RISKY SEXUAL BEHAVIOUR AMONG ADOLESCENTS ATTENDING PUBLIC SECONDARY SCHOOLS IN NAIROBI, KENYA

A DISSERTATION IN PART FULFILMENT FOR THE AWARD OF THE DEGREE OF MASTER OF MEDICINE IN PSYCHIATRY, UNIVERSITY OF NAIROBI

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DECLARATION

I, Dr. Jackline A. Ochieng' hereby declare that this dissertation is my original work and that I have not presented the same to any other university for the award of a degree.

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CERTIFICATE OF APPROVAL

This is to certify that this dissertation entitled 'Risky sexual behaviour among adolescents attending public secondary schools in Nairobi', is research work carried out independently by Jackline A. Ochieng' under our guidance and supervision.

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LIST OF ABBREVIATIONS

WHO –World Health Organization

HIV – Human Immunodeficiency Virus

AIDS – Acquired Immune Deficiency Syndrome

STIs/STD s – Sexually Transmitted Infections / Diseases

DEFINITION OF OPERATIONAL TERMS

Adolescent: A young person between ages 11 and 19 years (WHO).

Gender identity: A sense of maleness or femaleness (psychological aspect of behaviour related to masculinity or femininity, influenced by parental and cultural attitudes) (Sadock, 2007)

Sexual identity: Biological sexual characteristics (chromosomes, genitalia, hormones, gonads and secondary sexual characteristics) (Sadock, 2007)

Sexual behaviour: A psycho-physiological experience influenced by the brain and spinal cord. It is affected by psychosexual development, psychological attitudes towards sexuality and attitudes towards one's sexual partner. (Sadock, 2007)

Sexual intercourse: An act whereby a male inserts his penis into a female's vagina

Sexual orientation: Being heterosexual, homosexual or bisexual (Sadock, 2007)

Sexual coercion: That range of experience that compel someone to have sex against her or his will, including "violence, threats, verbal insistence, deception, cultural expectations and economic circumstances." The consequence being a "lack of choice to pursue other options without severe social or physical consequences." (Erulkar, 2004)

ABSTRACT

Introduction: Globally, the average age at which young people begin to have sex has steadily decreased. It has also been noted in Africa, that the age of initiation of sexual intercourse has dropped, predisposing the adolescents to the consequences of risky sexual behaviour at an early age (Imaledo et al., 2012). Adolescents in Kenya are sexually active, yet many do not take appropriate precautions to prevent pregnancy or the spread of sexually transmitted infections despite the information on sex education availed to them (Oindo, 2002). This research sought to study risky sexual behaviour amongst adolescents and to establish the predisposing factors from a psychosocial perspective. Adolescents, like adults, may be prone to engaging in risky sexual behaviour due to perceptions of personal invulnerability and their tendency to focus on the immediate, rather than long-term, consequences of their behaviour (Hall, Holmqvist & Sherry, 2004) Adolescence is a tumultuous stage, therefore striking a balance between healthy adolescent sexual experimentation and emotionally and physically safe sexual practices can be a major challenge for society.

Aim: The major aim of this research was to study risky sexual behaviour among the adolescents attending public secondary schools in Nairobi.

Study Design: A descriptive cross sectional study

Study Instruments: Researcher designed socio-demographic and psychosexual questionnaire.

Method: Convenient sampling was done and 499 students from form 1 to 4, completed Socio-demographic and Psychosexual questionnaires

Data Analysis: Data was double entered, cleaned and analysed using SPSS version 17 and inferential analysis. Results were presented in form of tables, charts, graphs and narratives.

Results: The prevalence of abstinence was 78%. Twenty five percent of the students were still engaging in sexual intercourse one week prior to interview. Most sexually active students were between 14 and 16 years of age (52% males, 40% females) and engaged in sex with partners who were of the same age group (47% males, 33% females). There was a significant association between gender and first sexual intercourse (chi square=45.537; p=0.000), the males being more sexually active than the females. Females (36%) had more partners who were above 20 years compared to males (3.6%) and the average number of sexual partners was one. Condom use at first sexual intercourse was 70% in males and 72% in females but reduced to 50% in males and 60% in females during the most recent sexual intercourse which

was one week prior to interview. The occurrence of teenage pregnancies in the sexually active group was 6% and that of sexually transmitted infections/diseases was 5%. There was a significant association between substance use and first sexual intercourse in this study (chi square=42.209; p=0.000), with alcohol being the most commonly used substance by both males (46%) and females (57%).

Conclusion: The youth are still engaging in risky sexual behavior despite all the educative information and preventive measures availed to them. Alcohol and other substance use are significantly associated with risky sexual behaviour, especially during their first sexual intercourse.

CHAPTER 1

1.0 INTRODUCTION

Adolescence is a transitional stage of physical, mental and physiological human development generally occurring between puberty and full maturation or adulthood. There is development of secondary sexual characteristics and their physiological maturation. Normal adolescent development involves increased interest in the opposite sex, concerns regarding physical and sexual attractiveness, frequently changing relationships, rules and limit testing as well as experimentation with sex. It is a period marked by turmoil and challenges, across all cultures and societies and may be associated with conflict between the adolescent and their parents, peers and society (Melvin, 2002).

Risky sexual behavior can refer to the behaviour itself, which may involve unprotected vaginal, oral or anal intercourse. It can also be in regard to the nature of the partner such as an intravenous drug user, a nonexclusive partner or a HIV-positive person. It can be in several forms, like having multiple sexual partners, engaging in risky sexual activities or even having sexual intercourse under the influence of substances such as alcohol or cocaine (Hall, Holmqvist & Sherry, 2004)

1.1 BACKGROUND

Adolescence, with its many changes, has long been considered a turbulent life stage. In addition to pubertal stages, the adolescent faces psychological challenges associated with peer relationships, their self identity and exploration of possible sexual relationships with the opposite sex. However, not all adolescents are affected by this turmoil. Most relate well with their families and peers and are comfortable with their social and cultural values (Melvin, 2002). It being a stage of turmoil, striking a balance between healthy adolescent sexual experimentation and emotionally and physically safe sexual practices is a major challenge for society.

In adolescence, reasonable risk-taking is considered normal as it leads to confidence in forming new relationships, sports and social institutions. However, high risk behaviours are associated with serious negative consequences which include drugs and alcohol use, unsafe sexual practices, self injurious behaviour and reckless driving (Sadock, 2007).

Risky sexual behaviour can be defined as unprotected penetrative sexual contact which may involve; initation of sexual intercourse at an early age, multiple sexual partners, sexual

intercourse under the influence of alcohol or other substances of abuse, lack of contraceptive use, sexual intercourse under coercion and sexual abuse.

Factors that influence adolescent sexual behaviour include personality traits, gender, cultural and religious background, racial factors, family attitudes, sex education and prevention programs (Sadock, 2007). However, psychosexual factors also come into play, as they affect personality, growth, development and functioning of the adolescent. These include sexual identity, gender identity, sexual orientation and sexual behaviour (Sadock, 2007).

Risky sexual behaviour exposes the adolescents to harmful consequences, both physical and psychological. These include teenage pregnancy, sexually transmitted infections and diseases, abortion, major depression, suicidality, post traumatic stress disorder (PTSD) among others.

Other issues of concern as regards adolescent sexual behaviour are casual sex, use of contraception, abortion, masturbation, pornography and prostitution. These also need to be addressed as they may have psychological consequences to the adolescent, such as regret and guilt, loss of self respect and low self esteem, stunting personal development, shaken trust and fear of commitment in future relationships.

1.2 PROBLEM STATEMENT

Globally, the average age at which young people begin to have sex has steadily decreased. The risk of unplanned pregnancy, HIV infection and other STIs increases with the frequency of unprotected sexual intercourse. In the last several decades there have been substantial increases in the proportion of adolescents who report sexual activity at each year of age. Thus, more than twice as many females aged 14, 15, and 16 are sexually active now, compared with young women of the same ages just 15 years ago. On average, there are seven years for women and ten years for men between first intercourse and first marriage. This creates a substantial interval of risk for non-marital pregnancy (Moore et al., 2008).

In Kenya, most of the studies that were done on adolescent sexuality in were in the 1990s, hence there is need to find out if there are any changes in the trends of sexual behaviour currently. The studies were done in other towns such as Machakos, Nakuru and Kisumu but not in Nairobi. Based on the magnitude of the problem and the gaps of knowledge in this area, this study sets out to study risky sexual behaviour amongst adolescents attending public secondary schools in Nairobi.

CHAPTER 2

2.0 LITERATURE REVIEW

Globally:

Initial sexual intercourse experiences are usually important and sometimes defining events in the lives of young people. Early timing of sexual initiation is significant because, the younger the age of first sexual intercourse, the more likely that the experience was coercive, and forced sexual intercourse is related to long lasting negative effects. The younger the age of first sexual intercourse, the greater the risk of unwanted pregnancy and sexually transmitted infections. This is because those who begin having sex at young ages are generally exposed to risk for a longer time, are less likely to use contraception, generally have more sexual partners, and tend to engage in higher risk sexual behaviours such as alcohol or drug use prior to sexual intercourse and having multiple concurrent sexual partners (Moore et al., 2008).

Many adolescents still choose to initiate sexual intercourse and engage in risky sexual behaviour despite knowledge of the consequences. Their decision is influenced by various factors as seen in a study of students between ages 13 and 18. The study found that not initiating sex was associated with having a two-parent family and higher socioeconomic status, residing in a rural area, performing better in school, feeling greater religiosity, not having suicidal thoughts, and believing parents care and hold high expectations for their children (Lammers et al., 2000).

Studies of high school youth found links between the number of sexual partners and other risk behaviours such as carrying a weapon, physical fighting and using alcohol, marijuana and/or cigarettes (Valois et al., 1999). Across ethnicity and gender, alcohol use was the only risk behaviour that was significantly and consistently associated with an increase in the number of sexual partners (Valois et al., 1999). It was also found that 17% of teenagers between 13 and 18 years who have had an intimate encounter say they have done something sexual while under the influence of drugs or alcohol that otherwise they might not have done (Kaiser Family Foundation, 1998).

Physical and sexual abuse was related to increased high risk activity. In a study of over four thousand high school students (30.2% of females and 9.3% of males) report on history of sexual abuse, abused males were four to five times as likely as non-abused males to report multiple partners, substance use at last sex, and involvement in a pregnancy and abused females were twice as likely as non-abused females to report early coitus, multiple partners,

and a past pregnancy (Raj et al., 1997). Another study found a significant relationship for both black and white females between having been a victim of dating violence and/or date rape and the number of sex partners. For males, a significant association existed between multiple sexual partners and being victims of rape (whites) or being a perpetrator or victim of dating violence (blacks) (Valois et al., 1999). Religiosity was also found to influence sexual behaviour as seen in a study of youth aged 11 to 25 years who were not sexually active and scored higher than sexually active youth on the importance of religion in their lives and reported more connections to friends whom they considered to be religious or spiritual (Holder et al., 2000).

Peer influence also affects adolescent sexual activity. In the Adolescent Health (Add Health) Survey of students in grades 7 through 12, when factors of family structure, wealth, education and popularity were controlled, a female's close group of friends had the most influence on the timing of sexual debut. Adolescents whose friendship network included mostly low-risk friends were half as likely to experience first intercourse as were adolescents whose close friend network was composed mostly of high-risk friends (Bearman & Brückner, 1999). The Kaiser Family Foundation (1998) found that 13% of young men between 13 to 18 years cited pressure from their friends compared to 7% of young women and 8% of young women and 1% of young men cited pressure from a partner as a factor contributing to why they had sex for the first time.

In another study, about 48% of 13 to 15 year old male and female respondents said they talked to their friends about sexuality issues. Females were more likely to discuss many sexuality issues with their mothers, while less than 20% talked with their fathers about any sexuality issue. Fewer males than females reported talking with friends or parents about sex-based topics. However, male teens were about as likely to talk with their mothers as with friends and only slightly less likely to talk with their fathers (Dilorio et al., 1999).

Good parent –child relationships, academic aspirations and sports participation was also found to promote healthy sexual decisions by adolescents. A study by Dittus & Jaccard (2000) showed that teenagers who reported being highly satisfied with their relationship with parents were 2.7 times less likely to engage in sex than teenagers who had little satisfaction with their parental relationships. Relationship satisfaction was associated with a lower probability of engaging in sex, higher probability of using birth control if sex occurred, and lower probability of pregnancy during the ensuing twelve months.

Research suggests that parents can strongly influence their teenager's sexual behavior. Parents' marital status, their disapproval of and discussion with teenagers about the standards

of behavior and the social and moral consequence of teenage sexual activity as well as parental monitoring all appear to impact teenagers' decisions to engage in sexual activity. Parental involvement in their teenagers' lives, to the extent of even watching television with them and limiting their television viewing, reduced the adolescents' likelihood of being sexually active (Bersamin et al., 2008). Even the youth whose parents talked to them about what is right and wrong in sexual behaviour were significantly more likely to be abstinent than peers whose parents did not (Aspy et al., 2007). Children whose parents showed stricter monitoring of their behaviour during pre-adolescence were 30% less likely to be sexually active unlike those who were not monitored (Longmore, Manning & Giordano, 2001) and the more mothers communicated with their adolescents about the social and moral consequences of sexual activity, the less likely adolescents were to engage in sexual intercourse (Guilamo-Ramos et al., 2006).

Parents' marital status, family structure and stability all influence the adolescents' sexual behaviour. According to Hogan, Sun & Cornwell (2000), teenage girls were less likely to be sexually active if their parents were married at the time of their birth. Adolescent females aged 15 to 19 years whose parents were married at the time of the adolescent's birth were 42% less likely to report having engaged in sexual activity when compared to similar adolescents whose parents were cohabiting at the time of the adolescent's birth and 26% less likely to report having engaged in sexual activity when compared to similar adolescents whose parents were not living together at the time of the adolescent's birth. Young et al. (1991) also found that compared to adolescents from two-parent families, adolescents from single-parent families were significantly more likely to report having ever had sexual intercourse.

On average, adolescents whose mothers divorced tend to have more sexual partners than peers who did not experience parental divorce. Adolescents whose mothers had a premarital pregnancy or were married at a young age and those whose mothers expressed more accepting attitudes about teen sexual activity tended to report having had sex with more partners than their peers (Thorton & Camburn, 1987). Another study by Witbeck, Simons & Kao (1994) showed that teenage boys whose mothers date more often and more quickly after a divorce are more likely to be sexually active. Among a sample of recently divorced mothers and their adolescent children, mothers' dating behaviours (number of dating partners, frequency of dates, length of time began dating after divorce) were directly related to their son's sexual activity. Sons whose divorced mothers dated often, had multiple dating partners,

and dated soon after divorce were more likely to report having been involved in heavy petting or sexual intercourse.

Other aspects of family that influence risky sexual behaviour include living in a step-parent household, living in a poor household, having siblings who are sexually active, feeling unloved, unwanted or not respected by parents. Community factors such as having few positive experiences at school, living in a neighbourhood with poor neighbourhood monitoring also play an important role (Morgan & Huebner, 2002).

The source of knowledge of sexuality varies with the adolescents. According to Couric (2005), about 70% of teenagers said they got some or a lot of information about sex and sexual relationships from their parents. Other sources of information included friends at 53%, school, also at 53%, television and movies at 51% and magazines at 34%. School and magazines were sources of information for more girls than boys, and teens "who were sexually active were much more likely to say they got information about sex from their friends and partners."

Various studies have shown that the American media is the most sexually suggestive in the world, and that "the media far outranked parents or schools as the source of information about birth control" (Strasburger, 2005). Research also found a direct relationship between the amount of sexual content children see and their level of sexual activity or their intentions to have sex in the future (Brown, 2004; Jones, 2006). Luscombe, in 2008 also showed that adolescents whose media diet was rich in sexual content were more than twice as likely as others to have had sex by the time they were sixteen.

The internet is also a major contributor of wrong information about sex to the adolescents. Sullivan, in 2008 showed that more that 90% of the children between 3rd and 10th grade are exposed to pornography, and that access, affordability and anonymity has made online sexual activity extraordinarily common among all ages, including adolescents. Adolescents who intentionally seek out pornography both online and off were found to be older youth, mostly male (Ybarra & Mitchell, 2005). The average age a boy will first view pornography was found to be 11 years and experts say that "it is the major form of sex education today for boys" and a "cultural force that is shaping the sexual attitudes of an entire generation."

As regards current trends in sexual behaviour, The National Centre for Health Statistics reported that half of all 15 to 19 year olds have had oral sex, with the percentage rising by the time they turn 19, with equal numbers of boys and girls participating. Many teens, especially from middle and upper income white families did not consider oral sex to be as significant or

meaningful as older generations do (Stepp, 2005). A Guttmacher Institute study in 2007 found that slightly more than half (55%) of 15 to 19 year olds have had heterosexual oral sex, 50% have had vaginal sex and 11% have had anal sex, and that the prevalence of both vaginal and oral sex among adolescents has remained steady over the past decade. Almost half of boys (47%) and fewer girls (38%) believed that oral sex is not a big deal compared to sexual intercourse, and 55% of teens believed that it was very important to be in love before engaging in oral sex (Couric, 2005).

It was also found that among the young people engaging in some form of sexual activity, definitions of virginity differed. 83% of adolescents between 12 to 16 years believed that one was still a virgin after engaging in genital touching while 70% believed that one retained their virginity after having oral sex. However, 44% believed that one was abstinent after genital touching and 33% believed one could have oral sex and still remain abstinent (Bersamin et al., 2007). This means that it is important to clarify to the adolescents what is meant by abstinence and virginity.

Brady and Halpern-Felsher (2007) reported that experts from University of Carlifornia, San Fransisco encouraged sex educators to include oral sex and emotional concerns as part of their curriculum. Their findings also supported earlier studies that concluded that sexual risk-taking should be considered from a dynamic relationship perspective, rather than solely from a traditional disease-model perspective. They noted that prevention programs rarely discussed adolescents' social and emotional concerns regarding sex. Discussion about potential negative consequences, such as experiencing guilt or feeling used by one's partner may lead some adolescents to delay the onset of sexual behaviour until they feel more sure of the strength of their relationship with a partner and more comfortable with the idea of becoming sexually active. Identification of common negative social and emotional consequences of having sex may also be useful in screening for adolescents at risk of experiencing more serious adverse outcomes after having sex.

In a broad analysis of data from the National Longitudinal Study of Adolescent Health, researchers found that engaging in sex leaves adolescents, especially girls, with higher levels of stress and depression. Sexually active girls were more vulnerable to depression, suicidal ideation and suicide attempt than sexually active boys, but the risk of depression was clearly elevated for the sexually active of either gender (Hallfors et al., 2005). Depression, anxiety and increased stress was observed to accompany the abuse of alcohol and drugs in sexually promiscuous teenagers (McDonough, 2008). While teenagers may have believed that their sexual activities are fine at the time, they felt very differently with time and regretted the

choices they made. 2/3 of sexually active girls wished they had waited longer before having sex (Lelchuk, 2007). Sex therapists also found that the roots of sexual issues facing adults often dated back to regretful teenage experiences (Lukas, 2005). Hence the need to screen sexually active adolescents for depression and provide them with anticipatory guidance about the mental health risks of these behaviours (Hallfors et al., 2005).

Africa:

In the African situation, Ojwang & Maggwa (1991) reported that the age of menarche had dropped from 17 to 12-15 years. In Machakos, a Kenyan rural town, 41.9% of the girls and 76.1% of the boys between 12 and 23 years had at least one sexual experience. The mean age at first coitus was 13.7 years for boys and 14.9 years for girls. 42% of the girls and 74.8% of the boys had more than one sex partner. Only 2-6% used any form of contraception. 58.4% of rural and 64.4% of urban pregnant girls were found to be in primary school at the time of conception. 8340-10,400 girls were reported to drop out of school each year. 46.6% of the girls who were pregnant were not married. Abortions among adolescents accounted for 28-64% of abortions done in hospitals, but most abortions were criminal, frequently performed by inexperienced people in unsanitary conditions. 36.8% of pregnant adolescents had at least one STD, compared to 16% of those aged 25 years and above. In comparison, a study in Transkei, South Africa showed that 25% of births were to teenagers, 75% of them unmarried. 74.6% of the females in secondary schools were sexually active, 18.7% of them having initiated coitus before menarche. Only 23.5% of them had used a modern method of contraception and 23.5% reported at least one pregnancy. Mean age at menarche was 13.91 years, first date was 14.47 years and first coitus was 14.86 years.(Buga, Amoko & Ncayiyana, 1993)

Maggwa (1987) found that 79.4% of girls and 69.3% of boys felt that sex is not enjoyable when planned for, while 80% of them felt that family planning methods were dangerous and it was sinful to use them. Knowledge about fertility and sexual practice was poor, with less than 50% showing what could be considered as correct knowledge. As the years have advanced, it is noticed that there are some changes in the statistics in the various aspects of adolescent sexuality. Oindo, in 2002 found that majority (73.5%) of the youth in Kisumu were sexually experienced, with most of the first sexual experiences occurring between 15 to 19 years. 74.4% were sexually active, with 84.4% engaging in regular sexual encounters and 79.7% maintaining single partner sexual encounters.

There was also a high level (99.2%) of knowledge of contraceptive methods and a positive attitude towards contraception, but the level of contraceptive use by the sexually active was lower (57.5%). This was influenced by the individual's background and health delivery systems and policy.

According to Kiragu and Zabin, a survey done in 1989 about contraceptive use among 2,059 secondary school students in Nakuru, Kenya showed that 69% of males and 27% of females were sexually experienced. Among these, 49% of males and 42% of females had ever used contraceptives while 25% of males and 29% of females had used a method the last time they had sex. 31% of males and 29% of females had used a method the first time they had sex. The condom was most commonly used at last intercourse, followed by "safe period" and the pill. They mostly obtained contraceptives from clinics, while others relied on friends. The females of high socioeconomic status and high academic achievement with favourable attitude towards contraception were found to have higher tendency to use contraceptives at first and last sexual encounters. The males who said their partner approved of contraception were twice as likely to have used a method at last sex.

Motivating factors amongst the girls in Kisumu, Kenya, for initiating sexual intercourse were pleasure (78.4%), obligation (15.6%) and material gain (5%) (Oindo, 2002). On the other hand, in Transkei, South Africa, the reasons given by secondary school girls were, being forced by partner (28.4%), peer pressure (20%), carried away by passion (15.1%), to prove normality (11.7%), and to prove love of boyfriend (10.1%) (Buga et al., 1993).

About 89.5% of the youth acknowledged the risks in sexual relationships. STI/HIV was viewed as the greatest risk (65.3%) followed by unwanted pregnancy (34.1%) then abortion and psychological problems (0.6%). Consequently, about 51.3% of the youth believe that contraceptive use is the main precaution against the risks, then abstinence (42%) and being faithful to one's sexual partner (6.7%). The reasons given by sexually inexperienced girls for delaying sexual intercourse were religious values(25.4%), fear of pregnancy (23.8%), wish to wait for marriage (20%), fear of AIDS (15.6%), not emotionally ready (8.6%) and fear of other STDs (6.4%). They had very little knowledge of reproduction, as only 19% were able to identify the fertile phase of the menstrual cycle. Majority of the girls disapproved of premarital sex while in school, but few supported inclusion of sex education in the school curriculum (Buga et al., 1993).

In 1987, Maggwa found that the most important source of information about sex was teachers followed by friends, and that parents and the church played a very minor role.

Several years later, in 2002, Oindo found that most youth got their contraceptive knowledge from educational institutions and peers, rarely from parents or relatives.

As regards the consequences of risky sexual behaviour, research in sub-Saharan Africa has identified various socio-economic, psychological and physical consequences. Some of the consequences of engaging in early sexual debut, unprotected sex and multiple sexual partners include premarital childbearing, which may be accompanied by pregnancy complications, low birth weight infants, unsafe abortions, risk of contracting HIV/AIDS and other STIs (Al-Azar, 1999; Ashford, 2002; Ankrah, 1996; Glover et al., 2003; Zabin & Kiragu, 1998; Cherlin & Riley, 1986; Population Council, 1994). Socio-economically, girls are most affected by premarital pregnancy and childbirth as they end up dropping out of school, having less stable marriages and jobs thus relying on others for assistance (Al-Azar, 1999; Cherlin & Riley, 1986; Kaufman et al., 2000). Psychological effect for girls can be due to stigmatization after an abortion, or even in settings where premarital pregnancy itself is not socially acceptable. Both boys and girls may get psychological effects of HIV/AIDs and STIs especially in area where the diseases are associated with stigma. (Population Council, 1994; ICRW, 2002)

Studies in rural Kenya showed that whereas boys viewed fathering as a sign of masculinity, they acknowledged the fact that premarital pregnancy would ruin a girl's reputation and future (Nzioka, 2001). Other consequences included loss of friends, limited chances of success life and being disowned by parents. In Guinea, a study by Gorgen et al. (1998) on sexual behaviour and attitudes among unmarried youths in three urban centres showed that adolescents viewed the social consequences of premarital pregnancy as being ridiculed by peers and teachers, severe punishment as well as banishment from home. A study in Kenya and Nigeria showed that there were negative consequences of premarital pregnancy, especially for girls. These included being forced out of school, punishment by parents, expulsion from home, poverty and being disowned by the boyfriend. The boys tended to ignore the question of how making a girl pregnant would impact on their lives and instead focused on how it would affect the girl's life (Barker & Rich, 1992). In Mbale, Uganda, Hulton et al. (2000) showed that female participants identified consequences such as abortion which could lead to death, inability to provide for the child as well as possibility of parents withdrawing their support. The males did not perceive any risks to themselves in the event that they made a girl pregnant except in terms of being fined or imprisoned for it.

Kekovole et al. (1997) in a survey of information, education and communication (IEC) in Kenya asked adolescents about the ideal age for sexual debut for young people. Results

showed that the older adolescents felt the best age was 17 to 19 years for girls, and 19 to 21 years for boys. Respondents were more likely to endorse premarital sex for boys than for girls and the expulsion for girls who became pregnant while in school. More boys than girls supported abortion if the girl's life was in danger. In Guinea, the preferred age for sexual debut was 15 to 18 years (Gorgen et al., 1998) while in Benin City, Nigeria, it was found that females usually initiated sex at 11 to 13 years and males 14 to 15 years. (Temin et al., 1997)

It has been noted that majority of interventions to prevent risky sexual behaviour are female-focussed, and either fail to include males in the intervention, or fail to consider the role of males in teen pregnancy at all. In addition, sexual coercion has been linked with early sexual activity, a fact that should be considered when designing interventions. It is difficult to prevent pregnancy by increasing a female's knowledge and motivation to prevent pregnancy if the female's becoming pregnant as a result of a non-voluntary sexual experience. (Moore et al, 2008)

Whereas there seems to be some agreement on these potential reproductive health challenges facing adolescents in the region today, a more complete understanding of these challenges requires a wholesome approach towards the individual. Their mental wellbeing is also important, hence the need to address psychological effects of their sexual behavior. How the adolescents themselves perceive the socio-economic, health and psychological implications of their sexual behaviours is also important to note, as this will help them make better decisions in future as well as to influence their peers positively.

2.1 JUSTIFICATION OF THE STUDY

Adolescent sexuality is an important aspect of adolescence and behavioural sciences. With regard to reproductive health, a lot of attention has been given to the physical consequences of risky sexual behaviour. However, there is need to have a holistic approach which deals with the physical, psychological and social aspects of the adolescent sexual behaviour. Despite several campaigns on abstinence before marriage, the reality is that many adolescents are engaging themselves in pre marital sexual intercourse. In the past decades, a lot of awareness and prevention programmes have been rolled out to promote safe sexual practices hence a decline in the prevalence of teenage pregnancies, sexually transmitted infections including HIV/AIDS. The studies on adolescent sexuality done in Africa and Kenya were mostly in the 1990s. Data available for Kenya were of studies done in Machakos, Nakuru and Kisumu, but not Nairobi.

Based on the persistence of the problem and the gaps of knowledge in this area, this study set out to study risky sexual behaviour amongst adolescents attending public secondary schools in Nairobi and to establish the factors that still led to adolescents engaging in risky sexual behaviour despite all the information availed to them. The findings would be useful for policy makers and other stakeholders interested in formulating policies or programmes to address issues of risky sexual behaviour among adolescents in order to provide holistic adolescent health care, which includes mental health.

2.2 RESEARCH QUESTIONS

The study intended to establish baseline data on sexual behaviour that is considered as risky, by asking the following questions:

1. What is the prevalence of abstinence amongst the adolescents in the study population?
2. What is the age of initiation of sexual intercourse amongst the adolescents in the study population?
3. What is the prevalence of contraceptive use and condom use by the adolescents in the study population?
4. What is the age of and the average number of sexual partners of the sexually active adolescents in the study population?
5. Are the adolescents in the study population engaging in sexual intercourse while under the influence of alcohol and/or other substances of abuse?
6. What are the social and demographic characteristics of the study population?

2.3 OBJECTIVES

2.3.1 Broad Objective

To study risky sexual behaviour among the adolescents attending public secondary schools in Nairobi.

2.3.2 Specific Objectives

1. To determine the prevalence of abstinence amongst the adolescents in the study population.
2. To establish the age of initiation of sexual intercourse amongst the adolescents in the study population.
3. To determine the prevalence of contraceptive use and condom use by the adolescents in the study population.
4. To establish the age of and average number of sexual partners of the sexually active adolescents in the study population.
5. To determine the association between risky sexual behaviour and substance use.
6. To determine the social and demographic characteristics and their association with risky sexual behaviour of the study population.

CHAPTER 3

3.0 METHODOLOGY

3.1 Study design

The research was a cross sectional descriptive study.

3.2 Study area

The study was carried out in Nairobi County, situated at an altitude of about 1660m (5450ft) above sea level, in the highlands of the southern part of Kenya. Nairobi's population according to the 2009 Census stood at 3,138,295 people, living within 696 km^2 (269 sq mi). The capital city, Nairobi is cosmopolitan, representing all regions of Kenya.

Nairobi is divided into 8 constituencies namely, Dagoretti, Embakassi, Kamukunji, Kasarani, Lang'ata, Makadara, Starehe and Westlands. The main administrative divisions are Central, Dagoretti, Embakassi, Kasarani, Kibera, Makadara, Pumwani and Westlands. Most of the upmarket suburbs are to the west and north-central of Nairobi where most European settlers lived during colonial times. Some lower income areas are also found close by. Most upper and lower middle income neighborhoods are in the north-central areas as well as the south-east and south-west of the metropolitan area near the Jomo Kenyatta International Airport. The low and lower income areas are mainly in the far eastern Nairobi. Most slum dwellers live in extreme poverty, earning less than $1.00 per day. Cases of assault and rape are common, and there are many people living with HIV and AIDS in the slums. There are few schools and most inhabitants cannot afford to educate their children.

Nairobi Province was divided into 4 districts in 2007, namely Nairobi East, Nairobi North, Nairobi West and Westlands. In 2010, according to the new constitution, Nairobi was renamed a County.

3.3 Study population

There are about 75 public secondary schools in Nairobi County. There is an average of 540 students in each school that is, 3 streams of between 40 and 50 students per class. Therefore the estimated study population was approximately 40,000 students.

3.4 Sampling method

One school was randomly selected from each of the four districts in Nairobi County. An updated list of public secondary schools in Nairobi was obtained from the Ministry of Education and the schools were arranged according to their respective districts. The name of

each school was written on a piece of paper, folded up and put in a container then one school was blindly picked from each container.

Once in the selected school, convenient sampling of one stream, which includes classes from form 1 to form 4 was done. With a total minimum sample size of 480 students, the estimated minimum number of students per school was 120. Consent forms were signed then the students were given the self administered questionnaire to fill.

3.5 Inclusion criteria

1. The public secondary school students of Nairobi County, in forms 1 to 4.
2. Those whose school principal/ head-teacher gave consent and students gave assent to participate in the study.
3. Those who volunteered to participate.

3.6 Exclusion criteria

1. The students in private secondary schools of Nairobi County
2. Those who refused to give consent/ assent
3. Those who declined to participate in the study

3.7 Sample size

This was determined using the Fischer et al. (1998) formula

$nf = n / [1 + n/N]$

where nf= desired sample size (N< 10,000)

n= desired sample size (N> 10,000)

N= estimated population size

Calculating the sample size: n=480

N= 40, 000

Therefore, nf=480/ [1+ 480/40,000]=474.3083

The minimum sample size was 480 students.

3.8 Study Instruments

Socio-demographic questionnaire

A researcher designed questionnaire that captured identification data, age, sex, religion, class amongst other relevant demographic variables.

Psychosexual questionnaire

The questionnaire was also researcher designed to capture the adolescents' psychosexual history and as well as the knowledge, attitudes and current trends in sexual behaviour of the adolescents in the study population.

3.9 Variables

The dependent variables were abstinence and risky sexual behaviour while the independent variable was being an adolescent. Other variables included age, gender and birth order of the student, the class of the student and whether they were in day school or boarding school, the religion of the student. Where the student lived, who the student lived with, whether both parents, one parent or none of the parents were alive, the marital status of the parents, parent or guardian's occupation were other variables. A possible confounding factor was thought to be the school setting. For example, in a strictly religious school, some of the students may not have been very honest in giving information about their sexual behaviour and perhaps just gave the information that was expected of their good behaviour.

3.10 Study Implementation

After obtaining approval from the Ethics and Research Committee as well as the National Council for Science and Technology and Ministry of Education, the researcher obtained permission from the school administration of the selected secondary schools. The researcher then followed the plan on ethical considerations, sampling and inclusion/exclusion criterion before administering the questionnaires.

The researcher then proceeded to the selected classes and give the students the self administered questionnaires to fill. The students were reassured that their identity would not be revealed, hence their confidentiality would be safeguarded. No teachers were allowed into the room, so as to prevent bias. The researcher explained to the participants how to fill the questionnaire and granted them adequate time, of about one hour, to fill it. The filled questionnaires were then collected by the researcher and stored in a waterproof bag and securely delivered to the data entry point, whereby the assistance of a statistician was sought do the data management and processing.

3.11 Ethical information for participants

The research study involved only willing participants. A detailed explanation of the study was given and adequate time offered to the participants to make a decision to participate. Participation in the study was voluntary therefore those who declined or dropped out in the middle of the study were not penalized in any way.

Confidentiality was ensured at all levels. Serial numbers were used and no identification by name or description in any reports was made. The students who took part in the study were requested to fill in the questionnaires as honestly as they possibly could. These were self-administered instruments especially because of the sensitive information being collected like drug use and sexual behaviour.

It was anticipated that some of the participants would re-experience emotional distress from memories of bad experiences they may have gone through in their earlier years. The affected students were advised to talk to the researcher who would refer them appropriately to a professional counsellor, psychologist or psychiatrist based on their need. No invasive procedures were used.

There was no form of compensation or financial benefit to the participants in the study and there were no charges either.

The researcher gave her contacts: telephone number +254720859186 or The University of Nairobi, Department of Psychiatry at Kenyatta National Hospital on telephone numbers 726300-9.

3.12 Data Management and Processing

The researcher was assisted by a statistician during the data management and processing stage. The data was collected using the researcher designed socio-demographic and psychosexual questionnaires. The questionnaires were then checked for completeness and arranged according to codes then entered for computer analysis. The descriptive and inferential statistics were analysed using the statistical package for social scientists (SPSS) version 17. Results were presented in form of tables, charts, graphs and narratives.

3.13 Study Limitations

The study was limited to public schools within Nairobi County because carrying out such a study in other counties would be difficult due to time and financial constraints. However, through the use of random sampling procedure, every public school in the county had a chance of being included in the study. The schools chosen therefore acted as representatives of all public schools or the study population.

Only students from public schools were interviewed, which could have omitted important data from private secondary school students. This was partly due to time and financial constraints and the fact that some of the schools had very few students thus may not have met the minimum requirement of the sample size per school. That was managed by dividing Nairobi County into the four districts, each representing a different socio-economic class and randomly sampling the public secondary schools therein.

The students may not have been completely honest while filling the questionnaires but attempts to manage that was by the researcher verbally re-emphasizing that confidentiality would be highly maintained by not involving any school staff member in the data collection process.

3.14 Time Schedule

Proposal Development .....Apr -Nov 2011

Presentation to Department of Psychiatry..... Dec 2011

Ethical Committee Clearance..... Jan-May 2012

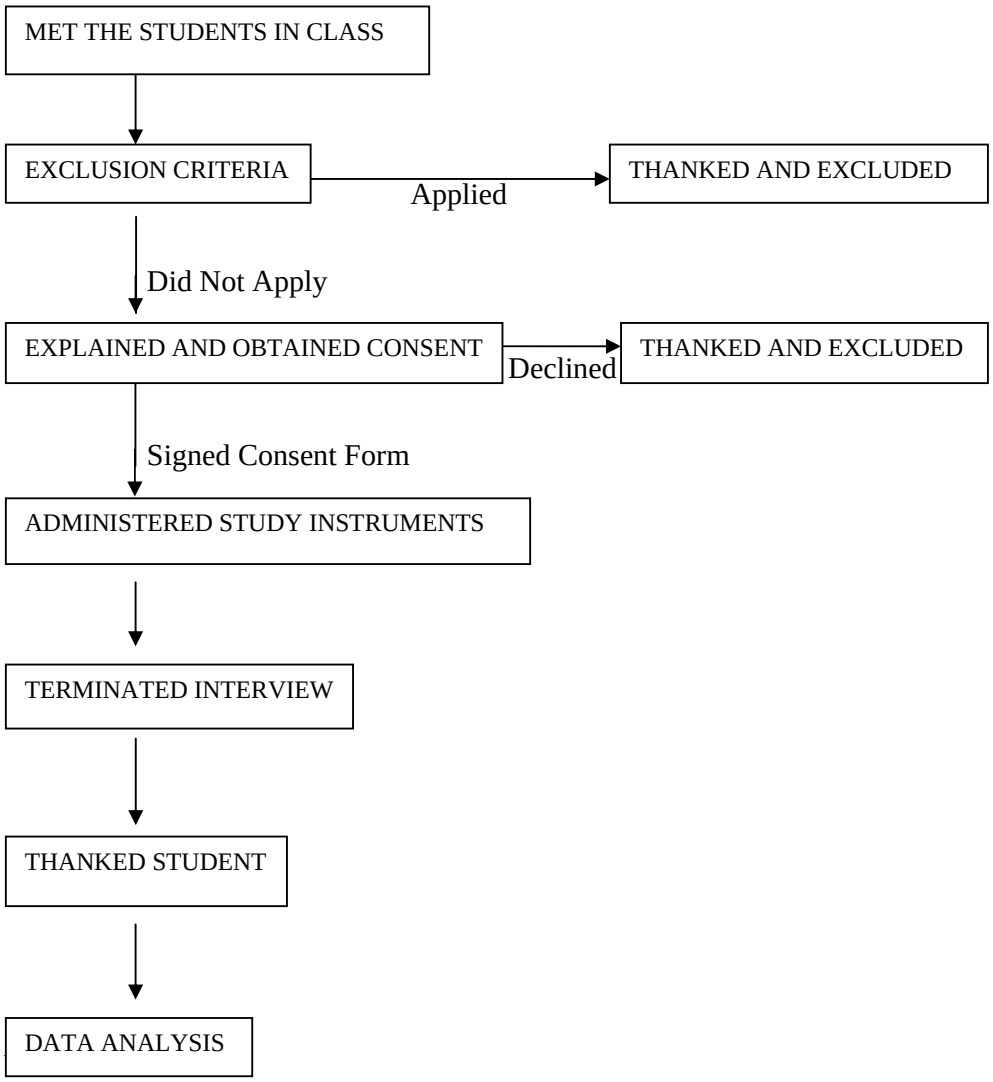
Data Collection and Analysis..... May-Jun 2012

Report Writing.....Jun 2012

Presentation to Dept of Psychiatry..... Jun 2012

Submission of Dissertation to Department of Psychiatry .....Jun 2012

3.15 Flow Chart



3.16 Budget (Kenya Shillings)

Internet and Communication Costs 15,000

Transport 20,000

Computer Printing and Photocopying..... 25,000

Stationery 15,000

Data Analysis/ Statistician..... 10,000

Dissertation Typing and Binding 5,000

Contingencies 10,000

Total 100,000

CHAPTER 4

4.0 RESULTS

Four hundred and ninety nine students participated in the study, 239 (47.9%) males and 260 (52.1%) females. The students who participated were between 13 and 22 years. The mean age was 16.76 years, median age was 17 years and mode was 16 years. Most of the students were Protestants 266 (53.3%) and 383 (76.8%) of the participating students reported that they were active members of their places of worship. Form 2 students (10 years of school) were the most, representing 35.7% of the total participants while Form 4 students (12 years of school) were the least, 33 (6.6%). Majority, 404 (81.0 %) were day scholars. Fifty three percent of the students resided in Lang'ata constituency, with half of them coming from Kibera slums. Most of the students, 277 (55.4%) lived with both parents, followed by those who lived with mother only, 112 (22.4%). See table 1 overleaf.

Three hundred and eighty one (76.3%) of the students reported that their parents were married while 43 (8.6%) had parents who were either separated or divorced. Fifty five (11%) of their mothers were widows while 20 (4%) were raised by single mothers. Thirty eight (7.6%) of their fathers were widowers, 1 (0.2%) was raised by a single father while 36 (7.2%) did not know who or where their father was. See figures 1 and 2 below.

Figure 1: Mother's marital status

Figure 2: Father's marital status

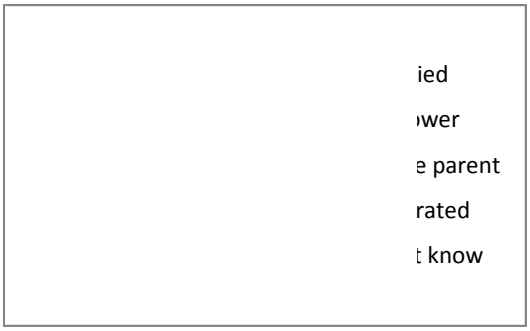


Table 1: Socio-demographic characteristics of the study participants

	Frequency	**Percentage (%)**
Gender		
Female	260	52.1
Male	239	47.9
Total	**499**	**100**
Age		
13	1	0.2
14	10	2
15	66	13.2
16	156	31.3
17	132	26.5
18	83	16.6
19	39	7.8
20	7	1.6
21	3	0.6
22	2	0.4
Total	**499**	**100**
Religion		
Protestant	266	53.3
Catholic	143	28.7
Muslim	90	18
Total	**499**	**100**
Class		
Form 1	134	26.9
Form 2	178	35.7
Form 3	154	30.9
Form 4	33	6.6
Total	**499**	**100**
Day/Boarding School		
Day Scholar	404	81
Boarder	95	19
Total	**499**	**100**
Residence		
Dagoretti	47	9.4
Embakassi	23	4.6
Kamukunji	1	0.2
Kasarani	7	1.4
Lang’ata	264	52.9
Makadara	3	0.6
Starehe	133	26.7
Westlands	21	4.2
Total	**499**	**100**
Student currently living with		
Both parents	277	55.4
Father	35	7
Mother	112	22.4
Guardian	46	9.2
Sister/Brother	12	2.4
Aunt/Uncle	14	2.8

Cousins	3	0.6
Total	**499**	**100**

Among the mothers who were alive, 23.9% were unemployed and out of the fathers who were alive, 13.6% were unemployed. 13% of the guardians were also unemployed.
See table 2 below.

Table 2: Employment status of parents and guardians

	Employed	**Self-employed**	**Unemployed**	**Total**
Mother	191 (41.4%)	160 (34.7%)	110 (23.9%)	461 (100%)
Father	240 (57.9%)	120 (29%)	54 (13.1%)	414 (100%)
Guardian	34 (57.6%)	17 (28.8%)	8 (13.6%)	59 (100%)

Thirty percent of the students admitted they had ever used drugs/ substances of abuse. Some of the students reported use of multiple substances, the most common being alcohol, 70 (35%) followed by khat, 60 (30%). Twenty eight (14%) students used cannabis while 26 (13%) used tobacco. Fewer students admitted to have used heroin, 8 (4%) and cocaine, 3 (1.5%). Other substances such as 'shisha', jet fuel and glue made up 2.5%. See table 3 below.

Table 3: Use of Drugs/ Substances of abuse

	Frequency	**Percentage (%)**
Use of Drugs		
Yes	151	30.2
No	348	69.8
Total	**499**	**100**
Types of drugs used		
Alcohol	70	35
Tobacco	26	13
Cannabis	28	14
Khat	60	30
Heroin	8	4
Cocaine	3	1.5
Others ('Shisha'/Jet fuel/Glue)	5	2.5
Total	**200**	**100**

Most of the girls (82) started their menstruation at 13 years, while most of the boys (57) started their wet dreams at 14 years. See figures 3 and 4 below.

Figure 3: Age girls started menstruation, ranging from 9-16 years

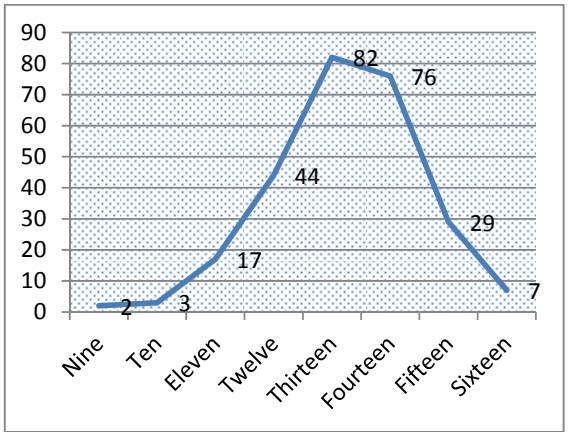
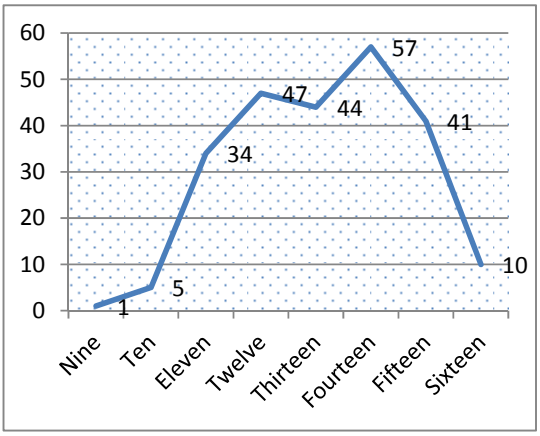


Figure 4: Age boys started wet dreams, ranging from 9-16 years



Twenty two percent (110) of all the students who participated in the study admitted ever having sexual intercourse. Thirty six percent (85) of the males and ten percent (25) of the females had ever had sexual intercourse. During their first sexual experience, majority of the students were willing (72% of males and 64% of females). Seventeen percent of males and 20% of females reported that they were coerced while 12% of the males and 16% of the females were forced. 69% of the males and 72% of the females used contraceptives during their first sexual encounter. 89% of the females ensured their partners used condoms while 11% of the females used pills. 31% of the males and 20% of the females reported that they had taken drugs during their first sexual intercourse. Alcohol was the most commonly used substance by both the males (46%) and females (57%). See table 4 overleaf.

Table 4: First sexual experience

	Male		**Female**	
	Frequency	**Percentage (%)**	**Frequency**	**Percentage (%)**
Ever had sexual intercourse?				
Yes	85	35.6	25	9.6
No	154	64.4	235	90.4
Total	**239**	**100**	**260**	**100**
First sexual encounter				
Willing	61	71.8	16	64
Coerced/ enticed	14	16.5	5	20
Forced	10	11.7	4	16
Total	**85**	**100**	**25**	**100**
Contraceptive use				
Yes	59	69.4	18	72
No	26	30.6	7	28
Total	**85**	**100**	**25**	**100**
Methods of contraception				
Condoms	59	100	16	88.9
Pills	-	-	2	11.1
Total	**59**	**100**	**18**	**100**
Use of drugs/ substances				
Yes	26	30.6	5	20
No	59	69.4	20	80
Total	**85**	**100**	**25**	**100**
Types of drugs/substances				
Alcohol	16	45.7	4	57.1
Tobacco	2	5.7	0	0
Cannabis	9	25.7	1	14.3
Khat	8	22.9	2	28.6
Total	**35**	**100**	**7**	**100**

Most of the students, 52% of the males and 40% of the females had their first sexual intercourse when they were between 14 and 16 years old. Most of their partners were also between the ages 14 and 16 years. However, it was also noted that the females (36%) had more partners who were above 20 years compared to the males (3.6%). See table 5 below.

Table 5: Age of student and of partner at first sexual intercourse

	Male		**Female**	
	Frequency	**Percentage (%)**	**Frequency**	**Percentage (%)**
Age of student				
6-10	8	9.4	0	0
11-13	14	16.5	9	36
14-16	44	51.8	10	40
17-19	19	22.4	6	24
Total	**85**	**100**	**25**	**100**
Age of partner				
6-10	8	9.4	0	0
11-13	15	17.6	3	12
14-16	40	47	8	33
17-19	19	22.4	5	20
20-24	2	2.4	6	24
25-29	0	0	1	4
30-34	1	1.2	2	8
Total	**85**	**100**	**25**	**100**

Twenty five percent of the students who had ever had sex had been sexually active within the one week prior to the interview. Out of these, the males were 82% and the females were 18%. Majority (85%) of the students had one sexual partner (91% of males and 60% of females). Overall contraceptive use was 52%, with condoms being used by the majority (93%). A third of the students used substances during their most recent sexual encounter, alcohol being the most common substance (75%). See table 6 overleaf.

Table 6: Most recent sexual intercourse experience, one week prior to interview.

	Male		**Female**		**Total**	
	Frequency	**Percentage (%)**	**Frequency**	**Percentage (%)**	**Frequency**	**Percentage (%)**
Number of partners						
1	20	91	3	60	23	85.2
2	1	4.5	1	20	2	7.4
3	1	4.5	0	0	1	3.7
4	0	0	1	20	1	3.7
Total	**22**	**100**	**5**	**100**	**27**	**100**
Contraceptive use						
Yes	11	50	3	60	14	51.8
No	11	50	2	40	13	48.2
Total	**22**	**100**	**5**	**100**	**27**	**100**
Types of contraceptives						
Condoms	11	100	2	60	13	92.8
Pills	-	-	1	40	1	7.2
Total	**11**	**100**	**3**	**100**	**14**	**100**
Use of drugs/ substances						
Yes	7	31.8	2	40	9	33.3
No	15	68.2	3	60	18	66.7
Total	**22**	**100**	**5**	**100**	**27**	**100**
Types of drugs						
Alcohol	7	87.5	2	60	9	75
Cannabis	1	12.5	1	20	2	16.7
Khat	0	0	1	20	1	8.3
Total	**8**	**100**	**4**	**100**	**12**	**100**

Out of the four hundred and ninety nine students, 8 (1.6%) had ever engaged in anal sex. Five of the students had anal sex in the week prior to the interview. All 5 of the students, were under the influence of drugs during their most recent anal sex encounter, alcohol 5 (50%) being the most commonly used. See table 7 below.

Table 7: Anal sex experience

	Frequency	**Percentage (%)**
Ever had anal sex?		
Yes	8	1.6
No	491	98.4
Total	**499**	**100**
Number of anal sex encounters 1 week prior to interview		
1	4	80
2	1	20
Total	**5**	**100**
Number of partners in the week prior to the interview		
1	4	80
2	1	20
Total	**5**	**100**
Use of drugs during the anal sex experience		
Yes	5	100
No	0	0
Total	**5**	**100**
Types of drugs used during anal sex encounter		
Alcohol	5	50
Tobacco	3	30
Cannabis	2	20
Total	**10**	**100**

The most common age (50%) at which the students had their first anal sex encounter was 14 years, and their partners were mostly 16 years old (37.5%). See figure 7 and 8 below.

Figure 7: Age at first anal sex encounter, ranging between 13 and 15 years

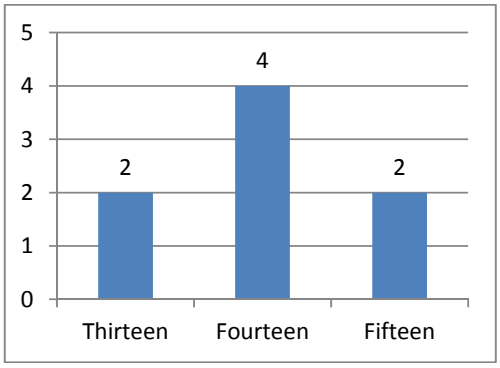
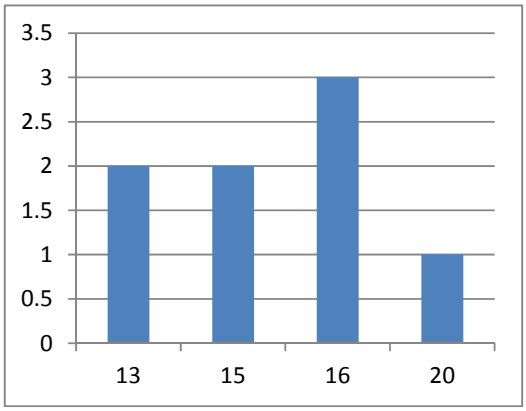


Figure 8: Age of partner, ranging between 13 and 20 years



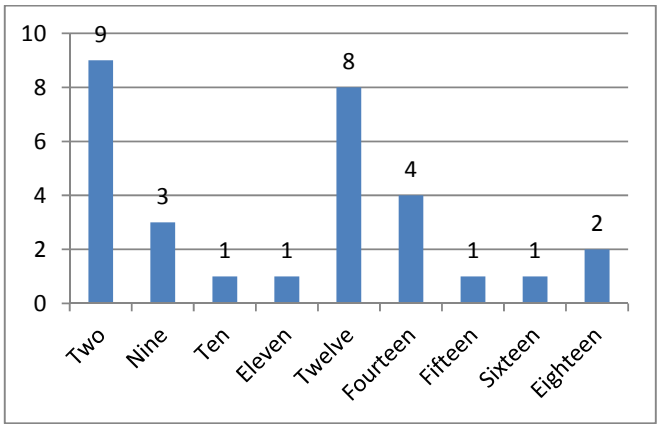
Thirty (6%) of the students admitted that they had ever been raped or sexually abused. Thirteen (5.4%) of them were male and 17 (6.5%) were female. Most of them 11 (36.8%) did not know the perpetrators, but most of the perpetrators mentioned were people close to them. 80% of the cases were reported, to their immediate family members. See table 8 below.

Table 8: Sexual abuse/ Rape experience

	Frequency	**Percentage (%)**
Ever been raped/sexually abused?		
Yes	30	6
No	469	94
Total	**499**	**100**
Who was the perpetrator?		
Boyfriend	4	13.3
Brother	1	3.3
Cousins	2	6.7
Friend	5	16.7
Gangster	1	3.3
Sister's friend	1	3.3
Step-father	1	3.3
Sugar-mummy	1	3.3
Teacher	1	3.3
Uncle	2	6.7
I don't know	11	36.8
Total	**30**	**100**
Was it reported?		
Yes	24	80
No	6	20
Total	**30**	**100**
Reported to whom?		
Mother	18	75.1
Father	2	8.3
Sister	2	8.3
Brother	2	8.3
Police	0	0
Total	**24**	**100**

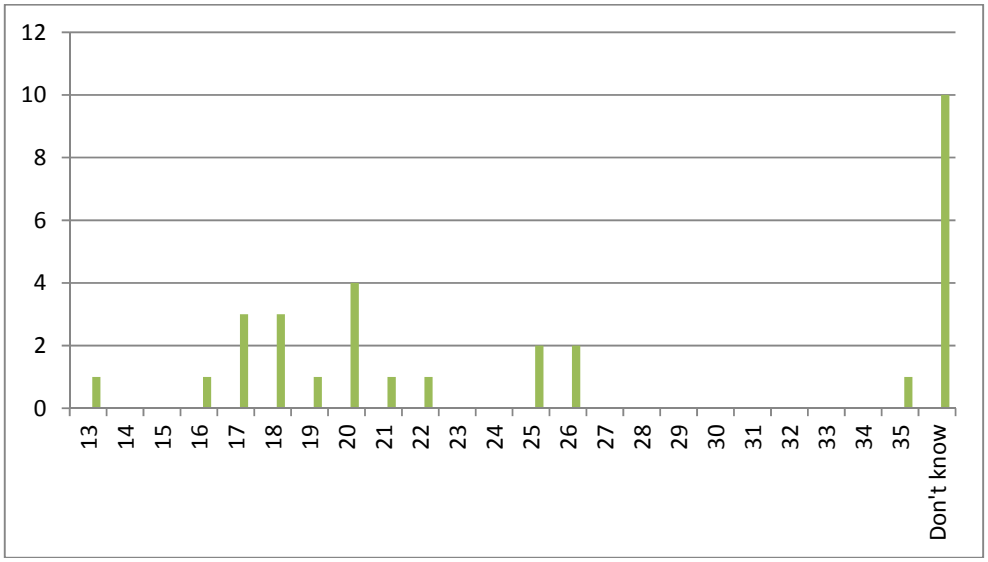
Most of the students who were sexually abused reported that it happened at around the age of two years 9 (30%), and twelve years 8 (26.7%). See figure 9 below.

Figure 9: Age at time of rape/sexual abuse



Most students 11 (37%) did not know the estimated ages of the perpetrators. The perpetrators who were estimated to be above 20 years represented another 37% of the total. See figure 8 below.

Figure 8: Estimated age of perpetrator



Five (5.2%) of the students who had ever had sex reported that they had ever acquired a sexually transmitted disease. Only two knew their diagnosis, of Chancroid and Syphilis. See table 9 below.

Table 9: Sexually Transmitted Diseases

	Male		**Female**		**Total**	
	Frequency	**Percentage (%)**	**Frequency**	**Percentage (%)**	**Frequency**	**Percentage (%)**
Ever had STD?						
Yes	2	2.4	3	12	5	4.5
No	83	97.6	22	88	105	95.5
Total	**85**	100	**25**	100	**110**	**100**
Diagnosis						
Chancroid	1	50	0	0	1	20
Syphilis	0	0	1	33.3	1	20
I don't know	1	50	2	66.7	3	60
Total	**2**	**100**	**3**	**100**	**5**	**100**
Received treatment?						
Yes	1	50	1	33.3	2	40
No	1	50	2	66.7	3	60
Total	**2**	**100**	**3**	**100**	**5**	**100**
Age when diagnosed with STD						
13	0	0	1	33.3	1	20
15	1	50	1	33.3	2	40
16	1	50	1	33.3	2	40
Total	**2**	**100**	**3**	**100**	**5**	**100**

Eight students (6.3%) admitted ever being pregnant; 6 (75%) of them got pregnant once and 2 (25%) got pregnant twice. Most (50%) got pregnant at 14 years. Most (37.5%) of the girls were shocked at the discovery of being pregnant, and 50% of their boyfriends denied and abandoned them. Only 25% of the girls delivered their baby at term (25%). The arrangement made for the two girls who delivered were; one girl was helped by her own family to raise the baby as she continued with school, while for the other girl, the boy's family took care of the baby as the girl went back to school. See table 10 overleaf.

Table 10: Pregnancy experience for the girls

	Frequency	Percentage (%)
Have you ever been pregnant?		
Yes	8	6.3
No	252	93.7
Total	**260**	**100**
Number of times you became pregnant?		
Once	6	75
Twice	2	25
Total	**8**	**100**
Age at time of pregnancy		
12	1	12.5
14	4	50
15	1	12.5
16	2	25
Total	**8**	**100**
Girl's reaction		
Did not know what to do, so aborted	3	37.5
Shock	3	37.5
Regret	1	12.5
Happy	1	12.5
Total	**8**	**100**
Boyfriend's reaction		
Denied/Abandoned the girl	4	50
Accepted/Happy	1	12.5
Shock	3	37.5
Total	**8**	**100**
Outcome of pregnancy		
Abortion	4	50
Miscarried	2	25
Delivered	2	25
Total	**8**	**100**

Eleven of the male students (4.6%) admitted ever making a girl pregnant; 8 (72.7%) of them made them pregnant once and 3 (27.3%) made girls pregnant twice. Most of the boys were 16 and 17 years old, each representing 27.3%. The boys' reactions were mostly shock (27.3%), and fear (27.3%). Most of their girlfriends' reactions were also fear (27.3%) and shock (18.2%). Four (36.4%) students reported that their girlfriends delivered their babies at term. One of the boys did not know the outcome of the girl's pregnancy. The arrangements made for the babies who were delivered were; one of the boys took responsibility of the pregnancy and was assisted by his family to pay for the girl's school fees, as well as provide food and clothes for the baby as the girl stayed with her parents and continued with school. Three of

the other boys did not know the arrangements that were made after their babies were delivered. See table 11 below.

Table 11: Pregnancy experience for the boys

	Frequency	**Percentage (%)**
Have you ever made a girl pregnant?		
Yes	11	4.6
No	228	95.4
Total	**239**	**100**
Number of times you made a girl pregnant		
Once	8	72.7
Twice	3	27.3
Total	**11**	**100**
Age at time of girlfriend's pregnancy		
13	1	9.1
14	1	9.1
15	1	9.1
16	3	27.3
17	3	27.3
18	1	9.1
19	1	9.1
Total	**11**	**100**
Boy's reaction		
Scared	3	27.3
Happy	1	9.1
Ignored her	1	9.1
Shocked	3	27.3
Felt like committing suicide	1	9.1
Denied and ran away	2	18.2
Total	**11**	**100**
Girlfriend's reaction		
Ignored me	1	9.1
Escaped from her parents	1	9.1
Scared	3	27.3
She was about to kill herself	1	9.1
Happy	1	9.1
Shocked	2	18.2
Fainted	1	9.1
Sad	1	9.1
Total	**11**	**100**
Outcome of pregnancy		
Abortion	5	45.5
Miscarried	1	9.1
Delivered	4	36.4
I don't know	1	9.1
Total	**11**	**100**

Sixteen students (3.2%) of the participants admitted ever having a psychological or mental problem. The most common conditions reported were drug abuse (19%) and depression (19%). Twenty five percent did know the diagnosis of their problem. See table 12 below.

Table 12: Psychological/mental problem

	Male		**Female**		**Total**	
	Frequency	**Percentage (%)**	**Frequency**	**Percentage (%)**	**Frequency**	**Percentage (%)**
Ever had a psychological/ mental problem?						
Yes	8	3.4	8	3.1	16	3.2
No	231	96.6	252	96.9	483	96.8
Total	**239**	**100**	**260**	**100**	**499**	**100**
What was the problem?						
Epilepsy	1	12.5	0	0	1	6.2
Truancy	1	12.5	0	0	1	6.2
Stress	1	12.5	1	12.5	2	12.6
Anxiety	0	0	1	12.5	1	6.2
Depression	0	0	3	37.5	3	18.8
Drug abuse	2	25	1	12.5	3	18.8
Anger problems	1	12.5	0	0	1	6.2
I don't know	2	25	2	25	4	25
Total	**8**	**100**	**8**	**100**	**16**	**100**

There was a significant association between gender and first sexual intercourse (chi square=45.537; p=0.000) however no significant association was found between the other socio-demographic characteristics and first sexual intercourse. See table 13 below.

Table 13: Association of socio-demographic characteristics with first sexual intercourse

	Ever had sex			**Chi square (df)**	**P value**
	Yes	**No**	**Total**		
Age				14.575 (9)	0.103
13	0 (0%)	1(100%)	1 (100%)		
14	0 (0%)	9 (100%)	9 (100%)		
15	5 (8.8%)	52 (91.2%)	57 (100%)		
16	24 (19.7%)	98 (80.3%)	122 (100%)		
17	23 (22.3%)	80 (77.7%)	103 (100%)		
18	17 (26.2%)	48 (73.8%)	65 (100%)		
19	8 (25.8%)	23 (74.2%)	31 (100%)		
20	1 (25%)	3 (75%)	4 (100%)		
21	1 (100%)	0 (0%)	1 (100%)		
22	1 (50%)	1(50%)	2 (100%)		
Gender				45.537 (1)	0.000*
Male	60 (36.4%)	105 (63.6%)	165 (100%)		
Female	20 (8.7%)	210 (91.3%)	230 (100%)		
Religion				3.738 (2)	0.154
Protestant	44 (22.1%)	155 (77.9%)	199 (100%)		
Catholic	26 (22.4%)	90 (77.6%)	116 (100%)		
Muslim	10 (12.5%)	70 (87.5%)	80 (100%)		
Day/Boarding School				3.024 (1)	0.082
Day	74 (21.6%)	268 (78.4%)	342 (100%)		
Boarding	6 (11.3%)	47 (88.7%)	53 (100%)		
Currently living with				10.477 (6)	0.106
Both parents	37 (17%)	181 (83%)	218 (100%)		
Father	6 (24%)	19 (76%)	25 (100%)		
Mother	28 (30.4%)	64 (69.6%)	92 (100%)		
Guardian	7 (18.4%)	31 (81.6%)	38 (100%)		
Sister/ Brother	0 (0%)	8 (100%)	8 (100%)		
Aunt/ Uncle	2 (18.2%)	9 (81.8%)	11 (100%)		
Cousins	0 (0%)	3 (100%)	3 (100%)		

There was no significant association between socio-demographic characteristics and unprotected sexual intercourse. See table 14 below.

Table 14: Association of socio-demographic characteristics and unprotected intercourse during first sexual encounter

	Used Condoms			**Chi square (df)**	**P value**
	Yes	**No**	**Total**		
Age				5.415(7)	0.609
15	4 (66.7%)	2 (33.3%)	6 (100%)		
16	13 (56.5%)	10 (43.5%)	23 (100%)		
17	13(68.4%)	6 (31.6%)	19 (100%)		
18	15 (83.3%)	3 (16.7%)	18 (100%)		
19	5 (83.3%)	1(16.7%)	6 (100%)		
20	1(100%)	0 (0%)	1(100%)		
21	1(100%)	0 (0%)	1(100%)		
22	1 (100%)	0 (0%)	1(100%)		
Gender				0.062 (1)	0.804
Male	40 (71.4%)	16 (28.6%)	56 (100%)		
Female	13 (68.4%)	6 (31.6%)	19 (100%)		
Religion				3.738 (2)	0.154
Protestant	29 (74.4%)	10 (25.6%)	39 (100%)		
Catholic	18 (75%)	6 (25%)	24 (100%)		
Muslim	6 (50%)	6 (50%)	12 (100%)		
Day/Boarding School				3.024 (1)	0.082
Day	48 (69.6%)	21 (30.4%)	69 (100%)		
Boarding	5 (83.3%)	1 (16.7%)	6 (100%)		
Currently living with				10.477 (6)	0.106
Both parents	22 (68.8%)	10 (31.2%)	32 (100%)		
Father	5 (83.3%)	1 (16.7%)	6 (100%)		
Mother	19 (76%)	6 (24%)	25 (100%)		
Guardian	6 (66.7%)	3 (33.3%)	9 (100%)		
Sister/ Brother	0 (0%)	1 (100%)	1(100%)		
Aunt/ Uncle	1 (50%)	1 (50%)	2 (100%)		

There was a significant association between the first sexual intercourse and substance use (chi square=42.209; p=0.000). However, no statistical significance was found between substance use and unprotected intercourse during the first sexual encounter (chi square=0.029; p=0.865). See tables 15 and 16 below.

Table 15: Association of first sexual intercourse and substance use

	Ever used drugs			**Chi square (df)**	**P value**
	Yes	**No**	**Total**		
Ever had sex				42.209 (1)	0.000*
Yes	47 (59.5%)	32 (40.5%)	79 (100%)		
No	69 (22.1%)	243 (77.9%)	312 (100%)		

Table 16: Association of substance use and unprotected intercourse during first sexual encounter

	Used condoms			**Chi square (df)**	**P value**
	Yes	**No**	**Total**		
Ever used drugs				0.029 (1)	0.865
Yes	32 (69.6%)	14 (30.4%)	46 (100%)		
No	20 (71.4%)	8 (28.6%)	28 (100%)		

CHAPTER 5

5.0 DISCUSSION

The main aim of the research was to study risky sexual behaviour among the adolescents attending public secondary schools in Nairobi.

Socio-demographic characteristics

Four hundred and ninety nine students from four secondary schools randomly selected from seventy five public secondary schools in Nairobi participated in the study. Two hundred and sixty were female and two hundred and thirty nine were male, showing that the females were 1.1 times more than the males. This ratio was similar to that of the population of adolescents aged between ten and twenty years in Nairobi as per the 2009 Population and Census results as well as household population of urban youth aged between fifteen and nineteen years as per the Kenya Demographic and Health Survey (KDHS) of 2008-09. The majority of the participants were Christians (eighty two percent) which was in keeping with the 2009 Population and Census results. This showed that the sample was representative of the adolescents in secondary schools in Nairobi and Kenya.

Most of the students were sixteen years old, those in the form two class being the majority. The entry age to secondary school in form one (nine years of school) is usually fifteen years, given that primary school starts at age seven in Kenya, with the end of secondary school in form four (fourteen years of school) being eighteen years. Therefore this sample was representative in age of youth in secondary schools in Kenya. Although the sampling method was stratified to include equal numbers from each class, fewer form 4 students participated because they were busy preparing for their final exams (Table 1).

Majority of the students were in day school, most of whom lived in various parts of Lang'ata constituency despite their schools being in Dagoretti, Makadara, Lang'ata and Westlands constituencies. This could be due to the centrality of Lang'ata constituency. However, almost half of the students who lived in Lang'ata constituency were from Kibera slums (Table 1). Kibera is the largest slum in Kenya, with a population of approximately one hundred and seventy thousand which is about fourty six percent of Lang'ata's population.

The only significant association between socio-demographic characteristics and first sexual intercourse was in the gender (Table 13). More of the male students (thirty six percent) reported that they had ever had sex compared to the female students (ten percent) despite the

ratio of male to females who participated in the study being approximately 1:1 (Table 4). This could have been because males are more likely to report their sexual behaviours than females.

Abstinence

The study showed that seventy eight percent of the students had never had sex, which was close to the findings by Couric, (2005) who showed that the vast majority (eighty seven percent) of teens in America aged between thirteen and sixteen years, had not had sexual intercourse.

Age of student and partner at initiation of sexual intercourse

Twenty two percent of the students had ever had sexual intercourse. Most of them (fifty one percent of the males and fourty percent of the females) had their first sexual intercourse when they were between 14 and 16 years old. Most of their partners were also between the ages 14 and 16 years. These findings were close to those of Couric in 2005, who reported that twenty seven percent of those between 13 and years in America were sexually active. She also found that sexual activity was much more common among 15 to 16 year-olds (fourty one percent) than 13 to 14 year-olds (fourteen percent). This study showed that the females were ten times more likely to have partners who were above twenty years old compared to the males (Table 5). This could be because the older men were better than them socioeconomically. The percentage of the sexually experienced students in this study (twenty two percent) was lower than what Oindo, in 2002 found among the youth in Kisumu (seventy four percent). Oindo also found that most of the first sexual experiences occurred between 15 to 19 years. This study had a wider age range of between 6 and 18 years (Table 5) similar to that of Imaledo et al. (2012) in Nigeria, who found that thirty four percent of the respondents had their first sexual intercourse within the age range of 5 and 19 years.

In this study, it was found that majority (seventy two percent of males and sixty four percent of females) of the students were willing during their first sexual intercourse. Seventeen percent of males and twenty percent of females reported that they were coerced while twelve percent of the males and sixteen percent of the females were forced (Table 4). This trend was different from that of Moore et al. (2008) who reported that sexual coercion had been linked with early sexual activity. He found that early timing of sexual initiation was significant because, the younger the age of first sexual intercourse, the more likely that the experience was coercive, and forced sexual intercourse was related to long lasting negative effects such as greater risk of unwanted pregnancy and sexually transmitted infections. The

high number of the students willing to have sexual intercourse during their first encounter could be explained by the fact that majority of their sexual partners were their age-mates. The students who were forced and coerced may have had older sexual partners.

Thirty students, which represented six percent of the students in this study reported ever being raped or sexually abused. Thirteen (five percent) of them were male and seventeen (seven percent) were female (Figure 8). This figure was lower than that of Lang et al. (2011) who found that twenty five percent of African-American adolescents between 15 and 21 years had ever been raped. Follow up at six months and at twelve months showed that the rape victims had significantly lower proportions of condom protected sex, higher frequency of sex while intoxicated, more inconsistent condom use, less condom use at last sex and more sex partners. The lower figure in this study could have been due to lack of complete openness by the students when reporting the sexual abuse and rape cases, despite assurance of confidentiality. This could have also been due to the setting of the African-American adolescents, who apart from being in an urban setting, were seeking sexual health services at the local teenager-oriented community health agencies in America, which were youth friendly.

Risky sexual behaviour

Twenty five percent of the students who had ever had sex had been sexually active within the one week prior to the interview. Out of these, ninety one percent of the males and sixty percent of the males had one sexual partner each (Table 6).These findings were lower than what Oindo (2002) found in her study in Kisumu which showed that eighty four percent were engaging in regular sexual encounters with eighty percent maintaining single partner sexual encounters.

Sixty nine percent of the males and seventy two percent of the females used contraceptives during their first sexual encounter (Table 4). However, in the most recent sexual encounter, which was one week prior to the interview, the overall contraceptive use was reportedly lower, at fifty two percent (Table 6). This could be explained by the fact that most of the students had one partner each, and the familiarity that arose from a relatively stable pattern of relationships. The trend on contraceptive use in this study was similar to that of Couric's study in 2005, which found that "while nearly all young teens (ninety percent) know they can get an STD from having sexual intercourse, they're not always acting on that knowledge. Only two in three (sixty seven percent) say they use protection such as condoms every time they have sex."

In this study, it was found that approximately two percent of the students had ever engaged in anal sex compared to eleven percent of the adolescents in an American study in Guttmacher Institute (2007). It was also noted that in this study, all the students who ever had anal sex had used substances prior to the experience.

The findings on risky sexual behaviour in this study were consistent with the American study by Moore et al. (2008) who found that those who begin having sex at young ages are generally exposed to risk for a longer time, are less likely to use contraception, and tend to engage in higher risk sexual behaviours such as alcohol or drug use prior to sexual intercourse.

Drug/Substance use and risky sexual behaviour

There was a significant association between drug use and first sexual intercourse in this study (Table 15). Alcohol was found to be the most commonly used substance. These findings were consistent with studies in South Africa by Pluddemann et al. (2008) and Moshia et al. (2004) which showed that young persons who drink alcohol and/or use other drugs are more likely to be sexually active than those who do not, and also more likely engage in unprotected sex. The use of substances including alcohol is reported to decrease young person's inhibitions and safer sex negotiation skills thereby increasing their already-present vulnerability to engaging in sexual risk behaviour (Morojele et al., 2006).

Consequences of risky sexual behaviour

In this study, teenage pregnancies were six percent which was consistent with the trend in America which showed a decrease in teenage pregnancy rates. It was found that eleven percent of all US births were among teenage girls and the teen pregnancy rate in the United States is two to eight times that of many other developed countries (Darroch et al., 2001; Martin et al., 2002). For the two girls who got pregnant and delivered their babies at term, arrangements were made by their families such that they were able to take them back to school and resume their studies unlike in the past when the girl would end up dropping out of school. An explanation for this could have been because the affected students were in Nairobi, an urban setting, rather than in the rural area.

Five percent of the students in this study reported that they ever had a sexually transmitted infection/ disease, though none reported that they ever had HIV/AIDS. This could have been due to the stigma associated with HIV/AIDS.

Sixteen students (three percent) admitted ever having a psychological or mental problem. These findings were not directly linked to those who had been sexually active or got pregnant. However, some of the reactions mentioned by the girls and boys affected by pregnancy included 'wanting to commit suicide' and abortion. These can result in psychological complications as was found in the study by Hallfors et al. (2005) that sexually active girls in America were more vulnerable to depression, suicidal ideation and suicide attempt than sexually active boys, but the risk of depression was clearly elevated for the sexually active of either gender. Depression, anxiety and increased stress were observed to accompany the abuse of alcohol and drugs in sexually promiscuous teenagers (McDonough, 2008).

5.1 LIMITATIONS

The scheduled time for data collection was delayed due to the lengthy clearance procedure by the ethics committee and the authorities at the ministry of education. This was further delayed by the Teachers' strike during the proposed period hence the research was not completed within the proposed time schedule.

The time of data collection was in late 2nd term and early 3rd term (June to October 2012) when the form four students were preparing for their national examination and this reduced the responses from the older adolescents as anticipated.

Some students may not have been as open as was hoped, despite the assurance of confidentiality.

Only students from public schools were interviewed and this could have led to omission of significant data from the students of higher socioeconomic status. The private schools were excluded because they were very many and their classes had fewer students than the expected sample size. This posed a challenge in the logistics, considering that the amount of time available for data collection was limited.

5.2 CONCLUSION

The youth are still engaging in risky sexual behavior despite all the educative information and preventive measures availed to them. Alcohol and other substance use are significantly associated with risky sexual behaviour, especially during their first sexual intercourse.

5.3 PREVENTION AND INTERVENTION PROGRAMMES

Youth programmes should enhance the education component of their agenda to inform the youth more about risky sexual behaviour and their consequences.

The programmes should also emphasize on the psychological and mental health consequences of risky sexual behaviour, especially in the area of substance abuse.

Early identification and treatment of the students found to have substance use disorders, with follow-up guidance and care.

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APPENDIX I

INFORMED CONSENT

A. Informed Consent Explanation

I am Dr. Jackline Ochieng', a student at University of Nairobi, pursuing a Masters degree in Psychiatry. I am conducting a study entitled 'Prevalence of abstinence and of risky sexual behaviour among adolescents attending public secondary schools in Nairobi'.

The purpose of this study is to find out the prevalence of abstinence and of risky sexual behaviour among adolescents attending public secondary schools in Nairobi. The research will be carried out by me, under the supervision of Dr. Muthoni Mathai, Dr. Mary Kuria and Dr. Anne Obondo who are lecturers in the Department of Psychiatry, University of Nairobi.

This is a medical research and it is important that you understand the following general principles which apply to all medical research: Your child's participation in the research is entirely voluntary; he/she may withdraw from the study at any time; refusal to participate will not lead to any penalty or benefit to which he/she is otherwise entitled.

After you have read the explanation, do not hesitate to ask any questions which may help you to clearly understand the nature of the study. The procedure will involve your child filling two questionnaires which will seek to understand your social background and assess your child's feelings, thoughts and behaviour towards their sexuality as an adolescent.

No risks will be posed to your child except that he/she may experience some emotional discomfort as he/she recalls past experiences while answering some of the questions. If any of these occur, please talk to the researcher or contact them on the number given below, who will refer your child approriately to a professional counsellor, psychologist or psychiatrist. There will be no invasive procedures such as drawing of blood.

All information obtained from the study will remain confidential and your child's privacy will be kept. No names will be used in this study or in its future publications. Identification will be by serial numbers.

I hope that the information generated from this study will be of benefit, in terms of implementation and better interventions in providing holistic adolescent health, which includes mental health.

In case you have any questions related to this study, you can contact me on telephone number **+254720859186** or my supervisors, Dr. Muthoni Mathai, Dr. Mary Kuria or Dr. Anne Obondo at the Department of Psychiatry, University of Nairobi. Any concerns can also

be forwarded to the Kenyatta National Hospital/ University of Nairobi Ethics and Research Committee on telephone numbers **726300-9** or **P.O Box 20723, KNH, Nairobi.**

B. Consent Form

I, the undersigned do hereby volunteer my child to participate in this study. The nature and purpose have been fully explained to me by Dr. Jackline Ochieng'.

I understand that all information obtained will be used for this study only and that I can withdraw my consent at any time.

Participant's Parent'/Guardian's Signature ..... Date.....

Participant's Signature ..... Date.....

Serial Number.....

Witness' Signature ..... Date.....

(Dr. Jackline Ochieng', Telephone number: 0720859186)

APPENDIX II

A. QUESTIONNAIRE

I Socio-Demographic Questionnaire

1. Current Date: (dd/mm/yr) Day _____Month _____Year_____

2. Serial Number: _____

3. Age in Years_____

4. Gender: 1. Male 2. Female

5. Religion: 1) Protestant 2) Catholic 3) Muslim 4) Other (specify) _____

6. Are you a regular attendant and active member of your place of worship /youth group?

1. Yes 2. No

6. Class: Form_____ Boarding Student_____ Day Student_____

7. I am the _____born out of _____siblings.

8. I currently live in: _____

(Estate)_____(Town)

9. If living in Nairobi, which Estate do you reside in_____

10. If in boarding school, mention where you live during the holidays_____

11. Who do you live with currently: (**Please Tick where appropriate**)

1) Both Parents 2) Father 3) Mother 4) Guardian (specify) ____ 5) Other (specify) ___

12. Are your parents alive or dead: (**Put Y for Yes N for No**))

Mother: Alive _____ Dead_____ Father: Alive _____ Dead_____

13. If parent(s) is/are dead:

a) State your age at time of mother's death _____ b) State your age at time of father's death _____

14. After my parent(s)' death, I have lived with_____ since I was _____years old.

15. If parent(s) is/are alive:

a) State mother's marital status (**Tick where appropriate**)

1	Married		2	Widow	
3	Single parent		4	Single/Divorced	

b) State father's marital status (**Tick where appropriate**)

1	Married		2	Widow	
3	Single parent		4	Single/Divorced	

16. My mother's occupation:

1	Employed		2	Self -employed	
3	Unemployed		4	Other (Specify	

17. My father's occupation:

1	Employed		2	Self -employed	
3	Unemployed		4	Other (Specify	

18. My guardian's occupation (if you are not living with your parents currently):

1	Employed		2	Self –employed	
3	Unemployed		4	Other (Specify	

II Psychosexual Questionnaire

1. What do you understand by 'being a virgin'? _____

2. What do you understand by abstaining from sex? _____

3. What do you think is the best age for one to begin having sexual intercourse?

4. What do you understand by 'safe period'? _____

5. a) What is a contraceptive? _____

_____

b) What methods of contraception do you know?

_____

6. Where did you first learn about sex? (**Tick where appropriate**)

From: 1) Parents_____ 2) Brother/ sister_____

3) Books/magazines_____ 4) Television programs/ movies_____

5) Internet_____ 6) Friends (at home or school?)_____

7) Teachers/school group___ 8) Church/ religious group (specify) _____

9) Other (specify)_____

7. During your childhood, what were your parents' /guardian's attitude about sex?

1) They talked openly about sex

2) They were reserved about the topic ☐

3) It is a taboo to talk about sex

8. If you learnt from your parents/ guardians,

a) Who initiated the topic? (**Tick where appropriate 1=Yes, 2=No)**

1) Me: Yes_____ No_____ 2) Mother: Yes_____ No_____

3) Father: Yes _____ No_____ 4) Guardian: Yes_____ No_____

b) How old were you then? _____(in Years)

c) What kind of issues did you talk about? (**Tick where appropriate in the blank box√)**

1	Pregnancy		5	Menstruation	
2	Birth		6	Masturbation	
3	Sexual Intercourse		7	Wet dreams	
4	Contraception		8	Other (Specify_____	

9. a) Who/where is your preferred source of information on sexuality and other sex related issues?

1	Parents		2	Brother/sister		3	Books/magazine	
4	TV/Movies/school group		5	Internet		6	Friends (at home or school)	
7	Teachers/school group		8	Church/ religious group		9	Others (specify)_____	

b) Why would you prefer them as your source of sexual information? _____

10. **Girls**: How old were you when you started your menstruation? _____

Boys: How old were you when you had your first wet dreams? _____

11. a) Have you ever used any "drugs" like alcohol, tobacco, cannabis (bhang), khat (miraa), heroin, cocaine? Yes=1 No=2

b) If yes, specify the type (s)

1	Alcohol		2	Tobacco		3	Cannabis (Bhang)	
4	Khat (miraa)		5	Heroin		6	Cocaine	
7	Others (Specify)___							

12. a) Have you ever had sexual intercourse? Yes=1 No=2

(When we say sexual intercourse, we mean when a male inserts his penis into a female's vagina.)

b) If no, what are your reasons for abstaining from sexual intercourse? 1) Religious values____

2) fear of pregnancy_____ 3) wish to wait for marriage_____ 4) not emotionally ready_____

5) fear of HIV/AIDS_____ 6) fear of other sexually transmitted infections/ diseases (STIs/STDs) _____

7) Other (specify) _____

c) If yes, how old were you when you first had sexual intercourse? _____

d) How old was your sexual partner when you first had sexual intercourse? (If you do not know exact age,

please give an estimated age) _____

e) During that experience, you were: 1) willing 2) coerced/ enticed 3) forced

f) Did you use any contraception (condoms or pills or others)?

1) All the times 2) Sometimes 3) Not at all

g) If yes, what types? 1) condom 2) pills 3) other (specify) _____

h) Had you taken any drugs or alcohol during your first sexual intercourse? 1= Yes 2=No

i) If yes, what types?

1	Alcohol		2	Tobacco		3	Cannabis	
4	Khat (miraa)		5	Heroin		6	Cocaine	
7	Other							

j) Did you have any regrets after your first sexual intercourse? 1=Yes 2= No

k) If yes, why? _____

13. a) If yes to 12 a, Did you have sexual intercourse in the last

1) 1 week 2) 1 month 3) 3 months 4) 6 months 5) 1 year

b) If yes, how many sexual partners have you had in the last

1) 1 week 2) 1 month 3) 3 months 4) 6 months 5) 1 year

c) Did you use any contraception? 1=Yes 2= No

d) If yes, what types? 1) condom 2) pills 3) other (specify) _____

e) Had you taken any drugs or alcohol during your last sexual intercourse? 1=Yes 2=No

f) If yes, what types?

1	Alcohol		2	Tobacco		3	Cannabis	
4	Khat (miraa)		5	Heroin		6	Cocaine	
7	Other							

g) How old was/were your sexual partner(s)? (give estimated age or ages if not sure)

_____, _____, _____, _____, _____,_____, _____

14.a) Have you ever had oral sex? 1=Yes 2=No

b) If yes, how old were you during your first experience? _____

c) If yes to 14 a, How old was your first partner ? (Give estimated age if you are not sure of exact age)

_____

d) Did you have oral sex in the last

1) 1 week 2) 1 month 3) 3 months 4) 6 months 5) 1 year ? ☐

e) How many partners have you had in the last 1) 1 week 2) 1 month 3) 3 months

4) 6 months 5) 1 year? ☐

f) Had you taken any drugs or alcohol during your last encounter of oral sex? 1=Yes 2=No ☐

g) If yes, what types?

1	Alcohol		2	Tobacco		3	Cannabis	
4	Khat (miraa)		5	Heroin		6	Cocaine	
7	Other							

h) How old was/were your sexual partner(s)? (give estimated age or ages if not sure)

_____, _____, _____, _____, _____,_____, _____

15a) Have you ever had anal sex? 1=Yes 2=No ☐

b) If yes, how old were you during your first experience? _____

c) If yes to 15

a,) Did you have anal sex in the last

1) 1 week 2) 1 month 3) 3 months 4) 6 months 5) 1 year? ☐

b) How many partners have you had in the last

1) 1 week 2) 1 month 3) 3 months 4) 6 months 5) 1 year? ☐

c) Had you taken any drugs or alcohol during your last anal sex encounter? 1=Yes 2=No

d) If yes, what types? ☐

1	Alcohol		2	Tobacco		3	Cannabis	
4	Khat (miraa)		5	Heroin		6	Cocaine	
7	Other							

e) How old was/were your sexual partner(s)? (give estimated age or ages if not sure)

_____, _____, _____, _____, _____,_____, _____

16.a) Have you ever been sexually abused or raped? 1=Yes 2=No ☐

b)If yes, how old were you? _____

c) Who was the perpetrator (one who raped you)? _____

d) How old (estimate) was the perpetrator? _____

d) Did you ever report it? 1=Yes 2= No

e) To who? 1) Mother 2) Father 3) Guardian 4) Brother 5) Sister

6) Other (specify)_____

17. a) Have you ever had a sexually transmitted infection/disease (STI/STD)? 1=Yes 2=No

b) What was your diagnosis? _____

c) Did you receive treatment? 1=Yes 2=No

d) How old were you? _____

18. Girls: a) Have you ever been pregnant? 1=Yes 2= No

b) If yes, how many times? _____

c) How old were you? _____

d) What was your reaction towards the discovery that you were pregnant? _____

_____

e) What was your boyfriend's reaction? _____

f) What was the outcome of your pregnancy? 1) abortion 2) miscarriage

3) carried the pregnancy to term (delivered) _____

g) If you delivered, what arrangements did you make for the baby/babies?

_____

Boys: a) Have you ever made a girl pregnant? 1=Yes 2= No

b) If yes, how many times? _____

c) How old were you? _____

d) What was your reaction towards the discovery that she was pregnant? _____

_____

e) What was your girlfriend's reaction? _____

f) What was the outcome of her pregnancy?

1) abortion 2) miscarriage 3) carried the pregnancy to term (delivered)_____

g) If she delivered, what arrangements were made for the baby/babies?

_____

19. Do you think sex education should be included in your school curriculum? 1=Yes 2=No

b) What are your reasons? _____

c) If yes, what topics would you like to be addressed? _____

20. a) Have you ever been treated for a psychological (mental) problem?

1. Yes 2. No

b) If yes, specify type of problem_____

B. LIST OF PUBLIC SECONDARY SCHOOLS IN NAIROBI

SERIAL NUMBER	COUNTY	CONSTITUENCY	NAME OF SCHOOL	TOTAL ENROLLMENT
1	NAIROBI	Dagoretti	Lenana School	1,167
2	NAIROBI	Dagoretti	Dagoretti Mixed	429
3	NAIROBI	Dagoretti	Ruthimitu Mixed	694
4	NAIROBI	Dagoretti	Moi Girls Nairobi	1,029
5	NAIROBI	Dagoretti	Dagoretti High	1,050
6	NAIROBI	Dagoretti	Upper Hill Sec	1,050
7	NAIROBI	Dagoretti	Ruthimitu Girls	320
8	NAIROBI	Dagoretti	Mutuini Sec	371
9	NAIROBI	Dagoretti	Precious Blood	560
10	NAIROBI	Dagoretti	Nembu Girls	470
11	NAIROBI	Dagoretti	Shadrack Kimalel	33
12	NAIROBI	Embakasi	Embakasi Garrison Sec.	95
13	NAIROBI	Embakasi	Kayole Sec	540
14	NAIROBI	Embakasi	Kayole South Sec	764
15	NAIROBI	Embakasi	Mwangaza Sec.	390
16	NAIROBI	Embakasi	Peter Kibukosya Sec	459
17	NAIROBI	Embakasi	Embakasi Girls	382
18	NAIROBI	Kamkunji	Kamkunji Sec	565
19	NAIROBI	Kamkunji	Eastleigh High	903
20	NAIROBI	Kamkunji	Moi Forces Academy	934
21	NAIROBI	Kamkunji	Maina Wanjigi	572
22	NAIROBI	Kamkunji	St Teresas Boys	561
23	NAIROBI	Kamkunji	OLM Shauri Moyo	212
24	NAIROBI	Kamkunji	Uhuru Sec	400
25	NAIROBI	Kasarani	Kamiti Sec	583
26	NAIROBI	Kasarani	Baba Ndogo Sec	402
27	NAIROBI	Kasarani	Ruaraka Sec	560
28	NAIROBI	Kasarani	Kariobangi North Girls	240
29	NAIROBI	Kasarani	Starehe Girls	320
30	NAIROBI	Kasarani	Kahawa Garrison	420
31	NAIROBI	Kasarani	Our Lady of Fatima	837
32	NAIROBI	Langata	Olympic High	765
33	NAIROBI	Langata	Langata Barracks	231
34	NAIROBI	Langata	Karen C	270
35	NAIROBI	Langata	Raila Educational Centre	425
36	NAIROBI	Langata	Langata High	749
37	NAIROBI	Makadara Nrb	Nile Road	410
38	NAIROBI	Makadara Nrb	ST Annes Girls	202
39	NAIROBI	Makadara Nrb	Our Lady of Mercy	355
40	NAIROBI	Makadara Nrb	Highway Sec	700

41	NAIROBI	Makadara Nrb	Aquinas High	1,058
42	NAIROBI	Makadara Nrb	Buru Buru Girls	780
43	NAIROBI	Makadara Nrb	Makongeni sec	534
44	NAIROBI	Makadara Nrb	Ofafa Jericho	704
45	NAIROBI	Makadara Nrb	St Patricks Nairobi	70
46	NAIROBI	Makadara Nrb	Huruma Girls	680
47	NAIROBI	Njiru	Drumvale Sec	321
48	NAIROBI	Njiru	Jehova Jire Sec	361
49	NAIROBI	Njiru	Ruai Girls	101
50	NAIROBI	Njiru	St Georges Athi	141
51	NAIROBI	Njiru	Ushirika Sec	549
52	NAIROBI	Njiru	Muhuri Muchiri	622
53	NAIROBI	Njiru	Dandora Sec	794
54	NAIROBI	Njiru	Dr Mwenje Sec	320
55	NAIROBI	Starehe	Jamhuri High	943
56	NAIROBI	Starehe	Ngara Girls	838
57	NAIROBI	Starehe	Parklands Boys	442
58	NAIROBI	Starehe	Pumwani Girls	254
59	NAIROBI	Starehe	CGHU	184
60	NAIROBI	Starehe	Ndururuno	341
61	NAIROBI	Starehe	Pumwani Sec	713
62	NAIROBI	Starehe	Pangani Girls	1,143
63	NAIROBI	Starehe	St Teresas Girls	487
64	NAIROBI	Starehe	Starehe Boys Centre	891
65	NAIROBI	Starehe	Muranga RD Boys Sec	171
66	NAIROBI	Westlands	Kenya High	925
67	NAIROBI	Westlands	Nairobi Millimani	237
68	NAIROBI	Westlands	Kangemi High	638
69	NAIROBI	Westlands	Nairobi School	1,201
70	NAIROBI	Westlands	Parklands Arya Girls	556
71	NAIROBI	Westlands	St Georges Girls	984
72	NAIROBI	Westlands	State House Girls	1,010
73	NAIROBI	Westlands	Highridge	181
74	NAIROBI	Westlands	Hospital Hill	491
75	NAIROBI	Westlands	Lavington Mixed Sec	364