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# Prevalence and Factors Associated With Unmet Need for Family Planning Among Medical Students at Kampala International University-Western Campus in Ishaka Municipality, Bushenyi District-Uganda

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**ABSTRACT**

Several factors contribute to the non-utilization of contraceptives, leading to the risk of unwanted pregnancy and unsafe abortions. The major objective of this study therefore was to assess the prevalence factors associated with unmet need for family planning among medical students at Kampala International University Western Campus (KIU-WC) in Bushenyi District, Uganda. A descriptive cross-sectional study design was used during the months of February to November at KIU-WC among female medical Students. Simple random sampling technique was used and to collect data using validated questionnaires**.** 360 out of 377 targeted participants were assessed, returning a response rate of 95.5%. Regular contraceptives use was reported at 32.0%, while up to 68.0% of the study participants were not regularly using contraceptives. Although most (98.9%) of the medical students at KIU-WC had ever heard about contraceptives, only a fraction (65.5%) had comprehensive knowledge about the different types, in addition to having poor knowledge about the scientific basis of conception. The most common contraceptive method used was the condom (34.4%) followed by safe days/withdrawal method (28.3), oral pills (12.2%), ECP (4.4%), injectables (2.5%), and lastly implanon (1.4%) while 16.7% used other methods. Reasons cited for choosing one method over another was safety (38.9%), accessibility (17.8%), affordability (15.0%) and reliability (7.2%). Although students pursuing a Bachelors in Medicine and Surgery at KIU-WC have adequate knowledge about contraceptives, majority are not using it due to safety concerns, accessibility and affordability. Further countrywide sensitization majorly through schools, health care settings, and media should be advocated for and carried out among the student body as a whole to address the low utilization of family planning methods.

**Keywords**: prevalence, factors, unmet need, family planning

## INTRODUCTION

Globally, there are over 100 million sexual encounters daily, which lead to about 3 million conceptions, of which 50% are unintended and 25% are unquestionably unwanted, and which are linked to an elevated risk of unsafe abortions, maternal morbidity, and mortality [1]. Family planning is essential to preventing unwanted pregnancies, lowering avoidable health risks, and enhancing youth chances for education and gainful employment [2-5]. Numerous factors that contribute to the non-use of contraceptives have been identified in research studies conducted around the world among university students. Another study conducted amongst university students in the United States of America (USA) estimated that regular contraceptive use can prevent about 12 million unwanted pregnancies every year [6].

Low or middle-income nations makes up for more over half of the world's population under the age of 25 (85%) according to the United Nations. University students make up a good portion of this population and the majority (80%) of them are highly sexually active and between the ages of 15 and 24. Particularly in light of unwanted pregnancies and Sexually Transmitted Diseases, these young people's sexual activity has elevated to a critical social and public health concern in terms of sexually transmitted diseases [7].

## METHODOLOGY

### Study Design



A descriptive cross-sectional study design was conducted at KIU-WC.

### Study Area

The study was conducted at KIU-WC, a private university located in Ishaka, Bushenyi district, South Western Uganda.

### Study Population

Female students undertaking a Bachelors in Medicine and Surgery at KIU-WC were studied.

### Sampling Technique

Research participants were selected using simple random sampling technique to ensure there was no selection bias.

### Sample Size Determination

The sample population of the study was obtained using Kirsch and Leslie formula from objectives I, II and III;

**Sample size for objective I (Prevalence of Contraceptive Use)**

$$n = \frac{Z^2{}_{\propto/2} \times P(1-P)}{\delta^2}$$

Where:
n = Sample size
$\delta$ = ± 5%, Marginal error
Z =1.96, Standard deviation corresponding to 95 % Confidence Interval
P = 43.1%, Prevalence of contraceptive use in 2016 in Ankole region [8] as per the first objective of the study.
Given that; Z = 1.96, P = 0.431, and d =0.05
Therefore n = 376.8

**Sample size for objective II (Knowledge of Contraceptives)**

$$n = \frac{Z^2{}_{\propto/2} \times P(1-P)}{\delta^2}$$

Where:
n = Sample size
$\delta$ = ± 5%, Marginal error
Z =1.96, Standard deviation corresponding to 95 % Confidence Interval
P = 23.1%, Knowledge of contraceptive use in 2017 in East Africa [9].
Given that; Z = 1.96, P = 0.431, and d =0.05
Therefore n = 269

**Sample size for objective II (Practice regarding contraceptive use)**

$$n = \frac{Z^2{}_{\propto/2} \times P(1-P)}{\delta^2}$$

Where:
n = Sample size
$\delta$ = ± 5%, Marginal error
Z =1.96, Standard deviation corresponding to 95 % Confidence Interval
P = 37%, Practice of contraceptive use in Lesotho and South Africa in 2011 [6].
Given that; Z = 1.96, P = 0.431, and d =0.05
Therefore n = 207

**Going with the largest sample size (i.e. for objective I – prevalence of contraceptive use), the sample size used was thus 377 participants.**

### Selection Criteria (study population)

The Participants were chosen according to the inclusion and exclusion criteria from their respective lecture rooms.

### Inclusion Criteria

All female students of Medicine and Surgery who consented to the study and were aware, were included in the study.

**Exclusion Criteria**

The research excluded all male students pursuing Medicine and Surgery, those who were critically ill, those pending disciplinary hearings and those in dead semesters.

**Data Collection Method**

Pretested self-administered questionnaires were used as a data collection tool. These consisted of closed ended questions, and were used to collect quantitative data sets.

**Data Analysis and Presentation**

Data was sorted, coded, and checked for consistency by entering it into MS Excel spreadsheet application software for organization and then exported to IBM SPSS – 20 for comprehensive analysis. Data sets were analyzed and cross tabulated and presented percentages and figures.

**Ethical Consideration**

The research proposal had previously been submitted to the research ethics committee for approval. After these administrative and ethical clearances, the researcher obtained a written informed consent of respondents before enrolling them voluntarily in the study. Ethic issues such as privacy of respondents and confidentiality of information extracted from the respondent were ensured. Respondents were at liberty to withdraw from the study at any time if they wished to.

**RESULTS**

360 out of 377 targeted participants were accessed and of these; 226(62.8%) were still Single, 123(34.2%) were either Married, Cohabiting or in a relationship; while 11(3.1%) were either Separated or Divorced. Of these; 64(17.8%), 40(11.1%), 35(9.7%), 58(16.1%), 43(11.9%) and 120(33.3%) were Banyankole, Bakiga, Baganda, Basoga Banyoro/Batoro and Other tribes that included Bagisu, Itesots, Bagwere tribe respectively. By religion; 42 (11.7%,), 96(26.7%), 113(31.4%), 35(9.7%) and 74(20.5%) were Muslims, Catholics, Anglicans, SDAs and Other religions respectively that participated in the study.

**Table 1: Socio-Demographic Factors**

| Parameter | Frequency (n=360) | Percentage (%) |
|---|---|---|
| | | |
| **Tribe** | | |
| Munyankole | 64 | 17.8 |
| Mukiga | 40 | 11.1 |
| Muganda | 35 | 9.7 |
| Musoga | 58 | 16.1 |
| Munyoro/Mutoro | 43 | 11.9 |
| Others (Specify) | 120 | 33.3 |
| **Religion of the respondent.** | | |
| **Muslim** | **42** | **11.7** |
| Catholic | 96 | 26.7 |
| Anglican | 113 | 31.4 |
| SDA | 35 | 9.7 |
| Others | 74 | 20.5 |
| **Marital Status** | | |
| **Single** | **226** | **62.8** |
| Married/ Cohabiting/ In a relationship | 123 | 34.2 |
| Separated/Divorced | 11 | 3.1 |
| **Year of study** | | |
| 1st year | 198 | 55.0 |
| 3rd year | 149 | 41.4 |
| 4th year | 13 | 3.6 |

Out of 377 targeted participants, 360 participants were conveniently accessible; however, 359 respondents gave an appropriate response while 1 (0.3%) respondent did not answer making a response rate of 99.7%. Of these, 32.0% (115) respondents agreed to be using contraceptives whereas the majority 246 participants didn't, implying they were not using contraceptives and this makes 68.0% of the accessed respondents as shown in table 2 and figure 1 below.

**Table 2: Proportion of Contraceptives Use among medical students of KIU-WC**



| Do you use contraceptives? | Frequency (n=360) | Percentage (%) |
|---|---|---|
| Yes | 115 | 32.0 |
| No | 246 | 68.0 |
| Missing | 1 | 0.3 |
| **Total** | **360** | **100.0** |

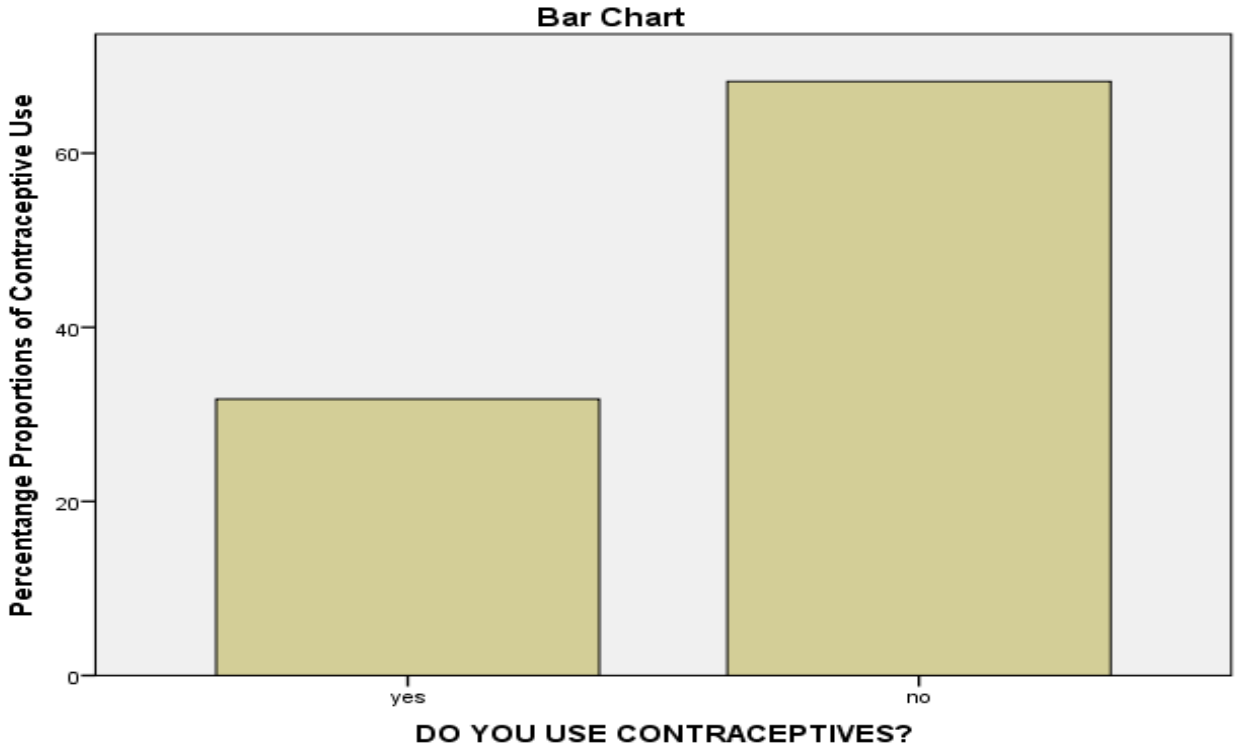


**Figure 1: A Bar graph showing the proportion of contraceptive Usage among medical Students at KIU-WC**

From table 3 below; 98.9% of the respondents had heard about and were aware of Contraceptives use even though 65.5% report that they know how to use contraceptive; only 32.0% (115) respondents agreed to be using Contraceptives as evidenced in table 2 above. Of these, 71.4% (257) of the respondents had ever been educated or trained concerning contraceptives use mostly from school (43.6%), health care providers (26.7%), friend/peer or from media [(Radio, TV, Social media; 10.6%]. 52.3 of the respondents said it (contraceptive usage) is a right among students and 71.7% say both female (21.1%) and male (3.3%) partners should decide on contraceptives use. 59.8% report that encouragement (among the 76.4% that discusses contraceptives use with their peers) by partners contributes to contraceptive use. Of the study participants,75.0% (270) know where to obtain contraceptives and 60.8% reported it is easy to get one of their choice (male condom at 50.6% followed by oral pills at 15.0%, withdrawal, 10.6%, and then EC method at 6.1%) and deem it necessary for people to be knowledgeable. Some participants had some knowledge on emergency contraception (34.1% knew of Levonorgestrel tablets), while majority (51.1%) had little knowledge on emergency contraception. Regarding knowledge on fertilization, 75.3% say conception occurs a few days before or after menstruation, followed by 17.2% mentioning that it occurred during the menstrual period, and 1.4% mentioned that occurs about 14 days before menstruation, whereas 6.1% did not know at all. 95.5 % of the

women recommended that sexual knowledge should include contraceptive methods learning among medical students.

**Table 3: Knowledge and Attitude on contraceptives Among Medical Students of KIU-WC**

| Parameter | Frequency (n) | Percentage (%) |
|---|---|---|
| **Have you ever heard of contraceptives use?** | | |
| **Yes** | **356** | **98.9** |
| No | 04 | 1.1 |
| **Have you ever been educated or trained on contraceptive use?** | | |
| **Yes** | **257** | **71.4** |
| No | 103 | 28.6 |
| **Do you know how to use contraceptives?** | | |
| **Yes** | **225** | **62.5** |
| No | 135 | 37.5 |
| **How did you get to Know information about contraceptive use?** | | |
| Friend/Peer | 69 | 19.0 |
| Health care provider | 96 | 26.7 |
| Media (Radio, TV, Social media, Newspaper) | 38 | 10.6 |
| Schools | 157 | 43.6 |
| **In your opinion, do you think it is students' right to use contraceptives?** | | |
| **YES** | **188** | **52.3** |
| NO | 172 | 47.8 |
| **Who should decide on use of contraceptive?** | | |
| Male | 12 | 3.3 |
| Female | 76 | 21.1 |
| Both | 258 | 71.7 |
| Don't know | 14 | 3.9 |
| **Do you discuss about contraceptives with your peers?** | | |
| **Yes** | **275** | **76.4** |
| No | 85 | 23.7 |
| **What are their opinions about using contraceptives?** | | |
| Encouraging | **215** | **59.8** |
| Discouraging | 145 | 40.3 |
| **Do you know where to obtain contraceptives?** | | |
| Yes | **270** | **75.0** |
| **No** | 90 | 25.0 |
| **Is it easy for you to obtain contraceptive?** | | |
| Yes | **219** | **60.8** |
| **No** | 141 | 39.2 |
| **Do you think it is necessary to have knowledge on contraceptive** | | |
| Necessary | **339** | **94.2** |
| **Unnecessary** | 21 | 5.8 |
| **Which methods can used for emergency contraception?** | | |
| Mifepristone | 32 | 8.9 |
| Vaginal douching | 20 | 5.6 |
| Levonorgestrel tablets | 124 | 34.4 |
| Don't know at all | 184 | 51.1 |
| **Which contraceptive methods do you think is suitable for students?** | | |
| Oral contraceptive pills | 54 | 15.0 |
| Male condom | 182 | 50.6 |
| Female condom | 20 | 5.6 |
| Withdrawal | 38 | 10.6 |
| EC method | 22 | 6.1 |
| **Don't know at all** | 44 | 12.1 |
| **Which stage of the menstrual cycle most likely to conceive?** | | |
| Menstrual period | 62 | 17.2 |
| A few days before or after menstruation | 271 | 75.3 |
| About 14 days before menstruation | 5 | 1.4 |
| Don't know at all | 22 | 6.1 |
| **Do you think Medicine Students need to learn about sexual health and that it should include contraceptive methods?** | | |
| Need | 345 | 95.8 |
| Do not need | 15 | 4.2 |

42.3% had had sexual intercourse in the last Year (2021), 24.7% in this Year (2022) whereas 33.1% claimed not be actively involved in sexual intercourse in the recent years. Only 37.8% of those who had had sex used Contraceptive methods while the majority (62.2% ) did not because they (42.7%) were worried about the side effects, 13.9% didn't like any contraceptive methods, 8.3% said it reduces pleasure during sex and 5.0% reported that their partner did not like use of contraceptives whereas 30.0% had concealed reasons for their failure to use contraceptives.

When asked about contraception during their last sexual contact, 34.4% used a condom, 28.3% used safe days/withdrawal method, 12.2 used oral pills, 4.4% used ECP, 2.5% used an injectable, and 1.4% used implanon whereas 16.7% used other methods. 79.2% reported that contraceptives prevent pregnancy & promote child spacing, 15.6% said they prevent STDs and pregnancy in addition to promoting proper child growth and 1.6% said it specifically prevent STDs; while 3.6% say it does not do any of these. On the specific methods of contraceptives, 46.1% report condom as the most effective, 18.6% chose safe days /withdrawal, whereas others went with Pills (15.8%), Injectables (5.8%), Implanon (2.8%), ECP (1.9%) and 8.9% referred other methods as most effective. Of those who used contraceptives, their major reasons for choosing that specific method was because they were safe/having less side effects (38.9%), accessible (17.8%), affordable (15.0%), effective (13.9%) and reliable (7.2%). However, 52.2 % agreed that contraceptives use is associated with some side effects; though 66.1% would still advise their friends to use contraceptives regardless of this.



**Table 4: Practice of Contraceptives use among Medical Students of KIU-WC.**

| Parameter | Frequency (n) | Percentage (%) |
|---|---|---|
| **Did you have sexual intercourse in the past two years?** | | |
| **Yes, in the last year** | **152** | **42.3** |
| **Yes, in this year** | **89** | **24.7** |
| No | 119 | 33.1 |
| **If YES, did you use a contraceptive method during your last sexual encounter?** | | |
| Yes | **136** | **37.8** |
| **No** | 224 | 62.2 |
| **If no, why didn't you use a contraceptive method?** | | |
| **Worried about the side effects** | **154** | **42.7** |
| reduce pleasure during sex | 30 | 8.3 |
| **I don't like** | **50** | **13.9** |
| **partner does not like** | **18** | **5.0** |
| Other | 108 | 30.0 |
| **What contraceptive method did you use in the last sexual contact?** | | |
| **Condom** | **124** | **34.4** |
| **Oral Pills** | **54** | **12.2** |
| **ECP** | **16** | **4.4** |
| Injectable | 9 | 2.5 |
| Implanon | 5 | 1.4 |
| **Safe days/Withdrawal** | **102** | **28.3** |
| **Others (specify)** | 60 | 16.7 |
| **Contraceptives are measures used to:** | | |
| Prevent Pregnancy & promote Child spacing | 285 | 79.2 |
| Prevent STDs | 6 | 1.6 |
| Prevent STDs and Pregnancy + promote Child spacing | 56 | 15.6 |
| None of the above | 13 | 3.6 |
| **Which is the most effective contraceptive method you know?** | | |
| Condom | 166 | 46.1 |
| **Pills** | **57** | **15.8** |
| ECP | 7 | 1.9 |
| **Injectables** | **21** | **5.8** |
| Implanon | 10 | 2.8 |
| **Safe days / Withdrawal** | **67** | **18.6** |
| Others (Specify) | 32 | 8.9 |
| **Why do you prefer the above method?** | | |
| Safe/ less side effects | 140 | 38.9 |
| Affordable | 54 | 15.0 |
| Accessible | 64 | 17.8 |
| Reliable | 26 | 7.2 |
| **Effective** | **50** | **13.9** |
| Others (specify). | 26 | 7.2 |
| **Is there any side effect with the contraceptive you use?** | | |
| Yes | **188** | **52.2** |
| **No** | 172 | 47.8 |
| **Would you advise your friend to use contraceptive?** | | |
| Yes | **238** | **66.1** |
| No | 122 | 33.9 |
| Total | **360** | **100.0** |

Other factors that influence contraceptive use are shown in table 5 below and they include but are not limited to; peer influence at 76.4%; second is availability of contraceptives of choice since 75.0% (270) of the respondents know where to obtain contraceptives; third is easy accessibility; to contraceptives of their choice (male condom being most easily accessible at 50.6% followed by oral pills at 15.0%, withdrawal, 10.6%, and then EC method at 6.1%). The fourth reason cited is anxiety and since they (42.7%) are worried about the side effects; 13.9% just don't like the idea of using contraception while 5.0% of respondents' partners do not like contraceptive use; thus, significantly preventing their usage. Fifth, there is gender as a variable where the male was more likely to influence the use of contraceptives. Religion was another factor, in which being a Muslim was likely to affect contraceptive use. Finally, marital status significantly prevented the use of contraceptives.



**Table 5: Other factors that significantly affect Contraceptive use among Medical students of KIU-WC**

| Parameter | Frequency (n) | Percentage (%) |
|---|---|---|
| **Do you discuss about contraceptives with your peers?** | | |
| **Yes** | **275** | **76.4** |
| No | 85 | 23.7 |
| **What are peers' opinions about using contraceptives?** | | |
| Encouraging | **215** | **59.8** |
| Discouraging | 145 | 40.3 |
| **Do you know where to obtain contraceptives?** | | |
| Yes | **270** | **75.0** |
| No | 90 | 25.0 |
| **Is it easy for you to obtain contraceptive?** | | |
| Yes | **219** | **60.8** |
| No | 141 | 39.2 |
| **If NO, why don't you use contraception?** | | |
| **worried about the side effects** | **154** | **42.7** |
| reduce pleasure during sex | 30 | 8.3 |
| I don't like | **50** | **13.9** |
| partner do not like | **18** | **5.0** |
| Other | 108 | 30.0 |
| **Why do you prefer your contraceptive method of choice?** | | |
| Safe/ fewer side effects | 140 | 38.9 |
| Affordable | 54 | 15.0 |
| Accessible | 64 | 17.8 |
| Reliable | 26 | 7.2 |
| Effective | **50** | **13.9** |
| Others (specify). | 26 | 7.2 |
| **Sex** | | |
| Male | **151** | **41.9** |
| Female | **209** | **58.1** |
| **Religion of the respondent.** | | |
| **Muslim** | **42** | **11.7** |
| Catholic | 96 | 26.7 |
| Anglican | 113 | 31.4 |
| SDA | 35 | 9.7 |
| Others | 74 | 20.5 |
| **Marital Status** | | |
| **Single** | **226** | **62.8** |
| Married/ Cohabiting/ In a relationship | 123 | 34.2 |
| Separated/Divorced | 11 | 3.1 |
| **Total** | **360** | **100.0** |

## DISCUSSION

The study showed that 32.0% of the participants were using contraceptives in their sexual encounters; this is a low level of utilization compared to 54.0% and 57% in studies conducted in 1990 and 2012 respectively. Majority of the respondents (68.0%) were not using contraceptives contradicting with Coetzee et al, (2011)'s study where utilization stood at 63.0%. [6]. Among our study participants, most (62.8%) were still single and 64(17.8%) were Banyankole owing to the fact that the University is in Ankole region. In this study the make condom was the most preferred among the participant. Since most reported safety, affordability and availability as the drivers to the utilization of contraceptives, this could explain why the male condom came top of the list. Our study result was also in line with a study conducted by Nsubuga et al. [10] that showed that the most commonly known modern methods were male condoms (88.4 %), followed by pills (86.7 %), injectables (50.3 %), IUDs (35 %) and implants (26.7 %). In contrast, Kabagenyi et al. [8] discovered contraceptive use to be at 12% among adolescents; but this could be explained by the ever-increasing rate of sexual activities in universities due to new found freedom, complacency and use of sexual intercourse as a stress relieve mechanism. More research is therefore required to ascertain this narrative. Almost all (98.9%) of the respondents had knowledge about Contraceptives use with the most preferred being the condom. Similarly, a study by Nsubuga et al. [10] on contraceptives in Uganda reported that 88.4% of the participants use male condoms; and in their last sexual encounter 34.4% had used a condom, 28.3% used safe days/withdrawal method, 12.2 used oral pills, 4.4% used ECP, 2.5% used an injectable, and 1.4% used Implanon whereas 16.7% used other methods. In this study, almost half (46.1%) of the students cited reasons for choice of particular methods as follows; condom as the most effective, 18.6% Safe days / Withdrawal, 15.8% Pills, 5.8% Injectables, 2.8% Implanon, 1.9% ECP and 8.9% referred other methods as most effective. This agrees with a study in Ghana about contraceptives use among University of Ghana students where the condom was mostly selected because it is affordable and easily accessible [11-15].



About 59.8% of the female students receive encouragement to use contraceptives from their partners and 76.4% discuss contraceptives use with their peers while 75.0% of the respondents are knowledgeable on where to obtain contraceptives. Studies show a significant association between respondents' attitude towards responsibility in using contraceptives and contraceptive use. Respondents who believe both partners should take responsibility in deciding whether to take contraceptives were four times likely to use contraceptives than respondents who believed one (female) partner should take responsibility. Majority of our respondents do not know the right time of conception during menstrual cycle since 75.3% reported that conception occurs a few days before or after menstruation, 17.2% during menstrual period, and 1.4% say it occurs about 14 days before menstruation; and this could explain the high rate of unwanted pregnancies; threatened and incomplete abortions as observed from the 2014-2018 KIUTH. Regarding practice however, only 37.8% of those who were engaging in sexual intercourse used contraceptive methods while 62.2% did not, citing reasons such as worry about the side effects (42%), reduction of pleasure during sex (8.3%) and partner dissatisfaction with contraceptives (5.0%) while a third had concealed reasons for their failure to use contraceptives. This figure is a bit lower than utilization rates reported in Lesotho and South Africa at 50% and 65%, respectively [6].We found out in our study that other factors include; peer influence (76.4%), availability of contraceptive of choice (75.0%), knowledge on where to obtain contraceptives from (60.8%), **easy** accessibility, anxiety and perception (42.7%) about the side effects, being of the male gender and being a Muslim. Religion was an important aspect in pushing for or deterring students from using contraceptives as it is well known and constantly mentioned that religious leaders are leading "de-campaigners" of contraceptives. Catholics are the religious groups to be least inclined to encourage contraceptive use according to Nsubuga *et al.* [10]. Religious leaders' unfavorable attitudes towards contraceptive use were directed to adolescents and married couples alike [16-20].

## CONCLUSION

Students pursuing medicine at KIU-WC have a low level of utilization of family planning methods even though the majority have thorough knowledge about contraceptives use, how to use and where to get them; the few that are using contraceptives have their major aim as prevention of unwanted pregnancy and child pacing while only a few do so as a STDs/HIV preventive measure. This indicates an unmet need for contraceptives due to factors such as peer influence, availability of contraceptives of choice, easy accessibility, Anxiety and perception, gender (Male), Religion (Muslim) and Marital Status (single) that drive the use, and consequently, whose unavailability could upset its usage.

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