results into a powerful clan," (rural woman aged 35-40 years from Mkono wa Mara village).

"There is no clan with few people, they might be few in the clan because of deaths but not because some people wanted to have few children. We have to protect our lineage from getting loss," (woman aged 40-47 years from Fulwe village).

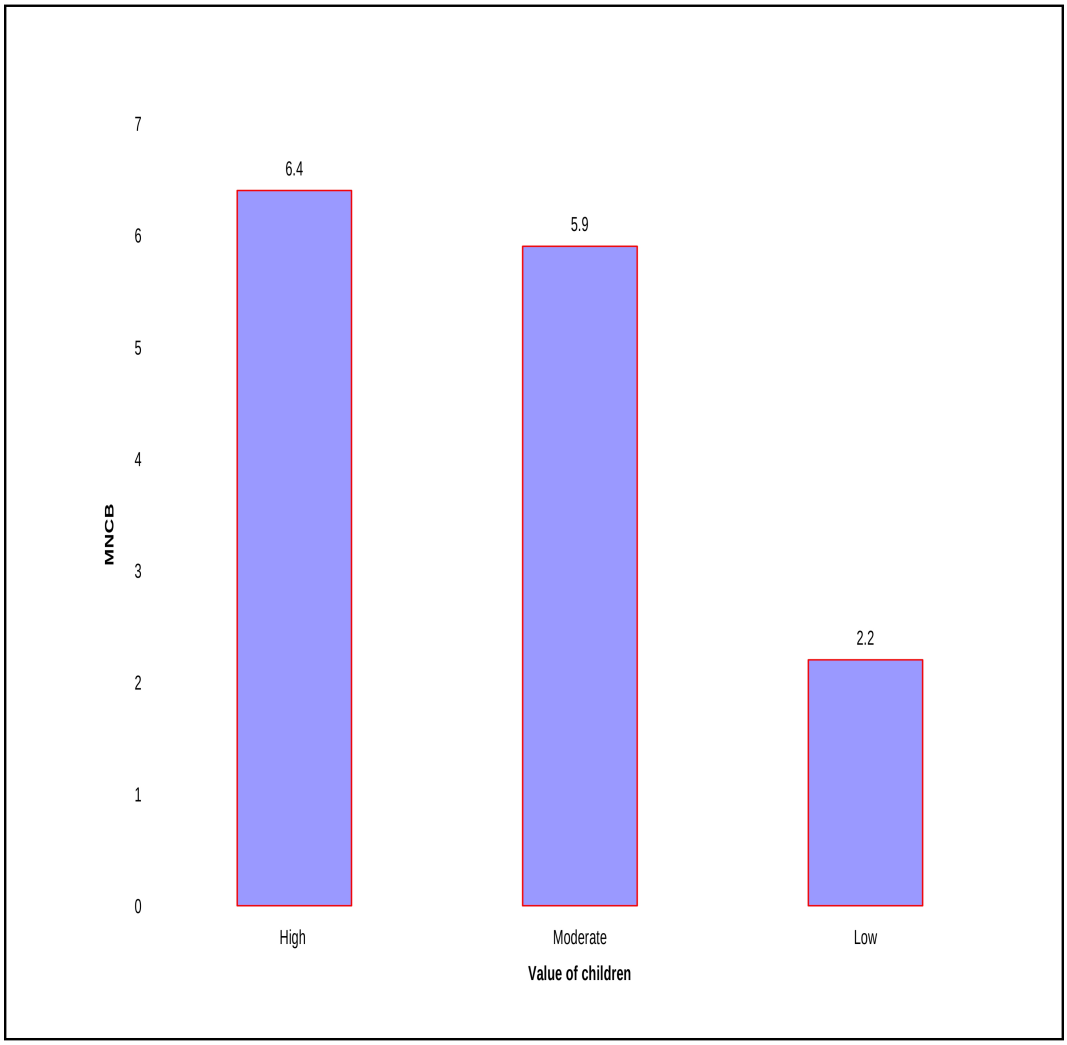


Figure 11: Relationship between value of children and number of children per woman

"My children help me in different farm activities, help in the house especially my only daughter take care of her young sisters and brothers while I am at the farm, she fetches water, collects firewood and do many house works in my absence," (rural woman aged 35 – 40 years from Mkono wa Mara village)

Regardless of life being hard some people still have the tradition of having few children as a shame among others in the traditional societies. Women in the study

area explained this during FGDs. Not only men lye to have many children but also women do like that for the various reasons.

When asked of the factors leading to this they said, children bring honour for the family because your husband will not be looked down upon by the elders or grandparents or other men in the society. Many children strengthen the clan, make the clan strong. They said during the discussion that children are the guarantee for the security. Nearly all participants agreed with the statement which says that children provide the guarantee for the security.

"Children when born pass through different stages they get different diseases others might die on the way before they reach your age. They might get disabilities hence depend on your assistance in doing everything. If some children die others continue to survive. I had seven children but three of them had died and I have remained with four and among those four one has crippled legs. You see my daughter……" (Rural woman 36-40 years from Fulwe village).

Despite the fact that majority agreed that it is good to have many children as they guarantee security for the family, help in the house, ensure survival for the lineage, and help during old age of the parents and many children are born for family prestige. Minority said, you can have many children but unfortunately might die before they grow up. In addition they continued to argue that,

"...you can not judge which children you are going to bear they will be good so that when you ask them to help you in the house they will help you smoothly

without friction." (Rural woman aged 28-32 from Fulwe village). Another woman stood and said that,

"…..Some children are born rude they do not want to work or do anything when told by their parents. Sometime there will be no difference between those with many children and those with no children. Yes it is true that many children are helpful but some times it becomes very difficult to take care of them especially in providing them with basic needs due to the tough life we have now days……." (Young woman 18-23 years from Mkono wa Mara Village).

In addition, (Todaro, 2003) argues that children in poor societies are seen partially as return in the form of both child labour and the provision of financial support for parents.

4.7 Religiosity and fertility

This sub – section determines the association of religiosity with fertility. To determine the association of fertility with religiosity, respondents were asked a series of questions in order to measure their intensity towards religiosity. To get this information, respondents were required to respond spontaneously the mentioned religious activities that are necessary for any religious people to do in his/her life.

The findings of the study reveal that majority of respondents are highly religious. Data in Table 22 show that more than three quarters (76.5%) go to church or mosque, among them 69.4% reported to be going to church or mosque very often;

minority (4.7%) do not go to church or mosque at all while there are others who are either going to church or mosque once or twice a week. These make a total of 21.7%; many of the respondents do some religious activities like giving offering to the poor (54.9%), pay toughies or ten percent (59.4%). More than half of the women have the habit of having self prayers; others have the habit of fasting during the holly month for the Muslims and during lent for Christians (54.9%). The more frequently people attend religious services, the more children they will have, controlling for religious affiliation and other factors. Besides religious participation, religious beliefs also are important. Researchers observe that non-religious persons have a lower marital rate than religious persons. Non-religious women also have a lower rate of first childbearing than religious ones (Pfeiffer and Nowak, 2001).

The answers of religiosity were combined to form an index of religiosity. For each item, ‘1’ was given for ‘yes’ response and ‘0’ for ‘no’ or other response (Table 23). An index with extreme low value of two and high value of sevn was obtained. The ranks were obtained in order to know the extent of these women towards religion. The ranks were made by considering ranges of the scores. Those who scored two to three were classified as less religious; while those who scored four were known to be moderate religious and those who scored five to seven were known to be high religious (Table 24).

Table 22: Religiosity of respondents

Religious attribute (N = 110)	Yes	No
Do you go to church/mosque?	**76.5**	**23.5**
How many times in a week?*		
Once or twice a week	17.5	82.5
Not very often	8.2	91.8
Very often	69.4	30.6
Do you have the habit of having self prayers	54.9	45.1
Do you fast during holy month or lent	54.9	45.1
Do you give offering to the poor	60.9	39.1
Do you give ten % or toughies	59.4	40.6

*** N=85**

Results in Table 24 and Fig. 12 indicate that above two thirds (62.5%) of the respondents scored between five to seven while more than one third (22.2%) scored four while above one tenth of them scored between two and three. Majority of respondents are highly affiliated with religion; they are considered to have positive attitude towards religiosity, while others have neutral/moderate affiliation to religion and the rest were put into “low category”.

Table 23: Index for the religiosity of respondents

Religious attribute (N=110)	**Value**	
Do you go to church/ mosque?	Yes =1	No =0
How many times in a week? *		
Not at all	Yes = 0	No = 1
Do you have the habit of having self prayers?	Yes =1	No =0
Do you fast during holy month or lent?	Yes =1	No =0
Do you give offering to the poor?	Yes =1	No =0
Do you give ten % or toughies?	Yes =1	No =0

Table 24: Religiosity of respondents (%)

Category (N= 110)	**Percent**
High	62.5
Moderate	22.2
Low	15.3

Results in Table 25 and Fig. 13 show that respondents in “high category” have seven children while those with low category show to have fewer children (two children). People who have strong religious beliefs are more likely to have more children than people without such beliefs. Because as I hypothesized that religiosity is significantly related to fertility, results show that fertility differentials among various religious groups may be due partly to the level of religiosity among members of religious groups. Having stronger religious beliefs is expected to have a positive effect on fertility.

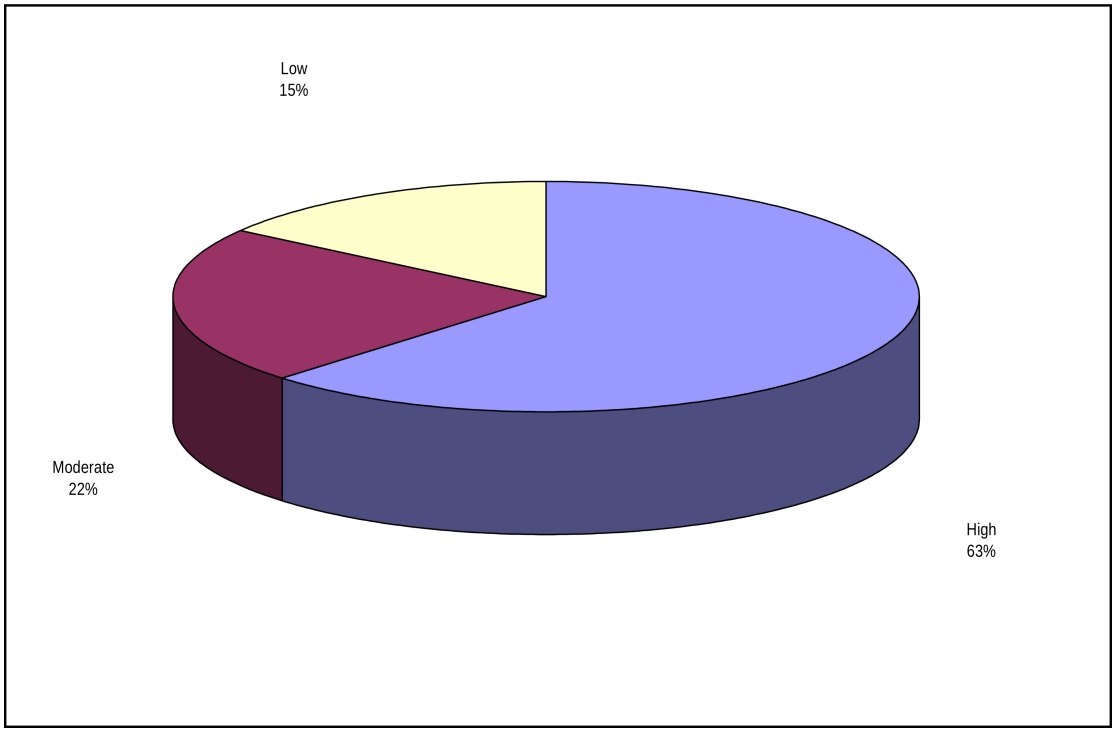


Figure 12: Religiosity of respondents

Table 25: Relationship between category of religiosity and MNCB

Category (N=110)	MNCB	F-value	P
High	6.8		
Moderate	3.4	40.0	0.000
Low	2.1		
Mean number of children	**4.5**		

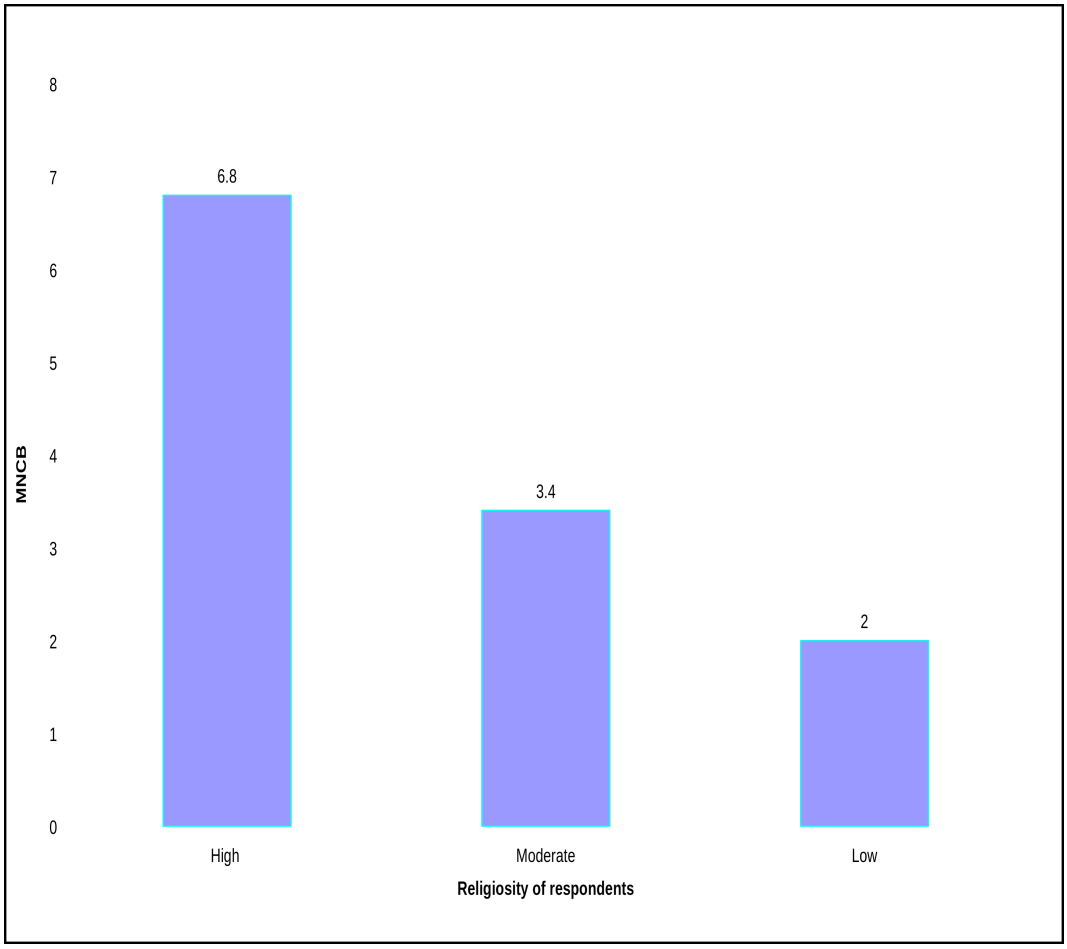


Figure 13: Relationship between number of children born per woman and religiosity

The results in Table 25 and Fig.13 are supported by answers from FGDs that some women due to religious principles it is not easy for them to use birth control

methods. Many women are at high rank. The results show that there is relationship between number of children and religiosity. Many of them are highly religious and their fertility levels are high. To support these results Ohadike (1979) argue that although natural fertility variations are primarily determined by biological process, it might be modified by social accommodation (socio-continuities). These ideologies are comprised of the norms, beliefs and values as well as the practices that are likely to affect positively or negatively the reproductive performance of a given society. It is likely that each cultural group and /or religious group may stress certain aspects in their reproductive institutions. These may form peculiar elements that may serve to explain fertility differentials and levels to a greater or lesser extent from the fertility levels of other cultural groups or religious groups.

About two thirds of participants said that religion makes them afraid of discussing family planning issue. Their religious leaders do not allow them to discuss about these issue because it is sin to stop from giving what God has put in women. They say that it is against God to use contraception as the way of controlling births. Women are afraid of disobeying God. They try natural method of controlling births. As we are aware that religion is among the factors that affect fertility due to early marriages, also religion is among the factor that prohibits people from using contraception. One woman said,

“*Our leader at the mosque used to explain to us that it is immortal going against God Almighty. If you wan tot control births do not dare to use artificial methods*

like injection, pills, condoms and the like" (Woman between 36-40 years from Fulwe village).

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Overview

The previous chapter has shown the findings obtained from the study. This chapter presents a summary of the major findings and conclusions derived from them. Recommendations for policy development and future research are also given.

5.2 Summary of the main findings of the study

5.2.1 Background characteristics of the respondents

5.2.1.1 Demographic characteristics

Majority of respondents were in the 25-29 years. Marital status wise many of them were married (65.5%). Most of the respondents were married probably because in rural areas traditions and norms are strong.

5.2.1.2 Socio-economic characteristics

The majority of the respondents did not attend school due to various reasons they explained during the study which are early marriages, premarital pregnancies, poverty and others. Minority of them attained secondary education and this is represented by (2.7%) and these are Christians and married. Study found that majority of respondents in the area of study was Muslims.

Many respondents are house wives (41.7%). They stay at home; they do not engage themselves in any production activity. Among them there are farmers and others are engaged in business.

5.2.2 Socio-cultural determinants of fertility

5.2.2.1 Number of children born per woman

The findings of this study have shown that fertility is high with TFR of six and MNCEB of eight. On average each woman had 4.5 children at the time of study.

5.2.2.2 Effect of sex preference on fertility

Findings indicate that people within the area of study still prefer to have more boys than girls. Half of the respondents preferred more boys than girls, others preferred equal number of children/neutral preference of children (slightly above one fifth).

Women who preferred boys have higher number of children (six children) than those who preferred girls and those who have preferred to have equal number of children.

5.2.2.3 Status of women

The study shows that, most of the women in the area of study are not given the chance to discuss with their husbands/partners any family matters either reproduction, economic or social matters. The results reveal that women have low status (Fig. 8).

The results of this study show that respondents with low status of women in reproduction matters, production matters and social matters in the family have higher average number of children than those with high status. The results show that there is negative relationship between status of women and fertility.

5.2.2.4 Value of children

Most of the women as shown by the results of the study have positive attitude towards value of children. Many of them agreed to the statements regarding value of children; the findings give us the conclusion that women within the area still have the belief that children are born in big number to cover mortality risks, guarantee of security, help in the house, help during old age and family prestige. All these women showed to have higher number of children; women with negative attitude have lower number of children than those with positive attitude towards value of children.

5.2.2.5 Religiosity

The results show that many of the women are highly religious. Many of them do go to church/mosques often. Others only once or twice a week. Many of them give offerings, ten percent, and toughies to churches or mosques.

Highly religious women have higher number of children (seven children) than the average number of children born per woman (4.5 children) in the area of study due to religious principles and rules kept by their religious leaders. Highly religious women have high number of children, while those with low religious affiliation have few children (two children). Religious principles prevent the women from using family planning methods hence the high number of children.

5.3 Conclusions

The study shows that number of children born per woman increases monotonically with age. Lower ages have fewer numbers of children than higher ages women.

a) The study findings have shown that women interviewed are not aware of the reproductive matters due to the low status. Low status makes women not to be given the chance to discuss with their husbands/partners the family matters not only reproductive matters but also social and economic matters. Thus, low status of women in the area result high fertility in the area of study.

b) Women in the area of study have positive attitude towards value of children. They still have the notion that, many children are for guarantee of security, help during old ages, and help in the house, for family prestige also to cover mortality risk.

c) Majority of the women have high fertility due to the fact that, they do prefer boys to girls. Boys' preference is highly practiced in the area of study. This results into high fertility in the area of study.

d) Women in the area of study are highly affiliated by religion. Highly religious affiliated women have higher number of children than less religious affiliated women.

5.4 Recommendations

The following recommendations put forward are based on the conclusions of the study as explained here under.

5.4.1 Policy/ Programme makers

The study revealed that, most of the women in the area of study do not know the impact of having many children that is why they still prefer having many children; organizations like UMATI, World Vision (T), PSI and the like should come out with strategies. They can influence policy though which will encourage fertility reduction. Together with MOH these organizations can do better in practicing the population policy or the reproductive health policy.

There should be peer group program through which youths, elders and school children should be getting information, without fearing who is giving information without fearing age, sex or the like so that people can be free when visiting the centers for services.

The promotion of contraceptives free of charge because others are willing to use contraceptives but due to poverty they can not afford to buy them. Also the access to get contraceptives should be improved. Every ward, street or ten cell leader should be provided with contraceptives so that for those who are in need it will be easy for them to get them without using much energy to find them or use transport to reach them.

5.4.2 Community level

Reproductive health experts should encourage men and women to use of contraceptives. They should be explained the methods of contraceptives, advantages and disadvantages of each method, to choose which can easily be obtained in terms of accessibility and affordability. They should be told the facts of raising many children health wise and financially. Men should allow their wives/partners to visit health centers, clinics and even hospitals for advice from health experts.

Religious leaders should first be attending meetings conducted by health experts if any in order to be aware of reproductive health to get knowledge on reproduction matters. This situation will make them flexible to their followers; hence they can allow them to use contraceptives. In addition I would like to advise religious leaders to teach their followers on reproduction matters and family planning.

5.4.3 House hold level

Women should be encouraged to visit health centers for advice from health experts from them they can get knowledge or can achieve the knowledge on the use of family planning methods even without their husbands to find out if they are using contraceptives. For the women with rude husbands/partners they must be keen on the use of contraceptive methods. They need to choose methods which can not easily be recognized by their husbands or partners.

I advise the husbands/partners to be the first to tell their wives/partners to use contraceptives for they are aware on the impacts of having big number of children in terms of health to the mothers, socially and economically. They should also be using contraceptives in order to reduce the number of children born per woman.

5.5 Areas for further research

This study has determined the effectiveness of socio-cultural factors in Morogoro District. However there are some areas that require further research, namely:

a) There is a tendency at which respondents prefer mostly male children. This issue is of deep significance, as a social issue, and government in general since it results into population growth of a country due to high fertility levels when in need of sons. There is a need to conduct research to examine the factors which are behind this scenario and to look at what, if anything might be done to stop this.

b) In all focused group discussions held with respondents across all study sites, there arose complaints that their male counterparts deprive them of the chance discuss all family matters including family planning matters thus resulting into high number of children born per woman. Thus there exists a problem of low status of women in the area of study. Therefore there is a need to conducted further research in order to know in deep the reasons behind this so that can be solved scientifically.

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APPENDICES

Appendix 1: Definition of Variables and Indicators

Variable	Operation Definition	Level of measurement
Background variables		
Age	Net years since one was born	Interval
Marital status	A state of being married, divorced, single, or widowed	Nominal
Sex	A state of being male or female in biological sense	Nominal
Education level	The number of years one went to school	Ordinal
Occupation	The main legal economic activity for which one earns a living	Nominal
Religion	Roman catholic, protestant, Muslim	Nominal
Dependent variable		**Dependent variable**
Fertility	Number of children born per woman	Interval
Independent Variable		**Independent Variable**
Sex preference	Preference of sex of a child to be born either male of female measured by cumulative scale. The respondents score number of points which are put in ranges between 0-9 where those scoring 0-3 less sex preference, 4-5 moderate and 6-9 referred to has high sex preference.	Ordinal Yes No
Value of children	The number of points scored by respondent on a likert scale composed of statements implying to attitude towards value of children ranging from 6-30 Scores 1-14 negative attitude towards women's decision making, 15 neutral undecided and 16-30 positive attitude towards value of children	Ordinal Agree disagree
Religiosity	The number of points scored measured by cumulative scale ranging from 0-9. The range will be 0-2 less religious, 3 moderate religious and 4-9 high religious.	Ordinal Yes No
Status of women	Levels of women involvement in household's decision making process in terms of reproductive and other major issues measured by scale ranging 0-11. Those scoring 0-5 low status of women, 6 moderate and 7-11 high status of women on decision making.	Ordinal Yes No
Many children	Number of children greater than two	Interval

Appendix 2: FOCUSED GROUP DISCUSSION GUIDE

Theme 1: Family size / number of children born per woman

It is said that, some men are interested in a certain number of children as a limit for couples /women to bear your life time. What are your views on this aspect? What is the exact number of children that men find to be ideal? What are the reasons for that choice?

Theme 2: Attitude sex preference / sex composition

Some women do prefer more sons than daughters, others more daughters than sons, and yet others want sons and daughters equal. What is your opinion on this issue? What composition is most preferred among those mentioned above? What are the reasons for such a preference?

Theme 3: Attitude towards value of children

Some women do prefer many children in the family because many children guarantee of security in traditional societies, because when other children die others will remain so that they will ensure the survival of the lineage. Also many children will help in the house and it is for the family prestige. What is your opinion on this?

Theme 4: Religiosity

Some women are afraid to discuss about family because of the religion they belong to. Some women like to bear few children but for religion sake they bear many children. What is your opinion on this? What does your religion say on family planning?

Theme 5: Communication about reproductive issues/ status of women

Do normally women in this community discuss with their husbands /partners about child bearing? Do they discuss about spacing and delaying births? Do they also discuss about specific methods of delaying or postponing births? For those who do not discuss what are their main reasons for not doing so?

Appendix 3: Identification

1. Questionnaire number……..
2. Name of the interview …….
3. Date of interview……
4. Name of district…….
5. Name of ward…….
6. Name of village……..

INTRODUCTION

Good morning /afternoon / good evening. My name is ……..a student fro Development Studies Institute, Sokoine University of agriculture carrying this survey in this village. The aim of the survey is to determine the Socio-cultural Determinants of Fertility. Let me assure you that the information you will give will be confidential and so I will not even record your name. The interview will not take long time. May I please ask you few questions?

A: RESPONDENTS' CHARACTERISTICS

NB: ALWAYS CIRCLE THE NUMBER CORRESPONDING TO THE RESPONSE EXCEPT WHERE OTHERWISE

1. What is your age?

Please write age in complete years.

2. Ever attended school?

Yes = 1

No = 2 [ ]

No response =9

3. If yes what was the highest level attended?

None =1

Adult education = 2

Primary education = 3

Secondary education =4

Tertially =5 [ ]

Other explain =6

No response =9

4. What is your religion?

Moslem =1

Roman Catholic =2

Other Christian =3

Traditional =4

No religion =5

Other (specify) =6

No response =9

5. What is your tribe?

…….

6. What kind of work do you normally do?

Name ……..

No response……=9

7. What is your marital status?

Single =1

Married =2

Living together =3

Separated =4

Widowed =5

Divorced =6

Other specify =7

B: Maternal History/ Number of Children Born per Woman

8. How many children have you given birth to in past twelve months…?

In numbers ( )

9. How many living children do you have who are living together with you?

As sons…….?

As daughters?…… [ ]

No response =9

10. How many living children do you have who are not staying with you

As sons? …….

As daughters? …….[ ]

No response =9

11. Just to make sure that the information I have is right, in total you have…….Children

12. In all how many of your children have died

As sons…….

As daughters……. [ ]

No response…=9

C: SEX PREFERENCE/ ATTITUDE TOWARDS FAMILY SIZE AND COMPOSITION AND STRUCTURE

13. If you could have a chance to have exactly the number of children that you always wanted, how many children would you have in total before completing your family size?

…….

No response =9

14. If you could have only 3 children in total, which combination would you choose?

3 girls =1

1 boy and 2 girls =2

2 boys and 1 girl =3 [ ]

3 boys =4

No response =9

15. Suppose the only choice you could have was 2 boys and 1 girl or 3 girls, which one would you prefer?

2 boys and 1 girl …=1

3 girls……=2 [ ]

16. Imagine that you have another alternative choice between 3 boys or 3 girls, which one would you, choose?

3 boys =1

3 girls =2 [ ]

No response =9

17. Now suppose you are to choose only between either 3 boys or 2 girls and a boy, which set would be your choice?

3 boys =1

2 girls and 1 boy = 2 [ ]

No response =9

18. In case you could only choose one of the following combinations of children, which one could be your choice?

NB: READ TO HER THE FOLLOWING AND PICK THE RESPONSE

No children =1

1 boy and 2 girls =2 [ ]

3 boys and 3 girls =3

No response =9

19. Suppose that you could only choose between having either no children or having 2 girls and 2 boys, which one would you choose?

No children =1

2 girls and 2 boys =2 [ ]

No response =9

20. Imagine that you could only choose between having either 1 girl or 1 boy or having 3 girls and 3 boys, which combination would you choose?

1 girl and 1 boy = 1

3 girls and 3 boys =2 [ ]

No response =9

21. Finally, imagine that you could only choose between having either no children or having 3 girls and 3 boys, which combination would you choose?

No children =1

3 girls and 3 boys =2 [ ]

No response =9

D: Attitude towards Value of Children

Please for the following statements indicate whether you strongly agree, agree, uncertain, disagree or strongly disagree about the value of children

Where: 1=strongly agree, 2= agree 3= uncertain, 4 = disagree, 5= strongly disagree.

Item	score
22. Many children in a family is the guarantee of security in traditional societies	
23. It is not necessary that having many children in a family will help during the old age	
25.To ensure the survival of the lineage we should never have many children in a family	
26. So as to get help in the house we should have many children.	
27. For family prestige we should have many children.	
28. It is not good to have few children in a family	

F: Status of women.

Please for the following statements say 'yes' or 'no' about the status of women about husband and wife communication.

Statement	**Yes**	**No**
A: Have you and your husband in the past twelve months ever discussed on reproductive matters on:		
29. Family planning matters?		
30. When to have a baby or not?		
31. Spacing of children?		
32. Sex of a child to be born?		
33. Number of children to be born?		
34. Addition of a baby in the family?		
35. Who makes decision on this, is it you or your husband?		
B: Have you and your husband in the past twelve months ever discussed on the matters concerning economic activities on:		
36. What projects to be run for the family?		
37. On income distribution for the family?		
38. Total income obtained yearly in the family?		
39. Who makes decision on this, is it you or your husband?		
C: Have you and your husband ever discussed about social matters on:		
40. School matters of your children?		
41. Matters like burial, funeral, sickness and the like matters occurring win the clan?		
42. Buying of household assets?		
43. Who makes decision on these issues?		

G: **Religiosity**

Please for the following statements say 'yes' or 'no' about religiosity

44. Do you believe in God?

Yes =1

No = 0 [ ]

No response =9

45. Do you go to church or mosque?

Yes = 1

No = 0 [ ]

No response =9

46. How many times per week do you go to church or mosque?

…….

No response =9

47. Do you have a habit of having self-prayers?

Yes =1

No = 0 [ ]

No response =9

48. Do you fast during the holly month or during charisma for the Muslims and Christians respectively?

Yes =1

No = 0 [ ]

No response =9

49. Do you give offering to the poor or disabled or orphans?

Yes =1

No = 0 [ ]

No response =9

50. Do you pay ten percent or ties?

Yes =1

No = 0 [ ]

No response =9

Appendix 4: Majadiliano ya vikundi kuhusu

1. **Mwelekeo kuhusu idadi ya watoto**

Inasemekana kuwa baadhi ya wanaume /wanawake hupendelea kuwa na idadi Fulani ya watoto ambayo hutaka wake zao wazae maishani mwao. Je mna maoni gani juu ya jambo hilo? Ni idadi gani ya watoto au namba kamili ya watoto unaona inafaa au inatosha na ni kwa sababu zipi?

2. Mwelekeo kuhusu jinsia ya watoto

Baadhi ya wanaume hupendelea zaidi watoto wakiume kuliko wa kike na wengine wa kike kuliko wakiume. Vile vile wengine hupendelea idadi sawa sawa ya watoto wakike na wa kiume. Ni mchanganyiko upi kati ya hiyo iliyotajwa hapo juu hupendelewa zaidi na wanume? Na kwa nini hupenedelea hivyo?

3. Mwelekeo kuhusu thamani /faida ya kuwa na watoto wengi katika familia

Baadhi ya wanawake wanapendelea kuwa na watoto wengi kwenye familia kwa sababu watoto wengi ni kuwa na hakika ya ulinzi katika jamii hizi za jadi kwa sababu watoto wengine wakifa wengine watabakin hivyo kutakuwa na uhakika wa kuendelea kwa ukoo. Pia watoto wengi husaidia wazazi wao kufanya kazi kwenye nyumba. Nini maoni yako juu ya hilo?

4. Mwelekeo kuhusu majadiliano juu ya uzazi wa mpango, nafasi ya mwanamke na maamuzi katika kaya

Je katika jamii hii hapa wanaume hupendelea kujadiliana na wake zao juu ya kuzaa watoto? Je huwa pia wanajadiliana juu ya kuchelewesha uzazi na kuzaa watoto wangapi? Je pia wanapenda kujadiliana na wake zao juu ya maamuzi mbalimbali hususani juu ya maendeleo ya familia? Je kwanini baadhi ya wanaume hawapendi kujadiliana na wake zao juu ya uzazi wa mpango na maamuzi ya familia?

5. Mwelekeo kuhusu dini

Wanawake wengine wanaogopa kuujdiliana kuhusu uzazi wa mpango kwa sababu ya dini zao. Wanawake wengine wanapendelea kuwa na watoto wachache lakini kwa ajili ya dini wanazaa watoto wengi. Nini maoni yenu juu ya hili?

Appendix 5:Dodoso juu ya wahojiwa

UTAMBULISHO:

NAMBA YA DODOSO:……..
JINA LA MHOJAJI:……
TAREHE:……
WILAYA:……
KATA:……..
KIJIJI:……..
UTANGULIZI:

Habari za leo (shikamoo). Pole na kazi. Jina langu ni……..mwanafunzi kutoka Chuo Kikuu cha Kilimo cha Sokoine Idara ya Taaluma za Maendeleo.nafanya kazi ya utafiti kwa niaba ya Taasisi ya Idara ya Taaluma za Maendeleo, hapa Morogoro Vijijini.

Madhumuni ya utafiti huu nimkutaka kujua ……..Naomba kukuhakikishia kwamba taarifa utakazonipa ni za siri kati yako tu na mimina hivyo sitachukua hata jina lako. Naomba nikuulize maswali na unisaidie kunijibu. Asante

SEHEMU A

TANBIHI: HAKIKISHA UNAZUNGUSHIA NAMBA INAYOELEKEANA NA JIBU ISIPOKUWA PALE UTAKAPOELEKEZWA VINGINE.

1. una umri gain? (andika miaka kamili) [ ]

   Hajui umri = 98

   Hakuna jibu = 99

2. umewahi kwenda shule?

   Ndiyo = 1 [ ]

   Hapana = 2

3. kama ndiyo ni kiwango gani umefikia?

   Hakuwahi kwenda shule =1

   Elimu ya watu wazima =2

   Elimu ya msingi =3

   Elimu ya sekondari =4 [ ]

   Elimu ya juu =5

   Mengineyo (taja) =6

   Hakuna jibu =9

4. Dini/ dhehebu lako /yako ni:

Muislamu =1

Romani Katoliki =2

Mkristo mwingine =3

Dini ya jadi =4 [ ]

Hana dini =5

Nyingineyo (taja) =6

Hakuna jibu =9

5. Nini kabila lako?

……

6. Kwa kawida unafanya kazi gani?

Itaje……

Hakuna jibu =9

7. nieleze hali yako ya ndoa

Sijaolewa =1

Umeolewa = 2

Kuishi pamoja = 3

Tumetengana = 4

Mjane = 5 [ ]

Tumetalikiana = 6

Nyingineyo = 7

Hakuna jibu = 9

B: IDADI YA WA TOTO

8. Una watoto wangapi hai ambao unaishi nao

Wakiume?.....

Wakike?.....

Jumla?.....

Hakuna jibu = 9

JAZA JUMLA YA WATOTO YA IDADI WATOTO KATIKA SWALI NAMBA

9**.** Una watoto wangapi ambao umezaa katika kipindi cha miezi 12 iliyopita? (andika namba kamil i)

( )

10. Una watoto wangapi ambao huishi nao?

Wakiume?.....

Wakike?.....

Jumla?.....

Hakuna jibu = 9 [ ]

11. Ili kuwa na uhakika kuwa idadi nilinayo ni sahihi, una jumla ya watoto……..

12. Kwa ujumla ni watoto wangapi wamefariki ambao ni

Wakiume?.....

Wakike? ……

Jumla……..

hakuna jibu = 9

C: IDADI NA JINSIA YA WATOTO

SASA TUONGELEE KUHUSU IDADI NA JINSIA YA WATOTO.

13. Kama ingetokea bahati kwamba ungepeta idadi ile ile ya watoto uliyotaka, ni watoto wanagapi ungependa uzae?

Hajui……..8

Hakuna jibu……9 [ ]

14. Kama ungekuwa najumla ya watoto 3 tu, ni mchanganyiko upi ambao ungeuchagua?

Wasischana3 = 1

M vulana 1 na wasichana 2 = 2

Wavulana 2 na msichana 1 = 3 [ ]

Hakuna jibu = 9

15. Iwapo kungekuwa na uchaguzi mwingine kati ya kuwa na wavulana 3 au wasichana 3, ungechagua nini?

Wavulana 3 =1

Wasichana 3 =2 [ ]

Hakuna jibu =9

16. Kutokuwa na watoto kabisa =1

msichana 1 =2 [ ]

Wavulana 3 =3

Hakuna jibu =9

17. Iwapo ungeambiwa uchague moja tu kati ya kutokuwa na watoto au kuwa na mvulana 1 wasichana 3 wewe ungechagua nini?

Kutokuwa na watoto =1

wasichana 3

mvulana 1 = 2 [ ]

Hakuna jibu =9

D: THAMANI YA WATOTO/ FAIDA YA KUWA NA WATOTO WENGI

ONYESHA IWAPO UNAKUBALIANA KABISA AU UNAKUBALIANA AU HUNA UHAKIKA AU HUKUBALIANI AU HUKUBALIANI KABISA KATIKA KILA KIFUNGU CHA MAELEKEZO YAFUATAYO.

TANBIHI: WEKA ALAMA ZIFUATAZO: 1=NAKUBALIANA KABISA, 2= NAKUBALIANA, 3= SINA UHAKIKA, 4= SIKUBALIANI NA 5= SIKUBALIANI KABISA KWENYE JEDWALI LIFUATALO.

Maelezo	Alama
18.Watoto wengikwenye familia ni uhakika wa ulinzi katika jamii za jadi	
19 Ni lazima kwamba kuwa na watoto wengi katika familia watakusaidia wakati wa uzee.	
20. kuwa na uhakika wa kuendelea kwa ukoo lazima kuwe na watoto wengi katika familia.	
21. Ili kupata msaada wa kazi kaika nyumba wakati wa uzee ni lazima kuwe na watoto wengi kwenye familia.	
22. Kwa fahari ya familia ni lazima tuwe na watoto wengi.	
23. Ni vizuri kuwa na watoto wengi kwenye familia.	
JUMLA	

E: NAFASI YA MWANAMKE KATIKA KUFANYA MAAMUZI JUU YA UZAZI WA MPANGO NA MAMBO MBALIMBALI KATIKA FAMILIA.

TAFADHALI SEMA 'NDIYO' AU HAPANA' KWA KILA SWALI UTAKALOULIZWA

Maelezo	**Ndiyo**	**Hapana**
A: Wewe na mume wako mmewahi kujadiliana kuhusu uzazi masuala ya uzazi katika kipindi cha miezi kumi na miwili iliyopita katika:		
24. Uzazi wa mpango?		
25. Kupata mtoto au la?		
26. Jinsia ya mtoto?		
27. Mzae watoto wangapi kwenye familia?		
28. Nafasi kati ya mtoto na mtoto?		
B: umewahi kujadiliana na mum e wako kuhusu mambo ya uchumi wa familia katika:		
29. Miradi gani muendeshe kwa ajili ya familia?		
30. Mgawanyo wa mapato katika familia?		
31. Kiasi cha mapato kwa mwaka katika familia?		
C: Umewahi wewe na mume wako kujadiliana kuhusu mambo ya kijamii katika:		
32. Mambo kuhusu kuwapeleka watoto shule?		
33. Kwenye mambo ya kijamii kama kufiwa, ugonjwa, kuzika kwenye ukoo au jamii mliyomo?		
34. Kununua vitu kwa ajili ya kaya yenu?		

SEHEMU F: DINI

TAFADHALI KWA KILA MAELEZO YAFUATAYO SEMA 'NDIYO' AU 'HAPANA' KUHUSU DINI.

35. Unamuamini Mungu?

Ndiyo =1

Hapana =0 [ ]

Hakuna jibu =9

36. Je huwa unaenda kanisani au msikitini?

Ndiyo =1

Hapana =0 [ ]

37. Ni mara ngapi kwa wiki?

……

38. Je una tabia ya kuwa na ibada za peke yako?

Ndiyo =1

Hapana =0 [ ]

Hakuna jibu =9

39. Huwa unafunga wakati wa ‘mwezi mtukufu’ au wakati wa Kwaresma?

Ndiyo =1

Hapana =0 [ ]

Hakuna jibu =9

40. Je huwa unatoa sadaka kwa wasiojiweza, au masikini au yatima?

Ndiyo =1

Hapana =0 [ ]

Hakuna jibu =9

41. Je huwa unatoa ‘fungu la kumi’ au ‘zaka’?

Ndiyo =1

Hapana =0 [ ]

Hakuna jibu =9

ASANTE KWA USHIRIKIANO WAKO.