AGE AT SEXUAL DEBUT AMONG FEMALE YOUTH IN NYANZA PROVINCE, KENYA

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DECLARATION

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

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DR WANJIRU GICHUHI
This is dedicated to my dear husband Bethuel
and my lovely children Mik and Iscah.
May you also be motivated and encouraged to reach your dreams.
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ABSTRACT

The study examined factors that influence early sexual debut among female youth aged 15 – 24 years in Nyanza province using data from the Kenya Demographic and Health survey of 2008/9. This was a national representative survey that collected data on sexual activity from a sample of 8444 women in their reproductive ages 15 – 49 years. In this study age at sexual debut measured in completed years was the dependent variable while the independent variables were place of residence, level of education, wealth index, religion, marital status and exposure to radio and television. The study sample was 607 female youth aged 15 – 24 years drawn from a population of 1318 women aged 15 – 49 years in Nyanza province. The life table approach was used to estimate median age at sexual debut among the female youth by various background characteristics. Bivariate and multivariate analysis using Cox hazard regression was employed to determine risk factors associated with age at first sexual debut.

The results from life table showed that the median age at sexual debut among female youth in Nyanza province was 15.3 years. Using Cox hazard regression, bivariate results showed that place of residence, level of education, wealth status, marital status and exposure to television were significantly associated with sexual debut among female youth in Nyanza Province. Rural residence was associated with acceleration of early sexual debut while secondary and above education, rich households, being married and exposure to television were associated with delay in sexual debut among the female youth in Nyanza province. Multivariate analysis results indicated that when all factors were controlled for, the effect of place of residence, level of education and marital status on early sexual debut among female youth were statistically significant. Contrary to the expectations were the findings that the never-married female youth were less likely to delay their sexual debut compared to the ever-married counterparts. The study recommends further research to establish why the married female youth delay their sexual debut compared to the never-married counterparts.
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CHAPTER ONE
INTRODUCTION

1.1 BACKGROUND

The concern for youth welfare and development is universal. In fact, there has been a rise in the number of researches worldwide that deals with youth issues. Most societies have afforded considerable attention to the needs and problems of this segment of the population. However, of all the areas in youth development, it is sexuality that attracts the most attention and interest from almost all sectors of society. By all accounts, it can be considered the most studied and dissected area of research. Investigations have progressed from the identification of level and trends in sexual behaviour among the youth to the identification of factors and contexts that facilitate its occurrence (Laguna 2001).

Research throughout much of Africa indicate that the first sexual experiences of today's young people are taking place in a different social context from those of previous generations. Increasing urbanization, modernization and education, together with exposure to western media, appear to have led to a decline in traditional values and, in particular, to have increased early sexual activity among the youth. Traditional systems of preparing, training and initiating young people into adulthood has disintegrated, and traditional values that once regulated sexual behaviour among youth have broken. (Gueye et al., 2001). Studies suggest that adverse economic conditions, no education, coercion, peer pressure to obtain luxury items are reasons for early sexual activity among youth. Where some form of payment is received for sex, young women maybe unable to negotiate condom or contraceptive use, leaving them at a greater risk of Sexually Transmitted Infections (STI) including HIV/AIDS and unwanted pregnancies. Further
studies reveal that poor women initiate sexual activity two years earlier than those who are wealthy and young people in rural areas are likely to have earlier sexual debut than those in urban areas (NCAPD & CSA 2004).

While there are several definitions and age categorization used to describe this segment of the population, this study adopts the definition of World Bank and United Nations that consider the youth as a period between ages 15 – 24. It is a transitional period of physical, emotional, and social maturation, which is often characterized by experimentation with sexual behaviours (Kelly 2001). The need to safeguard sexual health among this segment of population has fueled much research on factors that predispose them to risky sexual behaviours including unprotected sexual intercourse.

Early sexual activity poses major health risks for young women. Studies in Kenya demonstrate that substantial proportions of female youth begin their sexual activity early and it is usually unprotected, giving rise to early pregnancy and child-bearing, unsafe abortions, school dropout, reproduction tract infections including STIs and HIV/AIDS and economic hardships (NCAPD & CSA 2004). Girls who report first sexual intercourse during their early teens have much higher rates of fertility, morbidity and mortality unlike those who delay sexual onset until older ages (Muhunzu 2010). This scenario points to the need to determine predictors of age at sexual debut in different regions of Kenya as regional differentials is quite evident. It raises the question of the recommendable age of sexual debut among female youth since the earlier the age at sexual initiation, the higher the likelihood of being exposed to risks of pregnancy and longer reproductive lifespan leading to higher Total Fertility Rate of a nation (TFR) (NCAPD, 2010).
1.2 PROBLEM STATEMENT

The age at sexual debut is an increasingly important issue to study given that sexually
active young women are at risk of multiple outcomes. People who begin sexual activity at an
early age tend to have more unprotected sex, more lifetime sexual partners and longer period
of sexual activity, placing them at greater risk of unwanted pregnancy, vesico-vaginal fistula and
contracting STI, including HIV/AIDS. Young women who engage in early sexual debut are likely
to get married early which is associated with large family size therefore, leading to high fertility
levels among young women which contribute to the overall fertility of a nation (Olalekan 2008).

Studies on factors influencing age at sexual debut among female youth have found
contrasting results. Some researches carried out have established that level of education,
urbanization, media exposure, religious affiliation and higher socioeconomic status are
associated with later age at sexual debut among female youth (Gupta & Mahy 2003; Zaba et al.,
2004; Lehrer 2004; Magadi & Agwanda 2009). On the other hand, other studies have found that
urbanization, level of education (until primary level) and mass media are associated with early
sexual debut (Molla, Berhane & Lindtjorn 2008). In Kenya, other contrasting findings showed
household economic status and mass media had no statistical significant effect on timing of first
sex, and further showed that religion is weakly associated with the timing of first sex.
Moreover, the hypothesis that youth in urban areas are less likely to initiate early sexual activity
compared to those in rural areas has not been supported in the findings. The results of these
studies reflect the weakening of traditional norms regarding virginity in urban areas among
educated female youth because they were three times less likely to believe in the traditional
norm of remaining virgin until marriage than their rural counterparts. This is unexpected
because rural areas are usually associated with traditional practices that encouraged early sexual debut (Ikamari & Towett 2007).

Most studies on sexual debut in Kenya have looked at the female adolescents at the national level; however, findings have clearly shown that there are discernible regional differentials due to variations in socio-economic developments and cultural factors in these regions. This study focused on Nyanza Province which is predominantly rural and has recorded the lowest age of sexual debut among young women unlike other regions as reported in the latest national survey in Kenya (KNBS & ICF Macro 2010). The study aimed at addressing the research gap on early sexual debut among the female youth in this region and the main question that the study attempted to answer is; “What are the factors influencing age at sexual debut among female youth in Nyanza Province?

1.3 OBJECTIVES OF THE STUDY

The general objective of this study was to determine factors influencing age at first sexual debut among female youth in Nyanza. The specific objectives were;

(i) To examine the socio-economic factors that influence early sexual debut in Nyanza.

(ii) To determine the socio-cultural factors affecting age at sexual debut in Nyanza.

(iii) To establish the proximate determinants influencing age at sexual debut in Nyanza.
1.4 JUSTIFICATION OF THE STUDY

Young women who engage in early sexual debut are likely to get married early which is associated with large family size therefore, leading to high fertility levels which end up contributing to the overall fertility of a nation. The information obtained from the study is important in programming timely interventions that may help in delaying early age at sexual debut. An understanding of factors associated with early sexual debut among female youth is essential for designing programmes and policies aimed at reducing the negative consequences including unwanted pregnancies among female youth and providing reproductive health information and services that are youth friendly.

The results reported in this study will shed light on some of the factors associated with the timing of age at sexual debut that may be addressed in school-based prevention programmes and inform family life programmers about the exact age at which family life education services should be initiated for the female youth. The information from the study will also contribute to the existing knowledge on determinants of age at first sexual intercourse hence, enabling researchers to have a better understanding on factors influencing age at sexual debut in Nyanza and be able to make comparisons with other regions in Kenya.

1.5 SCOPE AND LIMITATIONS OF THE STUDY

The study focused on 607 female youth aged 15 – 24 years out of the 1,318 females aged 15 – 49 years who reported having had sex at the time of the survey, indicating their ages at the time of the first sexual intercourse, in Nyanza Province.
Limitations in the study worth recognizing were biases that were likely to occur due to recall problems since information collected in the Kenya Demographic Health Survey (KDHS) depended on retrospective reporting. The background variables used in this study as adopted from KDHS may have changed over time hence may not reflect the actual status of the respondent at the time of sexual debut. For instance a variable like place of residence in KDHS reflects the current place of residence of the respondent not the place of residence as at the time of sexual initiation. The other limitation is error that may occur due to misreporting of age of the respondent. Nevertheless, despite the errors associated with recall problems and age misreporting, researchers have found the KDHS data to be fairly accurate (Nahar & Min 2008; Gyimah 2003). Some of the factors that studies have shown to have an effect on age at sexual debut and may have been important for this study such as the effect of parents’ marital status and their level of education were not analyzed due to the difficulty in linking the female youth to their parents; however, the exclusion of these variables did not have an adverse effect on the results.
CHAPTER TWO
LITERATURE REVIEW

2.1 INTRODUCTION

This chapter discusses the theoretical perspectives that have been used to explain sexual activity among youth in transitional societies. The literature further discusses factors that influence age at first sexual intercourse among the female youth. The review focuses mainly on the effects of socio-economic, socio-cultural and proximate factors on age at sexual debut. This section therefore, reviews global literature on studies which have been undertaken on these explanatory variables; place of residence, level of education, wealth index, exposure to mass media, ever use of contraceptives, religion and marital status of the respondent on age at sexual debut as the dependent variable.

2.2 THEORETICAL PERSPECTIVES

Although most studies on female sexual behaviour in Africa lack a comprehensive theoretical framework, several hypotheses emerging from previous work can be considered as theoretical perspectives for research. This study adopts these theoretical approaches that are divided into three broad categories: (1) rational adaptation or economic hypothesis, (2) social disorganization theory and (3) framework on religion.

In Rational Adaptation Hypothesis, Female sexual activity is associated with gender inequality in the distribution of resources. Keeping women poor, it is said, gives prosperous men ready access to multiple sexual partners because the 'price' of women's sexual services will be low. Hence, proponents of the rational adaptation hypothesis argue that the current sexual behaviour of women, especially the unmarried ones, is economically rational. Under the
rational adaptation assumption, sexual relations are viewed as a means by which young women get economic benefits. Many researchers believe that young women exchange sexual favours for clothes, gifts, or school fees. These motivations for sexual activity suggest that becoming sexually active may be a rational decision, based on weighing of benefits such as school fees, the opportunity to find a husband, or the acquisition of needed goods and services (Djamba 1997 & Meekers 1994).

Social disorganization theory assumes that the current level of female sexual activity results from the breakdown of social control that older persons had over younger ones. Factors usually cited as correlates of the loosening of traditional social controls are education, urbanization, and the mass media. The main assumption of the social disorganization theory is that these modern factors are associated with the adoption of a Western lifestyle that has removed youth from parental surveillance.

In the process of urbanization, socialization processes shifts from being entirely the responsibility of the direct or extended family to being partially dominated by social institutions like the school and influence of the media. The introduction of western values often destroys traditional customs and value systems. In the process and as a consequence, other forms of social control lose relevance, as the weight of western values, attractive to the young, cannot be countered by local propositions. This type of explanation argues that most early sexual activity is unplanned and most premarital pregnancies are unwanted. It stresses the influence of the mass media, the peer group, the school, social welfare programs, and other institutions that allegedly weaken family control, as well as the weakening effects of poverty and unemployment. This model is consistent with modernization theory that emphasizes the
Theoretical work by McQuillan (2004) and Regnerus (2007) provide a useful framework for understanding the mechanisms underpinning religious influence on adolescent sexual behavior. These arguments coalesce around; first, specific teachings that religious organizations must have towards behavioral expectations directly related to childbearing or its proximate determinants (sex), second, mechanisms that religious faiths must possess to disseminate their teachings and enforce their behavioral norms, and third, religious influence is more likely to take hold over a behavior when one’s identity is highly intertwined with the religious community. That is, religion may directly influence sexual behavior through specific teachings that prohibit premarital sex, and it may indirectly influence sexual behavior through social integration in a religious community where social control serves to enforce behavioral expectations. Indeed, while both Catholic and Protestant faith traditions prohibit premarital sexual activity, this abstinence orientation derived from religious doctrines is particularly salient among the theologically conservative Protestant traditions. For example, to become a member of the conservative Protestant faith means ascribing to ideology that among other things explicitly prohibits premarital sex and bearing children outside of wedlock (Pierucci & Prandi 4; Gonzalez & Gonzalez 2008).
2.3 SOCIO-ECONOMIC FACTORS AND AGE AT SEXUAL DEBUT

2.3.1 Place of Residence

Place of residence is significantly associated with early sexual debut among female youth. Quantitative and qualitative data confirm that social changes are reshaping sexual decision making and behaviour among urban youth. Increasing modernization along with a decline in the authority of parents and elders, have undermined the societal and cultural rules that formerly controlled and informed the urban youth's sexuality. As material demands have escalated, expenditures have become individual among female youth rather than family concerns and indications are that urban areas have given young women material aspirations that they can sometimes meet only through sexual activity (Fatusi & Blum 2008). Given that marriage occurs much earlier in rural areas, much of the sexual activity among urban female is likely to take place with a boyfriend, while a rural female’s first partner is likely to be her fiancé or husband (Gueye et al., 2001).

The propensity to engage in sexual intercourse among female youth is contingent upon the level of urbanization. Highly urbanized areas are characterized by high incidence of family disorganization, low level of family religiosity, and high exposure to all forms of media that are likely to influence young adults in these areas to engage in early sexual debut. However, previous studies have validated the observation that sexual activity among youth is on the rise and sexual debut in rural areas occur even earlier (Frias 2000 & Ankomah et al., 2011). On the other hand, in comparison between rural and urban Molla et al (2008) indicated that rural youth are three times more likely to believe in the traditional norm of remaining virgin until marriage than the urban youth.
2.3.2 Education

Education is linked with a delay in age at first sex. Women with at least secondary education begin sexual activity almost three years later than those with no education. Among female youth, those who are attending school are less likely to have ever had sex than those who have stopped attending. Although the pattern by level of education varies, women start having sex early almost universally in sub-Saharan Africa (Gupta & Mahy 2003). This is confirmed by a study in Taiwan that high level of education is associated with lower level of sexual activity at young ages as education is the main activity among young women and is usually considered to be a part of growing up. Therefore, adult behaviour such as sexual intercourse is usually postponed until completion of education, thus, higher education would be associated with lower levels of sexual activity (Choe & Lin 2001).

The role of schooling in sexual behaviour change is of particular interest however, the association between level of schooling achieved and sexual debut is complex. Schooling is a measure of socio-economic status and of education itself hence, socio-economic conditions which may limit school access or contribute to poor performance may also pre-dispose female youth to early sexual activity (Hargreaves et al., 2008; Jukes et al., 2008 and Lloyd & Mensch 2008). For example, at least in some settings, female youth who stay in school longer are less likely to engage in sexual risk behaviours. It is unclear, however, whether youth who stay in school are less likely to engage in risky sex or whether sexually active youth who engage in risky sex are more likely than others to drop out of school (Hindin & Fatusi 2009). Formal education is regarded as a central component of socialization and the school represents an important socialization environment for adolescent behaviour. It is in school where youth get
opportunities to interact with their peers and it is while in school when most young adults have their first crush, where most relationships are formed and sexual experimentation behaviour is rampant among young people. In general however, the school influence is operationalized most often through the effect of education (level of education) on youth behaviour. But the school is not limited on teaching skills and inculcating values necessary to deter the youth from engaging in sexual activity. In contrast with family (another socialization agent) where an intact set-up (with both parents around) is correlated with lower probability of sexual intercourse, the same cannot be forthrightly established with school. However, attachment to school in general can be viewed as an indicator of overall aspiration of an individual. Thus, youth who have greater aspiration in life are more likely to finish school, refrain from engaging in risky sexual behaviours. Effect of school departure on early sexual debut on the other hand manifests only among young females who face limited options in life which are largely contingent on completion of their education. Once they drop out of school, they are at greater risk of early sexual initiation (Laguna 2001).

2.3.3 Wealth Status

Studies have found some support of an association between wealth status and age at first sex among female youth. 2004 National Survey of Adolescents in Burkina Faso, Ghana, Malawi and Uganda confirm the above statement. The observed higher likelihood of initiating first sex among poorer females was found to be consistent with the assumption of disadvantaged women having earlier sexual debut in order to have access to cash and gifts. Wealth status was significantly associated with the age at first sex among female youth at a five percent level in Burkina Faso, Ghana, and Malawi. Female youth in these regions were least
likely to initiate first sex at each age interval in the wealthiest quintiles as opposed to the poorest quintiles (Madise et al., 2007). Findings from qualitative studies confirmed that a combination of low level of economic status of both individual and family is associated with early sexual activity and it is normally done in exchange for money to meet economic needs (Olaniyi et al., 2007).

Assumptions from several researchers are that poverty may be a motivation for young women to engage in early sexual activity and to have multiple partners. This assertion has stemmed mainly from adolescents’ reports of exchange of gifts and money in sexual partnerships. The observed higher likelihood of initiating first sex among poorer young females is consistent with the assumption of disadvantaged women having earlier sexual debut in order to have access to cash and gifts (Gueye et al., 2001; Luke 2003 & Madise et al., 2007). Early exposure and socialization into sexual activity among the poor can also contribute to early sexual debut. This has been observed of children living in slum areas where accommodation is very cramped and where it is very common for children to sleep in the same room as their parents (Madise et al., 2007). In support of the above observation, strong association of poverty and risky sexual behaviour was reported among young women living in Nairobi slums in Kenya who had significantly higher levels of sexual risk-taking than other women (Zulu, Dodoo & Ezeh 2002).

2.4 SOCIO-CULTURAL FACTORS AND AGE AT SEXUAL DEBUT

2.4.1 Religion

Religious norms and beliefs affect one’s orientation towards sexuality among other things; thus, religion is bound to affect a woman’s behaviour towards her age at first sex.
Religion plays a significant role in the life of individuals in any society. As an agent of social control it has had many sociological interests and a lot of literature has developed in the recent past exploring the influence of religious factors on sexual behaviour among youth (Regnerus 2007; Rostosky 2004; Bearman & Bruckner 2001). Religious values and practices have been shown to shape sexual values and behaviours among youth. It guides behaviour, provides standards and a social control function or social norms that religious person will always conform to. For many young people, religious values and messages may be the principal moral compass guiding their attitudes and values on sexual decision-making. (Rostosky et al., 2004; Regnerus 2007; Uecker 2008).

Understanding how religion affects sexual attitudes is particularly salient in the sub-Saharan African context where religion permeates social life (Pew Research Centre 2010). To a certain extent, being religious and observant of church obligations serve as a protective factor against early sexual initiation. Religious norms and beliefs affect one's orientation towards sexuality among other things; thus, religion is bound to affect a woman's age at first sex (Ikamari & Towett 2007). However, specific doctrines and policies of the religious institutions to a large extent influence individual attitudes and behaviour towards sexual activity. The degree of commitment to religious organizations may be more important as a determinant to sexual attitudes and behaviour than religious affiliation therefore youth who do not have religious affiliation are likely to engage in early sexual debut. Greater religious commitment may also make youth more likely to accept the teachings of their religious institutions concerning premarital sex. Female youth who attend religious services or programmes are likely to exhibit less permissive attitudes and less engagement in early sexual activity, while the acceptance of
early sexual intercourse is likely to reduce religious commitment and participation (Lehrer 2004).

Catholics and Protestant females initiate sexual intercourse later than their counterparts. This is confirmed by a study done in Brazil indicating that female youth affiliated with Catholicism, other Protestant faiths, or Pentecostalism have significantly lower odds of early sexual debut when compared to their non-affiliated counterparts (Odimegwu 2005; Ogland and Xu, 2011). Conversely, youth unaffiliated with religious faith remain outside of the influence of religious teachings and the social interaction of religious communities hence are not likely to have strong proscriptions on early sexual activity. These results seem to support the theoretical arguments posed by both McQuillan’s (2004) and Regnerus (2007) concerning the mechanisms that work through religion to influence sexual behaviour.

2.4.2 Marital Status of the Respondent

The literature suggests that community settings that encourage early marriage also lead to an earlier onset of sexual activity. While premarital sex was once taboo in rural areas, a new cultural norm is emerging. Premarital sex has become increasingly common and socially acceptable among couples who are expected (engaged) to be married. Given the younger age at engagement and marriage in rural areas, this could explain the difference in the timing of sexual debut between urban and rural youth in China (Guo et al., 2012).

As expected, the ever-married female youth are more likely than their never-married counterparts to initiate sexual activity early. The ever-married status places the female youth at a risk of early sexual initiation. For instance, the ever-married youth are almost five times more likely than single youth to initiate sexual activity early (Ikamari and Towett 2007; Nchogu 2005).
Among the ever-married, younger people initiate sex in marriage at an earlier age while the never-married do not engage in premarital sex at an early age therefore, the age at sexual debut for the never-married is higher than the married ones. The fact that the urban never-married youth and literates are more likely to have premarital sex than the rural youth suggests that the virginity norm is in transition in urban areas. This suggests that marriages in rural areas occur at young ages and abstinence until marriage might be difficult as the age of marriage increases with educational aspirations (Versnel, Berhane, Wendte 2002).

2.5 PROXIMATE DETERMINANT

2.5.1 Exposure to Mass Media

The mainstream mass media (television, magazines, movies, music, radio and the Internet) provide increasingly frequent portrayals of sexuality. There is a relatively consistent set of sexual and relationship norms portrayed that rarely depicts sexually responsible models by the media (Brown 2002). Parents and schools have remained reluctant to discuss sexual topics with the female youth hence they have endeared themselves to the mass media to learn about and see sexual behaviours. For example, in the United States, young people spend 6 to 7 hours each day on average with some form of media. A national survey in 1999 found that one third of young children (2 to 7 years old) and two thirds of older children and adolescents (8 to 18 years old) have a television in their own bedroom. Many of those televisions are also hooked up to Cable and a Video Cassette Recorder (VCR) and sexual talk and displays are increasingly frequent and explicit in this part of the world (Roberts, 2000). One content analysis found that sexual content that ranged from flirting to sexual intercourse had increased from slightly more than half of television programs in 1997-1998 to more than two-thirds of the programs in the
1999-2000 season and depiction of intercourse (suggestive or explicit) occurred in one of every 10 programs. Sexual attitudes in the United States have become more liberal in the past 30 years among youth and adults that this liberal shift in sexual values could contribute to early sexual debut among young females. United States has painted an image of a sexually free modern youth society where parents often give their children limited information on sex hence youth are left to learn from their schools, friends, magazines, the internet, television, and other media (Kunkel et al., 2001; Berk 2004).

Little is known about the relationship between mass media and young people's sexual behaviour, especially in developing countries. A study in Nigeria on effects of mass media on sexual health behaviour of youth found out that mass media has both negative and positive effects. Negative sexual permissiveness among young people is promoted by more frequent exposure to print, home video and the internet. On the other hand, promotion of condom use in protection of risky sexual behaviours among young people is also promoted through mass media (Ankomah et al., 2011). With the increasing influence of the mass media, youth learn more about sexual norms from media portrayals. Exposure to any form of mass media among female youth is associated with lower sexual intercourse prevalence except in exposure to x-rated films which appear to have a general effect of hastening sexual initiation. In Philippine, exposure to newspapers and movies serve as preventive factors for female youth's early sexual behaviour (Onipede 2008).

Infrastructure developments (malls, coffee shops, commercial establishments) have been rapid, providing youth's access to a wide array of facilities and activities. Technological innovations such as the internet, mobile phones have redefined social interaction among youth,
as well as dating and courtship practices. The mass media's influence on youth's attitude has become increasingly pervasive and as the group becomes more susceptible to media influences, this segment of the population remains its most eager consumers (Laguna 2001). More longitudinal research, especially with early adolescents is needed to learn more about how media content is attended to, interpreted, and incorporated into developing sexual lives (Brown 2002).

2.6 SUMMARY OF LITERATURE REVIEW

Evidence from most of the literature indicates that sexual activity among the female youth is on the increase. The most common predictors linked to age at sexual debut include: place of residence, level of education, wealth index, religion, marital status and exposure to mass media.

Increased urbanization, modernization and education, together with exposure to western media, appear to have led to a decline in traditional values and, in particular, to have increased early sexual activity among the youth. While premarital sex was once a taboo, a new cultural norm is emerging where premarital sex has become increasingly common and socially acceptable among couples who are expected (engaged) to be married. Younger people therefore initiate sex in marriage at an earlier age than the never-married. Religious norms and beliefs affect one's orientation towards sexuality among other things; thus, religion is bound to affect a woman's age at first sex.
2.7 CONCEPTUAL FRAMEWORK

This study used sociological model of Twa-Twa (1994). The model borrows a lot from the sociological model of Peterson and Taylor (1980) and that of Hofferrth and Hayes (1987). The focus is on the role of social environment in sexual activity among young people.

The social environment plays an important role in adolescent sexuality through socialization, verbal and sign communication, modeling, sanctioning and internalization of norms and values. From the model, the social environment has two main opposed forces: one component accelerates sexual activity while the other suppresses or reduces it. Factors that accelerate sexual activity include type of residence, wars, peer influence, poverty, wealth, media and culture as a people's way of life, their norms and beliefs about sex.

On the other hand, factors that work to suppress sexual activity include good parental care, religion, fear of pregnancy, and laws on immorality. These accelerating factors of the model predominate over the suppressing factors during adolescence. The central axis of the sociological model is the individual with his or her innate bio-physiological properties namely genes, sex, age, hormones, primary and secondary characteristics. In this model these are assumed and their role in sexuality is kept in the background as constant factors since their investigation is not part of this study.
Figure 1: The Sociological Model of Adolescent Sexual Behaviour


Process 1: Acquisition of sexual knowledge, attitudes and values
Process 2: Initiation of sexual behaviour and practices; and subsequent maintenance of sexual practices
Process 3: Development of consequences such as HIV/STDs, pregnancy, or no consequences. This also provides a feedback within the individual (6 and 7) to give in or not to society's demands for sex.
Process 4: Feedback mechanism through social factors that accelerate adolescent sexuality.
Process 5: Feedback mechanism through social factors that reduce or suppress adolescent sexual activity.
2.8 OPERATIONAL FRAMEWORK

For ease of use Twa-Twa’s model was modified as shown below. The study conceptually hypothesized that socio-economic and socio-cultural factors work through proximate determinants to influence age at sexual debut.

Figure 2: Operational Conceptual Model Modified from Twa-Twa (1994) Sociological Model of Adolescent Sexual Behaviour

Socio-economic factors
- Level of education
- Wealth index
- Type of place of residence

Demographic factors
- Current age of respondent

Proximate determinant
- Exposure to mass media

Outcome
- Age at sexual debut

Socio-cultural factor
- Religion
- Marital status


CHAPTER THREE
DATA AND METHODOLOGY

3.1 INTRODUCTION

This section presents a description of data and methods that were used for the analysis in the study. The description and measurement of dependent and independent variables in the study are given. The first part describes the source of data; part two describes methods of data analysis and finally description of variables and their measurements.

3.2 DATA SOURCE

The data for this study was drawn from the 2008/9 Kenya Demographic and Health Survey (KDHS). This data was a national survey with representative sample of 8444 women of their reproductive ages 15 – 49 years. The survey collected data on fertility, marriage, sexual activity, fertility preferences, family planning, maternal and child health, information and education on HIV/AIDS and other sexually transmitted diseases, information on malaria and use of mosquito nets and domestic violence. The survey was carried out as part of the world-wide Demographic Health Survey (DHS) program. Of the 1318 women aged 15 – 49 years in Nyanza, the study focused on 607 female youth aged 15 – 24 years who included both single and ever-married women and the unit of analysis was individual female youth.

During the survey all women were asked series of questions regarding their sexual activity. All women who were sexually experienced were asked to indicate how old they were when they first had sexual intercourse. The response to the question constituted the women's age at sexual debut. All the women who indicated that they had never had sexual intercourse...
were not asked the question about the age at first sex. This is the standard way in which first sexual debut is being measured in the worldwide Demographic Health Surveys program. For each woman, information regarding their background characteristics was collected. A variable was reported as having a significant effect, if its effect on the age at sex was statistically significant at least at the 5 per cent level of significance.

3.3 METHODS OF DATA ANALYSIS

The study employed the life table approach to estimate the median age at sexual intercourse among the female youth. For bivariate and multivariate analysis the study utilized the regression to estimate the risk of experiencing first sexual intercourse by female youth. These methods are described below.

3.3.1 Life Tables

Life table is a presentation of the life history of a cohort commencing with the start event as the cohort progressively decreases over time by failures. Failures are the terminating events which in this study are the time adolescents enter into sexual intercourse for the first time. The life table was used in this study to show transition from a state of never-had-sex to ever-had-sex.

Life tables were originally developed for mortality analysis but they have become a standard procedure for tracking the duration-specific likelihood of experiencing an event which in this study, is entering sexual intercourse for the first time. Life table is applied to that specify the time elapsed until the event occurs. The basic idea in the use of life table follow a group of people from a specified time until they experience the event. The study
to determine how long female youth survive before experiencing first sexual intercourse. The analysis was used to determine the median survival time for women aged 15 – 24 who have had sexual intercourse.

The median age at first sexual intercourse is the time half of the female youth are expected to have experienced sexual activity for the first time.

Estimates that will be used in this study are:

- \( t \) = time elapsing since starting the event in years from 15 – 24
- \( q_t \) = estimates conditional probability of failure between \( t \) and \( t + 1 \), given survival to \( t \) (the interval \( t \) to \( t + 1 \) ranges from \( t \) up to but not including \( t + 1 \))
- \( P_t \) = estimates conditional probability of surviving from \( t \) to \( t + 1 \), given survival to \( t \)
- \( S_t \) = estimates conditional probability of surviving from starting event to time \( t \)
- \( F_t \) = estimates conditional probability of failure between the starting event and time \( t \)

Life table technique involves classifying the sample in the basis of covariates of interest and estimating the function in each class separately. When none of the cases are small these procedures are workable. But very often many cases are likely to be small, especially when covariates are taken into account simultaneously. When there are many covariates, cell sizes become too small for computation of life tables. Under such circumstances, it is advisable to use more comprehensive and complex models for comparisons in which factors affecting failure times are represented by unknown parameters. This is the reason why the study makes use of hazard model since it economizes cases so that there is no need for such a large sample to get statistically meaningful results. Life table technique is best suited for this study because it
calculates the differentials of median age at first sex by the explanatory variables as it takes care of the censored cases.

3.3.2 Cox Proportional Hazards Model

This is a statistical tool which allows analyzing the effect of several risk factors on survival. Risk factors in this study are the occurrence of first sexual intercourse while survival is the transition from a state of never-had-sex to ever-had-sex. The probability of the occurrence of an event, first sexual intercourse in the case of this study is the terminating event referred to as the hazard model.

The proportional hazards model assumes that the time to event and the covariates are related through the following equation.

\[ h_i(t) = [h_0(t)] e^{b_0 + \sum_{j} b_{ij} x_{ij}} + \ldots + b_p x_{ip} \]

where

- \( h_i(t) \) is the hazard rate for the \( i^{th} \) case at time \( t \)
- \( h_0(t) \) is the baseline hazard at time \( t \)
- \( p \) is the number of covariates
- \( b_{ij} \) is the value of the \( j^{th} \) regression coefficient
- \( x_{ij} \) is the value of the \( i^{th} \) case of the \( j^{th} \) covariate

The hazard function is a measure of the potential for the event to occur at a particular time \( t \), given that the event did not yet occur. Larger values of the hazard function indicate greater potential for the event to occur. The baseline hazard function measures this potential independently of the covariates. The shape of the hazard function over time is defined by the baseline hazard, for all cases. The covariates simply help to determine the overall magnitude of the function.

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The value of the hazard is equal to the product of the baseline hazard and a covariate effect. While the baseline hazard is dependent upon time, the covariate effect is the same for all time points. Thus, the ratio of the hazards for any two cases at any time period is the ratio of their covariate effects. This is the proportional hazards assumption.

In the case of dichotomous covariate (risk factor) it is coded 1 if present and 0 if absent. Then the quantity $\exp(b_i)$ can be interpreted as the instantaneous relative risk of an event, at any time, for an individual with the risk factor present compared with an individual with the risk factor absent, given both individuals are the same on all other covariates. Where the covariate is continuous, then the quantity $\exp(b_i)$ gives the instantaneous relative risk of an event, at any time, for an individual with an increase of 1 in the value of the covariate compared with another individual, given both individuals were the same on all other covariates. Values less than 1 (one) indicate that the relative risk of having sexual intercourse is lower than that of the reference group.

The model is useful for this study because the dependent variable age at sexual debut is continuous and it is measured in terms of completed years. It can be interpreted as survival time from a state of never-had-sex to a state of ever-had-sex. Throughout the interval, female youth may either experience sexual intercourse or be right censored. The study uses hazard models to overcome the problem of censoring.

The model recognizes that the occurrences of first sexual intercourse are age dependent and not constant overtime. It does not make any assumptions about the functional distribution of the timing function, hence appropriate for events whose empirical is unknown (Gyimah, 2003). It is based on assumptions that the ratio of the hazard functions of two individuals is
constant throughout the period of observation (Armitage, et al., 2002). Cox proportional hazard model is analogous to a multiple regression model and enables the difference between survival times of particular cases to be tested while allowing for other factors. In this model, the dependent variable is the hazard. The hazard is the probability of experiencing the event in question (sexual debut) given that the youth have survived up to a given point in time. The model will therefore determine factors that influence the risk of sexual debut together with other covariates. It handles censored cases correctly and provides estimate of co-efficient for each of the covariate allowing one to assess the impact of multiple covariates in the same model.

3.4 VARIABLE DESCRIPTION AND MEASUREMENTS

The Dependent variable used in this study was: Age at Sexual Debut and the Independent variables were: Place of residence, Level of Education, Wealth index, Religion, Marital Status of the Respondent and Proximate determinants being: Exposure to Mass Media (television and Radio). The definition of the study variables and their measurements are discussed as shown in Table 3.1.
### Table 3.1: Definition of Study Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Description</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age at First Sexual Debut</td>
<td>Dependent Variable</td>
<td>Refers to the age at which female youth engages in sexual intercourse for the first time. It was measured in terms of completed years.</td>
</tr>
<tr>
<td>Type of Place of Residence</td>
<td>Independent Variable</td>
<td>This variable refers to the type of residence of a female youth. It was categorized as either rural or urban.</td>
</tr>
<tr>
<td>Level of Education</td>
<td>Independent Variable</td>
<td>This variable measured the level of education attained by the female youth. Two categories were considered in this study; None/Primary and Secondary Plus education.</td>
</tr>
<tr>
<td>Wealth Index</td>
<td>Independent Variable</td>
<td>Refers to the household economic status of the female youth. It was measured using three categories; Poor, Middle and Rich.</td>
</tr>
<tr>
<td>Religion</td>
<td>Independent Variable</td>
<td>Refers to the religious affiliation of a female youth. It was measured using two major categories; Roman Catholic and Protestant/others.</td>
</tr>
<tr>
<td>Marital Status</td>
<td>Independent variable</td>
<td>This variable refers to whether a female youth is single or married. In this study the variable was measured using two categories; Never-married and Ever-married.</td>
</tr>
<tr>
<td>Exposure to Mass Media</td>
<td>Proximate determinant</td>
<td>This variable was used to measure the number of female youth who listened to Radio and watched Television.</td>
</tr>
</tbody>
</table>
CHAPTER FOUR

FACTOR INFLUENCING SEXUAL DEBUT AMONG
FEMALE YOUTH IN NYANZA PROVINCE

4.1 INTRODUCTION

This chapter presents the distribution of the study population by various background characteristics. It also presents differentials of median age at sexual debut by socio-economic, socio-cultural and proximate factors. In addition it presents the bivariate and multivariate results of the risk associated with sexual debut among female youth aged 15 – 24 years in Nyanza province of Kenya.

4.2 BACKGROUND CHARACTERISTICS OF THE STUDY VARIABLES

This study restricted itself to female youth aged 15 – 24 years, who were both sexually and not sexually experienced at the time of the survey (2008/9) and indicated how old they were when they first had sex. Table 4.1 presents results of their background characteristics. There were 607 female youth aged 15 – 24 years in Nyanza province and they were nearly distributed equally between the age groups of 15 – 19 (48.3%) and 20 – 24 (51.7%) years. The results of the descriptive analysis indicated, majority of the female youth (73%) had already engaged in their first sexual intercourse. Distribution by socio-economic factors demonstrated that Nyanza is predominantly rural with only twenty three percent of the youth living in urban while over three quarters (77%) living in rural areas. Nevertheless, a large proportion of the female youth had gone to school. Nearly three quarters of the youth had primary level of
<table>
<thead>
<tr>
<th>Study Variables</th>
<th>Percent</th>
<th>Frequency (N=607)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age at First Intercourse</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not had Intercourse</td>
<td>23</td>
<td>139</td>
</tr>
<tr>
<td>Had Intercourse</td>
<td>73</td>
<td>443</td>
</tr>
<tr>
<td><strong>Age group of Female Youth</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 – 19</td>
<td>48.3</td>
<td>293</td>
</tr>
<tr>
<td>20 – 24</td>
<td>51.7</td>
<td>314</td>
</tr>
<tr>
<td>15 – 24 (Overall Age)</td>
<td>100</td>
<td>607</td>
</tr>
<tr>
<td><strong>Socio-economic Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Type of place of residence</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>23</td>
<td>140</td>
</tr>
<tr>
<td>Rural</td>
<td>77</td>
<td>467</td>
</tr>
<tr>
<td><em>Level of Education</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None/Primary</td>
<td>66.9</td>
<td>406</td>
</tr>
<tr>
<td>Secondary Plus</td>
<td>33.1</td>
<td>201</td>
</tr>
<tr>
<td><em>Wealth index Nyanza</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>35.4</td>
<td>215</td>
</tr>
<tr>
<td>Middle</td>
<td>20.4</td>
<td>124</td>
</tr>
<tr>
<td>Rich</td>
<td>44.2</td>
<td>268</td>
</tr>
<tr>
<td><strong>Socio-cultural Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Religion</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roman Catholic</td>
<td>20.6</td>
<td>125</td>
</tr>
<tr>
<td>Protestant &amp; Others</td>
<td>79.4</td>
<td>482</td>
</tr>
<tr>
<td><em>Marital Status</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never Married</td>
<td>50.9</td>
<td>309</td>
</tr>
<tr>
<td>Ever Married</td>
<td>49.1</td>
<td>298</td>
</tr>
<tr>
<td><strong>Proximate Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Exposure to Mass media</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has radio</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>16.6</td>
<td>101</td>
</tr>
<tr>
<td>Yes</td>
<td>79.7</td>
<td>484</td>
</tr>
<tr>
<td>Has television</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>73.1</td>
<td>444</td>
</tr>
<tr>
<td>Yes</td>
<td>23.1</td>
<td>140</td>
</tr>
</tbody>
</table>

1 Female youth who had no education were 0.3%
2 Female youth professing Others (Muslims) religion were 0.8%
education and 33 percent had attained secondary and above education. However, in terms of wealth index, nearly a third of the female youth in Nyanza province were from poor households while 44 percent were from rich households and 20 percent were from households in the middle wealth index.

Religion was highly regarded among the female youth in Nyanza province and the distribution was skewed towards Protestant and other Christians that comprise over 79 percent, while the proportion of female youth professing Roman Catholic faith were 20 percent. Furthermore, distribution by marital status showed that the female youth were fairly distributed with never-married at nearly 51 percent while ever-married were 49 percent. A large proportion of female youth were exposed to radio than television. Moreover, results indicated that almost 80 percent had access to radio as opposed to only 23 percent who were exposed to television.

4.3 DIFFERENTIALS IN MEDIAN AGE AT SEXUAL DEBUT BY BACKGROUND CHARACTERISTICS

This section presents the differentials of the median age at sexual debut in Nyanza as shown on table 4.2. The median age at sexual debut for all the female youth aged 15 – 24 years in Nyanza Province was 15.3 years. However, the median age at sexual debut for the female youth aged 15 – 19 years and 20 – 24 years were 12.4 and 16.6 years, respectively. This implies that by the age of 15.3 years, half of the female youth (15 – 24 years) had already had their first sexual experience in Nyanza province. This is lower than the national average median age at first sexual intercourse of nearly 17 years (16.9 years) among young women aged 15 – 24 years in Kenya. This median age at sexual debut is still lower when compared to Nairobi (18.6 years)
<table>
<thead>
<tr>
<th>Variable</th>
<th>Median Survival Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age at first intercourse</strong></td>
<td></td>
</tr>
<tr>
<td>15 – 19</td>
<td>12.38</td>
</tr>
<tr>
<td>20 – 24</td>
<td>16.57</td>
</tr>
<tr>
<td>15 – 24 (Overall Age)</td>
<td>15.32</td>
</tr>
<tr>
<td><strong>Socio-economic variables</strong></td>
<td></td>
</tr>
<tr>
<td><em>Type of Place of Residence</em></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>15.89</td>
</tr>
<tr>
<td>Rural</td>
<td>15.15</td>
</tr>
<tr>
<td><em>Level of Education</em></td>
<td></td>
</tr>
<tr>
<td>None/Primary</td>
<td>15.19</td>
</tr>
<tr>
<td>Secondary plus</td>
<td>15.63</td>
</tr>
<tr>
<td><em>Wealth Index</em></td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>14.64</td>
</tr>
<tr>
<td>Middle</td>
<td>15.57</td>
</tr>
<tr>
<td>Rich</td>
<td>15.60</td>
</tr>
<tr>
<td><strong>Socio-cultural variables</strong></td>
<td></td>
</tr>
<tr>
<td><em>Religion</em></td>
<td></td>
</tr>
<tr>
<td>Roman Catholic</td>
<td>15.41</td>
</tr>
<tr>
<td>Protestant and Other Christians</td>
<td>15.30</td>
</tr>
<tr>
<td><em>Marital status</em></td>
<td></td>
</tr>
<tr>
<td>Never Married</td>
<td>12.67</td>
</tr>
<tr>
<td>Ever Married</td>
<td>16.10</td>
</tr>
<tr>
<td><strong>Proximate variables</strong></td>
<td></td>
</tr>
<tr>
<td><em>Exposure to mass media</em></td>
<td></td>
</tr>
<tr>
<td>Has Radio</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>14.41</td>
</tr>
<tr>
<td>Yes</td>
<td>15.41</td>
</tr>
<tr>
<td>Has Television</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>15.20</td>
</tr>
<tr>
<td>Yes</td>
<td>15.62</td>
</tr>
</tbody>
</table>
and Central province (18 years) among female youth aged 15 – 24 years as reflected in KDHS 2008/9 results. Moreover, the findings were consistent with KDHS (2008/9) report in the national survey that sexual activity begins earliest in Nyanza Province at 16.5 years among women aged 25 – 49 years. Furthermore, the results showed that female youth living in rural areas initiated sexual activity almost one year earlier than their counterparts in urban areas (15.9 years).

Female youth whose level of education is none/primary had a lower median age at sexual debut (15.2 years) than their counterparts who had attained secondary and above education. Those with at least secondary education started their first sexual intercourse by almost 16 years compared to those with none/primary education (15 years), hence delaying their sexual activity by nearly one year. Furthermore, the female youth from poor households initiated sexual debut earlier (14.6 years) than those who were from rich households (15.6 years).

There were very minimal differences in median age at sexual debut between female youth whose religious affiliation were Roman Catholics (15.4 years) and Protestants (15.3 years). Further results indicated that the female youth who were never-married started their sexual debut earlier (12.7 years) than their ever-married counterparts (16.1 years). The ever-married female youth therefore, delayed sexual activity by over 3 years. The findings further showed that, female youth who were exposed to radio and television had a higher median age at sexual debut than those who were not exposed to any of the media types. Those exposed to radio had median age of 15.4 years at sexual debut compared to those who were not (14.4 years).
years). On the other hand, those who were exposed to television had a higher median age at sexual debut (15.6 years) as opposed to those who were not exposed (15.2 years).

4.4 EFFECTS OF COVARIATES ON THE RISK OF EARLY SEXUAL DEBUT AMONG FEMALE YOUTH IN NYANZA PROVINCE

In this section bivariate and multivariate analysis using Cox hazard regression was carried out to establish the effect of covariates on the risk of sexual debut among the female youth in Nyanza Province. The results obtained by fitting the Cox hazard regression model are presented in Table 4.3 for bivariate results and Table 4.4 for multivariate results. The hazard rates shown in the tables indicate the relative risk of a given outcome per unit increase in a specified independent variable. The reference category is equal to a unit or in other words a hundred percent. When the Exp(B) is greater than a unit, it shows that female youth are at a higher risk of experiencing early sexual debut compared to the female youth in reference category and when Exp(B) is less than a unit, it shows that female youth are at a lower risk of experiencing early sexual debut compared to the female youth in the reference category.

4.4.1 Bivariate Analysis

In bivariate analysis seven models as shown in table 4.3 were run to show the effect of each independent variable on age at sexual debut. The results showed that there was a statistical significance between effects of place of residence, level of education, wealth status, marital status, exposure to television and age at sexual debut among female youth in Nyanza province. The female youth living in rural areas were 31 percent more likely to initiate early sexual activity compared to their urban counterparts. The results of the analysis showed that place of residence and age at sexual debut among female youth were highly significant at 0.01
### Bivariate Results of a Hazard Model of the Risk of Early Sexual Debut among Female Youth in Nyanza Province

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Coefficient(B)</th>
<th>SE(B)</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of Place of Residence (Model 1)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban (Reference category)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Rural</td>
<td>.271</td>
<td>.099</td>
<td>1.31**</td>
</tr>
<tr>
<td><strong>Level of Education (Model 2)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None/Primary (Reference category)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Secondary Plus</td>
<td>-.275</td>
<td>.090</td>
<td>0.76**</td>
</tr>
<tr>
<td><strong>Wealth Index (Model 3)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor (Reference category)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Middle</td>
<td>-.145</td>
<td>.116</td>
<td>0.87</td>
</tr>
<tr>
<td>Rich</td>
<td>-.239</td>
<td>.094</td>
<td>0.79*</td>
</tr>
<tr>
<td><strong>Religion (Model 4)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roman Catholic (Reference category)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Protestant &amp; Others</td>
<td>.082</td>
<td>.103</td>
<td>1.085</td>
</tr>
<tr>
<td><strong>Currently/Never Married (Model 5)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never Married (Reference category)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ever Married</td>
<td>-.392</td>
<td>.084</td>
<td>0.68***</td>
</tr>
<tr>
<td><strong>Exposure to Media</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Has Radio (Model 6)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No (Reference category)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Yes</td>
<td>-.197</td>
<td>.112</td>
<td>0.82</td>
</tr>
<tr>
<td><strong>Has Television (Model 7)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No (Reference category)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Yes</td>
<td>-.237</td>
<td>.101</td>
<td>0.79*</td>
</tr>
</tbody>
</table>

Key: * p ≤ 0.05  ** p ≤ 0.01  *** p ≤ 0.001
level of significance. This finding is consistent with previous studies that have observed that sexual activity among female youth is on the rise and sexual debut in rural areas occur even earlier than urban areas (Frias 2000 & Ankomah et al., 2011). Level of education had a strong effect on age at sexual debut. Moreover, level of education and age at sexual debut among female youth were highly significant at 0.01 level of significance. Female youth with secondary and above education were 24 percent less likely to initiate early sexual debut compared to those with none/primary level of education. The findings show links between education and delay in early sexual debut hence, an indication that adult behaviour such as sexual intercourse is usually postponed until completion of education, thus, higher levels of education would be associated with lower risks of sexual activity (Choe & Lin 2001).

Female youth from rich households were 21 percent less likely to engage in early sexual intercourse as compared to their counterparts from poor households. The analysis indicated that effect of wealth status on age at sexual debut among the female youth was significant at 0.05 level of significance. These results conform to the 2004 national survey in Burkina Faso, Ghana, Malawi and Uganda which found that female youth in the wealthiest quintiles were least likely to initiate early sexual debut at each age interval (Madise et al., 2007). The observed higher likelihood of initiating first sex among young females from poor households was consistent with the assumption of disadvantaged women having earlier sexual debut in order to have access to cash and gifts (Gueye et al., 2001; Luke 2003; Olaniyi et al., 2007 & Madise et al., 2007).

Further findings indicated that there was a strong association between marital status and age at first sexual intercourse. Marital status and age at sexual debut were highly
The study found that the risk of early sexual debut among the ever-married was 32 percent lower compared to the never-married counterparts. This finding was contrary to the expectations since, marital status is assumed to place the female youth at a higher risk of early sexual initiation compared to singlehood status (Ikamari & Tirot, 2007; Nchogu 2005).

The delay of early sexual debut was also extended to female youth who were exposed to television. The association between the two variables was statistically significant at 0.001 level of significance. The results showed that female youth who had access to television were 21 percent lower risk of experiencing early sexual debut by 21 percent compared to their counterparts who were not exposed to television. Even though this finding is in agreement with cross-sectional studies that have observed mass media as having an effect in delaying early sexual debut (Ankomah et al., 2011 & Onipede 2008), it cannot be conclusively supported since neglected sexual permissiveness among young people is promoted by more frequent exposure to home video and the internet. Furthermore, parents and schools have remained reluctant to discuss sexual topics with the female youth hence they have endeared themselves to the media to learn about and see sexual behaviours (Roberts, 2000).

The effect of religion and radio on early sexual debut among the female youth was significant in the bivariate analysis results. The next section of the analysis will therefore, focus on multivariate Cox regression which will seek to establish the risks associated with early sexual debut among female youth in Nyanza province when all factors are controlled for.
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The delay of early sexual debut was also extended to female youth who were exposed to television. The association between the two variables was statistically significant at 0.05 level of significance. The results showed that female youth who had access to television were at a lower risk of experiencing early sexual debut by 21 percent compared to their counterparts who were not exposed to television. Even though this finding is in agreement with certain studies that have observed mass media as having an effect in delaying early sexual debut (Ankomah et al., 2011 & Onipede 2008), it cannot be conclusively supported since negative sexual permissiveness among young people is promoted by more frequent exposure to print, home video and the internet. Furthermore, parents and schools have remained reluctant to discuss sexual topics with the female youth hence they have endeared themselves to the mass media to learn about and see sexual behaviours (Roberts, 2000).

The effect of religion and radio on early sexual debut among the female youth was not significant in the bivariate analysis results. The next section of the analysis will therefore, focus on multivariate Cox regression which will seek to establish the risks associated with early sexual debut among female youth in Nyanza province when all factors are controlled for.
4.4.2 Multivariate Analysis

Multivariate analysis results indicated that when all factors were controlled for, there were statistical significance between effects of place of residence, level of education, and marital status on early sexual debut among the female youth. The analysis indicated that place of residence and age at sexual debut were significant at 0.05 level of significance. Female youth living in rural areas were 30 percent more likely than their urban counterparts to engage in early sexual debut. Much as previous studies have validated the above observation (Frias 2000 & Ankomah et al., 2011), findings in recent studies in Kenya (Ikamari & Towett, 2007) that female youth in rural are less likely than urban to initiate early sexual activity contrast it. More contrasts are further found in earlier arguments that youth’s propensity to engage in sexual intercourse is contingent on the level of urbanization since highly urbanized areas are characterized by incidences of family disorganization, material aspirations that the female youth can sometimes meet only through sexual activity and high exposure to all forms of media which are likely to influence their sexual activity hence, the probability of early sexual debut (Fatusi & Blum 2008; Molla et al., 2008).

Level of education and age at sexual debut were strongly associated at 0.01 level of significance. The results showed that female youth with secondary and above schooling were 28 percent less likely to initiate early sexual activity compared to their none/primary counterparts. This is in conformity with Gupta and Mahy’s (2003) observation that women with
Table 4.4  Multivariate Results of a Hazard Model of the Risk of Early Sexual Debut among Female Youth in Nyanza Province

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Coefficient(B)</th>
<th>SE(B)</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of Place of Residence</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban (Reference category)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Rural</td>
<td>.259</td>
<td>.126</td>
<td>1.30*</td>
</tr>
<tr>
<td><strong>Level of Education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None/Primary (Reference category)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Secondary plus</td>
<td>-.332</td>
<td>.099</td>
<td>0.72**</td>
</tr>
<tr>
<td><strong>Wealth Index</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor (Reference category)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Middle</td>
<td>-.010</td>
<td>.124</td>
<td>0.99</td>
</tr>
<tr>
<td>Rich</td>
<td>.075</td>
<td>.136</td>
<td>1.08</td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roman Catholic (Reference category)</td>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Protestant &amp; Others</td>
<td>.155</td>
<td>.107</td>
<td>1.17</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Never Married (Reference category)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ever Married</td>
<td>-.520</td>
<td>.088</td>
<td>0.59***</td>
</tr>
<tr>
<td><strong>Exposure to Media</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has Radio</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO (Reference category)</td>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Yes</td>
<td>-.159</td>
<td>.117</td>
<td>0.85</td>
</tr>
<tr>
<td>Has Television</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO (Reference category)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Yes</td>
<td>-.187</td>
<td>.117</td>
<td>0.83</td>
</tr>
</tbody>
</table>

Key:  * p ≤ 0.05  ** p ≤ 0.01  *** p ≤ 0.001
at least secondary school delay their sexual initiation but the level of education varies with age at sexual debut. This is therefore, an indication that education has a significant effect on timing of first sex; and further implies that the higher the level of education the more the delay of sexual debut among the female youth.

Further analysis indicated that marital status was highly associated with age at sexual debut at 0.001 level of significance. The ever-married youth were 41 percent less likely to initiate early sexual activity compared to their counterparts who were never-married. This finding contradicts other studies in Kenya that have observed that the ever-married female youth are more likely than the never-married youth to initiate early sexual activity (Ikamari & Towett 2007; Nchogu 2005). Focus is therefore on the community settings that encourage early marriage that leads to an earlier onset of sexual activity (Molla et al., 2008).

Wealth status, religion and exposure to media were not statistically significant on age at sexual debut when all other factors were controlled for in this analysis. However, strong association of poverty and risky sexual behaviour was reported among young women living in Nairobi slums in Kenya who had significantly higher levels of sexual risk-taking than other women (Zulu, Dodoo & Ezeh 2002).
CHAPTER FIVE

SUMMARY, DISCUSSIONS OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter presents summary, discussions of the findings, conclusions of the study and provides recommendations for policy, programmes and further research.

5.2 SUMMARY AND DISCUSSIONS OF THE FINDINGS

The main objective of the study was to investigate factors influencing age at sexual debut among female youth aged 15 – 24 years in Nyanza province. The study used 2008/9 Kenya Demographic Health Survey which was a nationally representative survey. The study employed the life table approach to determine the median ages at sexual debut for female youth on each background characteristics. Cox regression hazard models were used in bivariate and multivariate analysis to establish the relative risks of a given outcome per unit increase in a specified independent variable.

Sexual initiation start early in Nyanza province and majority (73%) of the 607 female youth aged 15 – 24 years had been sexually experienced by the time of the survey. The results from the life table analysis indicated that the overall median age at sexual debut for female youth aged 15 – 24 years is 15.3 years. However, by 12.4 years and 16.6 years, half of the female youth aged between 15 – 19 years and 20 – 24 years respectively have experienced their first sexual intercourse.
Seven models were run to show the effect of each independent variable on age at sexual debut in bivariate Cox regression analysis. The results showed that place of residence, level of education, wealth status, marital status and exposure to television have statistical significance on age at sexual debut among female youth in Nyanza province. Further analysis indicated that factors delaying sexual debut were; secondary and above education, rich household status, being married and exposure to television. Thus, living in rural areas was synonymous with acceleration of sexual debut.

On the other hand, when all factors were controlled for in multivariate analysis, the only factors found to be associated with age at sexual debut were; living in rural areas, secondary and above education and being married. Further analysis indicated that having secondary and above education and being married delayed sexual debut. Female youth who had secondary and above education were 28 percent less likely to initiate early sexual debut compared to their none/primary counterparts. It implies that free primary education and many bursaries in secondary and above education in Kenya, has made the female youth in Nyanza to advance their educational aspirations thereby refraining from engaging in early sexual encounters. Thus, youth who have greater educational aspirations are more likely to finish school and postpone risky sexual behaviours.

Contrary to the expectations of the study, the analysis indicated that there was delay in sexual activity for the ever-married female youth compared to the never-married. The ever-married female youth were 41 percent less likely to initiate early sexual debut compared to the never-married. This finding suggests that traditional norms of remaining virgin until marriage is in transition in Nyanza province. In the early days, girls slept in the residence of an elderly
grandmother, who was responsible for sex education, particularly the virtue of virginity. However, the scenario has changed and many female youth nowadays sleep within the parents' compound (in the kitchen or a brother's house) where sex education is nonexistent. This condition makes them prone to lack of supervision for significant periods of time and they end up attending common social events such as village discos and funeral gatherings at night, during which there are opportunities for both consensual and non-consensual sex. Consequently, the abstinence from sexual intercourse for the never-married female youth until marriage might therefore be difficult as the age of marriage also increases with educational aspirations (Versnel, Berhane & Wendte 2002). Early sexual debut among the never-married female youth may also reflect to a lesser extent, the traditional norms in rural areas that are usually associated with practices that encourage early sexual activity. Traditional sexual rituals take place around significant events such as planting and harvesting seasons and after burial. In this context, non-engagement in sexual activity is therefore, perceived as a barrier to the symbolic end result of the act. Furthermore, Nyanza province has been ravaged by HIV/AIDS and many households are headed by orphans, hence, female youth who are in such situations lack parental guidance on the importance of delaying sexual activity until marriage. Thus, female youth who are living in households headed by parents could probably be benefiting from parental guidance on risks associated with early sexual activity and the negative outcomes that accompany such behaviours. This group therefore, may only initiate sexual intercourse in marital relationship.

Living in rural areas was found to accelerate sexual initiation among female youth in Nyanza province. The expectations on the effect of place of residence on sexual debut was
conforming to the findings as female youth living in rural areas were 30 percent more likely to engage in early sexual debut compared to their counterparts in urban. The results imply that Nyanza province is predominantly rural hence; many leisure activities that come with urbanization for the female youth are missing, therefore; female youth in the rural areas find themselves trapped in activities that jeopardize their sexual behaviours.

5.3 CONCLUSIONS

Results from the findings support the conclusion that higher levels of education delay sexual debut. This is in conformity with other studies that have associated higher levels of education with lower risks of sexual activity (Gupta & Mayh 2003; Choe & Lin 2001). Contrary to other studies in Kenya (Ikamari & Towett 2007; Nchogu 2005) marital relationship delay sexual initiation among the female youth in Nyanza Province. However, living in rural areas is associated with acceleration of early sexual activity among this group. This finding is consistent with previous studies that have observed that sexual activity among female youth is on the rise and sexual debut in rural areas occur even earlier than urban areas (Frias 2000 & Ankomah et al., 2011).

5.4 RECOMMENDATIONS

5.4.1 Policy and Programmes

In view of the above findings, programmes should come up with tailor-made interventions for Nyanza province as factors influencing early sexual debut may not be uniform in all regions. There is a clear need for the unmarried female youth in the rural to be informed and educated on the risks of early sexual behaviours and the negative outcomes that
accompany such behaviours. Articulation of the importance of delaying the onset of sexual activity among this group is therefore necessary. Policy makers and decision makers should ensure full implementation of free primary education and subsidies in secondary schools in Nyanza province as higher levels of education is strongly associated with delay in sexual debut.

5.4.2 Further Research

Due to the socio-economic and socio-cultural differences within the regions in Kenya, more regional studies should be carried out to get more insights and be able to compare the changes in patterns of sexual activities among the female youth aged 15 – 24 years. Further research using other methodologies or datasets need to be done on the influence of parents' education and marital status on age at sexual debut that was limited in this study but literature has advanced their influence on age at sexual debut. Further investigations by use of qualitative studies on why the ever-married female youth in Nyanza province is less likely to initiate sexual debut compared to the never-married need to be explored; and the effects of parents' marital status, parents' education on age at sexual debut which were not analyzed in the study due to the difficulty in linking the female youth to their parents in KDHS need to be contextualized to unravel the unexpected sexual behavior.
REFERENCES


Frias, N. 2000. Urbanization and Premarital Sex in the Philippines. (Unpublished MA Thesis submitted to the UP Population Institute, Diliman, Quezon City.)


