

**SEXUAL BEHAVIOUR AMONGST  
YOUTH IN COLLEGES AND  
YOUTH CENTERS IN MOMBASA**

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REQUIREMENTS FOR THE DEGREE OF MASTER OF MEDICINE IN  
OBSTETRICS AND GYNAECOLOGY OF THE UNIVERSITY OF NAIROBI

## **DECLARATION**

This research work and dissertation is my original work and has not been presented to any other university or in any other forum. References to work done by others have been clearly indicated.

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## **OPERATIONAL DEFINITIONS**

**Human Sexuality-** A broad concept that embodies interaction among anatomy, biology, psychology, interpersonal relationships, and sociocultural influences. It is the capacity to have erotic experiences and responses. Human sexuality can also refer to the way someone is sexually attracted to another person

**Sexual Behavior** ( human sexual practices or human sexual activities)- The manner in which humans experience and express their sexuality. It encompasses a wide range of activities such as strategies to find or attract partners (mating and display behaviour), interactions between individuals, physical or emotional intimacy, and sexual contact. Normal sexual behavior is not associated with undesirable sequelae either to the individual or to society. In the context of this study by sexual behavior, we mean age of sexual debut, use of condoms and contraceptives, no of lifetime partners, age of partner, route of penetration and use of alcohol during sexual contact.

**High Risk Sexual Behavior-** It is defined as indulging in unprotected intercourse, having multiple sexual partners, having high risk partners, engaging in transactional sex and being involved in sexual activity before 18years of age.

## **ABBREVIATIONS**

AFS – age at first sex

AIDS – acquired immune-deficiency syndrome

ARH&D – Adolescent Reproductive Health and Development Policy

DRH- Division Of Reproductive Health

ERC-Ethics and research committee

FP – Family planning

HIV – Human immune virus

HPV – Human papillomavirus

HSV – Herpes Simplex Virus

ICPD – International Conference on Population and Development

IUCD – Intra Uterine Contraceptive Device

KAIS – Kenya AIDS Indicator Survey

KDHS – Kenya Demographic Health Survey

KNH- Kenyatta National Hospital

MDG- Millennium Development Goals

SRH- Sexual Reproductive Health

STIs – Sexually Transmitted Infections

WHO – world Health Organization

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## SUMMARY

**Background:** Sexual behavior of the youth is an important issue, as it affects many reproductive health and social outcomes. Young age at first sex exposes both male and female youth to multiple adverse health outcomes such as, sexually transmitted infections, HIV/AIDS and negative outcomes of early pregnancy and unsafe abortions. This results in negative social consequences which include premature school dropout and early marriage. The unmet need for contraceptives among the youth in Sub Saharan Africa is more than 40%.

In Kenya the youth make up a third of the population. By 19yrs of age 46 % of the Youth have begun child-bearing, half of all new HIV infections occur among young people aged 15-24 years and girls are 2-3 times more likely to be infected than young men.

Sexual behavior is inadequately studied and understood. This study was designed to address these issues in Mombasa which is an unstudied area. Knowledge on sexual behavior of the youth and associated factors, will allow targeted public health interventions.

**Objectives:** To determine sexual behavior among youth aged 15-24yrs in colleges and youth centers in Mombasa, at sexual debut and subsequent extent of high risk sexual behavior, gender differences in relation to sexual behavior and role of socio economical factors on sexual debut and behavior.

**Study design:** This was a descriptive cross sectional study.

**Study setting and population:** The study was conducted in two colleges and two youth centres in Mombasa District. The study population consisted of youth aged 15-24 years both male and female in post secondary learning institutions and youth centers

**Method:** Following ethical approval by The KNH Ethics and Research Committee, eligible participants were enrolled into the study. Using a structured questionnaire, data was collected, and stored in a password protected computer under custody of the principal investigator

**Data management:** Data was entered using microsoft Access in a password protected computer. The data was thereafter transferred to Stata version 10 (StataCorp, Texas) statistical analysis software for analysis.

**Results:** A total of 190 youth were enrolled in the study, 70% had prior sexual experience. Of the youth enrolled, 48.4% were from youth centers and 51.5% from colleges. Their median age was 22 years .The median age for sexual debut was 17 years among youth enrolled in youth centers and 19 years among college attendants. The majority (89%) of youth initiated sex between ages 15-21 years. Sexual penetration was primarily vaginal but with significant oral (10.4%) and anal (4.4%) penetration reported. A significant proportion of women (16.9%) reported rape and financial gains (13.6%) as reasons for sexual debut.

Fifty two percent of youth reported using a condom at last sex and 54% at sexual coitarche. Alcohol use at last sex was reported by 20.7% of the youth. Among the 59 sexually active females, 20(34%) had experienced pregnancy, 10(50%) were unwanted, with 4(20%) reporting procurement of an abortion. Sex in exchange for favors was reported by 11.8% of the youth both male (4.2%) and female (7%)

**Conclusion:** High risk sexual behavior among the youth is prevalent, with low age of sexual debut for male and female. Youth indulge in many high risk behaviors: non traditional methods of penetration, sex in exchange for favors, alcohol use. Youth especially female are at high risk of rape and coercion into sex. On the whole no measures are taken to prevent HIV, STIs and pregnancies.

**Recommendations:** There is need for interventions to curb high risk sexual behavior amongst the youth that should target both male and female equally. Young girls need to be empowered and educated to resist coercion.

# CHAPTER 1

## 1.1 INTRODUCTION AND LITERATURE REVIEW

Worldwide, social shifts and behavioural patterns exacerbated by unique developmental vulnerabilities create a confluence of factors that place today's adolescents at heightened risks for poor reproductive health outcomes (1). Throughout the world, puberty is occurring at earlier ages while the age of marriage is generally rising. This combination of factors results in a longer time period during which unmarried youth have the opportunity for sexual activity. Early sexual debut among adolescents is associated with considerable negative reproductive health and development outcomes (2).

The World Health Organization (WHO) defines adolescence as the period between 10 and 19 years of age, the category of "youth" includes older adolescents, aged 15 to 24 years and "young people" are 10 to 24 years (3). This reflects the continued development and maturation of individuals as they enter adulthood.

Adolescence is a period of physical, cognitive, behavioral and psychosocial change that is characterized by increasing levels of individual autonomy, a growing sense of identity and self-esteem and progressive independence from adults. At one end of the continuum are *very young adolescents* (10 to 14 years of age), who may be physically, cognitively, emotionally and behaviorally closer to children than adults. Very young adolescents are just beginning to form their identities, which are shaped by internal and external influences. Signs of physical maturation begin to appear during this period. As young adolescents become aware of their sexuality, they may begin to experiment with sex.

During *middle adolescence* (15-16 years of age), they begin to develop ideals and select role models. Peers are very important to adolescents in this age group and they are strongly influenced by them. Sexual orientation develops progressively and non-heterosexual individuals may begin to experience internal conflict, particularly during middle adolescence. At the other end of the spectrum are *older adolescents* (17 to 19 years of age), who may look and act like adults, but who have still not reached cognitive, behavioral and emotional maturity. While older adolescents may make decisions independently and they may be employed, their sexual identities are solidified and they may even marry and start families but they still benefit from the influence of adult role models as well as family and social structures to help them complete the transition into adulthood.

Today's generation of adolescents is the largest in history. Nearly half of the global population is made of young people (1). In 2000, 29% of the population in low resource countries was less than 19 years of age and in the lowest income countries, they accounted for 32% of the total population (3). From Kenya Demographic Health Survey (KDHS) 2008-09, reflects a similar proportion with a third of the Kenyan population falling within 10-24yrs age bracket (4).

The KDHS 2008-09 and Kenya AIDS Indicator Survey (KAIS) 2007 had similar findings on median age of sexual debut amongst men and women 20-49 yrs, 18.2 and 17.6 yrs for men and women respectively. The surveys also found 20% of women and 22.4% of men, had sexual debut by age 15, and half of all men and women had sexual debut by age 18. When compared with data from KDHS 2003 there is a slight increase in median age at first sex for both sexes. Findings in similar surveys in other African countries are quite varied; in Chad, Mali and Mozambique median age of sexual debut for women is as low as 16 years while in Senegal median age is 19.6 years.

Targeted studies among teenage cohorts report younger ages for sexual coitarche. Among youth age 15-19 years in Brazil, Gabon, Haiti, Hungary, Latvia, Malawi, Mozambique, and Nicaragua, 25% of boys and 15% of girls had coitarche below age 15 years. In some countries, sexual debut among a small minority of youth occurs as early as 10yrs (2). Data from a study on adolescent sexuality in high schools in rural Nyanza, Kenya (1999) noted that more than half the girls had sexual debut between 12-15yrs (5).

Young people who initiate sexuality at an early age are more likely to participate in high risk behavior and be more at risk of Human Immunodeficiency Virus (HIV), Human Papilloma virus (HPV), Herpes simplex virus (HSV) and other sexually transmitted infections. Knowledge of all the key HIV prevention methods is lowest amongst adolescents and adolescent girls are more susceptible than boys (8). Research from around the world shows an alarming degree of misinformation and lack of knowledge about HIV/AIDS among young people, especially young women. The majority lack access to effective prevention programs, while many cannot access condoms and others fear stigmatization from the adult world (11). Young adults who use condoms at first sex are more likely to sustain condom use later in life (2). However, as KAIS 2007 revealed, use of condoms at first sex is low for both sexes, only

a quarter of Kenyans surveyed confirmed using condoms at sexual début. Condom use was least amongst youth under 20yrs of age (10).

The peak prevalence of HIV infection is at age 24 years. Worldwide, there are over 10 million youth with HIV and 63% reside in sub-Saharan Africa. An estimated 6000 get infected every day. Of the women living with HIV/AIDS in the world, over one third are in their youth (11). Women have a higher HIV prevalence than men across all age groups, most notably amongst the youth. According to KAIS, prevalence of HIV amongst youth in Kenya was 3.8%. In young women rose from 3% at 15yrs to a high of 12% at 24 yrs. It is also evident that women are five times more likely to be infected than men by age 24 years (10).

Similar to HIV infection, other STI predominantly occur among the youth. Biologically the immature reproductive and immune systems translate to increased susceptibility to STIs and HIV among youth compounded by lack of information, access to effective intervention (1). HPV is the most common sexually transmitted virus. Many studies of HPV prevalence and incidence indicate that the most consistent predictor of infection is sexual activity, particularly age of first intercourse and number of sexual partners. A study amongst college students in Seattle reports that one fifth of young girls became HPV-DNA positive within twelve months of initiating sexual contact. Persistent HPV infections have a high risk of developing into cervical cancer (12).

Use of medical contraceptives is another key to prevention of negative reproductive health outcomes. The unmet need for contraceptives amongst unmarried adolescents in Sub Saharan Africa is as high as 40% (6). Use of modern contraceptives, amongst married youth in Sub-Saharan Africa, is also very low, perhaps because of social pressure to conceive early in marriage (3). Recent evidence suggests that in Sub-Saharan Africa, South and South East Asia, more than a fifth of 15–19 year-old women have been pregnant; half of these pregnancies are non marital (1). Pregnant adolescents are at increased risk of morbidity and mortality due to complications during pregnancy and childbirth such preterm and obstructed labour, subsequent fistulas, neonatal deaths, spontaneous and unsafe abortions with 14% of all unsafe abortions in developing countries in women age less than 20 years. Carrying with it co-morbidities of unsafe abortions: sepsis, infertility and risk of death with 70,000 of related deaths among youth annually (6).

A study on contraception and sexuality among the youth in Kisumu revealed that 73% of the youth were sexually experienced. About 89.5% of the youth acknowledged the risks in sexual relationships. Of these, 65.3% viewed STI/HIV as the greatest risk and 34.1% considered unwanted pregnancy as the greatest risk. Only 0.6% recognised abortion and psychological problems as main risks. Consequently, about 51.3% of the youth believe that contraceptive use is the main precaution one can take against the identified risks, followed by abstinence (42%) and 6.7% for other practices such as faithfulness between sexual partners. Fifty two percent of the youth had ever-used a contraceptive method (23).

The social effect on education is profound. It is predicted that girls become vulnerable to dropping out of school once they become sexually mature, engage in pre-marital and unprotected sex. Skipping school and ultimately dropping out is as a result of facing the social and health consequences of early coitarche, which are quite overwhelming for the youngster. It is quite evident that it is indeed a vicious cycle-dropping out of school and becoming independent leads to reduced economical power, compromised access to health care and health messages, or avoidance of formal health facilities for fear of getting stigmatized. They are also likely to get involved in risky sexual behaviors and less likely to utilize HIV, STI preventive options due to time and resource constraints (9).

Relationships between young women and older men provide an entryway for STIs and HIV into the younger generation. Cross generational sex revolves around transactional and coercive sex. There is power imbalance and the woman may not be able to negotiate for safe sex and may also face sexual and physical violence (9). The 2008-09 KDHS revealed that 12% of women age 15-49yrs report having been forced at first sexual intercourse. Women whose coitarche was before age 15 had a higher chance of being forced or coerced (4).A recent study in ten districts in Kenya on sexual abuse among school going children showed that 58 of every 100 children have been sexually harassed while 29% boys and 24% girls reported to have been forced into unwanted sex. The main perpetrators of the violence were mentioned as peers and the home featured as the most unsafe place (24).

It was found that postponing sexual debut has long term positive effects on sexual, behavioral and reproductive health as well. Timing of first sexual intercourse is related to long-term sexual health outcomes. Late starters are less likely to be involved in risky sexual behaviors i.e. less number of lifetime partners, having sex under influence of drugs and more likely to be informed on HIV and STI transmission risks and use protection (8).

The timing of first sex and sexual behaviors of the young people today is affected by a multitude of factors acting upon the vulnerable girls undergoing development physically, biologically, psychosocially and mentally. A World Health Organization review of studies in countries found common protective and risk factors in all regions of the world: positive relationships with parents, teachers, and spiritual beliefs decreased the likelihood of early sex, while risk factors included engaging in other hazardous behaviors and having friends who are sexually active (2).

Findings from KDHS 2008-9 showed that education, employment, economical status and location all play a role in determining sexual coitarche and behavior in women. Economical and educational empowerment resulted in postponement of sexual initiation and greater awareness of HIV/STI. Women in the lowest wealth quintile and rural areas initiated sex earlier. In men no consistent pattern was noted according to their location, level of education or wealth (4). A similar cross sectional survey in Nigeria revealed that delayed sexual initiation in women was significantly related to religiosity, level of education and media exposure. In their male counterparts it was discovered that alcohol influence led to early sexual initiation. Nigerian female adolescents who had a positive attitude towards Family Planning and condoms, who reported a more positive attitude towards gender equality and less tolerance of gender based violence, were less likely to have initiated sex early (12). In Kisumu, a study conducted amongst young women in pre-marital relationships revealed that young women who were self sustaining, had a higher likelihood of practicing safe sex by delaying sexual debut and using condoms consistently. Material transfers decreased the negotiating power and condom use was decreased. It revealed that in 70% of the premarital relationships women received some sort of material transfer from the men in the first month of their relationship. It also revealed that 18% of these women were involved in other relationships concurrently (25).

Studies in Chile and Los Angeles on effect of socio-economic background on sexual behavior and differences in genders showed: adolescents living with both biological parents report a later median age at first intercourse compared to adolescents living in other family settings. Women living in single families with the father away were more likely to have initiated sex than their counterparts whose father was present. The difference in the males was not statistically significant. For both sexes frequency of church attendance was positively associated with delayed sexual initiation. Poor academic performance was also associated

with early sexual debut in both sexes. It was noted that mother's education level was not associated with age at sexual debut and sexual behaviors (7, 13).

Social isolation and poverty are both associated with higher risk of early sexual debut among boys and girls. Poverty is associated with lower access to media-based family planning messages, unequal access to health services and economic opportunities. Among girls, it is correlated with greater risk of coercive or economically motivated sexual encounters and lower negotiating power in sexual relationships. This increases the risks of HIV, STIs and unwanted pregnancies (15). Morals, values and expectations defined by community also influence sexuality of the youth. Differences in norms for sexual behavior (e.g. sexual involvement expected for boys and men while negatively sanctioned for girls and women), heighten the possibility of risky sexual behaviors (16).

Data (17, 18, and 19) on adolescent reproductive health among Kenyans collected in the years 1985-1994; found that many young people lacked guidance and information, their main source of information being peers and the media. The social structure and the government also ignored the adolescents need for health services in terms of contraception, and education on prevention of unwanted pregnancies and STIs. Lema et al found that by age 14 years 42% rural and 24% urban had initiated coitarche and over 90% of youth in both urban and rural were not using contraceptives.

There was general agreement across all authors that between 28-64% of abortions occurred among teenagers, teenagers accounted for 1/3<sup>rd</sup> of pregnancies, and had the highest burden of obstetric complications and high prevalence of STIs. Pregnancy was also noted to be a common reason for school drop outs for the majority of girls. This was thought to be due to unfavorable socio-economic status, lack of antenatal care and stigmatization of teen pregnancy (17, 18, and 19).

An understanding of the age at sexual debut and determinants, predictors and factors of the timing of sexual debut is key for effective planning, implementation and promotion of adolescent and youth sexual reproductive health, but very few studies have addressed this issue recently in the Kenyan context.

Given the increased risk for a number of sexually transmitted health problems, this study will assist programmers and policy makers in developing more effective risk prevention interventions. Present day data will give a reflection of the current situation and an evaluatory insight of the many interventions in place.

Furthermore age at sexual debut will reveal whether sexual education needs to be introduced in our education systems. The median age will also help determine what age needs to be targeted and thus at what level the education should start. It is also important to understand the youth's perception on sex, sexuality, high risk behaviors, their understanding on HIV/STI transmission and prevention methods, teenage pregnancies and abortions, condom and contraceptive use and barriers. Age of onset of sexual activity is also essential to guide national health authorities' recommendations and policy regarding the optimal age for prophylactic HPV vaccination.

## **1.2 RATIONALE**

The Youth form one third of Kenya's population today. Negative sexual and reproductive health outcomes threaten the health of these youth and destabilize their lives. The 1994 International Conference on Population and Development (ICPD) endorsed the right of adolescents and young adults to obtain the highest levels of health care. In line with the ICPD recommendations, Kenya put in place a National Youth Policy (2002), an Adolescent Reproductive Health and Development policy (2003) that addresses adolescent sexual health and reproductive rights. Several guidelines and strategic plans were later rolled out to help support the youth and adolescents programs in place as well as strategies to help achieve MDGs. It had been agreed by government, donors, programs and service providers that apart from focusing on the risk of HIV/AIDS a more holistic approach needed to be adopted including issues related to sexual and reproductive health. The way forward was to conduct a needs assessment and promote evidenced based programming (26, 27).

Although progress has been made since, adolescents continue to be disproportionately burdened by threats to their sexual and reproductive health. There has been recent data from KAIS 2007 and KDHS 2008-9; however it involves age cohorts from 15-49 years thus not truly reflecting the youth of today. Moreover sensitive questions like sexual debut, condom use are not addressed to those below 19 yrs of age. Median age of sexual debut in studies conducted amongst the youth is lower than the one provided by such studies involving cross generational cohorts. In a recent study conducted by an NGO-'I choose Life' amongst 2584 high school students in Nairobi; showed that 36% of male and 10% of female had had sexual debut and average age of sexual debut was 12.4 years. Only one third of male and 50% of the

female used condoms at last sex. More than a quarter of the students reported having more than one sexual partner in the last year (28).

Mombasa is an unstudied, unexplored area where talking about sexuality is a taboo and unheard of. The indigenous community is a closed community which is quite conservative in its outlook to sexuality. It also a trade and tourist center and a port city. This makes it a high risk area for commercial sex, drug usage, sexual violence, homosexuality, cross generational and childhood marriage and many others which continue to threaten the youth and their reproductive and sexual health and rights.

Studying sexuality in this region will provide local data on the sexual behavior of the youth in the context of the economical, socio-cultural background. Youth in youth centers and colleges were selected for this study, to provide a wide representation of the youth that is those who are in school and those out of school at every level in the age categories of 15-24 years.

### **1.3 RESEARCH QUESTION**

Is high risk sexual behavior among Coastal youth significantly prevalent to deserve active interventional programs?

## 1.4 CONCEPTUAL FRAMEWORK

Determination of sexuality of the youth is an important milestone in understanding their behavior, associated risks and outcomes. Youth are at very high risks for negative reproductive health outcomes and their sequelae like contracting HIV, STIs getting impregnated and associated abortions, infections which can lead to subsequent ectopic and infertility. This further impacts on the social life of the youth; school dropouts, runaways from home, drug abuse, gender violence, rape, poverty and inequality.

Several factors come together to determine sexual behavior of the youth and their venture into sexual life. Socio cultural issues and expectations, economical factors, educational and religious backgrounds play an important role in determining sexual behavior of the youth.

The Youth bear the biggest burden of the HIV/AIDS epidemic.

Biologically the immature reproductive and immune systems translate to increased susceptibility to STIs and HIV among youth.

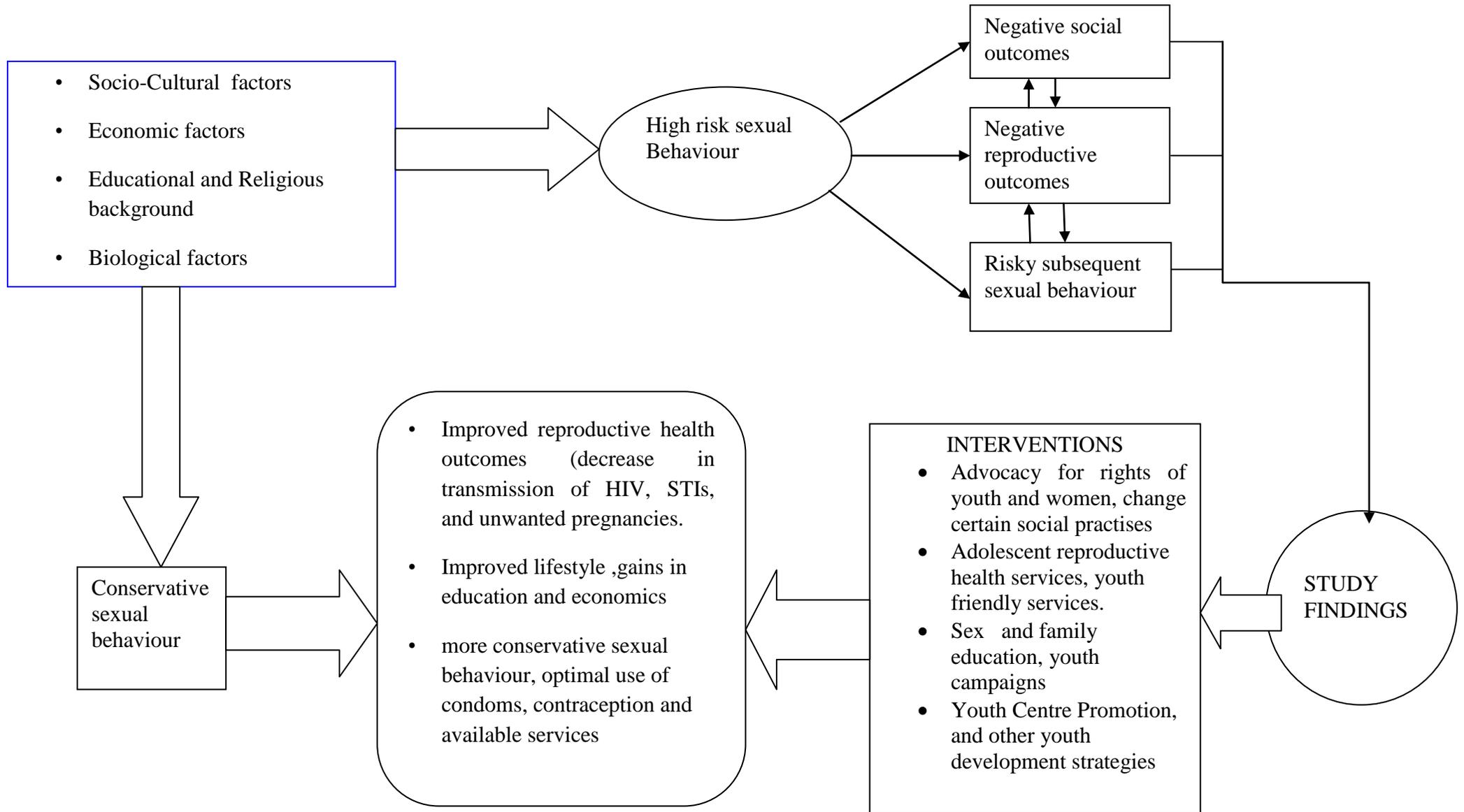
Sociocultural factors include the sociodemographics and community associated factors surrounding the youth. Societal factors like gender differences in norms for sexual behavior, early marriages for girls and cross generational sexual relationships whether marital or extra marital all have an impact. Family associated stability plays an important role as youth may be forced to use sex as an economical weapon or resort to sex and drugs for comfort. Evaluating socio cultural factors helps us determine interventions at community level, advocate for rights of the youth and campaign for appropriate sexual behaviour.

Early sexual debut is not only known to have negative reproductive and social outcomes but it is also associated with subsequent risky sexual behaviors and turns into a vicious cycle that can transcend from one generation to the next. Multiple sexual partners, sex under the influence of alcohol or drugs, ignoring protective measures like contraception and condoms increase risk of acquiring and transmitting STIs, cervical cancer and unwanted pregnancies. Age at first sex is an important indicator of exposure to risk of pregnancy and sexually transmitted infections.

Women are disproportionately affected by the negative outcomes of early sexual debut and risky sexual behavior. They are more likely to be raped, or coerced into sexual activity as they have less bargaining power with reduced use of condoms and other protective measures. They bear the burden of unwanted pregnancies and its complications, and they are three times more likely to get infected with HIV/AIDS.

The study aimed at having in-depth understanding of the factors associated with timing of sexual debut and sexual behavior of the youth, in Mombasa. This will assist programmers and policy makers to plan timely and effective interventions for the promotion of sexual health of the youth and curb the spread of negative reproductive health outcomes among the Youth in Mombasa

**FIGURE 1: SCHEMATIC PRESENTATION OF CONCEPTUAL FRAMEWORK**



## **1.5 OBJECTIVES:**

### **1.5.1 Broad Objective**

To determine sexual behavior among youth aged 15-24yrs in colleges and youth centers in Mombasa.

### **1.5.2 Specific objectives:**

- 1 To determine patterns of sexual debut among the youth.
- 2 To determine the extent of high risk sexual behavior among the youth
3. To determine the role of socio-cultural, economical factors and family backgrounds on coitarche.
- 4 To determine gender differences in relation to sexual behavior.

## **CHAPTER 2: METHODOLOGY**

### **2.1 STUDY DESIGN**

This was a descriptive cross sectional study. The design is suitable because the purpose is to determine the basic dimensions of the problem in an area which has a problem in adolescent health and there have been no studies with a specific focus on adolescent sexuality.

Youth in post secondary learning institutions and youth centers were administered a semi-structured questionnaire that covered several issues on sexual behavior, knowledge and attitudes, socio-cultural and economic factors promoting early sexual debut and subsequent consequences

### **2.2 STUDY SITES:**

The study was conducted in two post secondary learning institutions (colleges) and two youth centers in Mombasa District. Mombasa District is a cosmopolitan urban center, with residents from all over Kenya. It was selected because it is well known to me and there was ease of access to sites.

The colleges were selected based on their representativeness of the youth population in general and also convenience. These institutions have a wide catchment area of Mombasa and the neighboring Coastal Districts and students from other parts of the country. These were; Mombasa Polytechnic and Mombasa Technical Training Institute.

#### **2.2.1 Mombasa Polytechnic**

This is a University situated in the Mombasa City Island. The college offers a range of qualifications ranging from certificates to undergraduate level degrees in business, ICT and Allied Health Sciences. Mombasa Polytechnic mainly draws students from all Districts in the Coastal region and some from other parts of Kenya. The university college has about 5573 students and 296 teaching staff.

#### **2.2.2 Mombasa Technical Training Institute**

Mombasa Technical Training Institute (MTTI) is located in the City of Mombasa Island.. MTTI trainees are drawn from fresh secondary school leavers, employees on part-time release basis and the informal (Jua Kali) sector. MTTI offers courses at Artisan, Craft and Diploma

levels, and professional short courses. Courses offered are mainly Craft and Diploma levels and incorporate Entrepreneurship Training and Industrial Attachment to prepare the trainees for formal and self-employment. MTTI has a total student population of approximately 1,571 students and 80 teaching staff.

### **2.2.3 Youth Centers**

Two youth centers were selected and they had a good representation of the youth some who were still schooling and others who are not in school. These youth centers were; Mombasa Youth Centre and Kwacha Afrika.

#### **Mombasa Youth Centre**

Mombasa Youth Centre is located in the heart of Mombasa Island. The youth center is a three story building, divided into different sections namely: a youth friendly clinic with a VCT, STI clinic and family planning center; an indoor games section and a hall where the youth meet and plan their activities. There are several counseling rooms and youth counselors available for guidance and counseling. The youth center has about 423 registered youths and these include youth who are attending schools and youth who don't attend schools.

It also acts as the central coordinating point for most youth centers in and around Mombasa, inviting and involving the various youth centers in sports and cultural activities.

#### **Kwacha Afrika**

This is a small youth group consisting of about 120 members, located in Kisauni, Mombasa. This youth group mostly consists of youth who are not attending school. The youth group involves its members in forming dancing and singing groups which perform at various tourist hotels and local functions. It has also has facilities for indoor sports, a VCT center and a family planning counselor.

## 2.3 STUDY POPULATIONS

The target population for this study was the youth in Mombasa between the ages of 15-24 years, with special focus on those affiliated with colleges and youth centers. Youth from youth centers and colleges were chosen due to ease of approach through the organized structures and yet being able to have access to youth who were in schools and colleges youth who were not attending schools. This gave a wide representation of the youth.

The youth age 15-24 years were singled out as per the WHO, UNICEF, UNFPA definition of youth. Adolescents below the age of 15 years were not represented in this study, for the primary reason that it might not have been easy for them to comprehend and fill the questionnaire adequately.

## 2.4 ELIGIBILITY CRITERIA

### Inclusion criteria

Boys and Girls aged between 15-24 years

### Exclusion criteria

- a) Those who declined to participate.
- b) Those who were unable to comprehend and provide an informed consent
- c) Those who were under 15yrs.

## 2.5 SAMPLE SIZE:

A minimum sample size of 165 participants was sufficient to estimate the proportion of sexually active youth in Mombasa. The estimated proportion of youth who are sexually active is derived from a study in Kisumu, where 73% of the youth (15-24yrs) were found to be sexually active (23).

$$n = [(z^2 * p * q)] / [ME^2]$$

Where;

z is the critical z score at 95% confidence level = 1.96

p is the estimated proportion of youth aged 15-24 years who are sexually active=73%

q = 1-p = 27% is the estimated proportion of youth aged 15-24 years not engaging in high-risk behaviour

ME is the margin of error set at 5%

This means we require to recruit 165 participants.

## 2.6 SAMPLING

Sampling the study participants was done at two levels:

### 1. Sampling in the training institutions

The training institutions were purposively selected due to their representative nature of youth in the Kenyan Coast. The selected institutions draw students in the targeted population who are pursuing academic training ranging from certificate to undergraduate level qualifications. Stratified random sampling was used to sample students. Student registries were used as sampling frames. The students were stratified by gender and randomly selected. A computer based random number generator was used to randomly select the individual participants.

### 2. Sampling in the Youth Centers

The members' register served as the sampling frame in each youth centre. The members were stratified by gender and randomly selected using a computer generated random sequence.

	Male	Female	
Mombasa Polytechnic	21	21	42
Mombasa Technical Training Institute	21	21	42
Mombasa Youth Centre	21	21	42
Kwacha Afrika	21	21	42
Total	84	84	168

## 2.7 STUDY INSTRUMENT AND PROCEDURES

The semi-structured questionnaire was used to collect data on; socio-demographic background, sexual behavior, consequences of risky sexual behavior the participant experienced, and; attitudes and knowledge of the participant in relation to sexuality. The participants name was omitted from the questionnaire and instead a unique identifier was used to identify the record. (Appendix 2-Questionnaire).

In order to minimize any ambiguities in the questions to be asked, the questionnaire was piloted among nursing students at the Coast Provincial General Hospital.

### **Recruitment and training of research assistants**

Recruitment of two research assistants was done after permission from ERC was obtained. These were counselors who were young and who would fit in among the youth and be more approachable. They were oriented on the study, the consenting process, and ethical aspects of the study.

## **2.8 DATA COLLECTION**

A cover letter from the University Department accompanied the letter from the ERC. Permission to conduct the study was obtained from District Headquarters of the Ministry of Higher Education, Ministry of Youth Affairs and Ministry of Public Health.. Then permission was obtained to collect data in the training institutions and Youth centers from the respective Heads.

Once the participants were randomly selected and met the eligibility criteria, they were informed about the study and requested to sign an informed consent form. Youth younger than 18yrs, were mostly met in the Youth Centers, and being considered emancipated minors they provided assent for themselves. The consenting process was done by trained field assistants in a language that the participants were comfortable with. (Appendix 1- consent & assent forms).

Questionnaires were primarily in English however some translated in Kiswahili were made available for those who did not understand English. Due to the sensitive nature of the data collected and the cultural issues about sex, participants were given unique identifiers and no names were used on the questionnaires.

## **2.9 DATA MANAGEMENT AND ANALYSIS**

### **2.9.1 Data Storage**

The completed questionnaires are filed and stored in a locked cabinet. All the completed questionnaires had been checked for completeness. When data collection was complete, data entry in a Microsoft Access database in a password protected computer was carried out.

### **2.9.2 Data Analysis Plan**

Data was then transferred from the Microsoft Access database into Stata version 10 (StataCorp, Texas) statistical analysis software. The analysis is both descriptive and inferential. This section details the analysis that was undertaken using Stata 10 software.

## **CHAPTER 3: ETHICAL CONSIDERATIONS**

Due to the sensitive subject matter of the study and under age of consent study population the study had potential ethical aspects but all measures to safeguard the participants' ethical rights were adhered to. Youth below 18 had to provide assent for themselves as contacting parents may have corrupted the data.

Written approval to conduct the study was obtained from the Kenyatta National Hospital/UON Ethics and Research Committee (KNHERC) and permission was obtained from the District headquarters of Ministry of Youth Affairs, Public Health and Higher education. Permission to conduct interviews was sought from Heads of the respective training institutions and youth centers.

Informed consent and assent was obtained from the participating youth who were recruited. Participation in this study was voluntary. Precautions were taken to respect the privacy and confidentiality of youth who participated in this study. There were no names on the questionnaires and participants were only identified by unique identification numbers. Consent forms are stored under lock and key only accessible to the principal investigator.

### **3.1 DISSEMINATION**

The results of this study shall be sent to the participating training institutions and youth centers.

The Results shall be printed and bound and a copy will be made available in the department and the Ethics committee.

Efforts will be made to write up a report of the study findings and present it do Division of Reproductive Health, and Ministry of Youth Affairs

### **3.2 STUDY LIMITATIONS**

The limitations of the study were:

- Under reporting or over reporting of sexual activities by the youth, were anticipated. However this was countered by assuring confidentiality and allowing the questionnaire to be self administered rather than use interviews which may have biased the information.
- The population captured was predominantly an urban population and may not be representative of youth in general, however it provides information of possible sexual behavior aspects that would require interventions in urban and rural settings.

## CHAPTER 4: RESULTS

### 4.1 SOCIO-DEMOGRAPHIC DATA OF THE RESPONDENTS

**Table 1: Socio-demographic characteristics of participants**

Participant characteristics	Youth centers (N=92) No (%)	Colleges (N=98) No (%)	Total (N=190) No (%)
<b>Gender</b>			
Male	47(51.1)	52(53.0)	99(52.0)
Female	45(48.9)	46(47.0)	91(48.0)
<b>Age distribution</b>			
15-18yrs	36(39.0)	4(4.1)	40(21)
19-21yrs	33(35.8)	25(25.5)	58(30.5)
22-25yrs	23(25.0)	69(70.4)	92(48.4)
<b>Years in school</b>			
<4yrs	8(8.7)	0	8(4.2)
5-8yrs	4(4.3)	0	4(2.1)
9-12yrs	59(64.0)	0	59(31.1)
>12yrs	21(22.8)	98(100.0)	119(62.6)
<b>Marital status</b>			
Married	5(5.4)	7(7.10)	13(6.3)
Single	78(84.7)	88(90.0)	166(87.4)
Cohabiting	3(3.2)	1(1.2)	4(2.1)
Others	6(6.5)	1(1.2)	7(3.7)
<b>Religion</b>			
None	1(1.1)	3(3.1)	4(2.1)
Catholic	23(25.0)	26(26.5)	49(25.8)
Protestant	34(37.0)	44(44.9)	79(41)
Muslim	33(36.0)	25(25.5)	58(30.5)

Table 1 shows sociodemographic characteristics of the participants. A total of 190 youth were enrolled into this study. Their median ages was 22 years and most were between the ages of 22-25yrs (48.4%).

Ninety two (48.4%) were from youth centers and 98 (51.5%) were from tertiary teaching institutions. Among enrolled participants 99 (52.1%) were male and 91 (47.9%) female. Median numbers of years spent in school were 13years (3, 20) for youth in youth centers and 14 years (14, 20) years for youth in college. Majority of the youth were single(87.4%) and this was evident in both groups. 98% of the youth reported being affiliated with one or the other religion with Protestants being the highest at 41%, followed by Muslims at 30.5% and Catholics (25.8%). Youth in both youth centers and colleges were found to have similar backgrounds.

## 4.2 SEXUAL BEHAVIOUR

**Table 2: Sexual debut in male and female participants**

Sexual Debut	Male(N=99) No (%)	Female(N=91) No (%)	Total(N=190) No (%)
Ever had sex	72(72.2)	59(64.0)	131(70.0)
Never had sex	27(27.2)	32(35.2)	59(30.0)

Table 2 shows that of the 190 study participants 131(70%) participants had had their sexual debut, 55% of these were male and 45% were female.

About one third of the participants reported never having had sexual contact.

**Table 3: Median Age of Participants at Sexual Debut**

Participants	All		Youth centers(N=92)		Colleges(N=98)		p-value
	No	Age (range)	No	Age( range)	No	Age(range)	
<b>All participants</b>							
Age at sexual debut	131	18(6,25)	63	17(6,20)	68	19(13,25)	0.040
<b>Female</b>							
Age at sexual debut	59	18.5(6,25)	28	17.5(6,20)	31	19(10,25)	0.235
<b>Male</b>							
Age at sexual debut	72	18(9,23)	35	17.0(9,18)	37	18(11,23)	0.326

Table 3 shows the median age of sexual debut among youth in youth centers and colleges.

Median age of sexual debut was 18 in male (9, 23) and 18.5 (6, 25) in female.

There was a statistical difference (p=0.04) in the median ages of the youth in youth centers 17(6, 20) and colleges 19(13, 25)

The minimum age for coitarche among the male was 9 years and 6 years in the female.

Minimum age of sexual debut in both male and female was found amongst youth affiliated to youth centers. However youth in colleges also had sexual debut as early as 10 and 11 years of age in female and male respectively.

**Table 4: Patterns of Sexual Debut among Youth**

<b>patterns</b>	<b>Total( N=131)</b>	<b>Youth Centers(N=63)</b>	<b>Colleges(N=68)</b>	<b>p-value</b>
	No (%)	No (%)	No (%)	
<b>Age at sexual debut</b>				
<15yrs	11(8.4)	7(10.6)	4(6)	0.167
15-18yrs	59(45.0)	32(48.5)	27(40.3)	
19-21yrs	45(34.3)	17(25.8)	28(41.8)	
>21yrs	18(13.7)	10(15.16)	8(11.9)	
<b>Routes of sexual penetration</b>				
Oral sex	12(10.4)	7(11.1)	5(7.4)	0.085
Vaginal	113(85.0)	54(85.7)	59(86.7)	
Anal sex	6(4.4)	2(3.2)	4(5.9)	
<b>Reasons for sexual debut</b>				
By choice	69(52.6)	26(41.2)	43(63.2)	0.964
Rape	11(8.4)	8(12.6)	3(4.4)	
Financial reasons	11(8.4)	7(11.1)	4(5.9)	
Coercion	4(3.1)	2(3.1)	2(2.9)	
Marriage	2(1.5)	1(1.6)	1(1.5)	
Peer influence	30(23.0)	18(28.6)	12(17.6)	
Drugs	4(3.1)	1(1.6)	3(4.4)	
<b>Condom use during sexual debut</b>	71(54.2)	31(49.2)	40(58.8)	0.045

Table 4 shows an overall pattern of sexual debut amongst the youth. Cumulatively 89% of the youth initiated sex between 15-21yrs; 8% of the youth initiated sex before the age of 15 years.

More than half (59%) of the youth affiliated with youth centers had their sexual debut by 18yrs of age in comparison to 46.3% of college going youth. These differences however, were not statistically significant (p=0.167).

The most common route of sexual penetration during sexual debut was vaginal penetration (85%). Other routes of penetration reported were oral sex (10.4%) and anal sex (4.4%). Oral sex was more frequent among youth in youth centers (11.1%) than in college youth (3.2%). Anal penetration was more frequent among youth in colleges (5.9%) than in youth in youth centers (3.2%).

Of the 12 youth who reported oral sex at sexual debut six (50%) had been below 15yrs of age.

Most of the youth report initiating their sexual life by choice either personal or as peer influence (75.6%). More youth in colleges (63.2%) reported having sexual debut by choice than in youth centers (41.2%). Sexual debut influenced by peers accounted for 28% of youth in youth centers. Rape accounted for 8.4% of sexual debuts and was reported more frequently in youth affiliated to youth centers.

Of the 11 youth who reported rape at sexual debut three (27.3%) were below the age of 15 years.

Circumstantial sexual debut such as coercion or financial reasons accounted for 11.5% of the sexual debuts. Youth in youth centers had a higher frequency of such events (14.2%) than college youth (8.8%).

Condom use during sexual debut was at 54% overall and was higher in youth in colleges than in youth centers and the difference was significant (p=0.045)

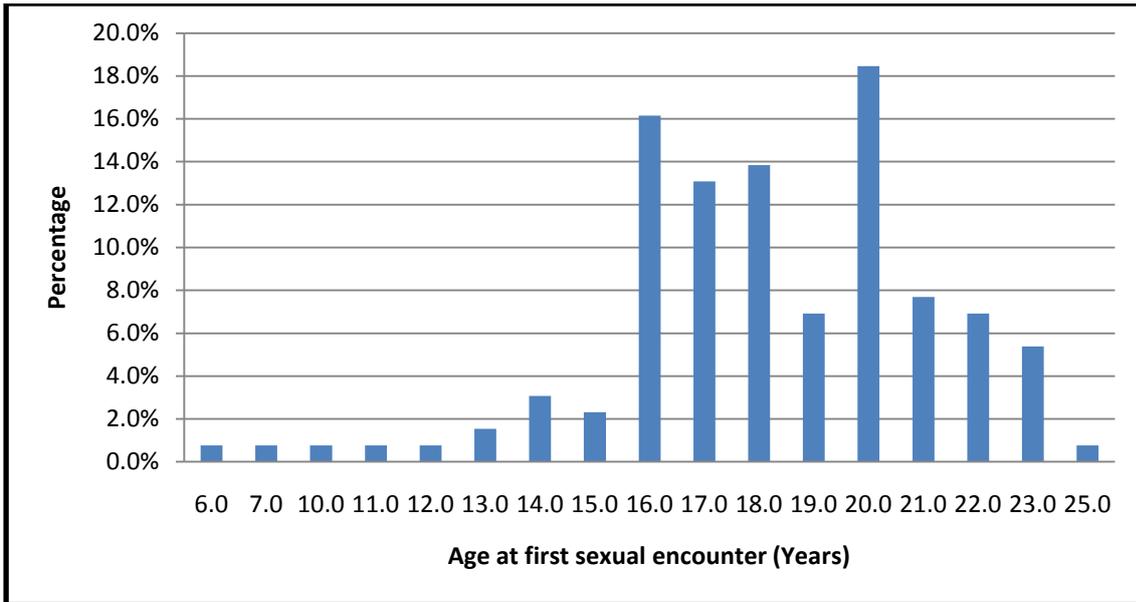


Figure 2: Age at first Sex

Majority of the youth (33%) had their sexual debut between 16-18 yrs. About 5% had their sexual debut before the age of 12yrs. The most common age of sexual debut was noted to be 20 years.

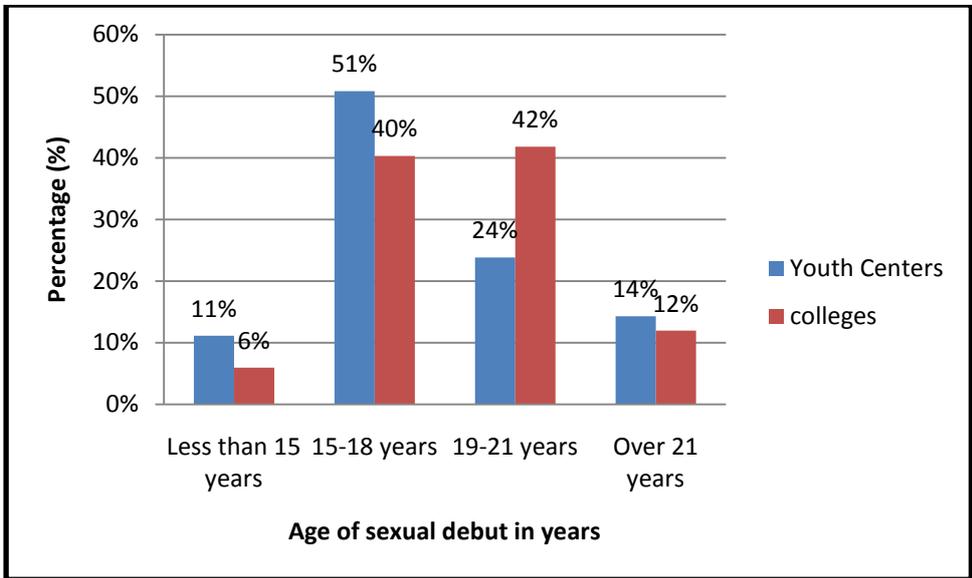


Figure 3: distribution of age of sexual debut by institution.

Youth in youth centers reported earlier ages of sexual debut than youth in colleges though by 21 yrs both groups had almost equal proportions of youth who had sexual debut.

**Table 5: Patterns of sexual debut by gender**

<b>patterns</b>	<b>Total( N=131)</b> No (%)	<b>Male (N=72)</b> No (%)	<b>Female(N=59)</b> No (%)	<b>p-value</b>
<b>age at sexual debut</b>				
<15yrs	11(8.4)	7(9.5)	4(6.7)	0.167
15-18yrs	58(45.0)	32(45.2)	2(43.3)	
19-21yrs	44(34.3)	26(35.6)	18(31.7)	
>21yrs	18(13.7)	7(9.6)	11(18.3)	
<b>Age of partner at sexual debut</b>				
Same age	20(15.3)	17(23.6)	3(5.1)	0.335
Younger 1-4yrs	40(30.5)	30(41.7)	10(17.0)	
Younger>5years	7(5.3)	7(9.7)	0	
Older 1-4years	38(29.0)	11(15.3)	27(45.8)	
Older> 5years	26(19.8%)	7(9.7)	19(32.2)	
<b>Routes of sexual penetration</b>				
Oral sex	12(10.4)	6(8.3)	6(10.2)	0.093
Vaginal	113(85.0)	62(85.0)	51(86.4)	
Anal sex	6(4.4)	4(5.5)	2(3.4)	
<b>Reasons for sexual debut</b>				
By choice	69(52.6)	42(58.3)	27(45.8)	0.096
Rape	11(8.4)	1(1.4)	10(16.9)	
Financial reasons	11(8.4)	3(4.1)	8(13.6)	
Coercion	4(3.1)	2(2.7)	2(3.4)	
Marriage	2(1.5)	1(1.4)	1(1.7)	
Peer influence	30(23.0)	20(27.7 )	10(16.9)	
Drugs	4(3.1)	3(4.1)	1(1.7)	
<b>Condom use during sexual debut</b>	71(54.2)	40(55.5)	31(52.5)	0.405

Table 5 shows patterns of sexual debut by gender. The most common ages for sexual debut were between 15-18 years followed by 19-21 years and the pattern was noted to be similar in both genders. Among the male 45.2% had their sexual debut at 15-18 years and 35.6% at 19-21 years. For the female a similar pattern was reported at 43.3% and 31.7% at 15-18 years and 19-21 years respectively.

Of the sexually active male 90.3% had coitarche by 21 years compared to 81.7% of the female at the same age, the differences though were not statistically significant.

Age of first partner at coitarche had a wide variation. 15.3% of the youth reported having same age partners, 35.8% reported having partners who were younger and 48.8% reported having older partners.

The female reported having 45.8% of partners who were older by 1-4 yrs and 32.2% who were older by more than five years. The maximum encountered was 37 years. However, there were also reports of younger partners and 17% of female had debut with partners 1-4 years younger.

The male had 51.4% partners who were younger and of these 9.7% were younger than 5 years. There were reports of 26% of partners being older and 7(9.7%) were more than 5 years older.

On routes of penetration vaginal was the most common in both sexes. Oral sex at sexual debut had a similar frequency in both male and female at 8.3% and 10.2% respectively. Anal sex however was more frequent in male (5.5%) than in female (3.4%).

The most common reasons for entry into sexual life were those with willing denominators i.e. by choice and peer influence, and these were reported by 62% of male and 37% of female. In the female rape accounted for 16.9% of all sexual debuts; coercion and financial reasons 17.9%.

In the male 1(1.4%) reported rape and 5(6.8%) reported sex due to coercion or financial reasons. The differences between male and female though were not significant ( $p=0.096$ )

Male participants reported a higher influence of peers (27.7%) on their coitarche than female (16.1%).

Condom use at sexual debut was at 55.5% and 52.5% in male and female respectively.

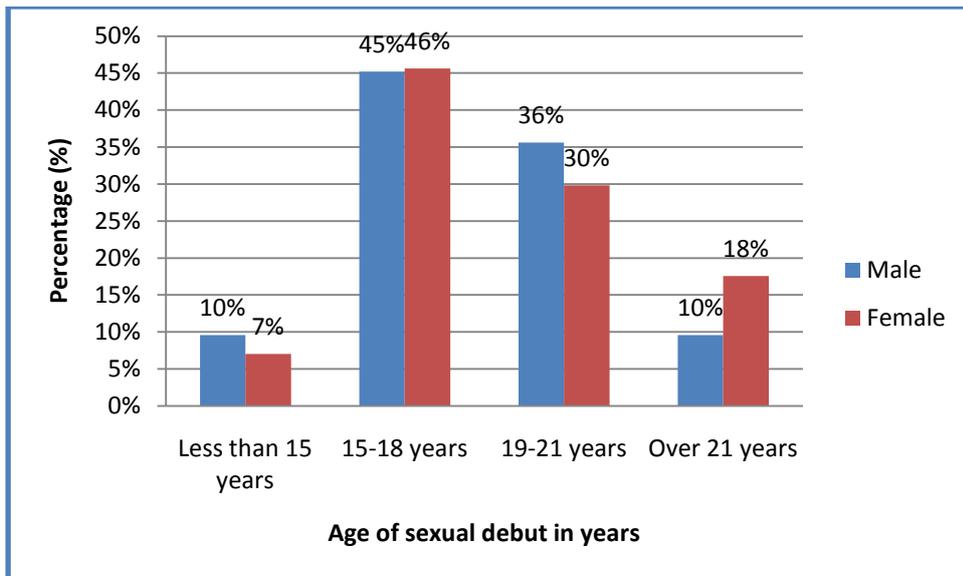


Figure 4: Distribution of age of sexual debut by gender.

The male had a higher frequency of sexual debut at earlier ages.90% of the male had their sexual debut by 21 years of age.

### 4.3 EXTENT OF SEXUAL BEHAVIOURS AMONG STUDY PARTICIPANTS

**Table 6: Condom use, risk perception and risky behavior among sexually active youth by institution**

Condom use/ risk perception/ risky behavior	Total (N=131) No (%)	Youth centers(N=65) No (%)	Colleges(N=66) No (%)	P value
<b>Frequency of condom use</b>				0.339
Always	57 (43.5)	24 (37.0)	33 (50.7)	
Sometimes	38 (29.2)	21 (32.3)	17 (26.1)	
Once	25 (19.2)	14 (21.6)	11 (16.9)	
Never	10 (7.7)	6 (9.2)	4 (6.2)	
<b>Condom at last sex</b>	69 (52.6)	32 (49.2)	37 (56.8)	0.197
<b>Perception of Sex related risk</b>				0.071
High risk	13 (7.9)	7 (8.8)	6 (7.1)	
Medium risk	15 (9.1)	11 (13.8)	4 (4.8)	
Low risk	31 (19.0)	15 (18.8)	16 (19.0)	
No risk	105 (64.0)	47 (58.8)	58 (69.0)	
<b>Number of lifetime partners</b>				
≥3 partners	26 (19.8)	17 (26.1)	9 (13.6)	
2 partners	63 (48.1)	34 (52.3)	29 (43.9)	0.055
0-1partner	42 (32.1)	14 (21.0)	28 (42.4)	
<b>Alcohol at last sex</b>	27 (20.7)	12 (18.4)	15 (22.0)	0.577
<b>Drunk during last sex</b>	20 (15.3)	9 (13.8)	11 (16.1)	0.396
<b>Who was drunk</b>				0.627
Male partner	11 (64.7)	5 (45.5)	6 (54.5)	
Female partner	6 (35.3)	2 (33.0)	4 (67.0)	
<b>Had sex for favors</b>	16 (11.8)	7 (10.7)	9 (13.3)	0.727

Table 6 shows condom use, risk perception and risky behavior in the sexually active youth. About 90% of college going youth report condom use; however consistent condom use is

reported by only half of them (50.7%). A similar pattern is noted among participants in youth centers.

About half the youth (52.6%) who were sexually active reported condom use during last sexual activity and this was similar in college youth (56.8%) and youth centers (49.2%).

Alcohol use at last sex was reported by 20(20.7%) of the sexually active youth with 12(18.4%) from youth centers and 15(22.0%) from colleges. A proportion of youth 20(15.3%) reported being drunk. A higher number of male 11(64.7%) gave reports of being drunk than female 6(35.3%). Of the female who were drunk four (67%) were from colleges.

Sex in exchange for favors was reported by 16(11.8%) of the sexually active youth and the frequency was similar in colleges (13.3%) and youth centers (10.7%).

A proportion of youth 19.8% reported having had three or more lifetime partners. Maximum numbers of partners reported by male were 15 and female were 10. Youth in youth centers were twice more likely to have more than three partners than youth in colleges.

About 63(48.1%) of the youth reported having two partners and the proportions in youth centers (52.3) and colleges (43.9) were similar. More youth in colleges 42.4% reported 0-1 partners than youth centers 21%.

Majority (85%) of the participants perceived that they were at low or no sex related risk at all. College youth had a much lower perception of sexual risk than youth in youth centers (77%).

**Table 7 : Condom use, risk perception and risky behavior in sexually active youth by gender**

<b>Condom use/ risk perception / risky behaviour</b>	<b>Total (N=131) No (%)</b>	<b>Male(N=72) No (%)</b>	<b>Female (N=59) No (%)</b>	<b>p-value</b>
<b>Frequency of condom use</b>				
Always	57(43.8)	34(47.2)	23(38.9)	0.336
Sometimes	38(29.2)	23(31.9)	15(25.4)	
Once	26(19.2)	11(15.2)	15(25.4)	
Never	10(7.7)	4(5.6)	6(10.2)	
<b>Condom at last sex</b>	69(52.6)	38(52.7)	31(49.2)	0.712
<b>Perception of Sex related risk</b>				
High risk	13(17.9)	6(7.5)	7(8.3)	0.234
Medium risk	15(9.1)	6(7.5)	9(10.7)	
Low risk	31(19.0)	16(26.7)	15(17.9)	
No risk	105(64.0)	52(65.0)	53(63.1)	
<b>Relationship with partner at last contact</b>				
Husband/wife	4(3.0)	1(1.4)	3(5.2)	0.544
Fiancé	39(29.7)	21(29.1)	18(31.5)	
Partner	50(38.9)	21(29.1)	29(52.6)	
Casual acquaintance	16(12.2)	12(16.6)	4(7.0)	
Paying client	4(3.0)	0	4(7.0)	
others	17(12.9)	17(23.6)	0	
<b>Alcohol at last sex</b>	27(20.0)	15(11.0)	12(8.8)	0.776
<b>Drunk during last sex</b>	20(14.9)	9(6.7)	11(8.2)	0.396
<b>Who was drunk</b>				0.335
Male partner	11(55.0)	4(5.5)	7(11.8)	
Female partner	6(30.0)	4(5.5)	2(3.4)	
<b>Had sex for favors</b>	16(11.2)	6(4.2)	10(7.0)	0.171

Table 7 shows condom use, risk perception and risky behaviors among youth and highlights the differences and similarities by gender. Use of condoms consistently was reported to be higher in the males (52.3%) than in females (35.4%). Women who reported using condoms

inconsistently made up 50.8% of the sexually active in comparison to 47.1% of men. Of those who had never used a condom 5.6% were male and 10.2% were female. Condon use at last sex was 52.7% in male and 49.2% in female.

On the relationship with partner at last sex 71.6% reported having sex with a person known to them (spouse, fiancé or partner). The male (16.6%) had a higher frequency of sexual contact with a casual acquaintance at last contact than female (7%). About 4(7%), of all sexually active female reported last sex with a commercial partner.

Alcoholic influence on last sex portrayed a similar pattern in both male and female. The female youth (8.2%) had a higher frequency of being drunk than the male (6.7%). Homosexual sexual contact was also found linked with alcohol. Females reported having 7(41.9%) male partners who were drunk and 2(11.9%) female partners who were drunk.

The male reported having male and female partners who were drunk at an equal frequency of 23.5%.

Both male and female reported having had sex for favors in the last year, the female at a higher frequency (7%) than the male (4.2%)

**Table 8: Pregnancy and outcomes of pregnancy in sexually active youth**

<b>Pregnancy/ outcomes</b>	All (N=59) No (%)	Youth centers (N=28) No (%)	College(N=31) No (%)	p-value
<b>Ever been pregnant</b>	20(33.8)	10(17.5)	10	0.613
<b>Feeling about pregnancy</b>				
Wanted pregnancy	2(10.0)	0	2(7.1)	
A mistake	10(50.0)	5(17.8)	5(16.1)	0.286
Failure of contraceptives	8(40.0)	5(17.8)	3(9.6)	
<b>Pregnancy outcome</b>				
Delivered live baby	15(75.0)	7(25)	8(25.8)	>0.999
Procured abortion	4(20.0)	2(7.1)	2(6.45)	
Spontaneous abortion	1(5.0)	1(3.5)	0	
<b>Pregnancy complications</b>	6(30.0)	2(7.1)	4(12.9)	>0.999

Table 8 shows pregnancy and its outcomes in the sexually active female youth. Of the female youth who reported sexual penetration 20(33.8%) reported ever being pregnant. Half of them 10(50%) thought the pregnancy was a mistake and 8(40%) reported it as failure of contraception. The pregnancy outcomes were alive baby in 15(75%) and 4(20%) procured an abortion. Of the female who procured an abortion all of them had had coitarche below 18years of age

**Table 9: Condom use and risky behavior in sexually active youth by age of sexual debut**

<b>Condom use/ risky behavior</b>	<b>All(N=131) No (%)</b>	<b>&lt;18 yrs(N=70) No (%)</b>	<b>≥18yrs (N=61) No (%)</b>	<b>P value</b>
<b>Frequency of condom use</b>				0.046
Always	57(43.8)	26(8.67)	31(44.2)	0.284
Sometimes	38(29.2)	14(15.8)	24(34.3)	
Once	26(19.2)	7(22.2)	18(25.7)	
Never	10(7.7)	6(9.5)	4(5.7)	
<b>Condom at last sex</b>	69(52.6)	35(50.0)	34(55.7)	0.845
<b>Alcohol at last sex</b>	27(20.0)	19(27)	8(12.7)	0.076
<b>Drunk during last sex</b>	20(14.9)	12(60)	8(12.7)	0.255
<b>Who was drunk</b>				
Male partner	11(55.0)	6(8.5)	5(6.3)	0.171
Female partner	6(30.0)	4(5.7)	2(3.2)	
<b>Had sex for favors</b>	16(11.2)	12(17.1)	4(6.3)	0.074

Table 9 shows use of condoms and risky behaviors by age of sexual debut. Questions on use of condoms portrayed that those who had their coitarche at 18years and above had a more frequent and more consistent use of condoms (78.5%) than those who had coitarche before 18yrs (24.7%) of age. Use of condoms at last sex was similar between the two groups.

Alcohol use at last sex was significantly more common in those who had coitarche before 18 (27.8%) yrs of age than those who had coitarche later at or after 18 yrs (12.7%).

Those who had their coitarche at a younger age were more likely to have sex in exchange for favors (17.1%) than their counterparts (12.1%).

Overall the frequency of risky behaviors was reported to be higher than in those who had coitarche before 18 years of age.

#### 4 SOCIO-DEMOGRAPHIC FACTORS INFLUENCING SEXUAL DEBUT

**Table 10: Impact of socio demographic factors to median age of sexual debut and gender**

Socio demographic characteristics	Total(N =131) No	Age (range)	Male(N=72)		Female(N=59)		p-value
			No	Age(range)	No	Age(range)	
<b>Primary guardian</b>							
Both Parents	87	19.5(12,25)	49	20(15,20)	38	19(12,25)	0.196
Single mother	27	17(6,23)	13	17(9,22)	14	17.5(6,23)	
Single father	8	17.5(13,23)	5	17(13,23)	3	18(14,22)	
Other	9	17.5(6,23)	5	18(9,23)	4	19(6,21)	
<b>Guardian's level of education</b>							
None	16	17.5(6,23)	8	19(9,20)	8	17(6,23)	0.756
Primary	19	18(13,23)	10	19(13,22)	9	18(14,23)	
Secondary	42	19(9,25)	27	20(9,22)	15	18(12,25)	
College	54	18(10,23)	27	17(10,23)	27	19(13,23)	
<b>Guardians employment</b>							
Unemployed	11	17(6,25)	6	18(12,22)	5	17(6,21)	0.312
Formal employment	50	19(10,25)	27	18(10,23)	23	19(14,25)	
Casual worker	15	18(13,23)	6	18(13,23)	9	17(13,20)	
Self employed	55	18(7,23)	34	18(9,22)	21	18(7,23)	
<b>Participant years in school</b>							
<4 years	4	15(9,21)	2	14.5(9,20)	2	15.5(10,21)	
5-8 years	6	17(10,20)	4	16(10,20)	2	17(15,19)	
9-12 years	23	18(11,21)	4	18(14,21)	19	18(12,21)	
>12 years	97	18(15,23)	61	17(15,22)	36	18.5(15,23)	
<b>Religion</b>							
None	3	18(16,20)	2	18(16,20)	1	18	0.209
Catholic	39	19(11,25)	20	19(11,23)	19	20(16,25)	
Protestant	52	18(7,23)	26	18(12,23)	26	19(7,23)	
Muslim	37	17(6,25)	24	18(14,21)	13	17(6,22)	
<b>Practicing religion</b>							
Yes	115	18(6,25)	62	18(12,23)	53	18(6,25)	0.085
no	16	16.5(9,18)	10	16(9,16)	6	17.5(10,18)	

Table 10 shows relationship of socio demographic factors to median age of sexual debut, among the youth. The table shows that parental background with two parent unit had a higher age of sexual debut overall at 19 years and 20, 19yrs in male and female respectively. Single mother family backgrounds had an overall age of debut at 17 years and this was lower than any other family unit.

Those participants whose primary guardians had no education had an overall median age of sexual debut at 17.5 years. In the female participants those whose primary guardian had no education, median age of sexual debut was 17 years and 18yrs for those who had primary and up to secondary education. For those whose parents had tertiary education median age of coitarche was higher at 19years.

Participants whose parents were in formal employment had a higher median age of sexual debut than those whose parents were in casual or self employment. Those whose parents were unemployed had the lowest median age of sexual debut.

Majority of the participants spent more than 9years in school and their median age of sexual debut was higher than those who had spent fewer years in school. By affiliation to religion Catholics had the highest age of sexual debut (19years) in comparison to Protestants (18years) and Muslims who had the lowest median age of sexual debut at 17years. Those who confirmed to be practicing religion had a significantly higher age of sexual debut at 18 years than those who reported being non practicing and their median age of sexual debut was 16.5years.

## CHAPTER 5

### 5.1 DISCUSSION

It is well known that the youth do engage in sexual practices that are not safe and may be associated with long term implications on their social and reproductive health. In this study, majority (70%) of the youth reported being sexually active. The median age of sexual debut of youth in colleges was 19yrs and for youth in youth centers it was 17yrs. The difference was statistically significant ( $p=0.04$ ). The median age of sexual debut for male and female were at 18 and 18.5 yrs respectively and did not differ significantly. Findings reveal that the youth were involved in diverse and high risk sexual practices both at sexual debut and subsequently. Unusual routes of penetration were reported, and oral and anal penetration accounted for 10.4% and 4.4% of the penetrations at sexual debut. Rape and sex for financial reasons each accounted for 8.4% of the sexual debuts. The study reflected subsequent high risk sexual behaviors in the youth; 20.7% of the youth report alcohol intake at last sexual contact and 11.8% of the youth revealed that they had had sex in exchange for favors in the past year. Only half the youth reported using condoms at sexual debut and at the last sex. Of the female who had sexual penetration about one third had had a pregnancy and one fifth of those had procured an abortion.

The study revealed that in this population of youth in Mombasa differences in sexuality and sexual behavior were not significantly different among the genders. It also showed that Socio cultural and family back grounds did not have a significant effect on age at first sex, except for religiosity where the practicing and non- practicing had a significant difference in median age of sexual debut. This could be as a result of a rapidly changing environment in which exposure to the media and internet leads to formation of new ideas and perceptions. Socio cultural structures that provided guidance and norms for family structures, male and female behavior are losing value.

A total of 190 youth were recruited in the study with representative numbers from both the groups. There was an equal representation of participants both by gender and age. Majority (86.8%) had spent a minimum of 9 years in school. Over 80% of the youth in both the groups were single, and majority were not earning an income.

In comparing the two groups of youth, those affiliated to youth centers were more forthcoming, consented faster for the interviews and also revealed a curiosity for more information. The college youth, however, were difficult to convince and thought that the

questionnaires were an impingement on their privacy. This was especially the case with the male students.

Of the youth enrolled in the study 131(70.4%) reported to have had sexual penetration, and these were almost equally represented by respondents from the youth centers and colleges. This is in agreement with other studies where a similar proportion of youth were sexually active (16, 22). Male had a higher frequency of sexual penetration at 78.3% than the female at 69.4%.

Youth in Youth centers were likely to have had their sexual debut earlier on in life, then those in colleges, (Table 3). There was a statistical significance in the differences in median age of sexual debut amongst youth in youth centers (17yrs) with that of youth in colleges (19yrs) portraying a positive effect of education on sexual behavior. In youth centers the highest proportion (48.5%) had coitarche between 15-18years whilst those in college were distributed between 15-18 years (40.3%) and 19-21(41.8%) years.

In each age group men had a higher frequency of sexual debut up to the age of 21yrs. Almost half the male and female had their sexual debut by 18years of age. These findings coincide with those of KDHS (2008-9) where almost half of the women had had sexual initiation before 18yrs of age. The minimal ages for sexual debut for the youth varied between 6 years in females and 9years in male, interestingly portraying that despite the overall increases in median age of sexual debut that have been noticed when comparing data from the KDHS 2003 and KDHS2008-09 (4) the lower range of sexual coitarche still remains quite low and there are some childhood ventures into sexual life that could be due to rape and these need to be addressed.

There is need for introduction of sexual education and with inference from this data it should be at least before 15years of age or more correctly before completion of primary school as fewer students get to secondary schools. This should also be considered the right time for HPV vaccination programs so as to encompass a larger proportion of girls before onset of sexual debut.

Age of sexual partner is important information in a certain population as it may involve cross generational sex and outcomes associated with it. In this study population, females generally had sexual debut with older men and male with younger women. About one third of the female had sex with men who were older by five years or more; the oldest man being 33years old. It was also noticed that about one fifth of the male had sex with partners who were older, contrary to traditional perceptions. The oldest partner for the male was at 37 years. Cross generational sex promotes infection transmission from the older generation to the younger. It

may also be a result of forced sex and coercion or financial gains and thus compromises preventive measures. Once again we need to empower the youth to be able to say no and insist on protection.

Diverse sexual practices at coitarche were reported: Over 80% reported vaginal penetration, with no significant differences in gender or youth affiliated with either of the institutions. One tenth of the youth reported having oral sex and 4.4% reported having anal penetration at coitarche. There was no difference in the frequency of oral sex amongst the genders but it was more frequent in youth in youth centers (11.1%) than college students (7.4%). College students and male participants were twice as likely to have had anal penetration. Study participants especially the younger generation reported oral sex as being a stepping stone to vaginal penetration and half of those who had oral sex were less than 15 years of age at debut. These youngsters reported oral sex as being safe, in avoiding unwanted pregnancies and maintenance of virginity.

Other studies on sexual practices among adolescents and other unique populations have reported diverse sexual practices at almost similar rate. In a study in Tanzania; of the sexually active adolescents, 8.1% and 7.5% reported oral and anal sex respectively (22). In Meru, Kenya a study conducted amongst commercial sex workers revealed that more than 40% of the women reported ever practicing anal sex (20). Such findings could be interpreted as increased disclosures of such practices that may have existed before or on the other hand; an increase in other forms of sexual activities due to media exposure, drug influence, experimentation and a perception of decreased risk of HIV transmission. This however should be taken into consideration when implementing sexual health interventions as these youth are a sensitive group at high risk of transmitting and acquiring HIV, STIs and are also at high risk for involvement with drugs. Social implications should also be looked into and youth should be encouraged to use available reproductive health services.

Reasons for sexual debut varied amongst the participants, 52.6% report as having initiated sex by choice, and 23% due to peer influence. This is mostly represented by willing entry into sexual life and has elements of self awareness and decision making. Youth in youth centers and the male represent a more vulnerable target for peer influence. They should form the targets of youth campaigns and safe sex messages and positive peer influence should be encouraged.

Sexual debut due to coercion (3.1%) and financial reasons (8.4%) were also reported by study participants. The female and youth affiliated to youth centers were more likely to have been involved in sex for financial gains; however there were reported cases in youth who were in

college as well. Sex under coercion or due to financial reasons compromises decisions on use of condoms and contraception for prevention of sex related adverse outcomes.

Rape and gender violence prevalence among the youth are a cause for concern and the study revealed that about one tenth of all sexual debuts were due to rape and 17% of the sexually active female reported rape as the reason for sexual debut. Of those who reported sexual debut before 15years of age three had been raped. This was higher than what was reported in the KDHS (2008-9) that 12% of Kenyan women reported that their first sexual encounter was forced. About one fifth of the women who reported their sexual debut as less than 15yrs had been raped (4). Rape and sexual gender violence has been associated negative reproductive health and social outcomes and this is especially so for the younger generation or the youth who are setting out to start their lives, and may propagate them into risky sexual behavior. More awareness needs to be created about rape, and adequate clinical and psychosocial management for the survivors to help them think positively. Advocacy to ease legal proceedings and bring perpetrators to justice should be carried out.

Drugs usage in the youth is associated with high risk sexual behavior; it impedes on the thought process and decision making is compromised. It is also associated with rape, violence and homosexuality. Drug influence on sexual coitarche was more frequent in the male and three times more likely to be found in college youth. This is in contrast to preconceived notions that youth in the general society are more at risk. It's probably easier to have drugs peddled by students under guise to other students.

Condom use is elemental in preventing sexually transmitted infections and HIV. In combination with other contraceptive methods it helps in prevention of unplanned, unwanted pregnancies, procured abortions and its consequences. Data from different continents reports an increase in condom use by adolescents; however it still lags behind in containing the spread of HIV and STIs (1). A comparison of KAIS to the KDHS (2003) showed that condom use at first sex had increased to almost twice of what it was in 2003 (10). The KDHS 2008-09 reports one in every four Kenyans having used condoms at sexual debut (4).Urassa in Tanzania(of sexual practices amongst unmarried adolescents) notes that 50% of male and 42.7% of female had reported ever having used condoms. Condom use was significantly increased in school going adolescents (22).

The study had similar findings on condom use: male and female participants had 55.5% and 52.5% rate of condom use at first sex .The youth in colleges (58.8%) reported a higher use of condom at first sex than youth in youth centers (49.2%).Male and female had the same frequency of condom use at about 50% in contrast to previous studies where male had a

significantly higher use of condoms. Consistency and frequency of condom use was more likely to be higher in the male and those youth affiliated with colleges. Youth who had their sexual debut at less than 18 yrs were less likely to use condoms at sexual debut and subsequently. Reduced uptake of protection plus biologically immature systems of the younger adolescents makes them even more susceptible to STIs and HIV.

Engaging in sex under the influence of drugs and alcohol impairs judgment, increases risky behavior; compromises use of protection (condoms) and may lead to gender violence. One fifth of the sexually active youth took alcohol at last sex and both male and female were involved. Youth from youth centers and college youth were also involved. This was a revelation, the rate of alcohol use was quite high, and that indeed it did not much differ by gender or the background of the youth meaning that its use is quite common and widespread.

Of the sexually active participants, 13% report being drunk at last sex, three quarters were male and a quarter were female. These findings were clearly higher than what was found in the KDHS 2008-09 which reported only 1% of last sexual encounters to have been under influence of alcohol. However, it is also reported that Coast province had the highest number of women who had sex under the influence of alcohol or who had partners who had been drunk(4).

It emerged that homosexuality was strongly associated with being drunk; the male reported having male and female partners who were drunk and female reported having male and female partners who were drunk. This is a cause for great concern as it has direct negative health and social impact on the youth, their families and society in general. We were also able to deduce that the youth who had their sexual debut earlier were more likely to have been under alcoholic influence at their last sexual contact.

Sex in exchange for favors, monetary or otherwise, is associated with high risk of transmission of HIV/STIs as it is associated with decreased condom use due to imbalance of power. It also translates into having sex with a casual acquaintance and multiple partners both increasing sexual risks.

We found that of the 131 respondents, 16(11.2%) had had sex in exchange for favors within the last twelve months. One tenth of all the sexually active youth in youth centers and colleges reported having had sex in exchange for favors and both male and female reported the same. Youth who had their sexual debut below 18 years of age were at a higher risk of having had sex for favors. Youth are very vulnerable and there is an easy chance of coercion and blackmail and monetary benefits sometimes override all others. Transactional sex is associated with high risk of contracting sexually transmitted infections including HIV; it is

also associated with unwanted pregnancies and their repercussions, as power play comes in and negotiation for protection and contraception is compromised (1). Youth should be educated on this and empowered to be able to say no to such temptations.

One fifth of the sexually active participants reported having more than three lifetime sexual partners, and about half reported having two partners. Having multiple partners may lead to spread of HIV and STIs increasing incidence of pelvic inflammations and subsequent ectopic pregnancies and infertility (6).

Perception of sex related risks, attitudes and knowledge on risk prevention are very important in modeling the youths' sexual behavior and the risks they will undertake. Most of the youth in our study, i.e. 64% considered themselves to be at no risk at all and 19% considered themselves to be at low risk. This was equivocally distributed amongst the male and female. Youth in learning institutions considered themselves at a lower risk than youth enrolled in youth centers. This was despite the inconsistent use of condoms, high percentages of sexual contact under influence of alcohol, homosexuality, anal penetration in both males and females and transactional sexual interactions found in our study. These attitudes of the youth cut across the genders and affiliation to institution signifying that there is a gap in the youths' knowledge and understanding of sex related risks and adverse outcomes of risky sexual behavior. Early and timely education of the youth could help in turning the tide (6).

Among the female, one third of the sexually active youth had ever been pregnant, of these half were from youth centers and the other half from colleges'. Half of the pregnant women reported the pregnancy as a mistake and 40% thought it was contraceptive failure. One fifth procured an abortion. Contraception is still an area of conflict among many Kenyans and though uptake has increased especially in the younger generations, there's still need to educate people on contraception, solve myths and falsehoods. Correct usage of contraception should be relayed and commodities made available. Adolescents and youth who are already sexually active should have these methods availed to them.

Dual parent background, numbers of years spent by participant in school and guardians employment status did have an effect on median age of sexual debut though it was not statistically significant. Religiosity was also shown to delay sexual debut and this was statistically significant, though not differing by type of religion. Youth who came from dual parent backgrounds had a median age of sexual debut of 19yrs, compared to those who came from single parent families. Youth who came from single mother families had the earliest debut at 17 yrs with an age range of 13-23yrs.

Different studies have varied findings on effect of socio demographic factors on the sexuality of the youth and in most studies state of family units did have an effect with single mother family unit having the most negative effect on sexuality of the youth (6, 15). Education in the youth plays an important role in modeling their lives and sexuality as well. Education seemed to have a profoundly positive effect in delaying sexual debut. Youth who had minimum education (<4yrs) had a median age of sexual debut at 15years while those who had a higher number of years in school had a delayed median age of sexual debut.

## **5.2 CONCLUSION:**

1. Early sexual debut is common, majority have sexual debut by 21 years of age.
2. High risk sexual behavior is widespread, vaginal, anal and oral sex is common.
3. Women are at high risk of being raped and being coerced into sexual activity.
4. There were no major differences in gender by sexual behavior and use of preventions.

## **5.3 RECOMMENDATIONS**

1. There is need for interventions to curb high risk sexual behavior in the Youth.
2. Interventions should target both male and female.
3. Young girls need to be empowered and educated to resist coercion.

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## **APPENDICES**

### **APPENDIX I:**

#### **INFORMED CONSENT FORM**

#### **SEXUAL BEHAVIOUR AMONGST YOUTH IN COLLEGES AND YOUTH CENTERS IN MOMBASA**

This document is to be read to or by each prospective participant in a language (s)he best understands.

One copy of the signed consent form is to be given to each participant.

#### **Introduction**

**Name of Principal Investigator: DR. HAFSA JIN**

**Name of the Institution: UNIVERSITY OF NAIROBI**

I am ..... working for Dr. Hafsa Jin of the University of Nairobi.

We are conducting a research study to determine the median age at which youth in Coastal Kenya start to engage in sex and what factors are associated with this.

You have been randomly selected to be part of 168 youth from post secondary training institutions and youth centers. This project will take 6 months.

#### **Purpose:**

This study will determine the relation between age at first sexual intercourse and sexual behaviour and sexuality of the youth after this. The information collected from this study will be used to assist other youth in the future and provide guidance in ways that may be protective towards their health. It will also help us in designing ways to help our youth in a way that best suits our country.

{Please ask me any question you may have about the study}

#### **Procedures:**

You will be interviewed for a few minutes and the answers you give will be filled into a questionnaire. You will be asked questions about your home settings, sexual behavior, consequences of sexual behaviour you may have experienced and your feelings and knowledge about sexuality matters. Participating in this research is voluntary and you have a right to decline without giving any reason.

#### **Risks and discomforts:**

You will not have any additional risks by participating in this study as all the information you give will be confidential. We shall not use your name or student number in our records. I understand that this is a sensitive matter to speak about in our culture. In case you have any sexual problem I will be available to refer you to a doctor for further medical attention and counseling. None of the information you provide will be shared with anyone, including your parents and guardians.

**Benefits:**

Participating in this study will not be of direct benefit to you. The knowledge obtained by this project will improve our understanding of sexual behavior among youth and will help the Government in designing reproductive health behavior.

**Compensation:**

You will receive no compensation for participating in this study.

**Confidentiality:**

Any information you provide during the study will be kept strictly confidential. None of your names will appear on any study document. Questionnaires will be coded with a unique number. Questionnaires will be stored either in locked cabinets in secured rooms or in a password protected, secured computer. Questionnaires and consent forms will be stored separately in locked spaces.

The Ethics and Rights committee will have access to the consent forms

**Right to Refuse or Withdraw:**

You are free to choose whether or not you wish to participate. You will suffer neither penalties nor loss of any benefit should you decide not to participate.

**Who to Contact:**

If you have any questions you may ask now or later during the study. If you wish to ask questions later, you may contact my supervisor.

**Certificate of Consent**

**MEDIAN AGE OF SEXUAL DEBUT AND FACTORS ASSOCIATED WITH IT**

I have (been) read the information sheet concerning this study and I understand what is required of me if I take part in the study. All my questions and doubts have been answered by you. I understand that I can refuse to participate in this study without giving a reason and this will not affect me.

I agree to take part in this study.

Signature.....Date.....

Thumb print.....

Print name of Researcher.....

Researcher's signature..... Date .....

**Witness:** Name: .....

Signature

.....

## **ASSENT FORM**

### **MEDIAN AGE OF SEXUAL DEBUT AND FACTORS ASSOCIATED WITH IT**

One copy of the signed consent form is to be given to each participating minor.

**Name of Principal Investigator: DR. HAFSA JIN**

**Name of the Institution: UNIVERSITY OF NAIROBI**

#### **Introduction**

I am ....., working for Dr. Hafsa Jin of the University of Nairobi. We are conducting a research study to determine the age at which youth in Coastal Kenya start to engage in sex. We are also studying why they are having sex early.

You have been randomly selected to be part of 168 youth from post secondary training institutions and youth centers. This project will take 6 months.

#### **Purpose:**

This study will find out the relation between age at first sexual encounter and sexual behaviour after that. After this research we as doctors, organizations involved in reproductive health and the Ministry of health will be able to quote and use local data. We will be able to use the information we get from this research. It will also help us do come up with sexual health solutions that best suit our needs.

**{Please ask me any question you may have about the study}**

#### **Procedures:**

You will be interviewed for a few minutes and the answers you give will be filled into a questionnaire. You will be asked questions about your home settings, sexual behavior, consequences of sexual behaviour you may have experienced and your feelings and knowledge about sexuality matters. Participating in this research is voluntary and you have a right to decline without giving any reason.

#### **Risks and discomforts:**

You will not have any additional risks by participating in this study as all the information you give will be confidential. We shall not use your name or student number in our records. I understand that this is a sensitive matter to speak about in our culture. In case you have any sexual problem I will be available to refer you to a doctor for further medical attention and counseling.

#### **Benefits:**

Participating in this study will not be of direct benefit to you. The knowledge obtained by this project will improve our understanding of sexual behavior among youth and will help the Government in designing reproductive health behavior.

**Compensation:**

You will receive no compensation for participating in this study.

**Confidentiality:**

Any information you provide during the study will be kept strictly confidential. None of your names will appear on any study document. Questionnaires will be coded with a unique number. Questionnaires will be stored either in locked cabinets in secured rooms or in a password protected, secured computer

**Right to Refuse or Withdraw:**

You are free to choose whether or not you wish to participate. You will suffer neither penalties nor loss of any benefit should you decide not to participate.

**Who to Contact:**

If you have any questions you may ask now or later during the study. If you wish to ask questions later, you may contact my supervisor Dr Nelly Mugo on 0733629665.

**Certificate of assent**

**MEDIAN AGE OF SEXUAL DEBUT AND FACTORS ASSOCIATED WITH IT**

I have (been) read the information sheet concerning this study and I understand what is required of me if I take part in the study. All my questions and doubts have been answered by you. I understand that I can refuse to participate in this study without giving a reason and this will not affect me.

I agree to take part in this study.

Signature.....Date.....

Print name of Researcher.....

Researcher's signature..... Date.....

## APPENDIX II

### QUESTIONNAIRE

STUDY NO: .....

STUDY SITE: .....

STUDY SITE NUMBER: .....

#### SECTION A: DEMOGRAPHICS

1. Age.....
2. Gender: Male:  Female:
3. Marital status
  1. Married
  2. Divorced
  3. Single
  4. Cohabiting
  5. Other (specify).....
4. How many years of school have you completed? .....
5. Do you earn any income? Yes:  No:
6. Who was your primary guardian as you grew up?
  1. Mother and father
  2. Mother only
  3. Father only
  4. Others (specify).....
7. How many years have (did) you stay with your parents?.....
8. Describe your parents house
  - a) Is there running water? Yes:  No:
  - b) Is there a concrete floor? Yes:  No:
  - c) Is there electricity? Yes:  No:
  - d) Is the roof made of metal such as tin, iron, zinc? Yes:  No:
  - e) How many rooms are there in the house?
  - f) How many people live in that house?
9. If you are not living with your parents, who are you presently living with?
  1. Friends
  2. Relatives

- 3. Sibling
- 4. Cohabiting

10. What is the educational level of your primary guardian?

- Female guardian
  - 1. None
  - 2. Primary
  - 3. Secondary
  - 4. College
- Male guardian
  - 1. None
  - 2. Primary
  - 3. Secondary
  - 4. College

11. What is the employment status of your primary guardian?

- 1. Unemployed
- 2. Formal employment
- 3. Casual worker
- 4. Self employed

12. Do you have siblings?

		Gender:	male	female
Older: Yes: <input type="checkbox"/>	No: <input type="checkbox"/>		___	___
Younger: Yes: <input type="checkbox"/>	No: <input type="checkbox"/>		___	___

13. What is your current religious background?

- 1. None
- 2. Catholic
- 3. Protestant
- 4. Muslim

14. Are you practicing? .....

**SECTION B: SEXUAL BEHAVIOUR**

15. Have you experienced any form of penetrative sexual activity with another person?

Yes:  No:

16. How old were you when you first engaged in sex? .....

Which year was it? .....

17. Were you in school then? Yes:  No:

18. At what level of education were you when you first had sex?(specify class).....

19. How old was the person with whom you experienced sexual activity for the first time?  
(In years or date of birth).....

20. What was the age difference between the two of you:

Same age

Younger:

• (1-4yrs)

• (>5yrs)

Older:

• (1-4yrs)

• (>5yrs)

21. Was your first sexual encounter anal or vaginal or oral?

Oral  Vaginal  Anal

22. You had your first sexual encounter due to

a) By choice

b) Forced(rape)

c) Financial reasons

d) Coercion

e) In marriage

f) Peer influence

g) Under influence of drugs(one or both of you had taken alcohol)

23. The first time you had anal or vaginal intercourse did you and your partner use a condom (male or female condom)?

Yes:  No:

24. What was the time period between first time experienced sexual encounter and subsequent sexual encounter? .....

25. When was the last time you had sex? (State the date and year).....

26. How many sexual partners have you had in

a) Your lifetime.....

b) In the past five years.....

c) In the past one year.....

d) In the past one month.....

27. In your current or most recent relationship, how regularly do you use condoms?

- a) Always
- b) Sometimes
- c) Once
- d) Never

28. Did you use condoms at the last sex? Yes:  No:

**SECTION C: RISKS OF HIV AND STIs**

29. How do you think you behave in terms of risk taking in relation to sex
- 1. High risk (like risk and look for hazardous situations)
  - 2. Medium risk (do not look for hazardous situations but do nothing to avoid these)
  - 3. Low risk (avoid situation that are too hazardous but accept small risks.)
  - 4. No risk (try to avoid any risk at any price)

30. The last time you had sexual intercourse, did you or partner drink alcohol?  
Yes:  No:

31. Were any of you drunk? Yes:  No:

If yes, please indicate who .....

32. What is your relationship with this person whom you last had sex?

- a) Husband
- b) Fiancé
- c) Boyfriend
- d) Live-in partner
- e) Casual acquaintance
- f) Paying client
- g) Other (specify).....

33. How much older or younger was this person?

Younger:

- (1-4yrs)
- (>5yrs)

Older:

- (1-4yrs)
- (>5yrs)

34. In the last 12 months have you ever given or received money, gifts or favours in exchange for sex?

Yes:  No:

35. Are you doing anything to prevent pregnancy?

Yes:  No:

36. Which methods are you currently using? .....

37. Are you aware that if you are having sexual intercourse and not using contraceptives you might get pregnant?  
Yes:  No:

**This section is for the female participants (q38-41)**

38. Have you ever been pregnant? Yes:  No:

39. Was the pregnancy

- a) What you wanted
- b) A mistake
- c) Failure of contraceptives

40. What was the outcome?

- a) Delivered a live baby
- b) Delivered a still birth
- c) Had an abortion done
- d) Had a natural abortion

41. Was there any complication during pregnancy and labour?

- Yes  No

If yes, please specify.....

42. Do you know your HIV status? Yes:  No:

43. Have you ever been tested for HIV? Yes:  No:

44. Have you ever had a urethral /vaginal discharge or a genital ulcer, or have you been ever told that you have a sexually transmitted infection?

- Yes:  No:

**SECTION C: KNOWLEDGE AWARENESS**

45. Do you think that you received enough information regarding sexual behaviour?

- Yes:  No:

46. What was your main source of information?

- a) Parents
- b) Other relatives
- c) Siblings
- d) Friends
- e) Teachers
- f) Mass media
- g) Internet
- h) Medical personnel
- i) Others (specify).....

47. Did your mother discuss sexual issues with you before your first intercourse?

Yes:  No:

48. Whom do you discuss sexual issues with? Whom do you confide in?

.....

49. Who has the most influence in what you do? .....

50. At what age did your elder siblings start their sexual life? .....

51. Did most of your friends have their first sexual intercourse around the time you had yours.....

52. Were you amongst the first? Yes:  No:

53. Do you think you could have started later if you were a girl/boy (opposite sex) and why?

Yes:  No: .....

54. Do you think there is a need for young persons to delay the age at which they start sex?

Yes:  No:

55. What would their benefits be? .....

56. Should adolescents be using condoms? Yes:  No:

Explain.....

57. Should contraceptives be availed to unmarried adolescents and the youth?

Yes:  No:

58. What do you know about sex education? .....

59. Do you think sex education should be introduced in school? Yes:  No:

60. When do you think is the right time for this? .....

61. What is the ideal age for first sex? .....

62. Then what or who should disperse his information such that tomorrow's youth do not miss out on information? .....

63. Who do you think should provide sex education? .....

64. At what age do you think sex education should start?

.....

## APPENDIX III

### Fomu ya Kibali

#### UMRI WA WASTANI KWA MARA YA KWANZA YA NGONO NA MAMBO YANAYOHUSIANA NA HAYO

Nakala moja ya fomu iliyo sainiwa itatolewa kwa kila Mshiriki aliye na umri mdogo wa kushiriki.

**Jina la Mchunguzi Mkuu: DR. HAFSA JIN**

**Jina la Taasisi : Chuo Kikuu cha Nairobi**

#### Kuanzishwa

Mimi ... .., hufanya kazi kwa ajili ya Dr Hafsa Jin wa Chuo Kikuu cha Nairobi. Sisi tunafanya utafiti ili kujua umri ambao vijana katika mko wa Pwani ya Kenya huanza kujiingiza katika ngono. Sisi tunafanya utafiti ya kujua sababu ya vijana kufanya ngono mapema.

Umekuwa nasibu kuchaguliwa kwa sehemu ya vijana 168 kutoka taasisi ya mafunzo ya mwisho ya sekondari na vituo vya vijana. Mradi huu huchukua muda ya miezi ... ..

#### Lengo:

Utafiti huu utaonyesha uhusiano kati ya umri wakukutana mara ya kwanza ya ngono na tabia ya ngono baada ya hapo. Baada ya utafiti huu sisi, kama madaktari, hushirika katika afya ya uzazi na Wizara ya afya na uwezo wa kunukuuna kutumia takwimu za mitaa. Tutakuwa na uwezo wa kutumia habari hii ambayo itapatikana kutoka kwa utafiti huu. Pia itakua lengo ya kunufaisha na ufumbuzi wa afya ya uzazi bora kukidhi mahitaji yetu.

{Tafadhali uliza swali lolote unaweza kuwa nayo kuhusu utafiti }

#### Taratibu:

Utaulizwa maswali kwa dakika chache, na majibu utakayo toa yatajazwa kwa fomu ya maswali . Utaulizwa maswali kuhusu mazingira yako nyumbani, tabia ya kujamiiana,

matokeo ya tabiya ya ngono na unaweza kuwa na uzoefu, hisia na elimu juu ya masuala ya kujamiiana. Kushiriki katika utafiti huu ni wa hiari na una haki ya kukosa kushiriki bila kutoa sababu yoyote.

**Hatari na kukosakujisikiya vyema:**

Huwezi kuwa na hatari yoyote ya ziada kwa kushiriki katika utafiti huu na habari utakayo toa itakuwa ni ya siri. Hatutatumia jina lako au namba ya wanafunzi katika kumbukumbu zetu. Tunaelewa kwamba hili ni suala nyeti kwa kusema juu katika utamaduni wetu. Katika kesi tatizo lolote ya ngono mimi nitakuwa ninapatikana kwa kukuelekeza kwa daktari kwa ajili ya tahadhari zaidi ya matibabu na ushauri.

**Faida**

kushiriki katika utafiti huu hautakuwa na manufaa moja kwa moja kwa wewe. Elimu itakayo patikana kwa mradi huu utaboresha kuelewa tabia ya ngono miongoni mwa vijana na kusaidia Serikali kwa kubuni tabia ya afya ya uzazi.

**Fidia**

Utapata fidia yoyote kwa ajili ya kushiriki katika utafiti huu.

**Siri:**

Taarifa yoyote, utakayo toa kati ya utafiti huu zitatunzwa kwa siri. Hakun majina yenu yataonekana katika kitabu yoyote ya masomo. Maswali yatatolewa na nambari ya kipekee. Maswali zitahifadhiwa aidha katika makabati ambayo yamefungwa katika vyumba ama kufungwa na number ya siri katika computer.

Haki ya kukataa au Kutoka:

Unayo ruhusa ya kutaka kushiriki wakati wowote ama kutoshiriki.

**Nani Nitawasiliana naye**

Iwapo una maswali yoyote unaweza kuuliza sasa au baadaye wakati wa utafiti huu. Kama unataka kuuliza maswali baadaye, unaweza wasiliana namsimamizi wangu kupitiya numberi hii 073 ... ..

**Cheti cha Kukubali**

**UMRI WA WASTANI KWA MARA YA KWANZA YA NGONO NA MAMBO  
YANAYOHUSIANA NA HAYO**

Nimesoma (somewa) fomu yenye habari kuhusu utafiti huu na ninafahamu kile ninachopaswa kufanya ikiwa nitashiriki katika utafiti. Maswali na duku duku zangu zote zimejibiwa na wewe. Naelewa kuwa naweza kukataa kushiriki katika utafiti huu bila ya kutoa sababu nah, haitaniathiri.

Nimekubali kushiriki katika utafiti huu.

Sahihi.....

Tarehe.....

Alama ya kidole gumba.....

Jina la Mtafiti.....

Tarehe.....

Sahihi ya Mtafiti.....

**Shahidi:** Jina .....

Sahihi.....

## APPENDIX IV

### QUESTIONNAIRE

STUDY NO: .....

STUDY SITE: .....

STUDY SITE NUMBER: .....

### SECTION A: DEMOGRAPHICS

1. Umri.....
2. Hisia: Mume:  Mke:
3. Hali ya ndoa
  - a) Umeoa au kuolewa
  - b) Umeachana na mumewe au mkewe
  - c) Hujaoa au kuolewa
  - d) Unaishi na mpenzio lakini hamujaoana
  - e) Mengineo(fafanua) .....
4. Umemaliza miaka mingapi masomoni? .....
5. Je unajipatia kipato chochote? Ndio:  La:
6. Nani alikuwa mlezi wako?
  - a) Mama na baba
  - b) Mama pekee
  - c) Baba pekee
  - d) Wengineo(fafanua).....
7. Umeishi miaka mingapi na wazazi wako?.....
8. Elezea nyumba ya wazazi wako
  - a) Je ina maji ya mfereji? Ndiyo:  La:
  - b) Je sakafu yake ni ya seruji? Ndiyo:  La:
  - c) Je ina umeme? Ndiyo:  La:
  - d) Je paa lake ni la mabati? Ndiyo:  La:
  - e) Nyumba ina vyumba vingapi?

- f) Ni watu wangapi wanaishi katika nyumba hiyo?
9. Kama huishi na wazazi wako, kwa sasa unaishi na nani?
- a) Marafiki
  - b) Jamaa
  - c) Ndugu
  - d) Unaishi na mpenzio lakini hamujaoana

10. Kiwango cha elimu cha mlezi wako ni kipi?

- Mlezi wa kike
  - a) hakuna
  - b) Shule ya msingi
  - c) Shule ya upili
  - d) Chuo
- Mlezi wa kiume
  - a) hakuna
  - b) Shule ya msingi
  - c) Shule ya upili
  - d) Chuo

11. Hali ya uajiri ya mlezi wako ni gani?

- a) Hajaajiriwa
- b) Amejiriwa
- c) Mtu wa kibarua
- d) Amejajiri

12. Je una ndugu?

	Jinsia:	kiume	kike
Wakubwa: Ndio: <input type="checkbox"/> La: <input type="checkbox"/>		.....	.....
Wadogo: Ndio: <input type="checkbox"/> La: <input type="checkbox"/>		.....	.....

13. Wewe ni wa dini gani?

- a) Hakuna
- b) Katholiki
- c) Protestanti
- d) Uisilamu

14. Je unashiriki? .....

**SECTION B: SEXUAL BEHAVIOUR**

15. Je umeshawahi kushiriki tendo lolote la ngono penyezi na mtu yoyote?

Ndio:  La:

16. Ulikuwa na umri gani uliposhiriki tendo la ngono kwa mara ya kwanza?.....

Ulikuwa ni mwaka gani? .....

17. Je ulikuwa shuleni wakati huo?

Ndio:  La:

18. Ulikuwa umefikia kiwango gani cha masomo uliposhiriki tendo la ngono kwa mara ya kwanza?(fafanua darasa).....

19. Uliyeshiriki naye tendo la ngono kwa mara yako ya kwanza alikuwa na umri gani?(Miaka yake au tarehe yake ya kuzaliwa).....

20. Tofauti yenu ya miaka ilikuwa ni:

Umri sawa

Mdogo:

- (1-4yrs)
- (<5yrs)

Mkubwa:

- (1-4yrs)
- (>5yrs)

21. Elezea Ngono yako ya kwanza:

- a) Uke
- b) Njia ya Nyuma
- c) Mdomo?

22. Mara ya kwanza kushiriki ngono ilisababishwa na

- h) Ulitaka mwenyewe
- i) Ulilazimishwa(najisiwa)
- j) Kwa sababu za kifedha
- k) Ulishurutishwa
- l) Ndoa
- m) Ushawishi wa marafiki
- n) Chini ya ushawishi wa madawa ya kulevywa (mmoja au wote wawili, walikuwa wamekunywa pombe)

23. Je wewe na mpenzi wako mulitumia kondomu (ya kiume au ya kike) mara ya kwanza muliposhiriki ngono ya kawaida au ya nyuma?

Ndio:  La:

24. Nikipindi cha muda gani mara ya kwanza kukutana na uzoefu wa kijinsia na baadaye kukutana kingono? .....

25. Ni lini mara yako ya mwisho kushiriki ngono? (Taja tarehe na mwaka).....

26. Umekuwa na wapenzi wangapi wa ngono

- Maishani mwako.....
- Katika kipindi cha miaka mitano iliopita.....
- Katika kipindi cha mwaka mmoja uliopita.....
- Katika kipindi cha mwezi mmoja uliopita.....

27. Katika uhusiano wako wa sasa au wa hivi punde, munatumia kondomu kwa mara ngapi?

- a) Kila wakati
- b) Mara nyengine
- c) Mara moja
- d) Hamutumii

28. Je multumia kondomu mara ya mwisho muliposhiriki ngono?

Ndio:  La:

### **SECTION C: RISKS OF HIV AND STIs**

29. Je unadhani mwenendo wako ni upi

- a) Hatari (kama hatari na kuangalia kwahali ya madhara)
- b) Hatari ya kati (si kuangalia kwa hali na madhara lakini kufanya kitu ili kuepuka haya)
- c) Hatari ndogo (kuepuka hali ambayo ni ya madhara lakini kukubali hatari ndogo.)
- d) Hakuna hatari (kujaribu kuepuka hatari yoyote kwa namna yoyote)

30. Mara ya mwisho uliposhiriki ngono, je mpenzi wako alikuwa amekunywa pombe?

Ndiyo:  La:

31. Kuna mmoja kati yenu aliyekuwa amelewa?

Ndio:  La:

Iwapo ni ndio, tafadhali fafania ni nani .....

32. Uhusiano kati yako na mtu huyu uliyeshiriki naye ngono mara ya mwisho, ni upi?

- a) Bwana
- b) Mchumba
- c) Mpenzi
- d) Kuishi kwa mpenziyo
- e) Kuelewana kama marafiki
- f) Mteja wa kulipa
- g) Wengineo (fafania).....

33. Mtu huyu alikuwa mzee au mdogo kukuliko wewe kwa umri? Kwa miaka mingapi?

Mdogo:

- (1-4yrs)
- (>5yrs)

Mzee:

- (1-4yrs)
- (>5yrs)

34. Je umewahi kupokea pesa, zawadi au upendeleo wowote kwa kushiriki ngono katika kipindi cha miezi 12 iliopita?

Ndio:  La:

35. Je unafanya chochote ili kuzuia kupata mimba?

Ndio:  La:

36. Unatumia mbinu zipi kwa sasa? .....

37. Je una habari kuwa ikiwa unashiriki ngono na hutumii mbinu yoyote ya kuzuia kupata mimba unaweza kuwa mjamzito?

Ndio:  La:

**This section is for the female participants (q38-41)**

38. Je umeshawahi kupata mimba?

Ndio:  La:

39. Je mimba hiyo ilikuwa

- a) ulichokuwa ukitaka
- b) Bahati mbaya
- c) Kushindwa kufanya kazi kwa mbinu ya kuzuia mimba

40. Matokeo yalikuwa ni yapi?

- a) Ulijifungua mtoto akiwa hai
- b) Ulijifungua mtoto aliyekufa
- c) Ulitoa mimba hiyo
- d) Mimba ilitoka yenyewe

41. Je kulikuwa na shida yoyote wakati wa kubeba mimba na wa kuzaa?

Ndio  La

Ikiwa ni ndio, tafadhali fafanua.....

42. Je unajua hali yako ya HIV?

Ndio:  La:

43. Je umeshawahi kupimwa HIV?

Ndio:  La:

44. Je umeshawahi kutokwa na uchafu au kutokewa na vidonda kwenye uke wako au umeshawahi kuelezwa kuwa una ugonjwa wa zinaa?

Ndio:  La:

### **SECTION C: KNOWLEDGE AWARENESS**

45. Je unadhani ulipata habari ya kutosha kuhusu mienendo ya ngono?

Ndio:  La:

46. Chanzo kikuu cha habari hii kilikuwa ni kipi?

- a) Wazazi
- b) Jamaa
- c) Ndugu
- d) Marafiki
- e) Walimu
- f) Vyombo vya habari
- g) Mtandao
- h) Watoa huduma za afya
- i) Wengineo (fafanua).....

47. Je mama yako alijadiliana na wewe maswala ya ngono kabla ya wewe kushiriki ngono kwa mara yako ya kwanza?

Ndio:  La:

48. Wewe hujadiliana maswala ya ngono na nani?

.....

49. Ni nani mwenye ushawishi mkubwa kwako? .....

50. Ndugu zako wakubwa walianza kushiriki ngono wakiwa na umri gani?.....

51. Je wengi wa marafiki zako walianza kushiriki ngono kwa mara ya kwanza wakati sawa na ule wewe ulipoanza?.....
52. Ulikuwa miongoni mwa wakwanza?  
 Ndio:  La:
53. Je unadhani ungelianza kushiriki ngono baadaye iwapo ungekuwa mvulana/msichana?  
 Ndio:  La: .....
54. Je unafikiria kuna haja kwa vijana kuchelewesha umri ambao wanaanza kushiriki na ngono?  
 Ndio:  La:
55. Faida zake ni zipi? .....
56. Je vijana wanapaswa kutumia kondomu? Ndio:  La:   
 Eleza.....
57. Je mbinu za kuzuia kushika mimba zinapaswa kutolewa kwa vijana ambao hawajaoa?  
 Ndio:  La:
58. Unafahamu nini kuhusu elimu ya ngono? .....
59. Je unafikiria elimu kuhusu ngono inapaswa kufundishwa shuleni?  
 Ndio:  La:
60. Je unafikiria ni wakati gani mwafaka wa kufanya hivi? .....
61. Ni umri upi mwafaka wa kushiriki ngono kwa mara ya kwanza? .....
62. Nini au nani anastahili kutoa habari hii ili vijana wa kesho wasikose hii habari?  
 .....

63. Unadhani ni nani anapaswa kutoa elimu kuhusu  
ngono?.....

64. Elimu kuhusu ngono inafaa kuanza kufundishwa katika umri gani?  
.....

