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PREVALENCE OF NON-BARRIER CONTRACEPTIVE METHODS USE AMONG FEMALE STUDENTS IN THE UNIVERSITY OF NAIROBI
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PREVALENCE OF NON-BARRIER CONTRACEPTIVE METHODS USE AMONG FEMALE STUDENTS IN THE UNIVERSITY OF NAIROBI

J. O. Mutiso and S. O. Mbuya

ABSTRACT

Introduction: **Sexual activity among the unmarried youth is common. The major complications of unprotected sex in this group are unwanted pregnancies and sexually transmitted infections (STIs), especially HIV/AIDS. Knowledge of contraceptive methods prevents the two, if barrier methods are used. A study was done at the University of Nairobi in October and November of 2013 to find out the degree of non-use of barrier methods and therefore the risk of exposure to HIV/AIDS and unwanted pregnancy.**

Objectives: **The main objective was to determine the prevalence of use of non-barrier contraceptive methods and the challengesof its use in the 18-24 years old age group. The specific objectives were to determine the degree of awareness of contraceptive methods available currently, the level of awareness of STDs especially HIV/AIDS, and the prevalence of use of non-barrier methods.**

Methodology: **A descriptive cross-sectional study was done using a semi-structured questionnaire to collect data from 443 participants after obtaining a written consent. The target population was female students at the University of Nairobi and the study population was female students aged 18-24 years. The results were presented in form of tables and diagrams and data analysed using the SRSS 18.0 version.**

Results: **303(68.6%) respondents had engaged in sexual intercourse while 139(31.4%) had never had sexual contact. 333(75.2%) of the participants had knowledge of contraception, while 271(89.4%) of the sexually active participantshad used different forms of contraception in their lifetime.106(35%) had used non-barrier methods, while condom was the most commonly used contraceptive method, 197(65%).Awareness of the various methods of contraception was, 403 (91%) for the oral contraceptive pills, 393(88.7%) for the emergency pill, 386(87.1%) for condoms, 337((76%) for the implants,306(69%) for the surgical methods,273(61.6%) for the intrauterine devices,260(58.7%) for the injectable methods and 16(4%) for other methods. 247(55.8%) of the participants were aware that contraceptives are used for**

preventing pregnancy, and 75(17%) were aware it is for preventing both pregnancy and STIs. 434(99.3%) were aware of STIs and HIV/AIDS. There was no statistically significant association between use of non-barrier methods of contraception and a history of STIs among the respondents, P=0.614, 95% CI.

Conclusions: **Sexual activity among the youth is high (68.6%). Awareness of contraception and the various methods and use among those who are sexually active is high (91%, and 89.4% respectively). Use of non-barrier methods of contraception is high (35%) despite awareness of exposure to STIs and HIV/AIDS. This calls for concerted efforts to stem the tide of unnecessary exposure to STIs and HIV/AIDS.**

Recommendations: **The university administration and health services in collaboration with the ministry of health and other stake holders should produce and include programs very early in the students' life during the orientation week for newcomers and in their curriculum to increase awareness and use of contraception to prevent pregnancy and STIs and HIV/AIDS.**

INTRODUCTION

Although there is limited information on use of contraceptives among the university female students, reproductive health services which includes family planning, has been identified as an important component of primary health care by both government and private agencies. This is due to its positive health impact on mothers and their infants, including reduced mortality (Sonfield A et al 2013).Utilization of contraception to prevent pregnancy is beneficial to the individual, their families and the society as a whole as the reduction in both child and maternal morbidity and mortality ensures that women are better able to engage in economic activities and improve education and status in society (Mavranezouli, 2009).This reduces the cycle of poverty usually experienced from one generation to another (Smith et al., 2009). The two major benefits of contraception when correctly and consistently used are prevention of unwanted pregnancy and transmission of sexually transmitted diseases (STI and HIV/AIDS) (Frost, 2008). Use of barrier methods of contraception prevents both (Philips and Curtis, 2013).). The low rate of use of contraception among women in sub-Saharan Africa is accompanied by a high maternal mortality (WHO, 2011). Although premarital sexual activity is high among young African females (up to 50%, Hindi and Fatusi, 2009), contraceptive use is low (27%, KDHS, 2008-09).

For university students who not only need all the time they can get to concentrate on their studies and finish school in time, but are also not in a position to bear the responsibilities of child bearing and child care, yet are at an age of sexual activity, use of contraceptive methods that prevent both pregnancy and sexually transmitted diseases for those who are sexually active, would be of great

benefit. Studies show that irrespective of the consequences of engaging in unprotected sexual activity, University students value prevention of pregnancy more than protecting themselves from STIs (Belaynew et al, 2012).

Towards this goal of preventing unwanted pregnancies and STIs, knowledge of STIs and contraception and the various methods is vital.This study was done among university female students at the University of Nairobi to determine their level of awareness of STIs and contraceptive

methods and the prevalence of use of non-barrier methods, with a view to providing information for a basis of action.

MATERIALS AND METHODS

This was a descriptive cross-sectional study done at the University of Nairobi, located in Nairobi Kenya. The sampling frame was all the female students from the University of Nairobi. The target population was university female students aged 18-24 years. Determination of the sample size was done by using the Dobson (1984) formula, $n=Z^2pq/d^2$ and 15% non-response added. This gave a total of 443 students to be interviewed. Multistage sampling was used to pick the participants. The University has eight campuses namely: Main campus, Chiromo, Parklands, Kenyatta National Hospital, Upper Kabete, Lower Kabete, Kikuyu, and Kenya Science College. By simple random sampling technique after giving each of them a number from 1 to 8, three campuses namely: Main campus, Chiromo and Parklands were picked for the study population. These three campuses had an 18-24 years female population of 44,164. To get the number of students to be recruited in each of the 3 campuses, the number of students in each campus was multiplied by the sample size and divided by the total number of students in all the three campuses, i.e. 44,164. Systematic sampling was then used to select the participants in each year and the numbers were generated using excel software.

Table 1

The number of sampled participants proportional to each campus

Campus	Number of students	Number of participants
Main	27,217	273
Chiromo	9813	98
Parklands	7134	72
TOTAL	44,164	443

Approval of the research proposal was obtained from Kenyatta National Hospital/University of Nairobi Ethics and Research committee and permission to conduct the study obtained from the office of the Deputy Vice Chancellor. Written informed consent was obtained from the participants after explaining the purpose of the study. Confidentiality was maintained by ensuring anonymity of the study participants by giving the questionnaires a number and no names were used. The participants were assured of free access to the results of the study without restrictions.

Inclusion criteria for participation in the study were female students aged 18-24 years, and those who gave consent to participate. Exclusion criteria were those who moved to other campuses to complete their years of study, and those who did not give consent.

Data was collected using a self-administered structured questionnaire, filled in the presence of a research assistant. To minimize errors, the questionnaire was pretested at KNH medical school campus and appropriate adjustments made. The research assistants were given a one-day training.

The data obtained from the questionnaire were entered into a computer. Cleaning, coding and verification of data was done using SPSS 18.0 computer software. Results were presented in form of tables, histograms and bar charts. Chi square test was done to test association between the variables.

RESULTS

The sample size variation in some sections was due to skipping pattern of some questions by some students who had never had sexual contact and due to non-response. A total of 443 students took part in the study.

Table 2

Socio-demographic characteristics of study participants

Characteristic	Frequency	Percentage
1. Age of respondents(n=435)		
In years		
18-19	62	14.3
20-21	157	36.1
22-23	161	37
≥24	55	12.6
2. Marital status(n=434)		
Single	407	93.8
Cohabiting	16	3.7
Married/monogamously	11	2.5
3. Year of study(n=443)		
1st year	110	24.8
2nd year	110	24.8
3rd year	111	25.1
4th year	112	25.3
4. Whether they have ever had sexual experience		
	Frequency	Percentage
Yes	303	68.6
No	139	31.4

The mean age of the study participants was 21.4 years (SD1.7). Only a few students, 55(12.6%), were 24 years. Most of the participants, 407(93.8%) were single, with only a few, 11(2.5%), married. 8(1.8%) and 9(2%) did not indicate their age and marital status respectively.

The majority of the students, 303(68.6%) had had a sexual experience.

Table 3
Knowledge of STIs, HIV/AIDS

1. Knowledge of what HIV/AIDS is(n=437)	Frequency	Percentage
Yes	434	99.3
No	3	0.7
2. Signs and symptoms of HIV/AIDS		
Diarrhoea and vomiting	257	63.1
Mass wasting	283	69.5
Oral thrush	174	43
3. Examples of other STI s known	Frequency	Percentage
Syphilis	423	97.2
Gonorrhoea	419	96.3
Hepatitis	207	47.7
Human papilloma virus	173	39.8
4. Signs and symptoms of STIs		
Vaginal itching/discharge	394	91.2
Burning sensation and pain on urination	385	89.3
Lower abdominal pain	166	38.1
Low back pain	116	26.9
5. Knowledge of transmission of STIs		
Sexual intercourse	357	82
Homosexuality	26	6
Kissing, sexual intercourse	46	11
Sexual intercourse, homosexuality	82	18.8
Others	1	0.2

Almost all of the participants, 434 (99.3%), knew about STIs and HIV/AIDS, with only a few, 3 (0.7%), having no knowledge of them. Between 43% (174) and 69.5% (283), knew at least some signs and symptoms of HIV/AIDS. The vast majority of the participants knew some examples of STIs with almost all knowing about syphilis, 423(97.3%) and gonorrhoea, 419(96.3%). The majority were aware of some of the signs and symptoms of STIs, with 394(91.3%) being aware of vaginal itching/discharge, and 385(89.3%) being aware of burning sensation and painful urination. While the majority of the participants, 357(82%) were aware of transmission of STIs through sexual intercourse, only a few, 0.2 – 11% were aware of other modes of spread.

Table 4

Relationship between age and knowledge of STI/HIV/AIDS

	AGE IN YEARS					
	18-19	20-21	22-23	≥24	TOTAL	CHI SQUARE P-VALUE
HAS KNOWLEDGE	62(100)	152(96.8)	160(99.4)	53(96.4)	427(98.1)	3.401 0.334
NO KNOWLEDGE	0(0)	5(3.2)	1(0.6)	2(3.6)	8 (1.9)	
TOTAL	62(14.4)	157(36)	161(37)	55(12.6)	435(100)	

There was no statistically significant relationship between age and knowledge of STIs/HIV/AIDS (p-value 0.334).

Table 5

Knowledge of contraception and contraceptive methods

KNOWLEDGE	FREQUENCY	PERCENTAGE
Knowledge of what is a contraceptive (N=333)		
Methods of preventing and controlling pregnancy	247	74.2
Methods of preventing pregnancy and STIs	75	22.5
Protects from STIs	6	1.8
Condom/pill	5	1.5
Knowledge of types of contraceptives		
Pills	403	92.6
Emergency pill (Morning after)	393	90.3
Condoms	386	88.9
Implants	337	77.7
Surgical (Tubal ligation, vasectomy)	306	70.7
Intrauterine device, implant	273	62.8
Injections	260	60
Others	16	5.2

SUMMARY

Knowledge of condom as a barrier method	170	38.3
Condom plus other contraceptive	34	7.8
None	46	10.4

The study sought to find out whether the respondents knew the meaning of contraceptive. A large number of the respondents, 247(74.2%), knew contraceptive was a method of preventing and controlling pregnancy. Those who knew contraceptive as a method of preventing pregnancy and STIs were 75(22.5%). Only 6(1.8%) of the respondents thought that contraceptive protects against STI, while 5(1.5%) mentioned contraceptive as a condom and a pill.

The most common type of contraceptive mentioned by respondents was the pill, 403(92.6%), followed by the emergency pill, 393(93.3%). Those who identified condoms and implants as contraceptives were 386(88.9%) and 337(77.7%) respectively. The least known method of contraception to the respondents was injection, 260(60%). Only 170(38.3%) of the respondents were able to identify condom as a barrier method of contraception correctly. The respondents were asked to define contraceptive and only 110(24.8%) were not able to give the correct answer.

Table 6

Relationship between age and knowledge of contraception

	AGE IN YEARS				
What is a contraceptive? P-value	18-19	20-21	22-23	≥24	Chi square
Prevents/controls pregnancy 0.605	32(68.6)	85(70.2)	93(76.9)	34(81.0)	1.848
Prevents pregnancy & STIs	11(23.9)	29(24.0)	28(23.1)	7(16.7)	
Protection against STIs	0(0.0)	5(4.1)	0(0.0)	1(2.4)	
Condom/pill	3(6.5)	2(1.7)	0(0.0)	0(0.0)	

There was no statistically significant relationship between age and knowledge of contraception, (p-value 0.605).

Table 7

Knowledge of conception

KNOWLEDGE	FREQUENCY PERCENTAGE

Are there days in a woman's cycle when she is more likely to become pregnant? (n=428)		
Yes	390	91.1
No	38	8.9
Days in a woman's menstrual circle when conception is more likely to occur		
In the middle of the cycle (ovulation)	172	45.7
Just before the menstrual period	114	30.6
Just after the menstrual period	77	20.6
During the period	26	7.0
Don't know	23	6.3
No specific time	8	2.1

Majority of the respondents, 390 (91.1%) knew that there are days in a woman's menstrual cycle when a woman is more likely to become pregnant. Only 172(45.7%) of them were able to identify the period correctly as the ovulation period. Others thought it was before and after the menstrual period with 114(30.6%) and 77(20.6%) responses respectively. 23(6.3%) had no idea at all.

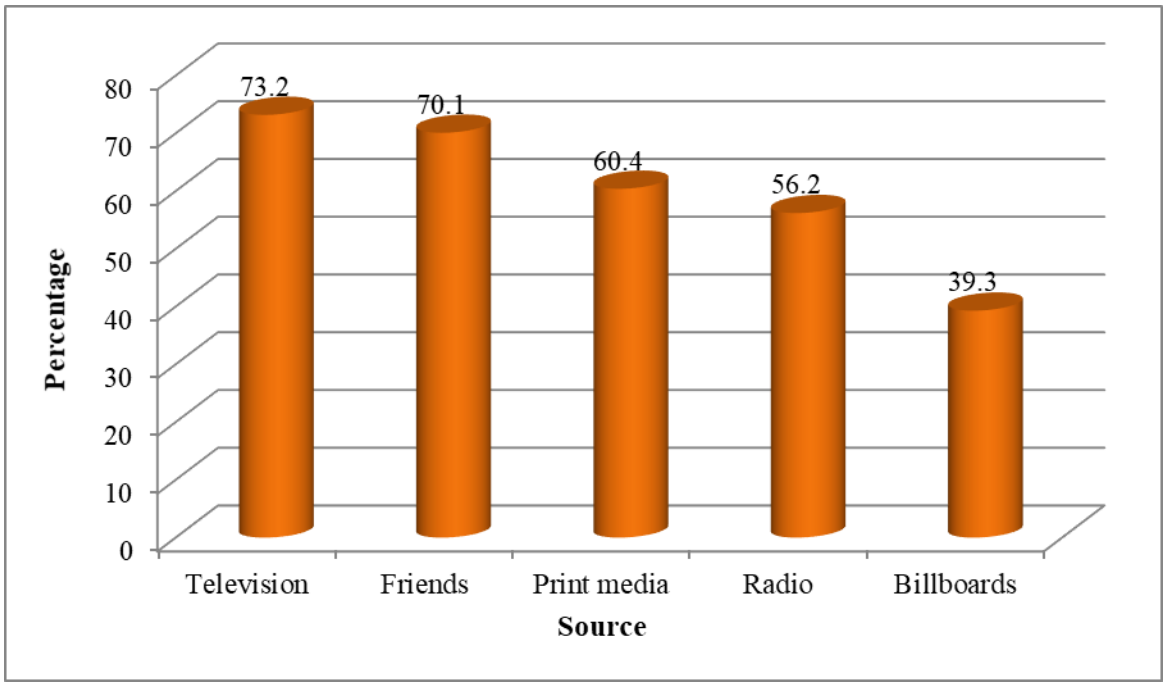

Figure 1. Sources of knowledge of contraceptive methods

Most of the respondents, 309(73.2%), obtained information on contraceptive methods from television, while 296(70.1%) learnt them from friends. Other respondents got the information from print media, 255(60.4%) and radio 237(56.2%). 165(39.3%) got the information from billboards.

Table 8

Current contraceptive methods used

Methods currently used by the female students	Number	Percent
Condom (barrier method)	162	66.7
Condom plus other methods of contraception	22	9.1
Non-barrier methods	59	24.3
TOTAL	243	100

Condom use was the most common contraceptive method at 162(66.7%), while 59(24.3%) had used non-barrier methods and 22(9.1%) combined a condom with other methods. Slightly over half of the respondents, 229(53%) had used a barrier method before while 199(46.5%) had never used any contraceptive.

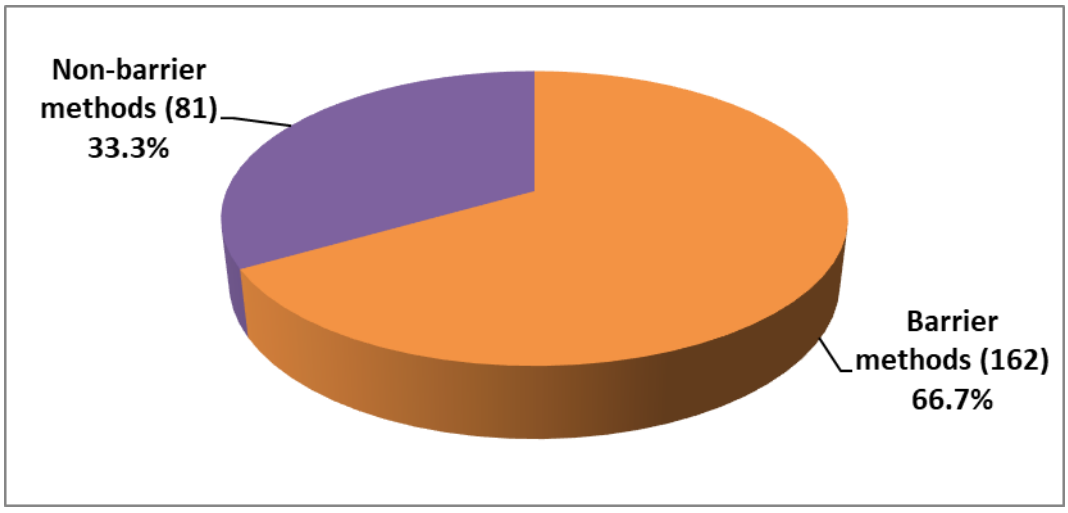

Figure 3.Prevalence of utilization of non-barrier contraceptive (n=243)

Table 9

Method of contraception used by students in different years

YEAR OF STUDY	CONTRACEPTIVE METHOD OFTEN USED			
	CONDOM	CONDOM PLUS OTHER METHOD	NON-BARRIER METHOD	TOTAL
	n(%)	n(%)		
1st Year	33(61.1)	4(7.4)	17(31.5)	54
2nd Year	31(64.6)	4(9.3)	13(27.1)	48
3rd Year	39(62.9)	7(11.3)	16(25.8)	62
4th Year	59(74.7)	7(8.9)	13(16.5)	79
TOTAL	162(66.7)	22(9.1)	59(24.3)	243

The 4th year respondents who had used a condom were 59(74.7%) as opposed to 1st years 33(61.1%). Among the 4th year respondents 7(8.9%) had used a condom plus another method of contraception while in 1st year it was 4(7.4%). There were more 1st years,17(31.5%) who had used non-barrier contraception as compared the 4th years, 13(16.5%). The 2ndyear respondents who had used a condom were 31(64.6%), while 4(9.3%) used a condom plus another method and 13(27.1%) used a non-barrier method. The 3rd years who had used a condom were 39(62.9%), while 7(11.3%) had used a condom plus another method and 16(25.8%) had used non-barrier method. The general pattern was increased use of a condom and less of the non-barrier method as they stay longer in the campus.

Table 10

Reason for using various methods of contraception

REASON	WHICH METHOD OF CONTRACEPTION DO YOU OFTEN USE			
	CONDOM	CONDOM + OTHER METHOD	NON-BARRIER METHOD	TOTAL
	n(%)	n(%)	n(%)	
Prevent pregnancy	14(9.0)	5(22.7)	46(79.3)	65(27.5)
Prevent STD	5(3.2)	1(4.5)	0(0)	6(2.5)
Prevent pregnancy+STD	137(87.8)	16(72.7)	12(20.7)	165(69.9)
TOTAL	156	22	58	236(100)

The respondents gave different reasons why they were using a particular method of contraception.

Majority 46(79.3%), of those who used non-barrier methods, used it to prevent pregnancy, as opposed to only 14(9.0%) who used only condoms to prevent pregnancy. Majority, 137(87.8%) of those who wanted to prevent both pregnancy and STDs used only a condom. Only a minority 5(3.2), solely used condoms to prevent STDs. The use of non-barrier methods to prevent pregnancy was statistically significant (p=0.000).

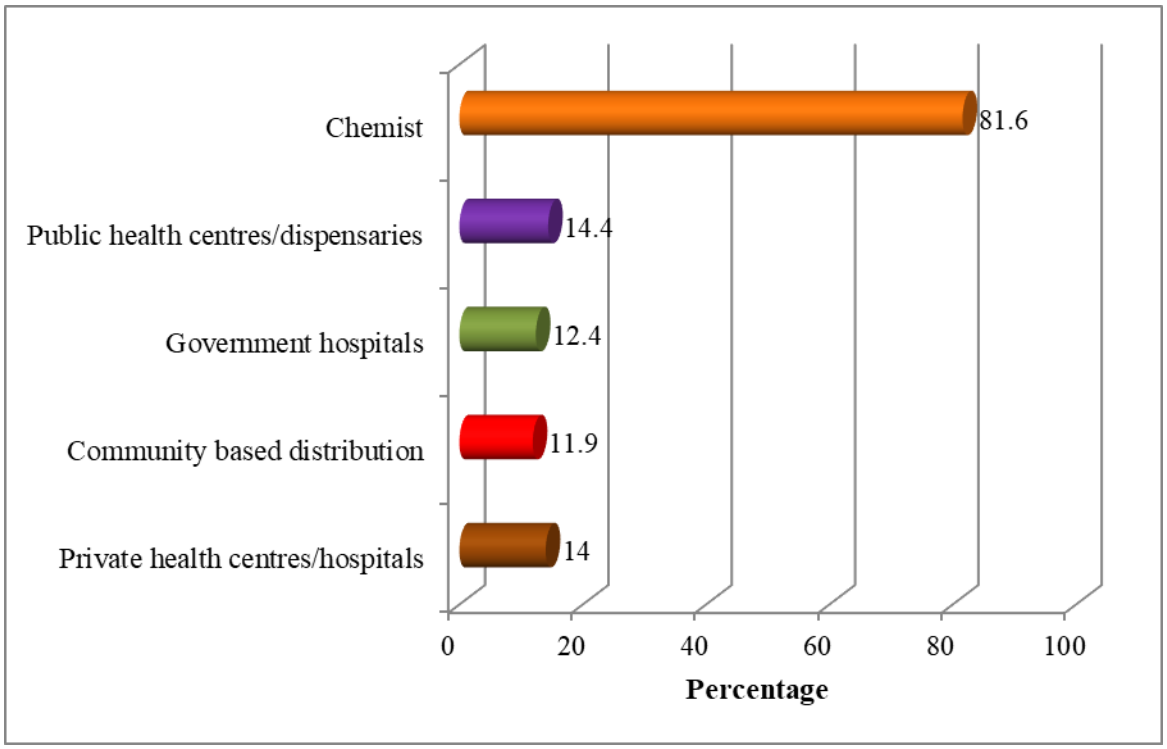

Figure 4. Sources of different methods of contraception

The respondents obtained different contraceptives they used from many sources. The highest source, 164(81.4%) was the chemists, while 25(12.4%) obtained from Government hospitals. Those who obtained them from public health centres/dispensaries were 29(14.4%), with 18(11.9%) of the respondents obtaining them from community-based distribution systems. 18(9%) got them from private hospitals while 10(5%) obtained them from private health institutions.

Table 11

Marital status and contraceptive methods often used

MARITAL STATUS OF SEXUAL PARTNERS	CONTRACEPTIVE METHOD OFTEN USED		
	CONDOM n(%)	CONDOM PLUS OTHER METHODS TOTAL n(%)	NON-BARRIER METHODS n(%) n
Single/never married	128(90.8)	21(95.5)	39(67.2) 188
Divorced/separated	1(0.7)	0(0.0)	0(0.0) 1
Cohabiting	9(6.5)	1(6.5)	5(9.3) 15
Married(Monogamous)	3(2.2)	0(0.0)	13(24.1) 16
Married(Polygamous)	0(0.0)	1(4.5)	2(4.5) 3
Widowed	1(0.7)	0(0.0)	1(1.9) 2

Majority of the sexual partners, 188(83.6%) were singles who had never married before. 128(90.8%) of themhad used condoms only, 21(95.5%) had used a condom plus other methods and 39(67.2%) had used non-barrier methods. Only 1(0.7%) of the respondents was divorced/separated and had used a condom, while 9(6.5%) of the respondents who were cohabiting with their sexual partners had used a condom and 5(9.3%) had used a non-barrier method. The monogamously married students who were using condoms were 3(2.2%), while 13(24.1%) used non-barrier methods. Those in a polygamous marriage, 1(4.5%) was using condom plus another method of contraception and 2 were using non-barrier methods.

Table 12

History of STIs

HISTORY OF STIs	Number	Percentage
Yes	22	5.1
No	383	89.1
Don't know	25	5.8
TOTAL	430	100

The respondents who had suffered from STIs were 22(5.1%) with 25(5.8%) not sure.

Table 13

History of STIs and contraceptive use

	CONTRACEPTIVE USED		
	CONDOM	CONDOM + OTHER METHOD	NON-BARRIER METHOD
THOSE WHO HAD SUFFERED FROM STIs	n(%)	n(%)	n(%)
Yes	11(7.5)	2(10.0)	5(9.1)
No	136(92.5)	18(90)	50(90.9)

Only a few students, 11(7.5%), had suffered from STIs and had used a barrier method(condom). 2(10%) respondents had suffered from STIs and used condoms plus another method of contraception. The respondents who suffered from STIs and had used non-barrier methods of contraception were 5(9.1%).

Table 14

Association between use of non-barrier contraceptive and history of STIs among respondents

EVER SUFFERED FROM STIs	CONDOM	CONDOM+NON-BARRIER METHOD	Chi-Square	P-value
Yes	11 (7.5%)	5 (9.1%)		
No	136(92.5%)	68(90.7%)	0.228	0.614
TOTAL	147 (100%)	73(100%)		

The respondents who had suffered from STIs and had used a condom were11 (7.5%), while those who had used non-barrier methods and had suffered from STIs were 5 (9.3%). There was no statistically significant relationship between use of non-barrier methods of contraception and contraction of STIs (p = 0.614).

Table 15

Association between various predictor variables and method of contraception

	METHOD OF CONTRACEPTION USED			
	CONDOM	CONDOM+OTHER	NON-BARRIER	Chi-Square P-value
1. Age in years				
18-19	17(10.6%)	2(9.5%)	8(13.8%)	
20-21	50(31.1%)	8(38.1%)	17(29.3)	
22-23	68(42.2%)	7(33.3%)	22(37.9%)	
≥24	26(16.1)	4(19.0%)	11(19.0%)	1.575 0.954
2. Suffered STIs	11(7.5%)	2(10.0%)	11(19.0%)	0.244 0.885
3. Marital status				

Single		128(90.8%)	21(95.5%)	39(67.2%)
20.001 0.000				
Cohabiting		9(6.5%)	0(0.00)	5(9.3%)
2.192 0.333				
Married(monogamously)	3(2.2%)	1(4.5%)	13(24.1%)	25.843
0.000				
Married(polygamously)	0(0.0)	0(0.0)	2(3.7%)	5.982
0.05				
Divorced/separated	1(99.3%)	22(100.0%)	54(100.0%)	0.553
0.758				
Widowed	1(0.7%)	0(0.0)	1(1.9%)	0.764
0.683				
4. Year of study				
1st year	33(20.4%)	4(18.2%)	17(28.8%)	
2nd year	31(19.1%)	4(18.2%)	13(22.0%)	
3rd year	39(24.1%)	7(31.8%)	16(27.1%)	
4th year	59(36.4%)	7(31.8%)	13(22.0%)	5.070
0.535				

The study established that there was an association between the method of contraception used by the respondents and those with partners in a monogamous marriage (p=0.000, 95% CI), partners in a polygamous marriage (p=0.05, 95% CI), cohabiting partners (p=0.0334, 95% CI) and also those partners who are single p=0.000, 95% CI). There was no statistically significant relationship between the method of contraception used and those who suffered from STIs (p=0.885, 95% CI), those cohabiting partners (p=0.758, 95% CI), year of study (p=0.535, 95% CI), and age of respondents (p=0.954, 95% CI).

DISCUSSION

The study findings show sexual experience in the majority of students in this age group, 303(68.6%).This was however lower than in a finding of 70.4%, in a study done at Muhimbili, Dar es salaam University, Tanzania, on 253 female University students (Somba, et al, 2014). In another study done on premarital sexual activity among African female adolescents, it was 50% compared to Latin America 25% and Asia 12% (Hindi and Fatusi, 2009).This shouldn't be surprising when you consider that the University is situated in town, with all the exposure to sexual information and the freedom students have in the University away from their homes and parents, electronic media (radio, TV, internet) and print media(books, magazines of all kinds) exposure and availability, besides the peer pressure this group undergoes.

Knowledge of contraceptives, STIs and HIV infection

Overall knowledge of HIV/AIDS was high, 434(99.3%), with majority of students able to identify the signs and symptoms. The knowledge of other STIs was also high, with 423(95.5%) for syphilis and almost as high for other STIs. The majority of students knew the other modes of transmission of these STIs apart from heterosexual intercourse and were aware of the signs and symptoms. This is encouraging, and should be expected in a group of bright intellectuals. This is consistent with another finding in a cross sectional study among University students in Malaysia where most of the respondents,(98%), knew about HIV/AIDS (Jahanfar et al, 2010).

The degree of knowledge of contraceptives was high, with 403 (92.6%) for the pills. The

most common type of contraceptive known to the respondents was the pill and the least known was the injectables. The degree of knowledge of contraceptives was different from that found in a national survey in Kenya where the most common type known was male condoms and the injectables, the least being the emergency pill and male sterilization (KDHS-08-09). This could be due to the narrow age bracket for this study compared with the KDHS. Information on the various types of contraceptives available in the market was obtained mostly from the Television, with the least number of respondents getting it from billboards. This is not surprising considering the exposure alluded to above. But it would have been best if it came from parents and teachers as it would be tempered with moral responsibility.

Methods of contraception used

Two in every three students used a contraceptive. The respondents were using different methods of contraception. The barrier method (condom), was the most popular among the respondents, the male condom being the most preferred. Other respondents used non-barrier methods only while others combined a condom with non-barrier methods. This was consistent with findings in a study at Makerere University in Uganda, where the most common type of contraceptive used was also the male condom (Byamugisha et al, 2009). Most of the students got the contraceptives from Chemists, with the least number getting it from privately owned health centres and hospitals. This is different from the results obtained in a national survey in Kenya, where the public (government) facilities provided most of the contraceptives to users (KDHS, 2008-2009). To get it from private institutions they must be paying for it, while in the public institutions it is for free. Either the way the students are handled at these public institutions is wanting, e.g. lack of confidentiality or the students just feel embarrassed about contraception and want to keep it private. Either way there is something which can be done about this.

Those partners were not married but had single partners were more likely to use barrier contraceptives than no-barrier contraceptives compared with those with partners in a monogamous marriage who were more likely to use a non-barrier contraceptive than the barrier methods. This was unfortunate as it exposed them more to STIs and HIV. Most likely these were paid for services where the temptation and allure of money is more probable. In a study by Jewke's et al, most women were shown to experience violence in their sexual encounters, with the men unwilling to use condoms (Jewkes et al, 2010). Age was positively associated with use of barrier methods of contraception. More of the older students had used a contraceptive in their lifetime with same group more likely to use a condom than the younger respondents. This could be due to peer pressure, experience and the fact that at this age they have more friends compared to the new students in the campus. It could also just be due to exploration after exposure to information expected at this stage of life and in the environment.

The respondents cited various reasons for using different types of contraceptives. A majority used barrier methods to prevent both STIs and pregnancy while slightly over a half used non-barrier methods to prevent pregnancy. In general about a quarter of the respondents used the various contraceptive methods just to prevent pregnancy. This is comparable to findings in study amongst non-institution based youths, where their main reason for contraceptives use was to prevent pregnancy (Oindo,2002). In another study young female students were found to value prevention of pregnancy more than prevention of STIs (Belaynew et al, 2012). This would be understandable as the

students worry is always to be able to finish their studies and find jobs.

Use of non-barrier methods of contraception

A third of the respondents used non-barrier methods of contraception which would mean that some of them were at high risk of contracting STIs and HIV infection. This means that there is a lot to be done to raise awareness on the benefits of using barrier methods to prevent both pregnancy and STIs.

RECOMMENDATION

The university administration and health services in collaboration with the ministry of health and other stake holders should produce and include programs very early in the students' life during the orientation week for newcomers and in their curriculum to increase awareness and use of contraception to prevent pregnancy and STIs and HIV/AIDS

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