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Relationship between Early Sexual Initiation and Reproductive Health among Undergraduates in Universities within Nairobi County

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Abstract

Several studies in Sub-Saharan Africa have documented high and increasing premarital sexual activities among undergraduate students in universities. This exposes them to risks of unintended pregnancies, abortions, HIV and other sexually transmitted diseases. One of the SDGs is to reduce HIV/AIDs pandemic by the year 2030. In this context it is important to understand whether university students understand the consequences of engaging in premarital sex and the effects it has on their reproductive health. The main objective of this study was to determine the effects of premarital sexual behavior on the reproductive health of undergraduates in Nairobi County. Targeted universities were; Kenyatta, Moi, Mount Kenya, and Africa Nazarene University. Sample size was 324 students and included both male and female aged 18-24 years. The study adopted descriptive cross-sectional research design. Quantitatively, both open and closed ended questionnaires were used. FGDs and KIs were used for qualitative data. Stratified random technique was used to select the sample from the Universities' Information management Unit. Statistical Package for Social Sciences (SPSS) version 20.0 was used to analyse data. Chi-Square tests was used to test for significance ($P<0.05$) and OR used to measure the exposure. Study found out that 63.6% of respondents had, and /or their partners contracted an STI following an unprotected sexual activity whereby only 63.5% were diagnosed by a healthcare provider. 66.7%) had several sexual partners ranging from 2-6 sexual partners. Mean SD age at sexual debut was at 15.9±2.67 years with a minimum and maximum age being 11 and 22 respectively. 115 of 169 female students had ever used a hormonal contraception with 62.6% having had exposure to emergency pills. Early sexual debut was a predictor to contracting STI at:

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OR=3.581, 95%CI (1.916-6.693), P<0.001. Respondents with one sexual exposure and with planned first sexual encounter were at lower risk OR=0.431, 95%CI (0.204-0.909), P=0.026 and OR 0.617(1.414-1.850), P=0.014 respectively. In conclusion, majority of respondents developed RH related complications following early sexual debt. Female youth are at a higher risk of developing STIs compared to their male counterparts. It is therefore recommended that institutional administrators, parents/guardians, the MOH, MOE and other key stakeholders provide access to condoms for students, provide reproductive health education and access to information, incorporate age appropriate sexuality education at primary school level and provide access to proper contraceptives in university infirmaries. The MOE and MOH must scale up the implementation of age-appropriate sexuality education framework as well as the ASRHR policy. Finally, it is imperative that the government increases the budgetary allocation for adolescent and youth programs to allow for efficient and effective implementation of youth programs.

Keywords: *Sexual initiation, reproductive health, undergraduates, universities, Nairobi County*

INTRODUCTION

Premarital sexual behaviors also known as non – marital sexual activities are any sexual activities practiced by unmarried people or simply engagement in sexual activities before marriage. These behaviors are prevalent among young people especially the adolescents. Premarital sexual behaviors have been discouraged for decades both by traditional and religious context since it has involved risky sexual activities including; unwanted pregnancies, sexual coercion, early sexual debut, early marriages, abortions, STIs, HIV and *AIDS* (Duressa Endalew, 2018).

Reports by UNFPA 2018 revealed that 1:5 girls are married or in a union, before 18 years globally. This doubled in developed countries with 40% of girls being married before 18 years and 12% of girls marrying before 15 years. Similarly, reports by UNICE 2019, indicated that 12 Million girls under 18 years get married each year globally. Accordingly, adolescent pregnancies increased their risks of complications in pregnancy and childbirth which are a leading cause of death among older adolescent girls.

Globally, premarital sexual behaviors seem to be currently on increase among the college and university students who are at their adolescent stages, with new terms to cover up the acts emerging. For instance, 'hooking up' which merely refers to premarital sexual activities with no commitment or emotional involvement, started in American colleges and has sprouted to all campuses in the world (Castillo, 2011). The increase might be inspired by the excitement of new freedom and campus life that single and young adults had never experienced as majority join the varsities immediately after high school or from homes where freedom was limited. These activities include multiple and frequent change of sexual partners, oral sex, anal and vaginal sex in most cases without protection and use of unreliable methods of contraception and inconsistent use of it (WHO, 2013). This prevalence has been associated to improvement in technology and availability of technological devices among the youths in universities as they are aggressive, and first consumers of new

technology as witnessed in 21st century. The mass media especially television, phones, movies, music, magazines have glorified sex through pornographic materials as fun and risk free (Strasburg, 2011).

In United States, premarital sexual behaviors among the youths especially at the university level are on increase and currently are a major public health concern. According to Guttmacher Institute (2010), over 800,000 mostly unplanned pregnancies among young girls aged 15 – 19 years occur annually and half of the roughly 19 million new sexually transmitted infections (STIs) diagnosed each year are among 15-24year old. Recent Youth Risks Behavior Surveillance survey reported that in a study done in 6 universities indicated that about 70% of the university students in US have ever had sex with 40% reporting to have sex more than twice and 33.33% having sex with more than one partner. The US Centers for Disease Control and Prevention reported that majority of the patients found to have reproductive health problems and sexual related infections and diseases were graduates who confessed to have engaged in sexual activities during their campus life (CDC, 2015).

Sub-Saharan Africa has been leading on sexual and reproductive health problems among youths emanating from premarital sexual behaviors, especially university students. Studies conducted in the region on the sexual activities among university students have shown varied results. In Ethiopia, a study conducted in one university indicated that 26.9% to 34.2% of the students ever had sexual intercourse and that 45.2% had more than one sexual partner and 59.4% had sex before joining the university (Oley *et al.*, 2011). A similar study done in Cameroon by Dominique (2013) showed that many university students frequently changed their sexual partners with minimal use of condoms.

In Kenya, there has been a high rate of HIV and sexually related infections among the youth that has been linked to pre-marital sexual behavior which is largely unprotected. Due to the changes in living arrangements and access to information, premarital sexual behavior has been reported to be rampant among university students in Kenya (NACC, 2014). In Moi University – Eldoret, a surveillance data obtained from a representative sample of 1917 students found that 71% of males and 47.6% of females reported having had sex in which 76% reported ever using a condom (Obasi, 2014). Recently, female students in Maasai Mara University were reported to engage in commercial sex in Narok town especially at the time of harvest to target the cash from the wheat farmers (Royal Media Services, 2017).

In Nairobi, being the largest city has several universities and branches and thus many university students are exposed to all kinds of sexual activities with their fellows or outsiders. Media houses in Kenya have reported that many university girls change into twilight girls at night by hitting popular Nairobi streets where known clients pick them to solicit for sex in exchange for hefty amount of cash (Real Magazine, 2015). These students seem to have little knowledge on the risks they are exposing themselves through engaging in premarital sexual behaviors, but this might be attributed to the very little information and literature existing on the effects of premarital sexual behaviors on reproductive health of undergraduate students and thus need for this study.

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Statement of Problem

Approximately 16 million girls aged 15-19 years and 2.4 million below 16 years give birth each year in developing regions, (WHO, 2018). According to World Health Organization, 2016, there are increased cases of reproductive health related problems in Africa among teens and youths aged between 15 to 25 years in which 26.3% cases were reported in 2016 compared to 21.6% cases reported in 2015. Among these youth, university students accounted for 15.2% being the most affected group. This might be attributed to high engagement in sexual activities that are being contributed by the breakdown in traditional family systems, urbanization and the influence of mass media (Keziah, 2015).

In Kenya, the pre-marital sexual behavior among young people is increasing at an alarming rate. The behavior has persisted in Kenyan universities despite consequences associated with such relations (Hulton et al, 2014). Most of the studies that were done on pre-marital sexual behavior among young people were in the 1990s and the most recent studies (Mathai, 2013; Mayabi, 2016; Kabiru, 2008; Adaji, 2010; Abdissa, 2017 & Kaaya, 2002) have focused on premarital sexual behaviors among secondary school students.

In addition, these researchers focused on risky sexual behaviors (Mathai, 2013), prevalence of premarital sex (Mayabi, 2016), factors associated with sexual activities (Kabiru, 2008) and attitude on premarital sex (Adaji, 2010). There is no empirically documented study on the effects of premarital sexual behaviors on reproductive health of undergraduates in universities in Kenya. University students have increasingly engaged in premarital sex oblivious of the effects on reproductive health.

Based on the magnitude of the problem and the gaps of knowledge in this area, this study was set out to study the extent to which premarital sexual behaviors affects reproductive health among undergraduates.

Study Question

What is the relationship between early sexual initiation and reproductive health among undergraduates in universities within Nairobi County?

Objectives of the study

To determine the relationship between early sexual initiation and reproductive health complications among undergraduates in universities within Nairobi County

Conceptual Framework

There are effects associated with all forms of premarital sexual behaviors, some are untreatable and irreversible. Common premarital sexual behaviors that directly affect one's reproductive health are elucidated in the current study as the independent variables are: Unprotected sex which is associated with STDs especially HIV, Human Papilloma virus has been associated with genital cancer and warts as well as pelvic inflammatory diseases including gonorrhea or chlamydia; Early sexual initiation which affects reproductive health through, bleeding

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irregularities, stigmatization leading to other reproductive complications and premarital child bearing and hormonal contraceptives which refers to hormonal methods of birth control that prevent the ova from being released from the ovaries, thickens cervical mucus to prevent sperm from entering the uterus, and thin the lining of the uterus to prevent implantation**.** They have been associated with bleeding irregularities, hormonal imbalance and low sexual desire. The dependent variable in this study was reproductive health disorders and conditions that affect the optimal functioning of the male and female reproductive systems during all stages of life. These include; STDs, unplanned pregnancies, labor and delivery complications, birth defects, impotence/ reduced fertility, erectile dysfunction and ejaculation disorder.

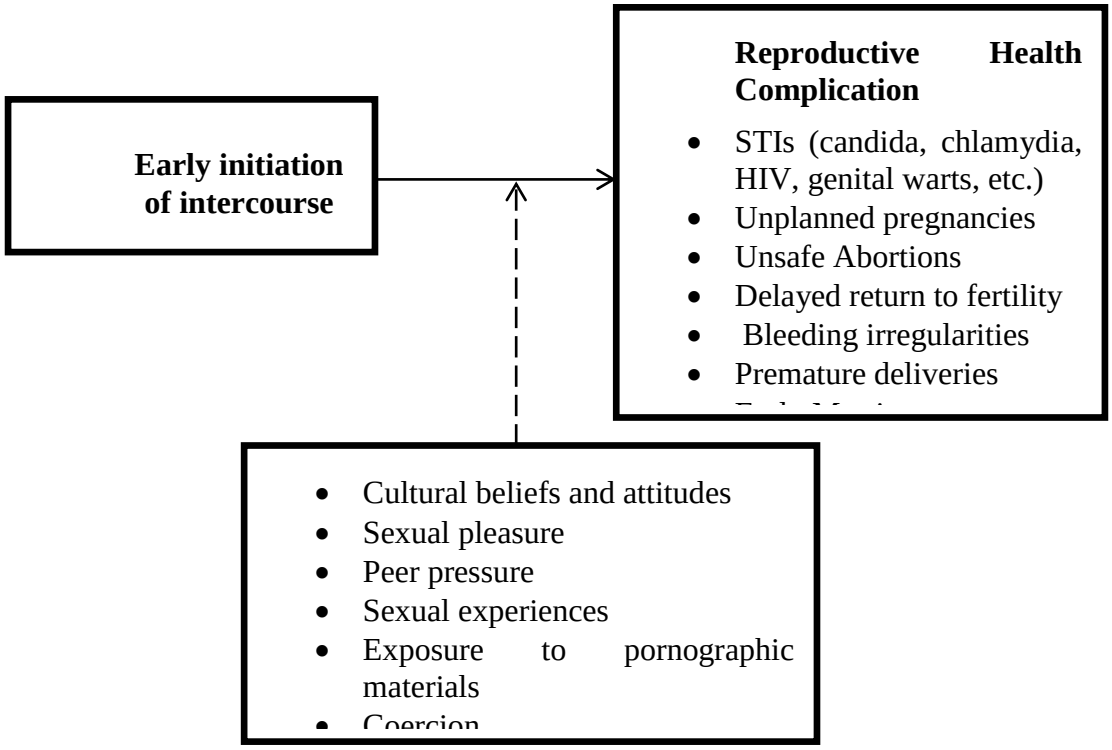

Figure 1: Conceptual framework

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LITERATURE REVIEW

Effects of early initiation of intercourse on reproductive health

Age at sexual debut has been of central interest to researchers and policymakers for a variety of reasons. Young age at first intercourse is associated with reduced rates of contraceptive use, (Manlove et al., 2016) resulting in an elevated likelihood of a teenage birth, and many such births are unintended (Henshaw et al., 2008). Furthermore, in combination with other risk factors, being especially young at first sex is associated with increased odds of an STD diagnosis in young adulthood and with an increased lifetime number of sex partners (Henshaw et al., 2008). To the extent that early age at first sex is linked to engagement in sexual risk behaviors across the life course, we expect it to be associated with an increased risk of unintended childbearing and STD diagnosis, and an increased number of sex partners, during young adulthood.

Although McBurney & White (2007) stated that it is extremely unclear to differentiate planned and unplanned pregnancies but most of the pregnancies among the university students are of no doubt that unplanned. William – Wheeler (2005) asserted that although all women may have unintended pregnancies, youths are at higher risk especially ranging from 16 – 22 years in which majority are at undergraduate level.

In a study done by Stevens – Simon & White (2011) on the health-related consequences of unplanned pregnancies among young mothers, findings indicated that the younger the mother, the higher the incidence of anemia, toxemia, infection of urinary tract, STIs and other complications of labor and delivery.

In another study done by McWhiter (2014) on problems associated with early pregnancies indicated that 15-year-old mothers were twice as likely as older mothers to have low birth weight babies and the baby is three times as likely to die in the eight days of life.

Similarly, reports by UNFPA 2018 revealed that 1:5 girls are married or in a union, before 18 years globally. It also revealed that 40% of girls were married before 18 years while 12% of girls were married before 15 years. Reports by UNICEF 2019 indicated that 12 Million girls under 18 years get married each year globally. Adolescent pregnancies increased their risks of complications in pregnancy and childbirth which are a leading cause of death among older adolescent girls.

Theoretical Framework

A theoretical framework and model designed to explain and predict decisions about premarital intercourse is presented in axiomatic theoretical framework. Decision-making is viewed within an exchange of this framework. Throughout the exchange process, variations in socialization, definitions of the situation, perceptions of group vs. individual profits, and variations in the values of the participants are related to decisions made which eventually affects premarital sexual intercourse. Consensual and accommodative decisions to have or not to have premarital intercourse are explored. Suggestions have been made to utilize the framework to generate hypotheses and to develop the theory further. Aaxiomatic theory construction has

been used in studies to analyze the likelihood of participation in premarital sexual intercourse by college students. A study conducted in Midwestern State University in the USA which consisted of 754 never-married female students enrolled in the institution responded to asexual attitudes and behavior survey. Forty-eight empirical propositions concerning premarital sexual intercourse were tested, nineteen of which were found to be statistically significant. Three derived propositions were reformulated from these findings, which in turn were utilized to develop two middle-range theories: commitment theory and cultural milieu theory. These theories clearly demonstrate the role of changing personal and societal attitudes toward sexuality and perceived partner commitment in the decision to become sexually active.

METHODS AND MATERIALS

The study adopted descriptive cross-sectional survey design to assess the effects of premarital sexual behaviors on reproductive health among undergraduates in universities within Nairobi County. The dependent variable in this study was reproductive health disorders and conditions that affect the optimal functioning of the male and female reproductive systems during all stages of life. These include; STDs, unplanned pregnancies, labor and delivery complications, birth defects, impotence/ reduced fertility, erectile dysfunction and ejaculation disorder. The independent variables for this study early sexual initiation or debut. The study was carried out in universities within Nairobi County. Nairobi County has more than 148 institutions of higher learning including private and public universities, colleges and campuses. The study population was undergraduate students aged between 18 – 24 years in selected universities within Nairobi County. The targeted number of all undergraduate students in the four selected universities within Nairobi County was estimated to be 3200 (KUCCPS). Four focused group discussions, each consisting of 8-12 students in each campus. 4 key informants, one from each university's health unit.

Purposive sampling was used to select two public universities and two private universities within Nairobi County namely: Mount Kenya University, Africa Nazarene University, Kenyatta University, and Moi University. A sample of 324 students was targeted derived from the total population in the four universities. Proportionate sampling was hence conducted were the sample size from each university was proportionate to size sampling. In this way data was extracted from each university as Kenyatta University (122) MKU (71), Nazarene University (50) and Moi University (81).*Quantitatively*, self-administered questionnaires were used to collect data from the selected undergraduate students aged between 18 – 24 years. Both open ended and close ended questions were used to collect data and questions were written in English. *Qualitatively*, 4 Key Informant Interviews (KII) were also conducted which comprised of one health care worker (Clinician) from each university infirmary. Three Focused group discussions from each university were conducted composed of 8-12 students.

Data was cleaned, coded, categorized as per each of the research variables and then exported to Statistical Package for Social Sciences (SPSS Version 21). Descriptive

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statistics and inferential statistics were then calculated. Descriptive statistics were used to generate frequencies, percentages, medians, and modes. The data was then be presented using tables, graphs and charts for easy interpretation. Inferential statistics were calculated using Chi-square to generate the fitness of the model and relationship between the variables at 95% Confidence Interval, (P-value≤0.05 was considered significant). Thematic analysis of qualitative data was done.

RESULTS

Response rate

The response rate was 99.4%. This was satisfactory to draw conclusions for the study as it was considered. According to Mugenda and Mugenda, 2003, a response rate of 50% is adequate for data analysis and reporting. A 60% response rate is good whereas a 70% and above response rate is excellent. Based on this assertion, this study's response rate was excellent.

Characteristics of study participants

The study enrolled a total of 322 students from four universities in Nairobi's CBD, namely, MKU (21.7%), KU (37.6%), ANU (15.5%) and MU (25.2%). The details of the study participants are outlined in Table 1. Majority were female (52.5%) and Christians (95.3%). An analysis of the distribution of the age of the respondents showed that their age ranged from 18 to 22 years with a mean ± standard deviation (sd) of 20.1 ± 1.39 years. Further, those who were aged 18, 19 and 22 years comprised 16.8%, 20.2% and 20.8% of the respondents, respectively.

Table 1 Socio demographic characteristics

Characteristic	Number (n=322)	%
Age (years)		
18	54	16.8
19	65	20.2
20	65	20.2
21	71	22
22	67	20.8
Sex		
Male	153	47.5
Female	169	52.5
Religion		
Christian	307	95.3
Muslim	15	4.7
University		
MKU	70	21.7
ANU	50	15.5
KU	121	37.6
MU	81	25.2

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Demographic characteristics of the parents of the students

Table 2 describes selected attributes of the parents of the students who took part in the survey. An overwhelming majority of the respondents reported that their parent(s) were alive. In addition, most of the study participants (68.6%) reported that their parents were married at the time the study was undertaken. Respondents whose fathers and mothers were employed were, 59.9% and 49.0% respectively, as shown in Table 2.

Table 2 Sociodemographic characteristics of the respondent's parent

Attribute	Frequency	%
Parents (Alive/Dead) (n=322)		
Alive	303	94.1
Both parents dead	11	3.4
One parent dead	8	2.5
Marital status of the parents (n=303)		
Married	208	68.6
Single	87	28.7
Divorced	8	2.6
Employment status (Father) (n=307)		
Employed	184	59.9
Unemployed	123	40.1
Employment status (Mother) (n=310)		
Employed	152	49.0
Unemployed	158	51.0

4.3

Sexual activities of the respondents

Of the 322 students who were interviewed in the current study, 198 admitted that they had engaged in sexual activities at least once in their lifetime thus a prevalence of 61.5% (95% confidence interval (CI) 56.1% - 66.6%). Enquiries on the frequency of engaging in sexual activities showed that those who had indulged in sexual

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activities only once in a lifetime constituted 29.8% of the study participants while those who had engaged in sexual activities four or more times were 32.3% (Table 3).

Table 3 Description of sexual activities

Attribute	Number	%
Ever had sexual experience (n=322)		
Yes	198	61.5
No	124	38.5
Frequency of engaging in sexual activities (n=198)		
Once	59	29.8
Twice	37	18.7
Thrice	38	19.2
4 +	64	32.3

Effects of early sexual initiation on the reproductive health

The mean ± sd age at sexual debut among the 198 sexually active respondents was 15.9±2.67 years with the minimum and maximum reported age of sex initiation being 11 and 22 years respectively. Early initiation of sex (<15 years) was reported by 61 respondents (30.8%; 95% CI, 24.8% - 37.6%). Those whose sexual debut was at 19 years and above were 19.7% with the rest (49.5%) indicating that they had their first sexual encounter between the ages of 15 to 18 years. There was no statistically significant difference in the age at sexual debut between male and female respondents (mean ± standard error (se): 15.8±0.27 years for male versus 15.9±0.26 years respectively for females, p=0.884). Most of the study participants (80.3%) had their first sexual encounter before joining the university. Minority had planned their first sexual encounter (10.1%) and used protection during the first sexual encounter (42.1%). The effect of the first sexual encounter on the reproductive health of the study participants included unplanned pregnancies (18.2%), fearing of subsequent sexual intercourse (28.9%), early use of contraception (39.6%) and STI (18.2%) (4).

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Table 4 Early sexual initiation and related reproductive health issues

Characteristic	Number	%	95%CI	p-value
Age of sex debut (years) (n=198)				
<15	**61**	**30.8**	**0.248-0.376**	**0.036***
15 – 18	98	49.5	0.426-0.564	0.001*
> 18	39	19.7		
First sexual encounter before joining campus (n=198)				
Yes	**159**	**80.3**	**0.742-0.852**	**0.004***
No	39	19.7	REF	
If yes, was the first sexual encounter planned (n=159)				
Yes	16	10.1	0.050-0.127	0.001*
No	**143**	**89.9**	**REF**	
Used protection during the first sexual encounter (n=159)				
Yes	67	42.1	0.276-0.407	0.004*
No	**92**	**57.9**	**REF**	
Effect of the first sexual encounter on reproductive health (n=159)				
Got an unplanned pregnancy	29	18.2	0.104-0.202	0.089
Fears of intercourse	38	28.9	0.143-0.252	0.003*
Early use of contraception	63	39.6	0.257-0.386	0.001*
Got an STI	29	18.2	REF	

*P-value showing statistically significant difference at P<0.05

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Effects of early sexual initiation on the reproductive health of the study participants

Table 5 demonstrates the findings of the analysis of the effects of early sexual initiation on the reproductive health of the study participants.

Table 5 Effects of early sexual initiation on the reproductive health

Statement	**Response (n=198)**			
	Strongly Agree [n (%)]	**Agree [n (%)]**	**Disagree [n (%)]**	**Strongly Disagree [n (%)]**
Early sexual initiation has led to premature deliveries	88(44.4)	37(18.7)	40(20.2)	33(16.7)
Early sexual initiation has led to bleeding irregularities	33(16.7)	63(31.8)	73(36.9)	29(14.6)
Early sexual initiation has led to abnormal pain during sex	55(27.8)	82(41.4)	31(15.7)	30(15.2)

Those who agreed and strongly agreed that early sexual initiation had led to premature deliveries were 88 (44.4%) and 37(18.7%) respectively thus an overall agreement of 63.1%. The proportion of respondents who agreed with the statement '*Early sexual initiation has led to bleeding irregularities*' was 16.7% while those who were in strong agreement with the statement were 31.8% thus, overall, 48.5% agreed with the statement. Those who responded positively on enquiring whether early sexual initiation led to abnormal pain during sex constituted most of the study participants (137, 69.2%) with agreement and strong agreement being recorded by 55(27.8%) and 82(41.4%) respondents, respectively.

Majority of students seemed to understand the effects of early sex debut and its meaning. However, a few seemed reluctant about it. Just like one participant stated as below;
"*I mean I was initiated into sex when I was at age of thirteen by our shamba boy and have never had any negative effect. So, I don't see the issue about early sex initiation. I careless, am keeping on*".

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Correlates of contracting STI among the study participants

Association between ever contracting an STI and sociodemographic characteristics

The findings on the analysis of the association between ever contracting an STI and sociodemographic characteristics are shown in Table 6a. Age was partly predictive of the study participants reported status on ever contracting STI. Overall, the average age of those who reported that they and/or their partners had ever contracted STI was not statistically significant from that of their counterparts who reported on the contrary (mean ±se: 20.0±0.17 years versus 20.2±0.13 years respectively). The proportions of respondents who reported that they and/or their partners had ever contracted STI increased with age of the respondents. Respondents who were 18 and 19 years of age were, respectively, 73% and 75% less likely to have reported that they and/or their partners had ever contracted STI (odds ratio (OR=0.273, 95%CI=0.104-0.712, p=0.007) and OR=0.245, 95%CI=0.087-0.686, p=0.008) respectively. A higher proportion of females reported that they and/or their partners had ever contracted STI when compared to males (44.3% versus 28.7% respectively, OR=1.977, 95%CI=1.098-3.561, p=0.022). Employment status of the parents was a significant risk factor for STI. Respondents whose mothers were unemployed had approximately 2-fold increased likelihood of reporting that they and/or their partners had ever contracted STI (OR=2.156, 95%CI=1.171-3.972, p=0.013). Moreover, respondents whose fathers were unemployed were about four times more likely to have reported that they and/or their partners had ever contracted STI (OR=3.915, 95%CI=2.087-7.347, p<0.001). The rest of the sociodemographic attributes that were assessed did not show significant associations with the dependent variable that is, ever contracting STI as shown in Table 6a.

Table 6a Assessment of the association between ever contracting an STI and socio-demographic factors

Characteristics	You/your partner ever contracted STI		OR (95% CI)	P-value
	Yes [n(%)]	No[n(%)]		
Age (years)				
18	**9(23.1)**	**30(76.9)**	**0.273(0.104-0.712)**	**0.007***
19	**7(21.2)**	**26(78.8)**	**0.245(0.087-0.686)**	**0.008***
20	19(43.2)	25(56.8)	0.691(0.295-1.617)	0.393
21	15(37.5)	25(62.5)	0.545(0.226-1.317)	0.176
22	22(52.4)	20(47.6)	REF	
Sex				
Female	**43(44.3)**	**54(55.7)**	**1.977(1.098-3.561)**	**0.022***
Male	29(28.7)	72(71.3)	REF	
Religion				
Christian	71(37.6)	118(62.4)	4.814(0.590-39.292)	0.159

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Muslim	1(11.1)	8(88.9)	REF	
Parent's marital status				
Married	51(39.2)	79(60.8)	1.445(0.775-2.695)	0.246
Not married	21(30.9)	47(69.1)	REF	
Employment status (Mother)				
Unemployed	**46(45.1)**	**56(54.9)**	**2.156(1.171-3.972)**	**0.013***
Employed	24(27.6)	63(72.4)	REF	
Employment status (Father)				
Unemployed	**40(58.0)**	**29(42.0)**	**3.915(2.087-7.347)**	**0.001***
Employed	31(26.1)	88(73.9)	REF	
University				
MKU	19(42.2)	26(57.8)	1.370(0.587-3.197)	0.466
ANU	9(31.0)	20(69.0)	0.844(0.312-2.279)	0.737
KU	28(35.9)	50(64.1)	1.050(0.490-2.252)	0.900
MU	16(34.8)	30(65.2)	REF	

* p-values showing statistically significant difference between those who contracted STI and those who had not, at $p<0.05$

Association between ever contracting an STI and sexual practices and related attributes

Table 6b illustrates the association between ever contracting an STI and sexual practices and related attributes. An increasing alarming trend in the proportion of STI cases was observed with the increasing frequency of sexual encounters with multiple sexual partners. Those who had reportedly had sex once in their lifetime had lower odds of reporting that they and/or their partners had ever contracted STI compared to their colleagues who had had sex multiple times (more than once) (OR=0.431, 95%CI=0.204-0.909, p=0.026). There was a significant difference in the proportions of respondents who reported that they and/or their partner had ever contracted STI between those who had multiple sex partners and those who had one sexual partner (55.3% against 24.6% respectively, (OR=0.264, 95%CI=0.143-0.487, p<0.001). This finding relates with findings by *Santel et al*, *2008* who reported that multiple sexual partners was associated with adverse RH outcomes because, the risk of exposure increases with each additional partner. Age at initial sexual encounter was a significant predictor of ever contracting STI, with early sexual debut being associated with higher odds of reporting having ever contracted STI (OR=3.581, 95%CI=1.916-6.693, p<0.001). Planned initial sexual encounter was associated with a reduction in the likelihood of reporting to have ever contracted STI (OR=0.617,

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95%CI=1.414-1.850, p=0.014). For those with multiple sex partners, using condoms was associated with a 67% reduction in the odds of they and/or their partners ever contracting STI (OR=0.325, 95%CI=0.135-0.782, p=0.011). Other factors which were evaluated were not significantly associated with reporting that either the respondent or his/her partner had ever contracted STI.

Table 6b Evaluation of the association between ever contracting an STI and sexual practices and related attributes

Characteristics	You/your partner ever contracted STI		OR (95% CI)	P-value
	Yes [n(%)]	No [n(%)]		
No. of times had sex				
Once	**17(28.8)**	**42(71.2)**	**0.431(0.204-0.909)**	**0.026***
Twice	11(29.7)	26(70.3)	0.450(0.191-1.063)	0.066
Thrice	13(34.2)	25(65.8)	0.554(0.241-1.270)	0.161
4 +	31(48.4)	33(51.6)	REF	
Multiple sex partners				
No	**30(24.6)**	**92(75.4)**	**0.264(0.143-0.487)**	**0.001***
Yes	**42(55.3)**	**34(44.7)**	**REF**	
Used a condom (For those with multiple sex partners)				
Yes	**8(20.0)**	**32(80.0)**	**0.325(0.135-0.782)**	**0.011***
No	**40(43.5)**	**52(56.5)**		
Currently has partner				
Yes	61(35.3)	112(64.7)	0.693(0.297-1.620)	0.396
No	11(44.0)	14(56.0)	REF	
Age at sex debut (years)				
<15	**30(49.2)**	**31(50.8)**	**4.424(1.695-11.549)**	**0.002***
15 – 18	**35(35.7)**	**63(64.3)**	**2.540(1.016-6.349)**	**0.042***
> 18	7(17.9)	32(82.1)	REF	
First sexual encounter before joining campus				
Yes	50(35.5)	91(64.5)	0.874(0.463-1.650)	0.678
No	22(38.6)	35(61.4)	REF	
First sexual encounter was planned				
Yes	**0(0.0)**	**10(100.0)**	**0.617(1.414-1.850)**	**0.014***
No	**50(38.2)**	**81(61.8)**	**REF**	
Used protection during the first sexual encounter				
Yes	15(31.9)	32(68.1)	0.790(0.376-1.660)	0.534
No	35(37.2)	59(62.8)	REF	

* p-values showing statistically significant difference between those who contracted STI and those who had not, at p<0.05

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CONCLUSIONS

Most adolescents and youth experience unplanned first sexual encounters at a mean age of 15.9±2.67 years-before joining university. From this study, close to one third of the respondents had a sexual encounter below 15 years. Early sexual debut is associated with unplanned pregnancies and early childbearing, early and inconsistent use of contraception, multiple sexual partners, increased risk STIs and fear of sexual encounters.

STUDY RECOMMENDATIONS

An enhanced AASRH education among teenagers and adolescent will help them understand the need to delay their sexual debut. This requires a collaborative approach by all stakeholders, including parents/guardians, teachers, peer educators, RH experts, religious leaders and the media to help the young people abandon the paths that lead to early sexual encounters.

POLICY RECOMMENDATION

1. A collaborative approach by the MOE, the MOH and other relevant stakeholders must scale up the implementation of the age-appropriate adolescent sexual and reproductive health policy. Its full implementation will ensure that young people have full access to comprehensive age-appropriate reproductive health information, services and commodities that will prevent them from engaging in undesirable premarital behaviors
2. The government must increase the budgetary allocation for adolescent and youth programs to allow for efficient and effective implementation of youth programs that will help engage the youths in constructive development-orientated programs hence help divert their attention from destructive behaviors.
3. It is important that the administrators in institutions of learning put in place sexual and reproductive health policy frameworks that guide young people while at school. For instance; a code of conduct, where to access SRH services and where to report and seek help in case of sexual assault or abuse. Summarized version print out of these frameworks can be pinned on notice boards, and toilets for continuous reminders.
4. Civil society groups, reproductive health advocates and activists must enhance their lobbying strategies for political and religious support and commitment towards investing in young people as better future leaders and family men and women. With the understanding that investing in ASRH means investing for a sustainable population and environment that will go a long way in contributing to the achievement of the SDGs.

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