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Education as a Development Strategy

A Case Study of Women's Education
and the Demographic Behavior in Tanzania

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Minor Field Study 2001

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Abstract

The aim of the thesis is to examine if women's education affect the demographic behavior. The thesis is conducted as a Minor Field Study in Tanzania, and it is based on general statistics, complemented with interviews with female students. It is based on Demographic Transition Theory, as well as on Theories on Socio-economic Factors and Women's Role. It is found that women with a higher level of education have lower fertility rates, better knowledge of family planning methods and health issues, and more frequent use of contraceptive methods. It is further found that children to educated mothers have a higher chance of survival. Those findings are explained through the increased knowledge and capabilities that come with schooling, but also, more important, through the changed status of women and the changed balance of power that can be expected with women's education. It is though concluded that in order to reduce child mortality and to achieve a demographic transition it is of high importance to support girls' entitlements and possibilities for schooling.

Keywords: Tanzania; education; demography; women; development

Table of Contents

MAP AND BASIC FACTS ABOUT TANZANIA	6
1 INTRODUCTION	7
1.1 Statement of Purpose	8
1.2 Method and Data	8
2 THEORETIC APPROACH	11
2.1 The Demographic Transition	11
2.2 Social Factors and Women	11
3 BACKGROUND	15
3.1 The School System in Tanzania	15
3.2 Girls' Enrollment in School	15
4 DEMOGRAPHIC EFFECTS I: FERTILITY	17
4.1 Age at Marriage and at First Intercourse	17
4.2 Age at First Birth	19
4.3 Fertility	20
5 FAMILY PLANNING	25
5.1 Knowledge of Family Planning and Contraceptive Methods	25
5.2 Use of Contraceptive Methods	27
6 DEMOGRAPHIC EFFECTS II: MORTALITY	29
6.1 Infant and Child Mortality	30
6.2 High-risk Behavior	31
7 HEALTH ISSUES	34
7.1 Children's Nutritional Status	34
7.2 Diarrhea	35
7.3 AIDS	37
8 SUMMARY & CONCLUSIONS	40
APPENDIX: QUESTIONNAIRE	43
BIBLIOGRAPHY	45

List of Figures

Fig. 1	Natural population growth, CBR, CDR and TFR in Tanzania	8
Fig. 2	Interrelationship between girls' education and social-demographic change	14
Fig. 3	Age at marriage	17
Fig. 4	Age at first sexual intercourse	18
Fig. 5	Age at first birth	19
Fig. 6	Wanted and actual fertility rates	20
Fig. 7	Percent of women, who have heard about family planning in radio, TV or in print media	26
Fig. 8	Percent of women with knowledge of contraceptive methods	26
Fig. 9	Unmet/met need for family planning	27
Fig. 10	Percent of women using contraception	28
Fig. 11	Infant and child mortality	30
Fig. 12	Percent of women 15-19 who are mothers or pregnant with their first child	32
Fig. 13	Percent of women with more than one (1) child with less than/more than 24 months since previous birth	32
Fig. 14	Percent of children with malnutrition	35
Fig. 15	Percent of children with diarrhea the latest two weeks and percent of mothers who know about treatments of diarrhoea	36
Fig. 16	Percent of women who know about AIDS and who know specific ways to avoid getting infected	37
Fig. 17	Percent of women who have heard of AIDS by specific changes in sexual behavior in order to avoid AIDS	38

Map of Tanzania



Basic facts about Tanzania¹

Area: 945,090 km²

Capital: Dar es Salaam (actual capital, population 2 million, 1997); Dodoma (official capital, population 203,000, 1988)

Population: 32.2 million (1998)

Population density: 34/km²

Urban population: 24 % (1995)

GNP per head: 230 US dollars (1998)

Literacy rate: 68 % (women 57 %, men 79 %, 1995)

Enrollment in primary school: 40 % (1995)

¹ Utrikespolitiska institutet (1999) *Länder i fickformat no 210: Tanzania*

1 Introduction

Just before we entered the 21st century the world population reached six billion, which is an addition of a billion in only twelve years, or the double since 1960. Every year the global population grows by 17 million and 95 percent of this growth occurs in developing countries. Meanwhile, population growth has slowed or stopped in Europe, North America and Japan.² Since Thomas Robert Malthus 1798 wrote *An Essay on the Principle of Population as it affects the Future Improvement of Society* there has been a fear that population will reach such a high rate that the world will not be able to sustain us anymore. Even if the world population has grown by 4.5 billion since then, the fear is still alive in politics and in research. It is stressed that high population leads to poverty, famine, economic problems, environmental damage, etc. A higher population will be eating our food, drinking our water, using our energy and causing pollution, desertification, greenhouse effects, etc. Because of the increasing demand for schools, health services, etc. higher population is also believed to create social difficulties.

But there is also those who stress that high fertility and fast population growth does not only lead to poverty but is also a sign of it. In societies which have no social security systems, children play the role of supporters in case of illness, aging, disability and death. Poor families must use large family size as a survival strategy where children become labour force, contributors to the household income and supporters where the society fails to offer security.

The *United Nations' Population Fund*, as many other international organisations, recognises the importance of social security for overcoming population problems. In their plan of action for the 21st century they stress that “one of the strongest and most consistent relationships in demography is between mothers’ education and infant mortality – the children of women with more years of schooling are more likely to survive”³ and that “the relationship between women’s education and fertility is complex but the underlying pattern in most countries is that the more years of schooling a woman has, the fewer children she is likely to have”⁴.

Since achieving independence in 1961, Tanzania has made a lot of efforts to increase the level of education in general and for women in particular. Their first president, *Mwalimu Julius Karambage Nyerere*, stressed that the only way to development was through “hard work and education”⁵ He also succeeded to increase the literacy rate, and in 1987, two years after his reassignment, 90 percent of the adult population were able to read and write. Furthermore, he increased the total enrolment rate in primary and secondary schools from 22 to 57 percent during the 1970’s, even though the economic crisis later caused the enrolment rate later during the 1990’s to sink to 40 percent in primary school and 5 percent in secondary.⁶ Tanzania is also a country that belongs to the group of countries from sub-Saharan Africa, South Asia and West Asia which have seen very weak signs of declining fertility or

² N. Sadik (1999) *The State of World Population 1999, 6 Billion – A Time for Choices*, p. 1

³ N. Sadik (1999) p. 21

⁴ N. Sadik (1999) p. 22

⁵ J. K. Nyerere (1968) *Socialism i Tanzania*, p. 31

⁶ Utrikespolitiska institutet (1999) p.7

population growth.⁷ The total fertility rate in 1960 to 1965 was 6.8 and in 1990 to 1995 it was 5.9. On the other hand, the natural population growth rate at the time of independence was 2.87 percent and in 1990 to 1995 was 2.82.⁸

Fig. 1: Natural population growth, CBR, CDR and TFR in Tanzania 1960-95
Source: UN (1999) *World Population Prospect: The Revision*, p. 416

Indicators	1960- 65	1965- 70	1970- 75	1975- 80	1980- 85	1985- 90	1990- 95
Population growth	2.87	3.00	3.11	3.11	3.15	3.06	2.82
CBR	51.1	50.4	49.6	47.5	46.5	45.1	43.1
CDR	22.4	20.4	18.5	16.4	15.0	14.5	14.9
TFR	6.8	6.8	6.8	6.8	6.7	6.4	5.9

According to the above statements from the United Nations and theories in section 2 it seems strange that Tanzania, despite of increased education, does not have any stronger signs of changed fertility or population growth as expected.

1.1 Statement of purpose

My purpose is to analyse education as a demographic development strategy. The analysis of education as a development strategy is done through searching for possible relations between women's level of education and their demographic behaviour. My central question will thereby be: *Does a higher level of female education affect the demographic pattern in Tanzania?*

1.2 Method & Data

The thesis is conducted as a field study in Tanzania. The analysis is based on a theoretic approach, which is presented in section 3 and applied on the case of Tanzania.

In order to understand if, and in that case how, women's education affects the demography, I compare demographic variables by women's level of education. Those demographic variables are divided into two main parts; fertility and mortality. Under fertility fall age at marriage, age at first birth, fertility rates, and bounded to fertility are fertility regulation as knowledge and use of family planning and contraceptive methods. Under mortality fall infant and child mortality rates, and bounded to mortality is health issues as malnutrition and diseases which are common causes of death, such as, malaria, diarrhoea and AIDS.

⁷ N. Sadik (1999) p. 4

⁸ UN (1999) *World Population Prospect: The Revision*, p. 416

Education is here defined as formal schooling, i.e., not vocational training, literacy programs, etc. When, in the thesis, it is referred to *uneducated* and *educated* women it refers to one who has not started primary school and to one who has completed secondary school or more. However, between these are two steps, *primary incomplete*, i.e., one who has started but not finished primary school and *primary complete*, i.e., one who has finished primary school but has not continued to or been able to fulfil secondary school.

The thesis is based on statistical material, mainly taken from the report *Tanzania; Demographic and Health Survey* which is complemented with a questionnaire among secondary school girls students and research within the field.

The *Tanzania; Demographic and Health Survey* was conducted by the *Tanzanian National Bureau of Statistics* in 1996. Although not covering all of the population, it is the most detailed analysis done and therefore the most suitable base for the thesis. The sample covers 357 areas in Tanzania, of which 262 are rural and 95 urban. Problems occurring in sampling consist mainly of misunderstanding by either the interviewer or the respondent. For the parts included in my thesis, the misunderstandings or misreporting are in the questions concerning births and deaths. This misinformation can have consequences for birth intervals and infant mortality rates. The persons responsible for the sample at the National Bureau of Statistics appreciate though that after corrections the misinformation would amount to less than one percent for date of births, and even less than that for date of deaths. The value of the sample is therefore not in danger, but keeping in mind that a certain level of misunderstanding and underreporting always occur can be important.⁹

My questionnaire includes 100 girls at secondary schools, A-level, form 6. The girls are collected from four different schools in three regions of Tanzania; Dar es Salaam (capital region), Tanga (coastal) and Morogoro (central/southern). All four schools are secondary schools for girls. Out of the four schools, two are public (Dar es Salaam and Morogoro) and two are private (Tanga and Morogoro). The Dar es Salaam school is an urban one, while the Tanga school is rural and Morogoro could be classified as "semi-urban". The questionnaire, written in English and Kiswahili, contains three parts; studies, family and health. The girls answer and discuss issues such as, reasons for studying, professional intentions for the future, having their own income, preferred age at marriage, first birth and number of children. They further answer questions intended to show their knowledge about basic health issues important for child mortality such as, AIDS and diarrhoea among children. The questionnaires are answered anonymously for the reason that the girls shall be more comfortable and confident to give honest and true answers. That is particularly important in the part consisting of questions about sexual relations and usage of contraceptive methods, since in Tanzania, school girls are forbidden to use contraception or to be sexually active.

The main problem with anonymous questionnaires as opposed to personal interviews is that misunderstandings cannot be rooted out and corrected. But in spite of that, I considered it to be the best method to receive as reliable answers as possible.

Following the introduction, theory and background, the thesis consists of four sections, section 4-7. Section 4 and 5 treat fertility issues such as age at marriage, age at first birth and fertility rates (section 4) as well as knowledge and use of family planning and contraceptive

⁹ Bureau of Statistics Planning Commission *Tanzania Demographic and Health Survey* pp. 219-221

methods (section 5). Section 6 and 7 discuss mortality issues such as infant and child mortality rates and high-risk behaviour (section 6) and nutritional status and diseases among children (section 7). Each section presents statistics, results of the questionnaires and a discussion about how education affects the issues.

2 Theoretic Approach

2.1 The Demographic Transition Theory

Efforts to achieve demographic changes have, for a long time, been to achieve a so called transition, such as the one that occurred in Europe, where both mortality and fertility fall to low rates. The theory about how *the demographic transition* happened was lanced by Frank Notestein in 1945. Since then it has been criticised but never been replaced. The theory pointed out that there were four stages on the way to transition. The first stage was the pre-industrialised agrarian and traditional society where both fertility and mortality rates were high. The population growth was therefore low and eventual fluctuations appeared in mortality caused by mainly diseases. At the second stage, there were improvements in medical care, sanitation and nutrition which led to a decreased mortality. However, at this stage the fertility rate remained high and population growth became therefore high. In the third stage, the population had adapted to the increased number of surviving children and decreased therefore their fertility. When fertility has stabilised around reproduction rate, the fourth stage began which was characterised by low fertility, low mortality and slow population growth. In short Notestein pointed out that fertility decrease is an answer to decreased mortality but can be motivated by economic and social improvements such as education, increased wages, women's participation in the labour force etc.¹⁰

2.2 Socio-economic Factors and Women's Role

A number of researchers have dealt with the connections between demography and female education. Methods used have involved everything from world-wide surveys to specific case studies, and most of them have found an actual connection. In most of the researches, education has been treated as a part of a wider social system along with participation in labour force, income and social security such as pensions insurance, unemployment insurance, health insurance etc.

Gary Becker was the first to apply the neo-classical economic theory on fertility behaviour. He represented what was called *New Home Economics*. In this way of regarding fertility, children are treated as consumer durables that have a "price" since they contribute "utility" and fertility can therefore, just as other consumer goods, be determined by demand and household income.¹¹ Together with Lewis, he later developed the theory introducing the term "child quality" which referred to the expenditure of every child. Their main findings were when household income rises the couple want to increase both quality and quantity of children.¹² Fertility decisions are thereby made by a rational economic choice where parents

¹⁰ T. Bengtsson and R. Ohlsson (1993) "Sveriges befolkning – myter och verklighet" from *Äventyret Sverige – en ekonomisk och social historia*

¹¹ G. Becker (1981) *A Treatise on the Family*, p. 135

¹² E. Iglesias (1999) *Welfare, Security and the Level of Fertility*, p. 30

try to balance the benefits of every additional child with the expenditures they cause. Furthermore, according to this theory, every effort to increase the child quality, for example through education, decreases the benefits and decreases therefore also the motivation of high fertility.

Purely economic based fertility theories, such as those of Becker, are often criticised for their narrow way of regarding fertility. Critics argue that fertility decision making is a much more complex process than just economic calculations and in order to understand the process one has to include social and cultural aspects. One of the most influential spokesmen for the introduction of social and cultural factors in the fertility analysis is John Caldwell. He agrees that man is rational, but argues that rationality is culturally determined and varies therefore from society to society. His theory is based on the concept of “wealth flow”, which refers to the flow of money, goods, labour services, protection, guarantees and status between parents and children. In traditional societies the flow is strongest from children to parents while the children work, help the mother and have a low cost for the family. In those societies it is rational to have many children and there is no motivation for limiting the fertility.¹³ Through the modernisation of society, the flow of wealth changes direction and goes from parents to children, where children cost money and time through education and do not any longer provide as much income and service. There are no longer as many incentives for producing many children. Caldwell argues that the main determinant of the fertility transition is the effects of mass education upon the family economy. Education changes the direction of wealth flow while (i) education diminishes children’s potential for work outside and inside home; (ii) education increases the cost of children; (iii) society begins to regard children as an investment for the future rather than for the present; (iv) education may accelerate the cultural change and finally, (v) education in traditional societies serves to propagate Western values.¹⁴

Caldwell gets agreement but also criticism from Mead Cain who accepts the wealth flow theory but argues that the benefits of children are more than what Caldwell says. He stresses that the economic role of children is rather risk insurance than immediate benefits, and fertility decisions are thereby based on what a family will lose from getting an additional child rather than what they will win.¹⁵ He also criticised Caldwell for not paying attention to the dependence of women upon men. He argues that in a society where women’s participation in the labour force is limited and where widows and divorced women therefore face difficulties, sons become an important and sometimes the solely insurance.¹⁶ Also Geoffrey McNicoll deals with women’s role in fertility decision-making and includes their empowerment as an important factor. He argues that in many societies, women desire fewer children than their husbands and empowering women through education would increase their decision-making power and thereby reduce their fertility.¹⁷

To summarise the discussion of women’s role in the fertility transition, evidence is now strong enough to support the conclusion that investing in the education of women is the single

¹³ J. Caldwell (1982) *Theory of Fertility Decline*, p. 333

¹⁴ J. Caldwell (1980) “Mass Education as a Determinant of the Timing of Fertility Decline”, *Population and Development Review* no. 6, pp. 225-255

¹⁵ M. Cain (1981) “Risk and Insurance: Perspectives on Family and Agrarian Change in India and Bangladesh”, *Population and Development Review* no. 7, p. 436

¹⁶ M. Cain (1982) “Perspectives on Family and Fertility in Developing Countries”, *Population Studies*, p. 174

¹⁷ McNicoll *Institutional Analysis of Fertility* p. 215

most cost-effective investment to improve standard of living in poor countries.¹⁸ Education provides a foundation for poverty alleviation and the social and economic benefits are many.

Among the social and demographic benefits of education for girls are as follows:

- Lower fertility rates;
- Lower infant and child mortality rates;
- Improved nutrition for children and adults;
- Better opportunities for their children in the next generation.

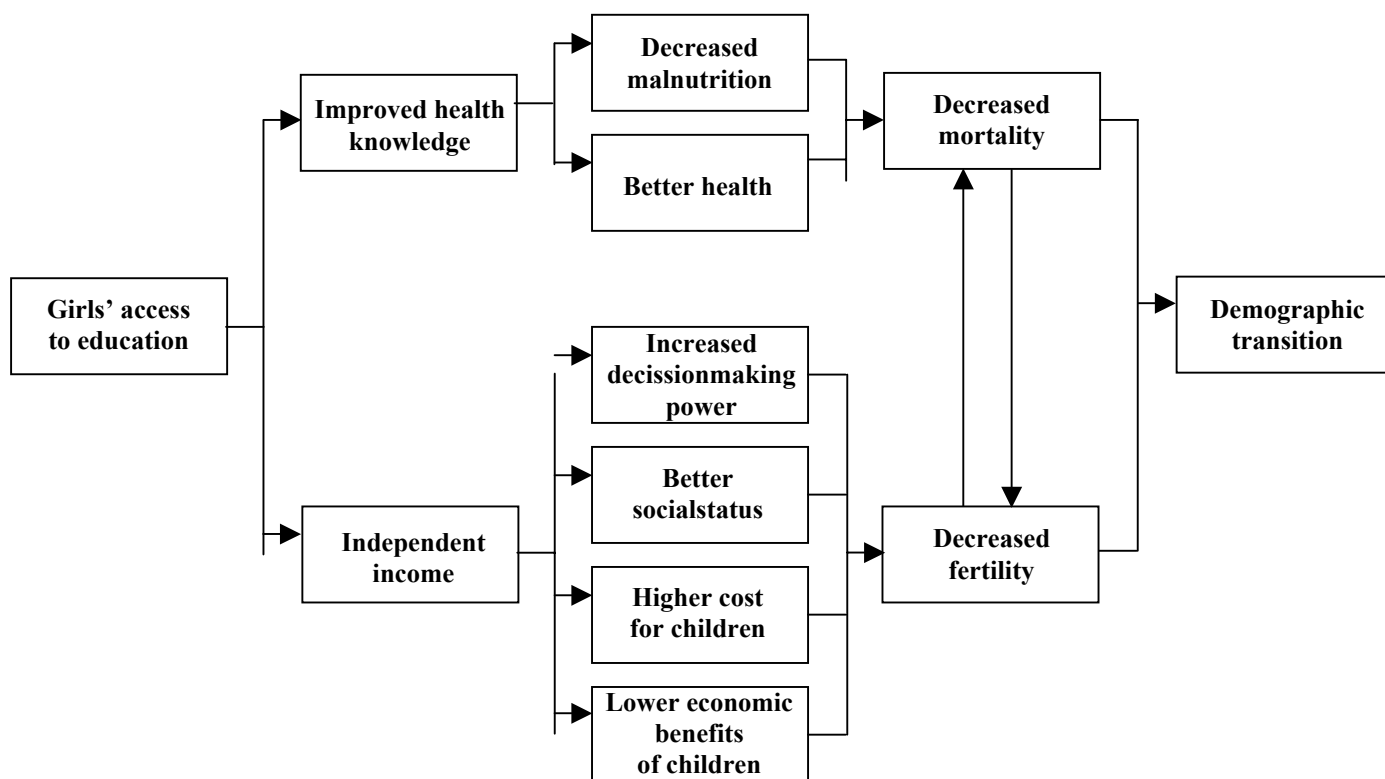
The interrelationship between girls' education and social-demographic change, which will be shown in figure 2, can be explained as follows; allowing girls access to education gives literacy and numeracy, improved health knowledge and a desire for a modern lifestyle including work outside home. With the increased health knowledge they become more able to take care of their children, which results to decreased malnutrition and a lower mortality among their children. The desire for modern life, coupled with society's ability to provide such opportunities, can ultimately enable women to acquire an independent income, which, in turn, gives them an increased status and thereby an increased participation in the decision making process. In addition to that, higher cost and lower economic benefits from the children lead to a desire for a smaller family, and thereby a decreased fertility rate. In this way, educating girls have a direct relationship to poverty alleviation and demographic transition.¹⁹ Finally, educated women also tend to better understand and stress the importance of education, and therefore tend to send their children to school to a much higher extent than when only the man or neither of the spouses is educated. Thereby, the benefits of women's education generate and spill over to the next generation.²⁰

¹⁸ A. Sen, *Ge henne makt – rädda världen*; E. Kane (1995) *Seeing for Yourself – Research Handbook for Girls' Education in Africa*, p.4

¹⁹ E. Kane (1995) p. 5

²⁰ N. Sadik (1999) p. 1

Figure 2: interrelationship between girls' education and social-demographic change



3 Background

3.1 The School System in Tanzania

There are two educational systems which operate in Tanzania, one on the mainland and the other in Zanzibar. On the *mainland* the education system consists of seven years of primary education, four years of lower secondary education (“*O-level*”), two years of higher secondary education (“*A-level*”), and three, four or five years of university education depending on the course taken. Primary education is compulsory and universal, and children generally start primary education at the age of seven. In primary education the medium of instruction is Kiswahili, the official and national language of Tanzania, and from secondary the medium is English. Pupils first sit for school certificate examination at Form 4, and at the end of primary education pupils sit for the Standard 7 primary school leaving examination (PSLE). Only those meeting specially designed criteria are selected to go on to public secondary schools, but those who could afford the fees can as an alternative be enrolled in private secondary schools. At the fourth year of lower secondary education pupils take the Form 4 national examination, and depending on the vacancies available, those who pass the examination well enrol in Form 5. The others can join tertiary institutions like teacher education, nursing, full technician certificate courses and so on. Finally, after two years of study at secondary education the pupils sit for Form 6 examinations. Those who pass well enrol at institutions of higher learning such as the university, or they enrol at professional institutions such as the Institute of Finance Management, Institute of Development Management, etc. In *Zanzibar* the education system consist of eight years of primary education, standard 1-8, and six years secondary education, form 1-6. Education is compulsory up to Form 2. Pupils enter Standard 1 at an age of seven to ten. The first examination is done in Form 2, and those who fail are not allowed to repeat. Students also sit for national examinations in Form 4 and 6.²¹

3.2 Girls’ Enrolment in School

Since the independence in 1961 there has been a remarkable change in enrolment in schools in Tanzania. Although decreasing after the economic crisis in the mid 1980's, literacy rate and enrolment in primary education, particularly in an African context, is very high.

The average level of education for women versus men can be presented as follows:

- 35 % of women and 13.1 % of men have no education.
- 20.7 % of women and 26.6 % of men have incomplete primary education.
- 39.6 % of women and 49.5 % of men have complete primary education.
- 4.7 % of women and 10.7 % of men have secondary education or more.

²¹ G. H. Puja and T. Kassimoto, *Girls in education and pregnancy at school* pp. 54-55

However, the average number does not give a fair picture of the population's level of education. While there have been a lot of changes over time, there's also a big difference in level of education in different ages. While the younger part of the population is more educated, there's often a lack of schooling in the elder generations.

In Zanzibar too, enrolment in primary school is high and almost equal between men and women. But during and after secondary school, Zanzibar shows a trend different from that in the mainland. While in mainland the drop-out rate is higher for girls than for boys, and enrolment in secondary school is higher for boys than for girls, in Zanzibar the contrary is happening. In 1995, the gender stream in enrolment in Form 1 was 48 percent. When in Form 6, more boys had dropped out, and 50 percent was girls. In secondary education the enrolment is in general slightly higher for girls than for boys (51 v. 49 percent).²²

²² Bureau of Statistics (1997) *Women and Men in Tanzania* p. 53

4 Demographic Effects I – Fertility

This section discusses aspects of fertility such as the age at marriage (4.1), age at first birth (4.2) and finally, the fertility rates (4.3) in relation to women's education.

4.1 Age at Marriage and at First Intercourse

The age at which a woman marries affects the rest of her life. It influences her level of education, participation in the labour force and the number of children she will have. Like in many African countries women in Tanzania often marry when they are very young. For most people in Tanzania, marriage is expected to be soon followed by pregnancy and birth giving. A raise in age at marriage reduces exposure time to pregnancy, thus reducing the number of children a woman would have during her reproductive period.

In figure 3 there will be shown that the higher the women's level of education is, the later she get married.

Fig. 3: Age at marriage by level of education

Source: Bureau of Statistics (1996) *Tanzania Demographic and Health Survey* p. 77

Level of education	20-24	25-29	30-34	35-39	40-44	45-49	Ages 20-49
No education	17.4	18.0	16.6	16.8	17.1	17.0	17.1
Primary incomplete	17.7	18.3	17.6	16.7	16.8	17.8	17.5
Primary complete	19.7	19.0	19.7	19.4	19.5	20.6	19.5

For uneducated Tanzanian women aged 25-49 the median age at first marriage is 17.1. The age at marriage increases though with women's education and for women with complete primary education the age at marriage has risen to 19.5. Unfortunately the list is not complete and the median age at marriage for women who have completed secondary school or more is missing. But the median age has risen with 2.4 years between no education and complete primary, which also means a reduction of the exposure time to pregnancy with 2.4 years. It could be likely to think that the median age of marriage continue to rise even with higher education.

In interviews with female students at form 6, it appears that educated girls have a desire to marry late. The median age at which the interviewed girls wanted to get married is 26. Fifty percent of the interviewed students stated that they preferred to get married at age 26-28, 38 percent at age 23-25, 2 percent at age under 22 and 8.5 percent at age over 29.

Marriage at a young age is not new in Tanzania but rather has a long tradition. Early marriage is deeply embedded in the customs of many ethnic groups. Even today child betrothal, arranged by the parents, is still practised in some societies in Tanzania such as among the Maasai, Kuria and Nyaturu. "Bride wealth" is still widespread whereby parents receive cattle, cash payment or other gifts in connection with their daughter's marriage ("*ndoa ya mkeka*"). Early marriage is also encouraged by some religious groups.²³

It is reasonable to think that the education not only compels the girls to wait with marriage and keeps them in school, but also that a kind of "modernisation" appears, as among others Caldwell and Cain stress. With a knowledge and consciousness of the modern society and what it can offer people tend to drag away from such traditions which hence them to liberate. With education the girls start to look upon themselves as something else than wives and mothers, and they get ambitions of a professional life. As shown in my questionnaires, girls in the end of their secondary education have a strong desire of having high professions like lawyers, sociologists or doctors. With these ambitions the custom of getting married at a young age seems more far away. Higher education often also means that the student in rural areas for a period of his or her life have to change environment. Seeing other customs more connected to the modern conducts and for a while living more or less on their own, also discourage early marriages.

The postponement of marriage, as a method to reduced exposure time to pregnancy, reduces the overall fertility does not address the fact that in many Tanzanian societies premarital childbearing is common.²⁴ Since this occurs, the age at which a woman initiates sexual intercourse more precisely marks the beginning of their exposure to reproductive risk than does age at marriage.²⁵ Figure 4 below shows the age at first sexual intercourse by level of education.

Fig. 4: Age at first sexual intercourse by current age and level of education
Source: Bureau of Statistics (1996) p. 79

Level of education	20-24	25-29	30-34	35-39	40-44	45-49	20-49
No education	15.9	16.1	15.9	15.9	16.0	16.2	16.0
Primary incomplete	16.5	16.1	16.4	16.0	16.5	17.0	16.4
Primary complete	17.7	17.0	17.3	17.3	18.2	18.8	17.5
Secondary +	19.9	20.1	19.0	19.0	16.9	18.0	19.7

Comparing age at first sexual intercourse shows that uneducated women in the cohort 20-49 have a 3.7 years lower medium age than educated women; women with no education have their first intercourse at age 16 while women with secondary education or more at age 19.7. Furthermore comparing figure 3 and 2 shows that the average age at first intercourse is lower

²³ C. K. Omari, "Fertility rates and the status of women in Tanzania", *Gender, Family and Household in Tanzania* p. 253

²⁴ Bureau of Statistics (1996) p. 34

²⁵ Bureau of Statistics (1996) p. 77

than the average age at marriage for all levels of education; 16.0 vs. 17.1 for those with no education, 16.4 vs. 17.5 for those with primary incomplete and 17.5 vs. 19.5 for those with primary complete. It is also shown that the medium age at first intercourse does not differ as much over the cohorts as does the medium age at marriage.

The reasons why secondary school girls have a higher medium age at first intercourse could be found by first of all analysing why unmarried teenage girls engage themselves in sexual relations. Stated by such girls in a research conducted by Grace Khwaya Puja and Tuli Kassimoto in Tanga, Pemba, Kilimanjaro and Mwanza, there were two major reasons. Primary, they were simply in love, attracted to the actual man and involved in a love relationship with him. Secondly, the girls had a sexual relation because they were economically dependent on the man and they thought it was therefore expected of them.²⁶ Schoolgirls have a tremendous pressure to do their duty and are expected to play a certain role in society. The policy of Mainland Tanzania of expelling pregnant girls possibly causes them to think twice about initiating a sexual relation as such a relation could hinder the fulfilment of their expected social role.

4.2 Age at First Birth

As said earlier, marriage in Tanzania is mostly supposed to be followed by pregnancy and child birth. The age at which childbearing starts has important consequences for the overall level of fertility, but also for the health and welfare of the mother and the child. Pregnancy and childbearing at a young age is a severe health problem for the mother, and a common reason for infant mortality, which shall be discussed further in section 5.2.

Fig. 5: Age at first birth by level of education

Source: Bureau of Statistics (1996) p. 35

Level of education	20-24	25-29	30-34	35-39	40-44	45-49	Ages 25-49
No education	18.6	18.8	17.8	18.5	18.3	18.7	18.4
Primary incomplete	18.6	19.2	17.9	18.1	17.9	19.0	18.4
Primary complete	19.9	19.5	19.9	19.7	19.8	20.5	19.7
Secondary +	X	23.7	22.8	22.1	22.1	22.3	23.0

As shown in figure 5, the difference in age at first birth between women with different levels of education is huge, which shows an inverse relationship between age at first birth and women's education. For the second youngest cohort, age 25-29, the medium age at first birth for women with no education was 18.8, while for women with secondary schooling or more, it was 23.7, which makes a difference of 5 years. The medium age at first birth for all cohorts, above presented as age 25-49, is for uneducated women 18.4 while for women with secondary education or more it is 23.0, which makes a difference of 4.6 years.

²⁶ G. H. Puja & T. Kassimoto, *Girls in Education and Pregnancy at School*, p. 66

It seems that the interviewed girls in the sample that they still expect that their marriage shall be immediately followed by child birth as according to the customs. But while they prefer delaying their marriage at a much older age, even the birth giving is delayed. On the question “*at what age do you prefer getting your first child*” the median age 27.7 appeared. 55 percent stated that they preferred giving birth for the first time when they are at age 26-28, 30.5 percent at age over 29, 12.5 percent at age 23-25, and only 1 percent at age younger than 22.

This number can of course not always correspond to the reality while many pregnancies are unexpected or unplanned, just as some will not get their first child as soon as they wish for. But what the numbers say is that there is strong incitements among secondary educated girls to marry later and to give their first birth later on in their life and thereby to reduce their exposure time to pregnancy.

4.3 Fertility

This section deals with *Total Fertility Rate* (TFR) which tells the medium number of children born per woman. In the interest of the analysis I differentiate between *wanted* and *actual* fertility rate. The wanted fertility rate is derived from the question “*if you could (go back to the time when you didn't have any children and) choose exactly the number of children to have in your whole life, how many would that be?*”²⁷

When talking to young students prior to reaching motherhood it is, of course, only possible to discuss wanted, as opposes to actual, fertility rates. The wanted fertility rates and the gap between them and the actual fertility rates are mainly of interest for discussions about family planning and will therefore mainly be dealt with in section 4.

Figure 6 shows the wanted and the actual fertility rates among women with different levels of education.

Fig. 6: Wanted and actual fertility rates by level of education
Source: Bureau of Statistics (1996) p. 95

Level of education	Wanted FR	Actual FR
No education	5.6	6.4
Primary incomplete	5.0	5.9
Primary complete	4.6	5.4
Secondary +	3.0	3.2

While the actual TFR for women with no education is 6.4, the rate for women who had finished secondary school or more was only 3.2. This gap in fertility between women with no education and those with secondary education has widened significantly in the five years between 1991-92 and 1996. In 1991-92 women who had never gone to school had on average

²⁷ Bureau of Statistics (1996) p. 91

2.3 children more than women who had attended secondary education.²⁸ In 1996 this difference was 3.2 children, which means that uneducated women have a 100 percent higher fertility rate than educated women, or about 7 percent higher for every year a girl is not going to school. It is possible that this gap has continued to widen also during the following four years between 1996 and 2000.

In order to understand how the prognoses for the future look like, one method could be to compare the actual fertility rate with the wanted. By comparing those two rates one can determine how the fertility rate could be if the demand for fertility regulation was satisfied. Figure 4 above shows that education gives the women both an obvious desire for fewer children (3.0 vs. 5.6) and a lower actual fertility rate (3.2 vs. 6.4). But it also shows that the gap between actual and wanted fertility is smaller among educated women than among uneducated. While the ideal fertility rate for educated women is 3.0 (compared to 3.2 which they actually have), women who lack schooling wish to have a fertility rate of 5.6 (compared to 6.4 which they actually have). The fact that uneducated women wish larger families is important while it gives effects on family planning programmes and efforts to reduce the population growth. It is not only that uneducated women might not know about contraceptive methods²⁹, but it is not very likely that they will use such methods in a higher existence since they find the ideal number of children much higher than what does educated women.

The low fertility rate among educated women corresponds to the impression from the form 6 students' fertility preferences. The most frequent preferred number of children girls in form 6 had was 2 (with 54 percent of the asked students) and the average number of preferred children was 2.6. 32 percent of the students answered that they preferred 3 children, 10 percent wanted 4 children and only 3.5 percent preferred 5 children during their life time.

It has been discussed earlier how the high fertility could be positively affected by the low age of marriage and age at first birth as well as, in the theoretic approach, how high fertility can have its roots in the culture, economy and society within the women are living. In the theoretic approach was shown that there are both economic and cultural reasons for fertility variations. For the economic side Becker made a cost-benefit analysis where the quality (expenditure) of children was put in relation to the benefits of them. In the theory of the demographic transition was also pointed out women's relative wages (women's wages compared to men's) as a factor which is believed to have played an important contributing role to the fertility decline in Europe during the early 20th century. The hypothesis was that higher wage of women's work motivate them to leave the home in favour for labouring and in the same way the expenditure of children will increase when the mother can't take care of them while working and she therefore have to pay for alternative child care.³⁰ Applied to Tanzania and education, it could be likely that as better chances a woman have got to external work and income as lower her tendencies to high fertility. According to the *Labour Force Survey*, people with no training have a higher rate of unemployment than those with training. Women have a lower training, lower employment rate and a higher unemployment rate than men, and women with education are to a higher extent employed than women without education.³¹ In *LFS* it's also established that the low profile on all aspects of women in employment can be attributed to their low educational and training level.³² Furthermore, it is

²⁸ Bureau of Statistics (1996) p. 31

²⁹ See section 4.1

³⁰ Bengtsson T & Ohlsson R (1993) p. 129

³¹ Bureau of Statistics (1993) *Tanzania (mainland): the Labour Force Survey 1990/91*, p. 1-10

³² Bureau of Statistics (1993) p. 1-90

shown that of women working as paid employees 6 percent have no education, 6 percent have not completed primary school, 62 percent have completed primary and 26 percent have secondary education or more. For self employed without employees corresponding numbers are 27, 20, 50 and 4 and for self employed with employees the numbers are 26, 12, 57 and 5. Among women who work as unpaid helpers 13 percent have no education, 33 percent have primary incomplete, 46 percent primary complete and 9 percent have secondary education or more. For women in traditional agriculture the corresponding numbers are 45, 19, 36 and 1.³³

So what we see in Tanzania is that women with education have a lower rate of unemployment, a higher rate of better-paid jobs, lower fertility preferences and lower fertility rate. According to Caldwell both the quality and the quantity of children are supposed to raise when household income increases. It seems in the Tanzanian case that when women's income raise they prefer to increase the quantity instead of the quality, and therefore their education have a negative and not positive effect on their fertility. Cain on the other hand, analysed how children's education affects the mothers' fertility and found a negative relation through among other factors a westernization of attitudes and lifestyle. According to that logic, if the mother is educated and has adopted the western preferences, it could explain why educated women have lower fertility. Finally, according to the European demographic transition, women's income and participation in the labour market affect negatively their fertility, which also seem to be the case in Tanzania.

Both the quality-quantity thinking and the female work-fertility thinking are recognised in the interviews with form 6-girls. Through their answers they seem aware of that the professional career that most of them wish for is not possible to combine with large families. A common answer was that *"to be able to be a successful lawyer/doctor/sociologist I can't take care of or be a good mother for too many children and therefore I prefer only two/three"*. The same thinking goes for quality-quantity. Many girls seem to prefer to have fewer children with "quality" than more to whom they can't provide the same in form of education etc. It seems that educated girls realise the importance of education. Few of them can imagine their children not going to school and in fact almost every one of the girls participating in my questionnaires have extremely high expectations on their future children concerning their education. 87 percent answered that they consider it very important that all of their future children finish university, of whom 23 percent specified that PhD is the lowest acceptable level of education for their children and the rest 13 percent argued that they want their future children to study "as long as possible" but that depends on the overall situation at that time, their economic capabilities and their children's academic performances. Those girls also recognise the cost of schooling. In fact, the high costs of giving children capabilities to fulfil their education and necessary training was the most common mentioned reason to why those girls only wish to have two or three children. It seems therefore that girls who go to school prefer having fewer children so that they can be "sure" that they will manage to afford all the costs of having children. On the other hand, a part of the interviewed girls stated that if they could afford it they would like to have additional children. It seems that while educated women recognise higher costs of children and emphasise quality rather than quantity when they have to choose, they don't consider themselves able to afford large families. In the case where their income exceeds the full costs of educating each child it is likely that they increase their fertility. Somehow uneducated and educated women's way of thinking seems similar; they often prefer to have as many children as they can afford. But the idea of costs and "to

³³ Bureau of Statistics (1993) p. 1-26

afford” differs between the two groups: Educated women consider the minimum cost of a child to be much higher than uneducated women.

As for cultural reasons, many demographers stress that any analysis of high fertility rates must give weight to patriarchal social relationships and the way they operate at the family level.³⁴ The relations and ideology of patriarchy, which secure men's domination over women, make a major contribution to sustaining a high birth level. Among most ethnic groups in Tanzania men control women's reproductive power in their own interest. Women are married in order to reproduce and extend the family tree. The status of women is so low that the first priority in marriage is to bear children. The traditional gender roles are that men carry the responsibility for cash income, and women for the reproduction and perhaps the home production. Women become economically dependent upon the men, and, in order to secure their survival, they fulfil their duty of giving their spouse a number of off-springs and descendants.³⁵

The theory above could give an explanation to this large difference in fertility rates. When a woman has no, or insufficient, income of her own, her status and chances for survival rely on being mother. Assuming that women have small power to decide over themselves because of the traditional gender roles, as stated by Omari, a higher level of education give them an economic strength to make their own decisions even when it comes to reproduction. When she trespasses on the traditional male role she creates a disorder which eventually also disturbs the traditional female role. A higher level of education gives an income which decreases women's dependence to men, and also a certain social status which gives her strength to participate in the decision-making of her fertility. That fertility decreases when women's decision-making power increases could be a possible influencing factor explaining the different fertility rates between uneducated and educated mothers. The assumption was that women have lower fertility preferences than men and when she gets power to participate in the fertility decisions the fertility will therefore fall.³⁶ In fact, it has been shown that in monogamous marriages, husbands more often want large families than do women. With no division in level of education, in 10.5 percent of the couples, the husband wants more children but the wife does not when they already have had 1-3 children, 18.9 percent when they have had 4-6 children and 16.1 percent when they have had 7 children or more. For the cases when the wife wants more children but the husband does not the percentage is 3.8 when they have had 1-3 children, 7.6 when they have had 4-6 children and 8.4 when they have had 7 children or more.³⁷ It is likely that when there are disagreements concerning fertility, husbands want more children than wives. The assumption above that educated women have higher decision-making power and thereby lower fertility is also supported by several case studies in Tanzania. Such studies have shown that urban high-educated and high-income women have a significant lower fertility than the rest of the population but also in rural areas fertility is affected by exposure to education and postponement of marriage which comes as a consequence of education. These studies draw the conclusion that education, as it changes the status of women, is the key factor in women's liberation and the most important determinant in deciding lower fertility.³⁸ Here it is also relevant to keep in mind Cains emphasis on women's dependence on men, where in a society where women's participation in the labour force is limited and sons become an insurance against widowhood and divorce. According to the figures above, educated women are more engaged in paid employment and self-

³⁴ Such statements one can find among others from C. K. Omari p. 260

³⁵ C. K. Omari p. 261

³⁶ McNicoll in section 2.2

³⁷ Bureau of Statistics (1996) p. 88

³⁸ C. K. Omari pp. 262-263

employment than uneducated women and have therefore not an as high need for sons as insurance as uneducated women have.

In conclusion, the gap between wanted fertility rate and actual fertility rate is larger for women who lack schooling and decreases with level of education. This can be explained by two possible reasons. First, as stated above, women's participation in the households' decision making increase with her education. In the cases where the man wants more children than the women, it is therefore likely that the educated women have stronger power to limit her fertility and stop the childbearing when she wishes to do so. Second, educated women have a better knowledge of and access to family planning methods than uneducated women. That means that she can easily and more successfully control her reproduction and achieve the number of children she prefers. This aspect shall be further analysed in the following section.

5 Family Planning

To achieve a fertility reduction three criteria must normally be fulfilled:³⁹

1. A *desire* to reduce the family size and acceptance of doing so;
2. *Knowledge* of how to do so;
3. *Access* to methods for fertility regulation.

We have already seen in section 4.3 that the desire for children declines antagonistic with women's education. Educated women have a lower desire for big families than uneducated. But it was also shown that uneducated women, as well as educated women to some extent, wish fewer children than they actually have. A conclusion was drawn that the gap between wanted and actual fertility is due to both a lack of decision-making power, which increases with women's education, and a lack of knowledge how to reduce or control their fertility.

In the following section family planning will be discussed. In the first part (5.1) knowledge of family planning and contraceptive methods will be treated and in the second (5.2) the use of contraceptive methods.

5.1 Knowledge of Family Planning and Contraceptive Methods

Figure 7 below shows that the higher the education of a person, the more sensitive and responding the person becomes toward family planning messages. The proportion of women exposed to messages in any print media increases directly with educational level, from 8 percent among women with no formal schooling to 73 percent among women with at least some secondary education.⁴⁰ The same trend is shown in response to messages in radio and television. 30.4 percent of educated women have heard about family planning on both radio and television, while only 1.5 percent of uneducated. Similarly, 76 percent of women with no formal schooling have *not* heard or seen family planning messages on radio or television, compared with 18.5 percent of women with some secondary or higher education.⁴¹

³⁹ These criteria have often been treated for example within the discussions about the demographic transition in Europe. It was stressed that fertility decline was possible first when the modernisation of society had changed the general attitudes and women had got knowledge about and access to modern contraceptive methods. (T. Bengtsson & R. Ohlsson (1993) pp. 125-126)

⁴⁰ Bureau of Statistics (1996) p. 59

⁴¹ Bureau of Statistics (1996) pp. 56-57

Fig. 7: Percent of women who have heard about family planning in radio, TV or in print media

Source: Bureau of Statistics (1996) pp. 57 & 60

Level of education	Heard on radio	Heard on TV	Heard on both	Heard on neither	Seen in print
No education	22.5	0.1	1.5	75.9	8.3
Primary incomplete	36.2	0.1	2.9	60.7	21.9
Primary complete	50.8	0.4	5.7	43.0	41.0
Secondary +	49.9	0.9	30.4	18.5	73.4

Even when it comes to knowledge of contraceptive methods the trend is the same. Almost three quarters, 72.4 percent, of the female population with no education is aware of any contraceptive method, traditional or modern.⁴² This is a high number, especially compared to the number of women wanting to use them, but it is even much higher for educated women of whom 96.6 percent have knowledge about contraceptive methods.

Fig. 8: Percent of women knowing contraceptive methods by level of education

Source: Bureau of Statistics (1996) p. 42

Level of education	Any method	Modern method
No education	72.4	70.7
Primary incomplete	78.6	78.3
Primary complete	92.5	92.4
Secondary +	96.6	96.6

Those numbers seem to correspond to the interviews with students in form 6. About 91.5 percent of the students could name at least one contraceptive method,⁴³ and the average number of contraceptive methods the students could name was 2.7. About 27 percent could name one method, 12.5 percent two methods, 20.5 percent three methods, 17 percent four methods, 9 percent five methods and 5 percent more than six methods. But it also seems to be a sensitive question as 7.5 percent chose not to answer.

While sexual education is not included in Tanzanian schools, the higher knowledge of contraceptive methods among educated women is not likely to come from the school itself. Except for that the school can function as a social meeting point, where for example seminars can and are arranged, the most possible explanation is that schooling gives training in

⁴² Traditional methods refers to "natural" methods such as the use of calendar and withdrawal while modern methods refer to "medical" methods such as pills, injections, condom, sterilization etc.

⁴³ Contraceptive methods include using of calendar, i.e. to avoid sexual intercourse at time for ovulation

utilising/profitting of information, and women with schooling therefore can more easily apprehend and absorb messages in media and in their close environment. Thus, it can be concluded that education may not be necessary a means for spreading information, but a helpful one.

Figure 9 shows met and unmet need for spacing and limiting and includes both women who know about family planning methods but can not satisfy their need, and women who don't want any more children/their last child/pregnancy but who don't know how to reduce their fertility.

Fig. 9: Unmet/met need for family planning by women's level of education⁴⁴
Source: Bureau of Statistics (1996) p. 90

Level of education	Unmet need for FP		Met need for FP	
	For spacing	For limiting	For spacing	For limiting
No education	10.3	8.8	2.9	4.0
Primary incomplete	10.9	8.1	4.6	7.9
Primary complete	13.9	4.6	13.5	8.0
Secondary +	10.2	3.9	21.1	10.4

Figure 9 shows that the need for family planning, both for spacing and limiting, are more satisfied among educated women than uneducated. The fact that those women actually have a demand for family planning but can't satisfy it support former interpretation that the gap between wanted and actual fertility rates depend on a deficient knowledge of and/or access to fertility regulating methods. Further the difference between met/unmet need of family planning between educated and uneducated women could, as stated above, depend on that educated women have better knowledge about fertility regulating methods and can easier absorb information about such methods.

5.2 Use of Contraceptive Methods

Although most women have knowledge about contraceptive methods, the actual use of them is much less. In figure 10 appears that the use of contraceptives, just as the knowledge of them, is clearly related to women's level of education. Women with some secondary or higher education are almost five times more likely to use contraceptives than women with no

⁴⁴ Unmet need for *spacing* includes pregnant women whose pregnancy was mistimed, amenorrhoeic women whose last birth was mistimed and women who are neither pregnant nor amenorrhoeic and who are not using any family planning but say they want to wait for their next birth. Unmet need for *limiting* refers to pregnant women whose pregnancy was unwanted, amenorrhoeic women whose last child was unwanted and women who are neither pregnant nor amenorrhoeic and who are not using any methods for family planning but want no more children. Excluded are menopausal or in fecund women and unmarried women who have not had sexual intercourse in the four weeks in prior to the interview.

education. The percentage of uneducated women currently using modern contraception is 4.7, while of women with secondary school or more is 23.1. For any methods, i.e. traditional methods included, the percentage of uneducated women using contraceptive methods is 6.8, and of educated is 31.5. That means that educated women are almost five times more likely to use contraceptive methods than uneducated women and are more likely to choose modern contraceptive methods than traditional.

Fig. 10: Percent of women using contraception

Source: Bureau of Statistics (1996) p 48.

Level of education	Any method	Any modern method	Any traditional method
No education	6.8	4.7	2.1
Primary incomplete	12.5	9.6	2.9
Primary complete	21.5	15.7	5.9
Secondary +	31.5	23.1	8.4

In conclusion, both knowledge and use of contraception among women in Tanzania is highly related to their level of education. With education knowledge, demand and capability to satisfy the demand increase. But also the attitudes toward family planning differ between uneducated and educated women. As stated above, fertility regulation is highly unlikely to be used if it is not morally or socially accepted. The increased use of contraceptive methods with higher education could therefore have to do with the acceptance of contraceptive use, which increases with higher education. Acceptance of contraceptive use is highest among couples where both spouses are educated (72.8 percent) but raise even when only one of the spouses are educated (46.5 percent when husband is educated but wife is not and 37.6 percent when wife is educated but husband not).⁴⁵

Explanations delivered in section 4 concerning fertility can be used even in the discussion about why uneducated women don't use family planning as much as educated women do. While fertility has a close connection to household income and the demand of children is determined through a simple cost-benefit analysis, family planning efforts can not in itself reduce fertility. Improvements or improved distribution of birth control methods should therefore be seen as induced responses to other decreases in the demand for children rather than as a cause of the decreased demand.⁴⁶

⁴⁵ Bureau of Statistics (1996) pp. 62 & 64

⁴⁶ Iglesias (1999) p. 30

6 Demographic Effects II: Mortality

Decreased mortality is in itself considered to be an important benefit from girls' education and a sign of poverty alleviation, but it is also a variable in the fertility analysis. The importance of decreased mortality for the fertility changes is to be found in the theory of demographic transition where fertility decline has been preceded by a mortality decline. As discussed above, a certain number of children are needed to extend the family tree, to contribute to the family income and to provide security for the parents later on in life. It is stressed that in society with high child mortality this "spill" is calculated in the family planning – you simply give birth to many children aware of that some of them will not survive. To achieve the preferred number of grown up children parents secure themselves through giving an additional number of births. That can occur through *compensation* or *replacement*, where compensation refers to when a family gives an additional number of births to achieve the preferred number of grown up children after deaths while replacement refers to when a mother compensates an already occurred death among her children with an additional birth. So as when child mortality decline and thereby more children survive until they are grown up this compensation or child surplus is not needed anymore. Now parents calculate that their children will survive and achieve instead the preferred number of living children with the same number of births. These theories take their support from what is believed to happen in Europe during the 19th century. Changed behaviour or conditions for the mass population resulted in or contributed to a very sharp decline in mortality which, after two-three generations and in combination with higher access to contraceptive methods for women in general, was compensated with lower fertility. A mortality decline could therefore be seen from two different perspectives; as a positive factor in itself and a sign of development, or as a first step toward a demographic transition.

This section discusses the death rates among infants and children in relation to their mothers' level of education (5.1). In order to understand and analyse the difference in mortality high-risk behaviour, such as teenage pregnancy and birth intervals, are discussed (5.2).

6.1 Infant and Child Mortality

Infant and child mortality are defined as follows:

- Neonatal mortality (NN): the probability of dying within the first month of life
- Post neonatal mortality (PNN): the arithmetic difference between infant and neonatal mortality
- Infant mortality (${}_1q_0$): the probability of dying between birth and the first birthday
- Child mortality (${}_4q_1$): the probability of dying between the first and the fifth birthday
- Under-five mortality (${}_5q_0$): the probability of dying between birth and the fifth birthday

The numbers presented in figure 11 shows infant and child mortality by mothers' level of education. The rates are for the 10-year period preceding the survey, i.e. 1986-1996.

Fig. 11: Infant and child mortality by mother's level of education
Source: Bureau of Statistics (1996) p. 99

Level of education	NN	PNN	${}_1q_0$	${}_4q_1$	${}_5q_0$
No education	39.9	66.0	105.9	62.6	161.9
Primary incomplete	35.8	64.7	100.6	55.6	150.6
Primary complete	33.9	51.1	85.0	52.2	132.7
Secondary +	X	27.0	63.9	26.6	88.8

Examinations of child mortality by mother's level of education shows huge differences in mortality between mothers with no education and mothers with secondary education. While the IMR (${}_1q_0$) is 105.9 per 1000 births when the mother lacks schooling, the IMR is only 63.9 for children with mothers who have attended secondary school. As for child mortality (${}_4q_1$) the same pattern appears; the child mortality rate is 62.6 per 1000 births for children born by women with no education but declines as with her schooling and when she has completed secondary school the child mortality rate has declined to 26.6 per 1000 births. Overall, 11 more children per thousand among those who are born to mothers with no education die under five years old (${}_5q_0$) than among those whose mothers have some (incomplete) primary schooling. As higher level of education the difference is even more dramatic. It can be observed that educating women up to secondary school reduces the under-five mortality with nearly half, or, in other terms, children to uneducated women have an almost 100 percent higher risk of dying before reaching their fifth birthday than those to educated women.

Those findings could also be expressed through dividing the percentile decline of mortality with the years of schooling. In this case, the under-five mortality decline is 50 percent and the years of schooling up to form 6 are 14. That means that for every year a girl goes to school the risk for her future children to die before reaching age five decrease with 3.6 percent! Or the opposite way, for every year earlier a girl is taken out of school, her future children will have a 7.1 percent higher risk of dying.

Another research, conducted in 1997 by the *National Bureau of Statistics* and based on the *1988 Population Census* compare the benefits in form of lower IMR from educating the future mother with those of educating the future head of household (no matter if the latter is a man or a woman). This shows that the chance of a child with an university educated mother to die before getting one year old is almost three times less than the child of head of household with the same education. According to the report the IMR of children to women or head of household with no education is 125 (per 1000). But already after reaching level 5-8, the IMR drops faster for educated mothers than for educated HH, and have reached 98 for the former and 100 for the latter. Continuing the education the IMR drops, and after finishing university the IMR is as low as 24 for children to educated mothers, but has not drooped to more than 66 for children to educated HH.⁴⁷ That means that just through university education in general the IMR will decrease with 47,2 percent, or, even more beneficial, educating a girl up to university level gives a 80,8 percent lower IMR.

Probable reasons to why infant and child mortality decrease with women's education is that the mothers have a better knowledge about how to take care of their children, i.e. nutrition, health, hygiene etc. and, in the cases where education actually gives higher income, they can afford better commodities and health care. Other reason to variations in mortality is reproductive behaviour such as birth intervals, birth orders and mothers' age at birth. Women's knowledge about basic health care will be discussed in section 7, while mothers' high-risk behaviour in following section (6.2).

6.2 High-risk Behaviour

Infant and child mortality occurs from different reasons, and one of them is the behaviour of the woman during pregnancy, and health issues after birth. This section will treat the high-risk behaviour which is mainly for a woman to give birth when she is too young or too old, when she has a too short birth interval and if she has a high birth order. Children born to too young or too old mothers, if they are born shortly after their previous sibling and if they already have a high number of siblings are more prone to illness and higher mortality during childhood. In the analysis of mortality a mother is classified "too young" if she is less than 18 years of age and "too old" if she is more than 34 years of age at the time of delivery. A "short birth interval" is defined as birth occurring less than 24 months after previous birth, and a child is of "high birth order" if the mother previously have given birth to three or more children.

Age at first birth has already been discussed in section 3.2 where it was shown that women with secondary education (on average of all cohorts) delay their first birth with 4.6 years compared to women with no education. But this numbers does not give a fair or complete picture while it shows the *medium* age at first birth but not how many falls into the high-risk category. In figure 12 is therefore shown the percentage of women age 15-19 who are mothers or pregnant with their first child.

⁴⁷ Bureau of Statistics (1997) p. 25

Fig. 12: Percentage of women age 15-19 who are mothers or pregnant with their first child, selected by level of education

Source: Bureau of Statistics (1996) p 38

Level of education	Mothers	Pregnant with first child	Total
No education	33.1	6.5	39.6
Primary incomplete	14.1	2.0	16.1
Primary complete	23.1	7.2	30.3
Secondary +	5.9	3.5	9.4

As shown in figure 12 above, 39.6 percent of the women with no education were pregnant with their first child or have already given birth at age 15-19, while only 9.4 of those who have finished secondary school or more. That means that almost four times more women with no education give their first birth when they are still in the high-risk zone.⁴⁸ Unfortunately I have not been able to find any numbers on how many women are too old at delivery, whereby the issue can't be discussed.

The next high-risk behaviour which is birth intervals does not differ as much as age at birth between educated and uneducated women. Figure 13 presents the percentage of women with more than one child with less than 24 months since previous birth.

Fig. 13: Percentage of women with more than one (1) child with less than 24 months since previous birth, selected by level of education

Source: Bureau of Statistics (1996) p. 35

Level of education	< 24 months
No education	17.6
Primary incomplete	18.0
Primary complete	17.4
Secondary +	14.4

As shown above, 17.6 percent of the births among women with no education occur within 24 months from previous birth compared to 14.4 percent among women with secondary education. That makes a difference of 3.2 percent units or 18.2 percent.

As for the last aspect of mothers' high-risk behaviour, birth order, it has been more difficult to find accurate and useable figures. The ideal would of course be a presentation of how many women in groups with different level of education that has more than three children, but those

⁴⁸ High-risk age is above defined as under 18 while figure 10 include women under 19 years old. All of those girls are thereby not in the absolute high-risk group, but in lack of other or further facts they have to be included.

are numbers I haven't been able to find. The closest I can come to birth order is the average fertility rate and the desire to limit child bearing by number of living children. As presented in section 4.3, uneducated women have an average of 6.4 children while educated women have an average of 3.2 children. That means that women without education are more likely to have a high birth order than women with secondary education or more. Another way of tackling the problem is to see how many women with different level of education desire to limit their childbearing after having a number of living children already. As said above, the higher risk starts when the mother has already given birth to 3 children. Among women who have already got 3 children 20.5 percent of those with no education want no more children compared with 22.4 percent of those with primary incomplete, 25.7 percent of those with primary complete and 46.2 percent of those with secondary education or more. The fertility rates and desire to limit childbearing after 3 children indicate that educated women tend to have fewer children of high birth order than uneducated women.

7 Health Issues

One of the benefits from girls' education presented in the theoretic approach was better health and decreased malnutrition among children. Concerning the health aspect, in particular one disease, diarrhoea, is of interest while it is one of the most common causes of death for children under age five in Tanzania. Fighting this disease is therefore also fighting child mortality. Malnutrition in general and among children in particular is an obvious and visible symptom of poverty, and a serious threat to children's well-being and survival.

AIDS and HIV infections have been identified as one of the most serious socio-economic problems in the synchronic Tanzania and one of the biggest hence for the development. While the infected people mostly are in their productive and reproductive age, the epidemic causes serious damage to both the economic and the demographic development. Children become orphans or get infected from their mothers during pregnancy and birth, and AIDS is now, close to diarrhoea, a common cause of death.⁴⁹

In this part the nutrition status among Tanzania's children (7.1) as well as the spread of diarrhoea and knowledge how to treat it (7.2) will be discussed in light of the mothers' level of education. The last part (7.3) will deal with AIDS.

7.1 Children's Nutritional Status

Malnutrition, insufficient intake of food which are desiccant in certain nutrients, may cause several threat to health and survival through different forms of kwashiokor, marasmus, blindness, goitre and others. Poor nutrition also weakens the body's immune system making it easier for an individual to be attacked by infectious diseases and decreasing severely the chances of a child's survival.⁵⁰ Malnutrition or rather diseases caused by malnutrition counted in 1988 for 60 percent of morbidity and mortality among children in Tanzania⁵¹ and it is not likely that there have been any dramatic changes since then.

Malnutrition use to be classified as three different kinds:

- Stunting – chronic malnutrition, i.e. low height-for-age
- Wasting – acute malnutrition, i.e. low weight for height
- Weight for age

The nutritional status among Tanzania's children is unfortunately very bad; 43 percent of the children under five are classified as stunted, of whom 18 percent severely; 7 percent are wasted of whom 1 percent severely; and finally more than 30 percent of the children are underweight for their age. Fortunately, even these numbers change with the mother's level of

⁴⁹ World Bank: *Tanzania AIDS Assessment and Planning Study*

⁵⁰ Ministry of Community Development, Culture, Youth and Sports (1988) *Situation of Women in Tanzania* p. 50

⁵¹ Ministry of Community Development, Culture, Youth and Sports (1988) p. 51

education. The relationship between women's education and their children's nutrition status is shown in figure 14.

Fig. 14: Percentage of children with malnutrition, selected by mothers' level of education
Source: Bureau of Statistics (1996) p. 131

Level of education	of Stunting		Wasting		Weight-for age	
	> -3 SD	> -2 SD	> -3 SD	> -2 SD	> -3 SD	> -2 SD
No education	20.8	49.4	1.2	8.5	10.0	36.9
Primary incomplete	17.6	44.0	1.3	7.4	9.5	32.9
Primary complete	16.9	41.2	1.4	6.6	6.4	27.7
Secondary +	7.5	24.1	1.1	5.2	2.3	11.9

As for stunting, the number is 49.4 percent for those children whom their mothers have no education, while it is only half of that, 24.1 percent for those with mothers with secondary education. For wasting the number is 8.5 percent among those with uneducated mothers, and 5.5 percent among those with secondary level educated mothers. But the biggest difference is in the weight-for-age group, where children to uneducated mothers are three times more often underweight, 36.9 percent vs. 11.9 percent, than the children to educated mothers.

7.2 Diarrhoea

In traditional societies the woman is responsible for the upbringing of the children. Interpreting symptoms of illness, knowing how to treat them and being able to understand when it is time to bring the sick child to medical care is a very basic and necessary knowledge for every mother. The infant mortality rate is exceptional high in Tanzania, which partly or fully could be explained by the mother's lack of knowledge in, and access to, basic medicine and child care.

One of the absolute most common causes of death among children in Tanzania is diarrhoea.⁵² Combined with the frequent malnutrition an otherwise rather simple disease like diarrhoea can be life-threatening. It is a very unnecessary cause of death which often occurs in third world countries as in Tanzania through unclean water or food. Frequent attacks of diarrhoea among children who suffer from underweight or malnutrition in a tender age can easily result in incapacity from consequent loss of sight, deafness or mental retardation.⁵³ When having diarrhoea, it is of absolute importance that the affected child gets enough water and salt, or the body even at a young child will simply be exhausted and collapse. A mother's knowledge about the symptoms and ways to treat the disease can therefore save a lot of lives, and strongly reduce the child mortality in Tanzania.

⁵² World Bank: *Tanzania AIDS Assessment and Planning Study* and Ministry of Community Development, Culture, Youth and Sports, p. 47

⁵³ Ministry of Community Development, Culture, Youth and Sports, p. 47

Fig. 15: Percent of children with diarrhoea the latest two weeks by mothers' level of education and percent of mothers who know about treatments of diarrhoea
Source: Bureau of Statistics (1996) pp. 120-121

Level of education	Children with diarrhoea	ORS	More liquids	More solid foods
No education	12.6	78.1	52.9	44.5
Primary incomplete	16.3	88.7	67.5	54.4
Primary complete	13.7	91.5	73.3	62.3
Secondary +	10.1	91.8	82.1	59.1

When it comes to diarrhoea, treatments like ORS (*oral dehydration salts*, a simple salt-sugar-water solution) and giving more fluid are important, cheap and simple actions which can save the life of the ill child. In questioning women about these treatments, it shows that 78.1 percent of the uneducated women are familiar with the ORS, while 91.8 percent of the educated. It also shows that women with higher education tend to have a more correct apprehension about the amount of solid food should be given to a child with diarrhoea; of women with no education 24.3 percent answered less, 25.1 percent answered same, and 44.5 percent answered more while of educated women 17.3 percent answered less, 21.3 percent answered same, and 59.1 percent answered more.

But even looking at, as done in figure 13 how many children actually get diarrhoea shows a relationship to the mother's level of education, although one there can see a quite surprising trend. Fewer children to mothers with secondary education have diarrhoea than those to mothers with no education, but the highest part is among children with incomplete primary education. I can not give a satisfactory explanation to that.

In order to get a picture of secondary school girls' awareness of the disease and the ways to treat it they were asked in the sample why, and what one should do if, a child gets diarrhoea. The results showed that 32 percent of the girls believe that diarrhoea comes from unclean or unboiled water, 55 percent stated from infected or improper food, and 31 percent explained the upcoming of the disease through unclean or unhygienic environment including that children eat soil when playing outdoors. Other frequent answers were "natural" conditions such as growth of children and getting teeth (8 percent), symptoms of other diseases or allergy (7 percent) and lack in attention of mother (2 percent). As for how to treat child diarrhoea 15 percent are aware of ORS, 32 percent stated that they would give the child more clean water or liquids as fruit juice, 7 percent would give more food as fruits and vegetables, 9 percent would give medication and 76 percent would take the child to hospital or health centre for medical advice.

7.3 AIDS

The *National AIDS Control Program* (NACP) estimates that about 800,000 people, or about 3.2 percent of the population, are currently infected with the disease (i.e., are HIV seropositive). Of these, approximately 160,000 have already developed AIDS (i.e., have crossed the threshold from being infected to being ill). The remainder will develop AIDS sometime between less than one and up to twenty years from the date of infection (the median time for adults between infection and becoming ill appears to be eight to ten years in developed countries and may be less in developing countries). Death follows within a year or two of the onset of major symptoms, and often much sooner. Annual deaths from AIDS are presently estimated at between 20,000 and 30,000 which is 5-7 percent of total deaths. AIDS is believed to have recently surpassed other diseases as the leading killer among diseases in adults, and is likely to do so for children in the very near future.⁵⁴ AIDS has thereby become a major social concern which severely affects the demography. To not face a demographic and socio-economic disaster, knowledge of AIDS, how it transmits and how to avoid getting infected is of absolute importance.

Figure 16 shows the percentage of women who stated they know about AIDS, and percent of women with different levels of education who know specific ways to avoid getting infected.

Fig. 16: Percentage of women by level of education who know about AIDS and who know specific ways to avoid getting infected by AIDS

Source: Bureau of Statistics (1996) pp. 147 & 150

Level of Education	Have heard about AIDS	No way/ Don't know	Abstain from sex	One/few partners	Use condoms	Avoid injections	Avoid transfusion
No education	92.1	48.0	12.3	40.5	21.4	1.4	0.5
Primary incomplete	97.9	40.1	14.6	38.3	34.9	4.8	1.2
Primary complete	99.3	28.9	15.1	48.2	48.7	5.3	1.9
Secondary +	99.6	13.5	29.1	61.7	62.5	11.8	4.3

According to figure 16 above almost all women are familiar with AIDS; 92.1 percent of the uneducated women and 99.6 percent of the educated. When it comes to knowledge about specific ways to avoid HIV/AIDS the result is not as positive, although getting better with higher educational level. Among women who have heard about AIDS, 48.0 percent of the uneducated women believe that there is no way to avoid AIDS, or they don't know any way to do so (13.3 and 34.7 respectively.). Among women with some primary schooling, 40.1 percent gave same answer, among women with completed primary 19.6 and among women with secondary education or more only 13.5 percent believe there is no way to avoid the disease, or they don't know any way (8.0 and 5.5 respectively.). 62.5 percent of the women

⁵⁴ World Bank: *Tanzania AIDS Assessment and Planning Study*

with secondary education answered that using a condom is a way to avoid AIDS, while only 48.7 percent of the women with completed primary, 34.9 percent of those with primary incomplete and 21.4 percent of those with no schooling. The same trend, increased knowledge by increased education, shows in asking about other specific ways as abstain from sex, having fewer partners, avoiding intercourse with prostitutes, avoiding injections and avoiding blood transfusions.

That educated women have a good general knowledge about specific ways to avoid AIDS correspond well to the impressions from the interview with girls in form 6. All of them, 100 percent, stated that they have heard about AIDS, and all of them could name at least one transmission way, while almost half of them (45 percent) could name three transmission ways, 36.5 percent less than one and 17 percent more than three. All of them stated that it transmits through sexual intercourse, 62 percent from blood transfusion, 79 percent from injections or through sharing unsterilized things as surgical equipment, syringes, razor blades, toothbrushes, etc. and 22 percent from mother to child during pregnancy or birth. About 95.5 percent named at least one way how they can protect themselves from getting infected, while 41.5 percent named two ways, 18.5 percent three ways, 4.5 percent four ways and 4.5 percent didn't answer. 28.5 percent answered that using condoms can prevent transmission, 73.5 percent answered through total absence from sexual intercourse until marriage, 43.5 percent through limiting the number of sexual partners and 16 percent answered other ways as avoid contact with open wounds, avoid prostitution, avoid local hospitals, requesting blood test from partner or before blood transfusion or to "change behaviour".

The different high knowledge about specific ways to avoid AIDS is also shown in the number of people taking practical actions to avoid getting infected. In analysing women's AIDS prevention behaviour among those who have heard about AIDS, it appears a sad result for all women. Figure 17 shows percentage of women who have changed their sexual behaviour in order to avoid transmission of AIDS.

Fig. 17: Percent of women who have heard of AIDS by specific changes in sexual behaviour in order to avoid AIDS and by level of education

Source: Bureau of Statistics (1996) p. 158

Level of Education	No change	Kept virginity	Stopped sex	Began condom use	Increased condom use	Restricted to one partner	Fewer partners
No education	26.4	4.2	7.4	0.4	0.3	45.5	13.4
Primary incomplete	19.4	23.3	5.9	1.7	0.8	39.9	10.7
Primary complete	14.0	12.0	6.0	2.8	1.3	54.9	17.0
Secondary +	7.9	23.4	9.6	3.9	4.5	48.2	12.4

As shown above, 26.4 percent of uneducated women but only 7.9 percent of educated women did no change in their sexual behaviour in order to avoid AIDS. As for all other ways treated here to avoid AIDS except for limiting number of partners, i.e. to keep virginity, stop sex, begin condom use, increase condom use and restrict to one partner, educated women are more

frequent represented than lower or uneducated women. While not only knowledge of AIDS and of ways to avoid AIDS increase with higher education but also actions of protection is positively related to education schooling of women can be seen as an important action to stop the spread of the virus.

Asking the students about actions taken to avoid transmissions was of no use while school students are not supposed to be engaged in sexual relations, and the answers could therefore not be supposed to be correct. However, from the hypothetical question "*If you had a boyfriend before marriage, would it then be important to use condom?*" it appears that 61 percent find it important while 39 percent do not. Of those girls who stated that condom use is important 35 percent found it important in order to avoid unwanted pregnancy and 55 percent to avoid AIDS and/or other sexual transmittable diseases. Of the girls who do not find condom use important 21 percent stated that they simply don't trust condoms in preventing the virus from transmission and 23 percent stated that sexual intercourse before marriage is of religious, cultural or other reasons inconsiderable and condom use therefore unnecessary.

8 Summary & Conclusions

The purpose of the thesis was to analyse if and in that case how women's education affects the demography in Tanzania. By comparing a number of demographic variables between women with different level of education, I tried to reach the answer to the above questions and through a theoretic approach I have tried to deliver an explanation to why those differences occur. A further question which has been actual for the thesis was if there is a demographic transition going on among the educated women in Tanzania.

The demographic transition consists of two parts, decreased fertility and decreased mortality, and is fulfilled when both fertility and mortality have stabilised at a low level. In order to understand if there is a demographic transition going on among the educated women, the thesis has included analysis of both fertility and mortality. Fertility included variables such as age at marriage, age at first intercourse, age at first birth, fertility rates and knowledge and use of family planning and contraceptive methods. Mortality included mortality rates, high-risk behaviour such as too low age at birth, low birth intervals and high number of previous births and health issues which are common causes of deaths such as diarrhoea and AIDS.

All of the demographic variables have shown a close relationship to women's education. Women who have finished secondary school marries later, have their first sexual intercourse later, give their first birth later, want fewer children and have only half the fertility of uneducated women. While uneducated women marries at age 17.1, have their first sexual intercourse at age 16.0, give their first birth at age 18.4, want 5.6 children and have a total fertility rate of 6.4, the educated women, on the other hand, marries at age 19.5,⁵⁵ have their first sexual intercourse at age 19.7, give their first birth at age 23.0, want 3.0 children and have a total fertility of 3.2. Furthermore, educated women are more likely to accept fertility regulation as a way to achieve wanted family size, have a better knowledge of contraceptive methods and are more likely to use them than uneducated women. About 72.4 percent of uneducated women know any contraceptive method and 6.8 percent use it while 96.6 percent of educated women know any contraceptive method and 31.5 percent use it.

As for mortality, children to uneducated mothers have an infant mortality rate of 105.9 and an under-five mortality rate of 161.9 per thousand while the IMR among children to educated mothers is 63.9 and the ${}_5q_0$ is 88.8 per thousand. Causes to the differences in mortality rates could be found in the mothers' risk-behaviour and her knowledge of health issues. Among uneducated women 39.6 percent give birth at a too young age⁵⁶ compared with 9.4 percent among educated, 17.6 percent have a too short birth interval compared with 14.4 percent among educated and uneducated women are more likely to give too many births since they have a higher fertility rate in general and only 20.6 percent of uneducated women want to stop childbearing after three children while 46.2 percent of educated women. Furthermore, children to educated mothers have better health and nutritional status which increase their

⁵⁵ Refers in this case to women with complete primary education and instead of to secondary education or more as in the other cases.

⁵⁶ "Too young age" refers here to under 19 instead of normal under 18 years old.

chances to survive than children to uneducated mothers. 49.4/8.5/36.9⁵⁷ percent are malnourished and only 24.1/5.2/11.9 percent are malnourished. Twelve percent of children to uneducated mothers had diarrhoea two weeks preceding the survey while 10.1 percent of those to educated mothers. About 78.1 percent of the uneducated mothers compared to 91.8 percent of the educated are familiar with the *Oral Dehydration Salt* as a good way to treat diarrhoea. Finally, 92.1 percent of the uneducated women have heard about AIDS, 48.0 percent believe that there is no way to avoid transmission or they are not familiar with such and 26.4 percent of them have not done any sexual changes in order to avoid AIDS. Among educated women it looks brighter where 99.6 percent have heard about AIDS, 13.5 percent believe that there is no way to avoid transmission or they are not familiar with such and 7.9 percent of them have not done any sexual changes in order to avoid AIDS. Even when it comes to knowledge on specific ways to avoid the infection and specific sexual changes done in order to avoid the disease it looks much more positive for educated women than for the uneducated.

Statements from girls' in form 6 correspond well with the impressions of delaying/declining based on the findings above. Those girls in the end of their pre-university education have a desire to marry first at age 26, to give their first birth at age 28 and to have only 2.6 children. Furthermore, 91.5 percent could name at least 1 contraceptive method and the average number of contraceptive methods known among form 6 students was 2.7. They are very aware of health issues and have a good knowledge about how to act when children get diarrhoea as well as how to protect themselves from AIDS, which is hopeful for their own and their future children's survival.

Those factors do of cause affect each other. Higher age at marriage, postponement of first sexual intercourse and first birth reduce exposure time to pregnancy. More positive attitudes towards family planning and an increased knowledge and use of contraceptive methods enable women to achieve the number of children they prefer. Increased participation in the formal labour force and in the household and fertility decision-making give a desire for fewer children as well as a possibility to do as they wish. Those aspects, decreased exposure time to pregnancy, possibilities to control fertility and desire for fewer children, lead to lower fertility. The decreased risk-behaviour and the better health reduce the risk of dying and lead thereby to a reduced mortality. Finally, the decreased mortality and the decreased fertility affect and reinforce each other, where while lower mortality rates make a surplus of children as insurance unnecessary and where lower fertility give parents opportunities to put more resources and attention on each child which increase their probabilities to survive.

To understand not only if but also how women's education affects the demography I have used a theoretic approach. This included the *demographic transition theory* and *social factors and women's role*. In the latter, I presented some researchers who in different ways have analysed how fertility can be affected by economic and social factors and I have tried to apply that on the case Tanzania. Gary Becker used terms as *child quantity* and *quality* which refers to the number and costs of children and stressed that when household income increases so does the motivation to increase both the quantity and quality of children. It has been presented in the essay that although no statistics which show that educated women have higher income women with education have higher employment rates, lower unemployment rates and higher representation in fields which normally give higher income. It has also been shown through the sample that girls with secondary education find it very important that their future children

⁵⁷ The different numbers refer to the three different forms of malnutrition; chronicle, acute and weight-for-age

go to school until at least university level. Furthermore, they have stated that they only want two or three children in order to give them the resources they need. It seems thereby that girls with secondary education put more emphasis on quality than on quantity and although maybe the rational choice of getting as many children they can afford, they calculate a higher cost for each child due to their education and they prefer a lower fertility.

John Caldwell criticised Becker for his narrow economic theory and argued for that also social factors must be included in the fertility analysis. He created the *wealth flow theory* which referred to the flow of money, goods, protection etc. between parents and children. In traditional society this flow is strongest from children to parents who motivate a high fertility while with modernisation the direction of the flow change and the motivation for fertility decline. He stressed that the main determinant of the fertility transition is education as it diminishes children's potential for work outside and inside home, increases the cost of children, society begins to regard children as an investment for the future rather than for the present, it accelerate the cultural change and it serves to propagate Western values. The two first aspects of the theory go for children's education and not the effects of mothers' education on fertility, but could be applicable on this case while educating women motivate education for their future children. The last aspects where investments in children become long term and where modernisation and westernisation of society accelerate are applicable. The educated women seemed to have adopted a modern life style which included female wage work, later marriage and fewer children.

Mead Cain and Geoffrey McNicoll are examples of demographers which emphasised women's dependence on men as a fertility determinant. Cain's argument is that in a society where women's participation in the labour force is limited and where widows and divorced women therefore face difficulties they will keep a high fertility in order to get son as insurance, while McNicoll argues that while women often want lower fertility than men the fertility will decline when women's decision making power increases. We have seen in the thesis that educated women have a higher participation in the labour force than uneducated women, and according to Cain's theory they would therefore not have as high need for sons as insurance and therefore not an as high fertility. It has also been shown that women in fact have lower fertility preferences than men and according to McNicoll and the theories which relate increased decision making power to higher female education it could work as a way to follow her preferences of lower fertility instead of his preferences of higher fertility.

The theory of demographic transition is harder to use while the thesis is static and does not include time analysis and the transition theory which said that a fertility decline follows a mortality decline can therefore not be proved. But the goal of the demographic transition is to reach a state where both fertility and mortality rates are low, which it seems to have become among the educated women in Tanzania. While the demographic benefits from female education is not only lower malnutrition, better health among children and better reproductive health through better awareness of and protection against health care and STD but also actually lower fertility and lower mortality can it be said that the educated part of the population is going toward a demographic transition. This has still not given any effects in the statistics which include all the population while the educated women are still a too small part of the population. If the trend is kept, educating women seem likely an effective way to decrease fertility and mortality rates and to approach a demographic transition.

Appendix: Questionnaire

Please answer following questions as well as you can. If you are unsure how to answer in English, please specify your answer in Kiswahili. **IMPORTANT:** Do not write your name. The answers are for academic purpose only, and no one will know what You personally write.

Tafadhali jibu maswali yafuatayo kwa uwezo wako. Kama huwezi kujibu kwa Kiingereza tumia Kiswahili.

MUHIMU: Usiandike jina lako. Majibu baya nikwa ajili ya kisomo tu, na hakuna atakaye jua majibu bayo.

PART I: STUDIES

1. What are your dreams for the future?
Unatarayia kufanya nini baday?
2. How important is it for You that You in the future have an income of Your own?
Vipi ni muhimu kwako kuwa nakipato baday?

PART 2: FAMILY

1. At what age do you want to marry?
Unataka kuoa/kuolewa katika umri gani?
2. When (at what age) do you want to get your first child?
Unataka opate mtoto wakwanza lini (katika umri gani)?
3. How many children do you want?
Unataka kuzaa watoto wangapi?
4. Which contraceptive methods do you know?
Unatumia kitugani kuzuwia mimba?
5. How important is it for you that your future children go to school?
Nimuhimu kwa vipi watoto wako watakwenda shule?
6. Until which level?
Wafike kiwango gani?

PART 3: HEALTH

1. Have you ever heard about an illness called AIDS/HIV?
Umewahi kusikia ugonja unaoikwa UKIMWI?

2. How does it transmit?
Unaambukizwa vipi?
3. How can you protect yourself?
Unaweza kujilinda vipi?
4. In case you have a boyfriend before marriage, how important is it to use condoms?
Kama una rafiki kiume kabla ya kuolewa, je nimuhimu kutomia kondom?
5. Why is it/is it not important to use condoms?
Kwa nini?
6. Are you familiar with the symptoms of malaria?
Unajua dalili za malaria?
7. What do you do if a child gets fever?
Ungefanya nini kama watoto wako wangepata homa?
8. Why do children get diarrhoea?
Kwa nini watoto wanaharisha?
9. What do you do if children get diarrhoea?
Unafanya nini kamo mtoto anaharisha?

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