

**ADOLESCENT DESIRE FOR MORE CHILDREN
IN KENYA**

BY

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A research project Submitted in Partial Fulfillment of the Requirements

for the

Degree of Master of Science in Population Studies

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Population Studies and Research Institute

University of Nairobi

November 2007

DECLARATION

This Research project is my original work and has not been presented for a degree in any other University.

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Q56/8144/05



November 6, 2007

Signature

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This Research project has been submitted for examination with our approval as University supervisors:

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6 November 2007

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6th November, 07

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Date

DEDICATION

To my parents, brothers and sisters without whom it would not have been possible to get to this end without forgetting all my pals who have always been supportive.

ACKNOWLEDGEMENT

First of all, I'm greatly indebted to the University of Nairobi for awarding me a scholarship, which enabled me to pursue this course at the Population Studies and Research Institute.

I'm also very grateful to my Supervisors Mr. Ben Obonyo and Dr. Anne Khasakhala for their guidance, encouragement and the keen interest they took in my work from the very beginning to the end. My appreciation also goes to Dr. Agwanda, Mr. Mutuku, Dr. Ikamari, Dr. K'Oyugi, Dr. Wanjiru, Dr. Kimani and all the staff of Population Studies and Research Institute for every support they gave me during my period of study.

I appreciate the cooperation and assistance accorded to me by my fellow students especially for their encouragement and support that saw me reach this far in life.

Finally, I'm greatly indebted to my dear parents, brothers and sisters.

Above all, thanks be to God.

Abstract

The study was aimed at investigating the influence of socio-cultural, socio-economic and demographic factors on adolescent desire for more children in Kenya. These factors are assumed to potentially influence the behaviour of adolescents (15-19) and the emerging adults (20-24) towards desire for additional children.

The data the study utilized was drawn from the 2003 KDHS.

The methods of data analysis used in the study were mainly quantitative statistical techniques: descriptive and multivariate analysis.

The findings of the study give an insight into the key determinants of adolescent desire for additional number of children. Most women are likely to desire more children if they reside in rural areas. With a few exceptions, desire for more children is low with higher levels of education of adolescents. More women reported a higher desire for more children if they wanted their last child than those who either wanted later or wanted no more.

Generally, there was a marked variation in the desire for more children across regional boundaries. These findings will help in the formulation of sound strategies to reduce adverse consequences of early childbearing among the adolescents.

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LIST OF ACRONYMS

AIDS	Acquired Immuno Deficiency Syndrome
ANOVA	Analysis of Variance
ANCOVA	Analysis of Covariance
CBS	Central Bureau of Statistics
DHS	Demographic and Health Survey
HIV	Human Immuno Deficiency Virus
KDHS	Kenya Demographic and Health Survey
NACC	National AIDS Control Council
STDs	Sexually Transmitted Diseases
UN	United Nations
UNFPA	United Nations Population Fund

CHAPTER ONE: INTRODUCTION

1.1 Background Information

Adolescent childbearing has been the focus of intense research activity in the recent past, yet the causes and consequences of this phenomenon remain subjects of debate. An important question that has not been adequately answered is how early family responsibilities affect the future opportunities and economic status of young women.

Adolescent women who become parents are at greater risk of social and economic disadvantage throughout their lives than those who delay childbearing until later in life. They are less likely to complete their education which would have increased their chances of employment, high wages, happiness in marriage; and they are more likely to have larger completed family size. Mass media has become one of the most commonly cited as influencing behavior of adolescents towards experiencing personal risk due to early and unprepared pregnancy and/or childbearing (Gupta, N. et al 2003)

The assertion that adolescent childbearing leads to adverse social and economic outcomes is both intuitively plausible and widely accepted by the public and many social scientists. Challengers of this conventional wisdom question whether early childbearing per se is the fundamental cause of the adverse outcomes, or whether it is the relatively disadvantaged backgrounds of

adolescent mothers and other observed and unobserved heterogeneity between them and other women who avoid early motherhood that lead to those outcomes. (FAWE, 1994; N. Kamal, 2000)

Adolescent pregnancy and childbearing have important deleterious consequences not only at the global level but also at the societal and personal levels. Globally, the rates of population growth are more rapid when women have their first child in their teen years (Mazur, 1997; Senderowitz and Paxman, 1985; Singh, 1998) because early initiation into childbearing lengthens the reproductive period and subsequently increases fertility level.

At the societal level, the strong association between adolescent childbearing and low levels of educational achievement for young women brings about a negative impact on their position in and potential contribution to society (UN, 1995)

Many governments in sub-Saharan Africa view with concern the region's continued rapid population growth, high birth rates, and escalating rates of HIV infection. Unprotected adolescent sexual activity significantly contributes to these numbers. Promoting contraceptive and condom use among youth can lead to decreases in morbidity and mortality due to unsafe pregnancy, abortion, and sexually transmitted diseases (STDs), including HIV/AIDS, and can slow population growth. Many non-governmental organizations and some

governments are working to meet the reproductive health needs of adolescents by providing sex education and life skills development, but more needs to be accomplished (Tim Adair, 2007).

1.2 Adolescent Sexual Activity

About 80 percent of youth in sub-Saharan Africa experience sexual encounter by age 20. Of the women aged 15 to 19 in Liberia, 73 percent of them have had intercourse, as have 53 percent of Nigerian, 49 percent of Ugandan, and 32 percent of Botswana women. In many sub-Saharan Africa countries, first sexual activity almost always takes place before marriage (Yeboe, 1993).

In a study conducted in a rural community in Nigeria, 42.1 percent of the sexually active female adolescent participants had experienced either an abortion or a sexually transmitted disease (Yeboe, 1993).

The maternal mortality rate for Ethiopian women aged 15 to 19 was 1,270 per 100,000 live births (Ethiopia DHS, 2000), approximately three times higher than for women aged 20 to 34. In Niger, 80 percent of all cases of fistulae occur to women between the ages of 15 and 19, (Niger DHS, 2006). In a Ugandan study, 17 percent of young women ages 15 to 18 have undergone an abortion. A more recent study in Uganda found that 73 percent of women exhibiting behavior that put them at risk of pregnancy did not want any more children (Nakayiwa et al., 2006).

STDs have a particularly large impact on young women who are more easily infected than older women. Few data on the incidence of HIV infection among African youth are available, but adolescent rates are often high. In Abidjan, 11 percent of females under the age of 20 attending a maternal-child health center were HIV positive. Over time, HIV infection has shifted to younger segments of the population. Young women are particularly susceptible to HIV infection. New data suggest that over 7,000 new infections per day occur among those aged 15 to 24 years in sub-Saharan Africa.

The first case of HIV/AIDS in Kenya was diagnosed in 1984 and since then an estimated 1.5 million people have died due to AIDS related illness, resulting in 1.8 million children left orphans.

The youth are the most endangered in this age of HIV/AIDS. Almost 50 percent of women have had sex by age 18 and more than one in ten (13%) have had sex by age 15 (KDHS, 2003). Almost a quarter of young Kenyan women (15-24) are either pregnant or with their first child. This is the situation in Kenya despite the fact that heterosexual activity is the principal mode of transmission of the virus (NACC, 2005).

Studies on adolescent desire for children have ignored some important determinants or even treated them only superficially. It is with this regard that a

deeper examination into factors affecting adolescent desire for children needs to be undertaken to assess the effect and suggest remedies to this problem.

1.3 Research Problem

Adolescent desire for more children is a fundamental aspect which may lead to adverse effects if not well directed. A large proportion of adolescent women have suffered as a result of early and unprepared pregnancy and births.

The desire for more children can be regarded as precursor of actual fertility performance (Freedman et al, 1975, Westoff and Ryder 1977, Nair and Chow 1980, Becker, 1981, Kaari, 2002) which are implemented in the course of subsequent childbearing career among women have not been fully examined in Kenya in spite of useful and availability of fertility preference data from fertility surveys as well as demographic and health surveys conducted worldwide, and Kenya in particular (Mburu, 2004). Fertility desires instrumentally influence individuals and couples' level of completed fertility and use of contraception (Fapohunda and Poukouta 1997).

The severity of social, economic and personal consequences of adolescent childbearing is greater the younger the age at birth. At personal level, adolescents are faced with the risk of contracting STDs and HIV/AIDS as they are less likely to use contraceptives as well as experiencing problems of reproductive health due to pre-maturity of their organs.

Adolescent reproductive health has been emphasized to safeguard against the negative consequences of early childbearing. Teenage mothers are more likely to suffer from severe complications during delivery due to physiological immaturity, which always results in higher morbidity and mortality for themselves and their newborns.

These health risks are greater for younger than for older adolescents (Zabin and Kiragu, 1998). Adolescent pregnancy may also encourage abortion, which is usually performed under unsafe conditions leading to elevated risks of pelvic infection and infertility (Bledsoe and Cohen, 1993).

At social and economic levels, early adolescent pregnancy and childbearing may lead to interrupted and discontinued education among schoolgirls. The opportunities that would have been available as a result of education become foreclosed. In this respect, the young woman loses her own identity in the family and society at large (Toroitich, C.R., 1997). Desire for more children should therefore be limited to mitigating the adverse consequences of the same.

Young people play an important role in economic matters of any country. This is because a country requires people to participate in nation building by providing human labour. However, if the human labour is unskilled, it may not be beneficial as more resources will be used to support such a population without

replenishing them. Young people have an in-built population momentum that usually affects future population.

A country needs to properly plan for future needs of its population in terms of provision of health services, education, basic needs, security needs, employment opportunities and other services whose overall goal is to contribute towards economic well being of a nation.

With about 45 percent of the Kenyan population being under 15 years of age, majority of whom are women, and high adult mortality rate due to HIV/AIDS in some parts of the country, it is important to explore the fertility desires for older adolescents (15-19) and emerging adults (20-24) in order to plan for their emerging needs. With a larger proportion of the Kenyan population still young, this study seeks to investigate factors that potentially influence the desire to have more children. The ultimate goal of the study is to address the factors that impede progress among adolescents as a result of their desire for more children and childbearing and recommend ways of improving their competitiveness in the society for social, economic and personal development.

1.4 Justification of the Research Problem

Adolescent pregnancy and the risk of childbearing have gained renewed attention due to the large number of young women who experience devastating effects as a result.

Pregnancy among schoolgirls is a growing concern in many African countries (Jean-Bart, 1985; Kilimwiko, 1991; Kulin, 1998), and social problems it engenders are abundantly described in literature. It is a major cause of interrupted and discontinued education (Boohene et al, 1991; Center for Population Options, 1990; Ministry of Health, Kenya, 1988).

About 50 percent of women have had sex by the age 18 and more than one in ten (13%) have had sex by age 15 (KDHS 2003). Almost a quarter of young women aged 15-24 are either pregnant with their first child or already mothers. All these cases were not married (KDHS 2003). Of those aged 19, 45.6 percent of them had already begun childbearing (KDHS 2003). According to the 1999 population and housing census, PPRs for the age group 20-24 increased up to parity 3 before falling with higher parities. This trend was unlike the trend in 1989 where PPRs presented rather unusual findings because the PPRs increased rather than decreasing with higher parities (CBS, 2002). The report however did not give PPRs for single women aged 15-19 because the majority in this age group are at parity zero.

Greater urbanization and exposure to mass media, together with the declining influence of religious organizations, and especially the Catholic Church, have been accompanied by greater sexual freedom for today's teenagers than their counterparts of even a decade earlier practised (Gupta, 2000).

At the level of the adolescent woman (and of her family), negative social and economic consequences usually result from childbearing. The majority of the adolescents who become pregnant are still in school. Yet, in most cases, they get expelled from school when they get pregnant, and schools do not facilitate resumption of education after the birth, particularly in the developing countries (UNFPA, 2006). As a result of school dropout or interrupted education, women who become mothers at a young age often have a lower level of educational attainment, which leads to loss of earning opportunities and poverty (Singh, 1998). Adolescent fertility has been largely associated with social and economic outcomes, the most publicized of which stem from lost educational opportunities when pregnancy forces young women to leave school.

It should be noted that adolescents in Kenya, are among those with the highest rates of fertility for their age and this exposes them to the highest risks of pregnancy-related mortality, of delivery complications, and of premature births or low-birth weight babies.

Besides posing challenges to society as a whole, adolescent fertility can have lasting and potentially devastating effects on themselves. In Kenya, like other African societies, adolescence is a key period, when several crucial events coincide. During their adolescent years, women are likely to terminate their training; leave home; and begin conjugal life, childbearing, and adult work.

In their studies Wachira (2001) and Mulewa (2002) recommended for further research on the desire for more children on regional basis in order to capture the specific regional characteristics unique to different regions and to find out factors responsible for such differences.

Many studies on adolescent desire for children in Kenya have focused mainly on the association between factors known to influence adolescent behavior and desire for children.

With a larger proportion of the Kenyan population still young, this study seeks to investigate the covariates that potentially influence the desire to have more children.

1.5 Scope and Limitation

The data used in this study to document the covariates of adolescent desire for children come from the 2003 Kenya Demographic and Health Survey. Analysis is limited to this dataset even though it does not bring out all important covariates that influence adolescent desire for children, for instance, the influence of peer pressure, drugs among others.

The study was limited to quantitative aspects alone since the data did not incorporate the qualitative aspects as a compliment which would have enabled examination of personal factors influencing desire for more children.

1.6 Research Objectives

1.6.1 General Objective

This study aims at establishing the various covariates of adolescent desire for more children.

1.6.2 Specific Objectives

- The study will determine the key covariates of adolescent desire for children.
- The study will establish the influence of each covariate on desire for more children.

1.7 Research questions

The study seeks to answer the following research questions.

- What are the key covariates of adolescent desire for more children?
- What is the influence of each of the covariates on the desire for more children?

CHAPTER TWO: LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 Introduction

A number of studies have been undertaken on this subject of desire for more children. This chapter examines some of these studies in terms of socio-economic, socio-cultural and demographic factors and their effect on the desire for more children. This review of literature covers studies not only in Kenya but also in other parts of the world. While the findings and data from these studies are numerous and multidimensional, only key variables are considered for this study.

2.2 Adolescent desire for more children

In recent decades adolescent childbearing has emerged as an issue of increasing concern throughout the developing and developed world (Jones, 1997; Shaikh, 1997; Islam and Mahmud, 1996). There is a growing awareness that early childbearing is a risk for both the mother and the child. Also, it usually terminates a girl's educational career, threatening her future economic prospects, earning capacity and overall well being (United Nations, 1995). Thus, adolescent childbearing has significant ramifications at personal, societal and global levels. At personal level, childbearing at an early age can shape and alter the entire future life of an adolescent girl. From the perspective of societies and

governments, adolescent pregnancy and childbearing have a strong and unwelcome association with low levels of educational achievement for young women, which in turn may have a negative impact on their position in and potential contribution to society.

Usually, in both developed and developing countries, the rates of population growth are more rapid when women have their first child before they are in their twenties (Senderowitz and Paxman, 1985; Mazur, 1997). It is one of the most crucial periods in an individual's life. Because during adolescence many key social, economic, biological and demographic events occur that set the stage for adult life.

Although the social and economic consequences for an adolescent of having a baby will depend on her particular culture, familial and community setting, the physical or health consequences for the mother and her child are more universally recognized as problematic (Buvinic and Kurz, 1998; Acsadi and Johnson- Acsadi, 1986). Adolescent pregnancies are usually problematic, because they occur before a young woman has reached full biological, physical and emotional maturity. As a consequence, adolescents face a number of problems, which include anaemia, retardation of foetal growth, premature birth and complications of labour. Pregnancy of a girl who is still growing means an increase in nutritional requirements, not only for growth of the foetus but also for the mother herself (Friedman, 1985). Adolescent mothers have a higher

governments, adolescent pregnancy and childbearing have a strong and unwelcome association with low levels of educational achievement for young women, which in turn may have a negative impact on their position in and potential contribution to society.

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incidence of low birth-weight babies, who are associated with birth injuries, serious childhood illness and mental and physical disabilities (Islam et al, 1995). Children born to teenage mothers are at higher risk of infant and child mortality (Mahmud and Islam, 1999).

The age below which the physical risks of childbearing are considered to be significant varies depending on general health conditions and on access to good prenatal care. In societies where anaemia and malnutrition are common and where access to health care is poor, childbearing among teenagers involves enormous health risks. However, in societies with good nutritional levels and widespread access to high quality prenatal care, the physical risk of having a child during adolescence may not be considered quite so serious (Makinson, 1985). The severity of the social and personal consequences of adolescent childbearing is also likely to be greater the younger the mother is at the time she gives birth.

Early marriage associated with low levels of contraceptive use leads to the beginning of childbearing at very young ages in most of the developing countries where this occurs. The age at which childbearing starts has important consequences for the overall level of a country's fertility as well as the health and welfare of the individual mother and child. Early initiation of childbearing is generally a major determinant of large individual family size and rapid national

population growth, particularly in countries where family planning is not widely practised.

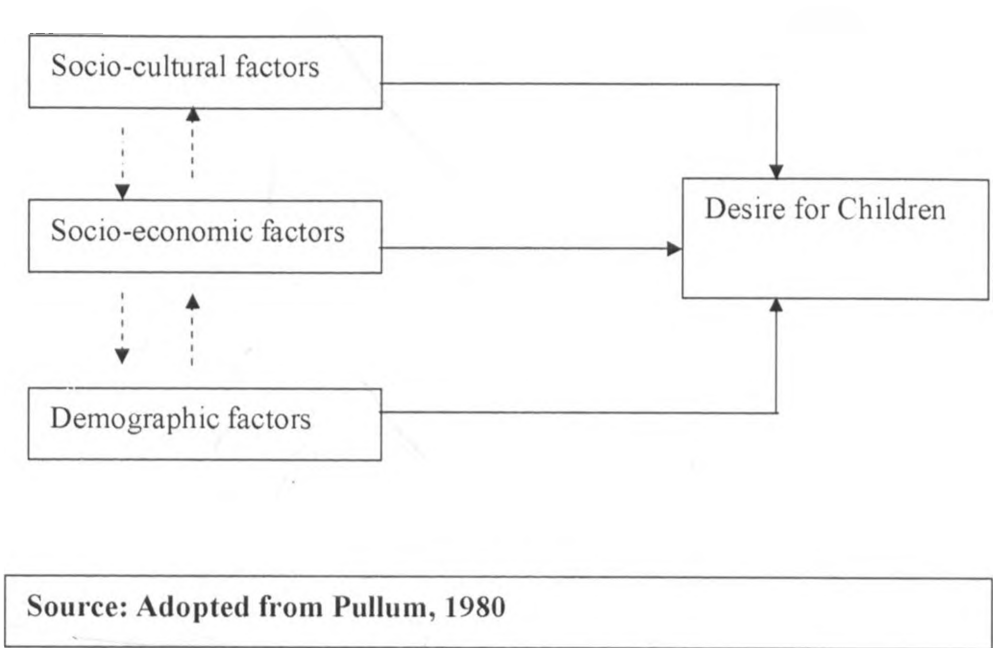
Ocholla-Ayayo (1988) argued that socio-cultural imperatives are grounded in factual needs for example, the desire for more children is required for domestic labour in the rural areas. In order for a couple to secure security at old age, they will continue, therefore to give birth until the sought for sex is born and such a family will not listen to family planning teachings regardless of sweet words.

2.3 Conceptual Framework

From the literature review, there is overwhelming evidence of the existence of a link between various socio-economic, socio-cultural, demographic factors and the desire for children (Chose et al, 1992 and Poedjastoeti and Hatmadj, 1991; Mustafa, 1988; Deep, 1988; Teshome, 1998; Washira, 2000; Mulewa, 2002; Mburu, 2004, Nyambane, 2005)

Pullum's model explains the causal relationship between the desire for children and these factors. This study adopts Pullum's model with inclusion of socio-cultural variables, which influence the desire for more children.

Figure 2.1: Conceptual Framework



2.4 Conceptual Hypotheses

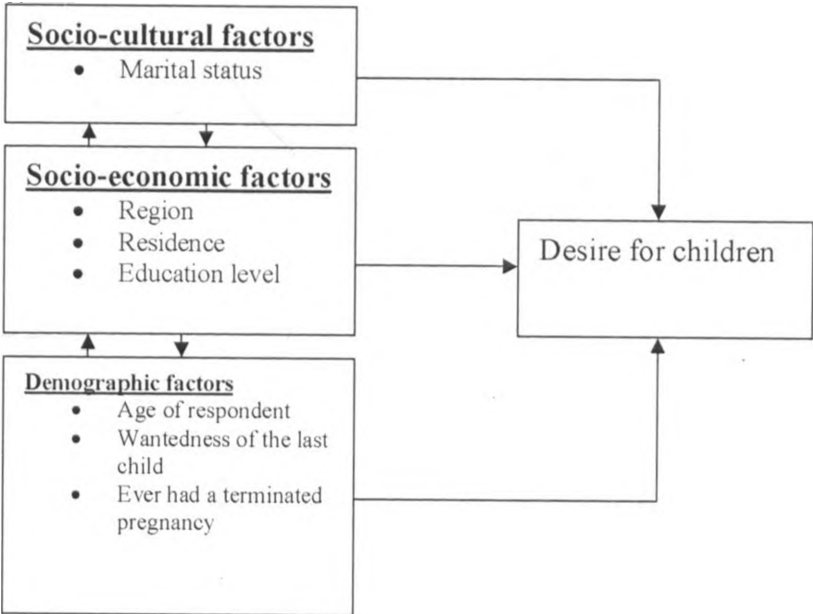
- Socio-cultural factors are associated with the desire for more children.
- Socio-economic factors are associated with the desire for children.
- Demographic factors are associated with fertility of adolescents.

2.5 Operational Framework

In the operational framework, the one socio-cultural factor considered is marital status. Highest level of education of the mother, region, and type of place of residence are classified under socio-economic factors.

Demographic factors that directly relate to the dependent variable have the following variables: age of respondent, 'wantedness' of the last child and ever had a terminated pregnancy.

Figure 2.2: Operational Framework Flow Chart



2.6 Operational Hypotheses

The study will test the following operational hypotheses:

- Highest level of education is likely to influence adolescent decision to get more children.
- Region of residence may influence the likelihood of an adolescent getting an additional child.
- Wantedness of the last child, age of the mother, and marital status are associated with adolescent decision to get an additional child.

CHAPTER THREE: DATA SOURCE AND METHODOLOGY

3.1 Data source

Data from the 2003 KDHS was used to examine the covariates of adolescent childbearing desires. The 2003 KDHS is a national representative sample survey of 8195 women aged between 15 and 49. The study focused on adolescents and emerging adults between the ages 15 and 24 found in the 2003 KDHS data. The total number of records for this sub-sample is 3530

3.2 Methodology

The study investigated the covariates of desire for more children among the adolescents and the emerging adults. The study also examined the differences existing between all those who desire more children and those who desire no more.

3.2.1 Methods of Analysis

Bivariate analysis was used in the analysis of desire for more children in relation to selected socioeconomic, sociocultural and demographic factors. Logistic regression analysis is a multivariate statistical technique that has been used to establish the relationship between desire for more children and explanatory variables. This method has been preferred because the response variable is dichotomous.

Logistic regression is part of a category of statistical models called generalized linear models. This broad class of models includes ordinary regression and ANOVA, as well as multivariate statistics such as ANCOVA and loglinear regression. An excellent treatment of generalized linear models is presented in Agresti (1996).

Logistic regression allows one to predict a discrete outcome, such as group membership, from a set of variables that may be continuous, discrete, dichotomous, or a mix of any of these. Generally, the dependent or response variable is dichotomous, such as desire or no desire for more children as is the case in this study. Discriminant analysis is also used to predict group membership with only two groups. However, discriminant analysis can only be used with continuous independent variables. Thus, in instances where the independent variables are a categorical, or a mix of continuous and categorical, logistic regression is preferred.

3.2.2 The Model

The dependent variable in logistic regression is usually dichotomous, that is, the dependent variable can take the value 1 with a probability of success θ , or the value 0 with probability of failure $1-\theta$. This type of variable is called a Bernoulli (or binary) variable. Although not as common and not discussed in this treatment, applications of logistic regression have also been extended to cases

where the dependent variable is of more than two cases, known as multinomial or polytomous [Tabachnick and Fidell (1996) use the term polychotomous].

As mentioned previously, the independent or predictor variables in logistic regression can take any form. That is, logistic regression makes no assumption about the distribution of the independent variables. They do not have to be normally distributed, linearly related or of equal variance within each group. The relationship between the predictor and response variables is not a linear function in logistic regression, instead, the logistic regression function is used, which is the logit transformation of θ :

The general form of the probability of success (desire for more children) is given by:

$$\theta = \frac{e^{(\alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k)}}{1 + e^{(\alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k)}}$$

Where α = the constant of the equation and, β = the coefficient of the predictor variables.

An alternative form of the logistic regression equation is:

$$\text{logit} [\theta(x)] = \log \left[\frac{\theta(x)}{1 - \theta(x)} \right] = \alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k$$

The goal of logistic regression is to correctly predict the category of outcome for individual cases using the most parsimonious model. To accomplish this goal, a model is created that includes all predictor variables that are useful in predicting the response variable. Several different options are available during model creation. Variables can be entered into the model in the order specified by the researcher or logistic regression can test the fit of the model after each coefficient is added or deleted, called stepwise regression.

Stepwise regression is used in the exploratory phase of research but it is not recommended for theory testing (Menard 1995). Theory testing is the testing of a-priori theories or hypotheses of the relationships between variables. Exploratory testing makes no a-priori assumptions regarding the relationships between the variables, thus the goal is to discover relationships.

Backward stepwise regression appears to be the preferred method of exploratory analyses, where the analysis begins with a full or saturated model and variables are eliminated from the model in an iterative process. The fit of the model is tested after the elimination of each variable to ensure that the model still adequately fits the data. When no more variables can be eliminated from the

model, the analysis has been completed. However, in this study, the enter method was used where all the explanatory variables are entered and run to establish their relationship with the dependent variable.

There are two main uses of logistic regression. The first is the prediction of group membership. Since logistic regression calculates the probability of success over the probability of failure, the results of the analysis are in the form of an odds ratio. For example, logistic regression is often used in epidemiological studies where the result of the analysis is the probability of developing cancer after controlling for other associated risks. Logistic regression also provides knowledge of the relationships and strengths among the variables (e.g., smoking 10 packs a day puts you at a higher risk for developing cancer than working in an asbestos mine).

3.2.3 Wald Test:

A Wald test is used to test the statistical significance of each coefficient (β) in the model. A Wald test calculates a Z statistic, which is:

$$z = \frac{\hat{B}}{SE}$$

This z value is then squared, yielding a Wald statistic with a chi-square distribution. However, several authors have identified problems with the use of the Wald statistic. Menard (1995) warns that for large coefficients, standard error is inflated, lowering the Wald statistic (chi-square) value. Agresti (1996) states that the likelihood-ratio test is more reliable for small sample sizes than the Wald test.

3.3 Variable Definitions and their Measurements

Table 3.1 shows variable definitions and their measurements. Below is a short description of variables used in the study.

Desire for more children: This variable refers to future intentions of a woman or intent of women to have more children in future. It is indicative of whether or not a woman wants additional children to add on the already existing ones. The respondents were asked this question: "Do you want another child sometime?"

3.4 Socio-economic factors

Region of residence: refers to the province where the respondent was at the time of the interview. Will be categorized as ;-(Kenya): Nairobi, Central, Coast, Eastern, Nyanza, Rift Valley, Western, North-Eastern.

Highest level of education: This refers to the respondent's level of literacy. This variable is classified as no education/pre school, primary, secondary, highest.

Place of residence: refers to the place where the respondent was at the time of the interview, will be categorized as rural or urban.

Table 3.1: Variable Definition and Measurement

Variable Classification	Variable Name	Measurement
<i>Dependent</i>	Desire for more children	Desire for more children Desire for no more children
<i>Independent</i>	Residence	1-Urban 2-Rural
	Highest education level	0-No education/pre school 1-Primary 2-Secondary 3-Higher
	Region	Nairobi Central Coast Eastern Nyanza Rift Valley Western North Eastern
	Wantedness of last child	1-Wanted then 2-Wanted later 3-Wanted no more
	Ever had a terminated pregnancy	0-No 1-Yes
Marital Status	Never married Currently married Formerly	

3.5 Demographic factors

Age of Respondent: The age under consideration is between 15 and 24. This is age refers to older adolescents and emerging adults. The study is limited to this age bracket and the variable used is the age in 5-year age-groups.

Wantedness of last child: This refers to whether the last child born was desired or not. This does not allow a response on the current pregnancy whether it is

desired or not. Categories include wanted then, wanted later and wanted no more.

Ever had terminated pregnancy: This refers to premature termination of life of the unborn. Such termination may be caused by a number of reasons some of which may be deliberate. Categories include No or Yes

3.6 Socio-cultural factors

Marital status: refers to the state of union that persons were involved in at the time of the interview. Three categories were included in this study; never married, formerly married and currently married.

CHAPTER FOUR: PRESENTATION OF ANALYSIS FINDINGS

4.1 Introduction

This chapter presents results of the study. In this section an investigation into differentials in desire for more children is highlighted according to selected socio-economic, socio-cultural and demographic factors. The study variable is desire for more children as the response variable.

Table 4.1 shows the percentage of all women who desired more children in the reproductive ages in Kenya. Adolescent mothers constitute 43.1 percent of all women in the reproductive ages. Those who desire more children were 18.9 percent and 16.6 percent in age groups 15-19 and 20-24 respectively. The results further show that desire for more children is high, the lower the age.

Table 4.1: Adolescent mothers as a percentage of all women by desire for more children and age

Current Age	no desire	desire	All
15-19	3.3	18.9	22.2
20-24	4.2	16.6	20.9
25-29	5.9	11.1	17.0
30-34	7.8	5.8	13.6
35-39	7.6	2.9	10.5
40-44	8.3	1.2	9.5
45-49	5.9	0.3	6.2
All	43.1	56.9	100

4.2 Determinants of adolescent desire for more children

The study has established a link between adolescent childbearing and socio-cultural, socio-economic and demographic factors which formed the basis of the study. According to the data shown in Table 4.2, there are great variations in the desire for more children among the adolescent women.

Table 4.2: Percentage distribution of women aged 15-24 by desire for more children and selected background characteristics, Kenya 2003

Characteristics	(%)
Residence	
Urban	28.8
Rural	53.6
Highest level of education	
No education	8.0
Primary	48.9
Secondary	21.5
Higher	3.9
Wantedness of last child	
Wanted then	17.2
Wanted later	7.9
Wanted no more	4.7
Ever had a terminated pregnancy	
No	79.2
Yes	3.2
Region	
Nairobi	13.2
Central	12.1
Coast	8.4
Eastern	10.0
Nyanza	11.7
Rift Valley	13.1
Western	10.3
North Eastern	3.7
Currently/never/formerly married	
Never Married	50.5
Currently Married	29.1
Formerly married	2.8

4.3 Socioeconomic differentials

Urban/rural differentials

The link between adolescent desire for more children and two socioeconomic characteristics, type of place of residence and highest level of education measured respectively by (urban or rural) and (no education/preschool, primary, secondary or higher), are examined in this study. Table 4.2 presents the distribution of adolescent desire for more children according to background characteristics. About 28.8 percent of women aged 15-24 living in urban setting desire more children. Most women are likely to desire more children if they reside in rural areas. This group is represented by 53.6 percent of the women.

Educational differences

Table 4.2 shows that there are also great variations in adolescent desire for more children by level of education. With a few exceptions, desires are low the higher the educational level of the adolescents.

Female adolescents who desire more children with no education constitute 8 percent. Those whose highest level of education is primary are more likely to desire more children than those with any other level of education. This group forms 48.9 percent of the sample population under study. Those with secondary and higher level of education are respectively 21.5 percent and 3.9 percent. This results support the fact that more educated adolescents are more likely to get married later because increased schooling tends to increase the opportunity cost

of marriage for women (Becker, 1973) and that of early childbearing (Gangadharan and Maitra, 2001). Indeed urbanization and increased education open better economic alternatives (such as higher education and paid job) to getting married and bearing children to women, especially the younger ones.

4.4 Demographic differentials

Currently/never/formerly married

The results in Table 4.2 further show that 50.5 percent of adolescent women would desire more children if they are never married. About 29.1 percent of the women reported that they would desire more children if they were married. Fewer women would desire more children if they were formerly married. These findings are indicative of a higher desire among never married women than any other category.

Differences in desire for more children by wantedness of last child

More women reported a higher desire if they wanted their last child than those who either wanted later or wanted no more.

Ever had a terminated pregnancy

About 79.2 percent of women who had never terminated a pregnancy would desire more children compared to only 3.2 percent of those who had experienced.

Regional differentials

Nairobi and Rift Valley provinces accounted for 13.2 percent and 13.1 percent respectively of the desire for more children. These were the highest proportions compared to other regions. Coast and North Eastern provinces were the lowest with 8.4 percent and 3.7 percent respectively.

4.5 Bivariate Analysis of desire for more children

Table 4.3 presents results of the bivariate analysis undertaken. According to the results, of the adolescent women who reside in urban areas, 16.1 percent of them had no desire for more children compared to 83.9 percent who would desire more children. Similarly, 18.3 percent of the rural resident women would have no desire for more children compared to 81.7 percent who would desire more children. Overall, the results are in support of the fact that more rural than urban women would desire more children.

The results also show that desire for more children among women whose highest level of education is primary is higher than in any other category. The level of desire for more children diminishes, the higher the level of education with a few exceptions.

Table 4.3: Bivariate analysis of desire for more children among adolescent women age 15-24, Kenya 2003.

	No desire (%)	Desire (%)	N
Residence			
Urban	16.1	83.9	1212
Rural	18.3	81.7	2314
Highest level of education			
No education	21.8	78.2	363
Primary	18.5	81.5	2119
Secondary	14.7	85.3	891
Higher	9.8	90.2	153
Wantedness of last child			
Wanted then	19.7	80.3	755
Wanted later	27.0	73.0	382
Wanted no more	36.3	63.7	262
Ever had a terminated pregnancy			
No	17.6	82.4	3389
Yes	16.8	83.2	137
Region			
Nairobi	11.4	88.6	525
Central	16.8	83.2	513
Coast	22.3	77.7	381
Eastern	18.3	81.7	431
Nyanza	14.3	85.7	483
Rift Valley	15.1	84.9	543
Western	23.4	76.6	474
North Eastern	26.1	73.9	176
Currently/never/formerly married			
Never Married	14.6	85.4	2089
Currently Married	19.7	80.3	1278
Formerly married	38.4	61.6	159

About 80.3 percent of women who reported they wanted their last child then desire more children. Those who wanted later or did not want their last child but desired more children were 73 percent and 63.7 percent respectively.

Most women with or without the experience of a terminated pregnancy reported that they would desire more children. However, most of those who had no experience with a terminated pregnancy would desire more children than those who had. Having never had a terminated pregnancy therefore would lead adolescent women to have a desire for more children.

Variations between regions in the desire for more children show that about 84.9 percent of women residing in Rift Valley desire more children followed by Nairobi with 88.6 percent. However, the main reason for this desire can be attributed to urban-rural differential within these regions and not the absolute numbers as it were.

More never married adolescents than either currently married or formerly married desire more children. Of those who are never married, 85.4 percent desire more children, followed by currently married with 80.3 percent and finally formerly married with 61.6 percent.

4.6 Multivariate analysis of desire for more children

Table 4.4 presents results of logistic regression showing factors that influence adolescent desire for more children. Factors associated with desire for more children are: type of place of residence, highest level of education, wantedness of last child, ever had a terminated pregnancy, region of residence, and marital status. Table 4.4 further shows that women who reside in urban areas are twice (odds ratio=1.578) more likely to desire more children than their counterparts in rural areas. This relationship is significant at 1 percent level.

Wantedness of the last child was found to be significantly related to desire for more children among adolescent women. Those who reported that they wanted the last child then were less likely (odds ratio=0.479) to desire for more children compared to those who wanted no more. This inverse relationship was highly significant. Similarly, those who wanted later were less likely to desire more children compared to those who wanted no more. This relationship was significant at 5 percent level.

Region of residence was found to be significantly related to adolescent desire for more children. Adolescent women living in North Eastern province were 6 times (odds ratio=6.054) more likely to desire more children compared to those living in Nairobi province. This relationship was found to be significant at 5 percent level. Adolescent women residing in Eastern province were less likely (odds

ratio= 0.324) to desire more children than those living in Nairobi province. This relationship was to be significant at 1 percent level. Similarly, adolescent women living in Central province were less likely to desire more children than those in Nairobi. Generally, region of residence was significantly related to desire for more children at 5 percent level. Nairobi being the capital city attracts all people with diverse background who bring with them varied desires for more children hence the reason for the observed results.

Currently/never/formerly married was highly significant in relation to adolescent desire for more children. Being never married was negatively correlated to desire for more children compared to formerly married. A never married woman is 0.68 times less likely to desire more children than formerly married woman. On the other hand, currently married woman is 0.53 times less likely to desire more children than formerly married woman. This relationship was significant at 1 percent level.

The study however, did not find any significant relationship with ever had a terminated pregnancy and highest level of education.

Appendix 1 shows the logistic regression results for the desire for no more children among the adolescent women. These results are similar to those presented in Table 4.4.

Appendix 2 is a combination of variables and their effect on the dependent variable. This further explains the combined effect of variables on desire for more children.



Table 4.4: Logistic regression results on adolescent desire for more children in Kenya, 2003

	B	S.E.	Sig.	Exp(B)
Residence				
Urban	0.456*	0.170	0.007	1.578
Rural ^b				
Highest level of education				
No education	0.021	0.587	0.972	1.021
Primary	0.248	0.535	0.643	1.281
Secondary	0.318	0.545	0.559	1.375
Higher ^b				
Wantedness of last child				
Wanted then	-0.737***	0.178	0.000	0.479
Wanted later	-0.327	0.184	0.075	0.721
Wanted no more ^b				
Ever had a terminated pregnancy				
No	0.116	0.285	0.685	1.123
Yes ^b				
Region				
Nairobi ^b				
Central	-0.805**	0.290	0.006	0.447
Coast	-0.329	0.300	0.273	0.720
Eastern	-1.128***	0.309	0.000	0.324
Nyanza	-0.128	0.288	0.657	0.880
Rift Valley	-0.332	0.282	0.239	0.718
Western	-0.419	0.282	0.138	0.658
North Eastern	1.801 *	0.778	0.021	6.054
Currently/never/formerly married				
Never Married	-1.138***	0.249	0.000	0.320
Currently Married	-0.757***	0.204	0.000	0.469
Formerly married ^b				
Constant	-11.363	4.726	0.016	0.000

b is the reference category

*P<0.05, **P<0.01, ***P<0.001

-2 log likelihood 1466.85, Chi Square 100.492

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter gives in summary the findings, conclusions derived from the study and recommends programmatic actions based on the findings which are necessary and recommends further work in certain areas.

The objective of the study was to determine the key covariates for the desire for more children among adolescent women in Kenya. The study population was a sample of 3530 women (15-24) covered in the KDHS 2003. The response variable was the desire for more children and a number of independent variables that were hypothesized to bear association with the response variable.

5.2 Summary of Findings

This overview shows that the level of adolescent desire for more children varies greatly according to background characteristics in Kenya. Nevertheless, high adolescent desire for more children has shifted from rural to urban areas in Kenya. Never married adolescents still have a higher proportion of those desiring more children. Majority of adolescent women are in the transition period from single life to married life. Even though this is the case, more of them are still single compared to those either married or were formerly married. The study has also established that most of these women have not experienced a

terminated pregnancy. Women who had experienced a terminated pregnancy were highly unlikely to desire more children. Regional variations in desire for more children show wide disparity. Central and Eastern were regions with a high likelihood of women desiring more children than other region.

5.3 Recommendation for Programmatic Action

This investigation gives an in-depth description of previous works by exploring the effects of an array of specific characteristics on the adolescent desire for more children. The results provide further evidence of the importance of these selected factors in shaping the behaviour of adolescents.

Despite the lack of clear trends in desire for more children among adolescents, the findings of this paper suggest that such desire may have massive effect on future population size, health status, morbidity and mortality. Therefore, programs and interventions targeting young adolescents, including those living in urban areas, are needed to lower the high levels of adolescent childbearing and therefore desire for more children. It remains an issue of concern not only in Kenya but also in other developing countries.

Another programmatic issue that might emerge from this study is to open avenues in the community where knowledge can be disseminated to guide the adolescents on making responsible and informed choices on childbearing desires.

5.4 Recommended further research

Further research is highly recommended to demonstrate the weakness in socialization of adolescents in Kenya in view of the dynamic approach in upbringing and guidance techniques among adolescents in schools and out of school.

The relative influence of migration on desire for more children in Kenya is another critical area where further research to quantify its magnitude is needed.

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Appendices

Appendix 1: Logistic regression for adolescent desire for no more children in Kenya, 2003.

Characteristics	B	S.E.	Wald	df	Sig.	Exp(B)
Residence						
Urban	ref	ref	ref	ref	ref	ref
Rural	-0.456	0.170	7.202	1	0.007	0.634
Highest education level						
No education/preschool	ref	ref	ref	ref	ref	ref
primary	-0.021	0.587	0.001	1	0.972	0.980
secondary	-0.248	0.535	0.214	1	0.643	0.781
Higher	-0.318	0.545	0.341	1	0.559	0.727
Wantedness of last child						
Wanted then	ref	ref	ref	ref	ref	ref
Wanted later	0.737	0.178	17.119	1	0.000	2.089
Wanted no more	0.327	0.184	3.163	1	0.075	1.386
Ever had a terminated pregnancy						
No	ref	ref	ref	ref	ref	ref
Yes	-0.116	0.285	0.165	1	0.685	0.891
Region						
Nairobi	ref	ref	ref	ref	ref	ref
Central	-1.801	0.778	5.353	1	0.021	0.165
Coast	-2.606	0.770	11.442	1	0.001	0.074
Eastern	-2.130	0.759	7.880	1	0.005	0.119
Nyanza	-2.929	0.771	14.434	1	0.000	0.053
Rift Valley	-1.929	0.771	6.255	1	0.012	0.145
Western	-2.132	0.760	7.864	1	0.005	0.119
North Eastern	-2.220	0.768	8.346	1	0.004	0.109
Marital status						
Never married	ref	ref	ref	ref	ref	ref
Currently married	1.138	0.249	20.829	1	0.000	3.121
Formerly married	0.757	0.204	13.713	1	0.000	2.132
Constant	2.583	1.010	6.538	1	0.011	13.236

Appendix 2: Desire for more children in Kenya, 2003

Variable categories	Variable categories	Desire for more children		Total
		no desire	desire	
Highest educational level				
No education/preschool	Rural	56	219	275
	Urban	23	65	88
Total		79	284	363
Primary	Rural	290	1231	1521
	Urban	103	495	598
Total		393	1726	2119
Secondary	Rural	74	408	482
	Urban	57	352	409
Total		131	760	891
Higher	Rural	3	33	36
	Urban	12	105	117
Total		15	138	153
Currently/formerly/never married				
Never married	Rural	217	1122	1339
	Urban	88	662	750
Total		305	1784	2089
Currently married	Rural	168	705	873
	Urban	84	321	405
Total		252	1026	1278
Formerly married	Rural	38	64	102
	Urban	23	34	57
Total		61	98	159
Highest educational level				
No education/preschool	Wanted then	15	154	169
	Wanted later	7	13	20
	Wanted no more	4	6	10
Total		26	173	199
Primary	Wanted then	105	369	474
	Wanted later	74	202	276
	Wanted no more	65	113	178
Total		244	684	928
Secondary	Wanted then	25	77	102
	Wanted later	22	58	80
	Wanted no more	25	44	69
Total		72	179	251
Higher	Wanted then	4	6	10
	Wanted later	0	6	6
	Wanted no more	1	4	5
Total		5	16	21

Conti.....ed

Variable categories	Variable categories	Desire for more children		Total
		no desire	desire	
Ever had a terminated pregnancy				
Yes	Rural	13	73	86
	Urban	10	41	51
Total		23	114	137
no	Rural	410	1818	2228
	Urban	185	976	1161
Total		595	2794	3389
Ever had a terminated pregnancy				
Yes	No education/preschool	2	21	23
	Primary	15	78	93
	Secondary	6	12	18
	Higher	0	3	3
Total		23	114	137
no	No education/preschool	77	263	340
	Primary	378	1648	2026
	Secondary	125	748	873
	Higher	15	135	150
Total		595	2794	3389
Currently/formerly/never married				
Never married	Nairobi	26	328	354
	Central	38	315	353
	Coast	50	150	200
	Eastern	28	254	282
	Nyanza	26	234	260
	Rift Valley	30	247	277
	Western	64	224	288
	North Eastern	43	32	75
Total		305	1784	2089
Currently married	Nairobi	29	126	155
	Central	40	95	135
	Coast	23	132	155
	Eastern	41	89	130
	Nyanza	34	163	197
	Rift Valley	46	198	244
	Western	39	129	168
	North Eastern	0	94	94
Total		252	1026	1278
Formerly married	Nairobi	5	11	16
	Central	8	17	25
	Coast	12	14	26
	Eastern	10	9	19
	Nyanza	9	17	26

Cont.....ed

	Rift Valley	6	16	22
	Western	8	10	18
	North Eastern	3	4	7
Total		61	98	159