

# Prevalence and Factors Associated with Unwanted Pregnancies among Female Students between 15 and 35 Years at Kampala International University Western Campus Ishaka Bushenyi

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## ABSTRACT

An unwanted pregnancy is either mistimed or unwanted at the time of conception. It was a core concept in understanding the fertility of populations and the unmet need for contraception. In this context, low use of contraception and high rates of maternal mortality make preventing unwanted pregnancies critical. The study conducted by Global Health Action in 2018 revealed that the non-use of contraception among Ugandan university students differs for men and women. A systematic sampling method was used to select 300 participants, of whom all female students taking health science courses were selected. This study was an institutional-based cross-sectional study. The study showed that having good knowledge of contraceptive use at an odds ratio of 0.91 (0.24–1.47) and a p-value of 0.001 and proper use of contraceptives at a p-value of 0.004 and an odds ratio of 0.60 (0.36–6.67) were significant factors in reducing unwanted pregnancies. The study recommends that students should be encouraged to use family planning to reduce the occurrence of unwanted pregnancies. There should be continued sensitization of students about unwanted pregnancies and the dangers of early sex involvement.

**Keywords:** Unwanted pregnancy, contraceptive use, Conception, Ugandan university students, Family planning.

## INTRODUCTION

Unwanted pregnancy is a pregnancy that is either mistimed or unplanned at the time of conception and is a critical public health issue in both developing and developed countries. Unwanted pregnancy hurts women's personal lives, their families, and society [1]. Globally, about 80 million unwanted pregnancies are estimated to occur worldwide annually [2]. In developing countries, more than one-third of all pregnancies are considered unwanted, and about 19% will end up in abortions, which are most often unsafe and account for 13% of all maternal deaths [3]. In Sub-Saharan Africa, an estimated 20 million unintended pregnancies occur annually [4]. These pose serious health concerns among youths because this public health issue exposes young women and their newborns to potential adverse health and social outcomes. Adverse outcomes include the likelihood of maternal depression and anxiety, unsafe abortions, premature births, and low birth weight [5]. In addition, unwanted pregnancy is socially destructive and hurts the educational progress and future career prospects of female students. In

Uganda, unwanted pregnancies often result in diverse maternal and neonatal health outcomes. In this context, low use of contraception and high rates of maternal mortality make preventing unwanted pregnancies critical [6]. The study conducted by Global Health Action in 2018 revealed that the non-use of contraception among Ugandan university students differs for men and women. The diversity of socio-demographic factors regarding risky behaviours seems to be pertinent to males but not females [7]. The decision-making power for contraceptive use largely appears to rest with men, especially among those who are not in a steady relationship [8]. Unwanted pregnancy is associated with an increased risk of morbidity for women and with health behaviors during pregnancy that are associated with adverse effects such as delayed prenatal care, which may affect the health of the infant [9] [10]. Women of all ages may have unintended pregnancies, but some groups, such as those at tertiary institutions, are at a higher risk. This issue is worrisome on different fronts [11].

First, given the alarming trend of the HIV/AIDS pandemic and other sexually transmitted diseases, the health of these students is put at risk. Second, they are exposed to psychological torture, and in some cases, their studies are adversely affected. Many young adults find it easier to buy contraceptive supplies such as pills and condoms from pharmacies than go to clinics or hospitals [12]. The service providers need to understand what constitutes the students at the university level and provide friendly services to these students to encourage them to use the health facilities and also ensure that their needs are properly met to reduce the burden of unwanted pregnancies and their associated complications among university students [13].

Every year in the world, the rate of unwanted pregnancies among students at higher institutions of learning continues to increase [14]. In Uganda, there are considerable studies at the national level that have investigated unwanted pregnancies and

their underlying factors in general [15]. However, there is a gap in studies on unwanted pregnancies and their underlying factors among female university students. Most of these unwanted pregnancies and needless deaths could have been prevented if the basic prevalence and factors associated with unwanted pregnancies were made available to these female university students [16]. Research is needed to determine the prevalence of unwanted pregnancies and their associated factors among female university students in Uganda. From the researcher's observation, unwanted pregnancies among students at KIU are fast becoming a problem because of the limited information about the prevalence and associated factors of unwanted pregnancies among these students. Therefore, this study was designed to determine the prevalence and factors associated with unwanted pregnancies among female students aged 15–35 years at KIU-WC.

## METHODOLOGY

### Study Design

This was an institutional-based, cross-sectional study design.

### Area of Study

The study was conducted at Kampala International University-Western Campus and Kampala International University-Teaching Hospital, both located approximately 330 kilometres along the Mbarara-Kasese highway in Ishaka-Bushenyi municipality, western Uganda, and southwest of Kampala city. Both institutions are under the umbrella of KIU, a privately owned university. KIU-WC is one of the campuses of KIU, with other branches in Kampala, Kenya, and Tanzania, and it mainly teaches health sciences. This setting was used because the participants were easier to identify from the university and the students' places of residence since some of the students rented near the university.

### Target population

All female students are studying at the Kampala International University Western Campus.

### Study population

Female students in the age range of 15–35 are taking health science courses at Kampala International University Western Campus.

### Sample size determination

The sample size was determined using the Kish and Leis-Lie formula [17].

$n = Z^2pq/d^2$ ,  
where;

**n** is the derived size of the population.

**Z** is the standard deviation at 95% of the degree of confidence, which is 1.96.

**p** is the estimated proportion of the target population (30%).

**q** is 1 p, which gives the remaining population.

**d** is the desired accuracy level (precision standard error = 0.05).

**z** = 95% = 1.96

**p** = 30% (0.3) **q** = 1-0.30.05

$n = (1.96)^2 \times 0.3 \times 0.7 / (0.05)^2$

= **322.6944**.

Sample size: 300

### Sampling Procedure

A systematic sampling method was used to select 300 Participants of whom all were female students taking health science courses.

### Inclusion criteria

Female students aged 15–35 years doing health science courses at Kampala International University Western Campus who consent to the study.

### Exclusion criteria

All female students at Kampala International University Western Campus, below the age of 15 and above 35 years of age, and all female students who don't consent, will be excluded.

### Research instruments

The researcher collected data from the respondents using structured and pretested questionnaires, which were divided into biodata, the prevalence of unwanted pregnancy, social and economic factors involved, contraceptive use, and unwanted pregnancy association. It had both structured and multiple-choice questions and was written in English.

### Data Collection Procedure

Data was collected by administering a questionnaire to a single participant. Depending on the situation, the researcher would conduct a one-

to-one interview, which could be an interaction between the interviewer and the informant. The researcher explained to the respondent the research project, the purpose, the kinds of questions that would be asked, and the assured confidentiality and consent that would be asked for and signed. Filling out the questionnaire lasted 30 to 45 minutes. At the end of filling out the questionnaire, the researcher thanked the respondents for their cooperation.

**Data management**

The filled-out questionnaires were checked for validity before leaving the data collection site. Data was manually coded, and it was entered correctly into the computer. The questionnaires were kept properly in a lock to avoid access by unauthorized persons and loss.

**Data analysis and presentation**

The data was entered into Microsoft Excel; coded data was exported into the starter, and encoded data was used for analysis. Frequencies of variables were generated; tabulation and percentages were used to illustrate the study findings. The data was presented in the form of tables and pie charts.

**Ethical consideration**

Ethical approval was obtained from the KIU Research Ethics Committee. The KIU administration and I ensured that the confidentiality of the participants was maintained. All participants were informed about the nature of the study, and they were given the option of withdrawing from the study or to omit to answer certain questions without any negative repercussions.

**RESULTS**

**Socio-demographic characteristics associated with an unwanted pregnancy**

**Table 1: The table showing socio-demographic characteristics associated with unwanted pregnancy (N=300)**

Respondent characteristics	Frequency	Percentage
<b>Age categories</b>		
15-24	182	61
25-35	118	39
<b>Faculty</b>		
Bachelor's medicine	40	13
Clinical medicine	80	27
Nursing	120	40
Pharmacy	60	20
<b>Religion</b>		
catholic	129	43
Protestant	150	50
Muslim	21	7
<b>Marital status</b>		
Single	240	80
Married	60	20
<b>Education level</b>		
Second year	100	33
Third year	100	33
Fourth year	60	20
Fifth year	40	13

From table one above, it shows that most of the respondents, 182 (61%), were of the age group 15–24, as compared to the age group 25–35, which only represented 118 (39%). Of these, 40 (13%) were doing bachelor's medicine, 80 (27%) were doing clinical medicine, 120 (40%) were doing nursing, and 60 (20%) were doing pharmacy. More so, 129 (43%) were

of Catholic affiliation, 150 (50%) were of protestant affiliation, and 21 (21%) were of Muslim affiliation. 240 (80%) of the respondents were single, and 60 (20%) were married. Also, of these respondents, 100 (33%) were in the second year, 100 (33%) were in the third year, 60 (20%) were in the fourth year, and 40 (13%) were in the fifth year).

Respondent distribution by faculties

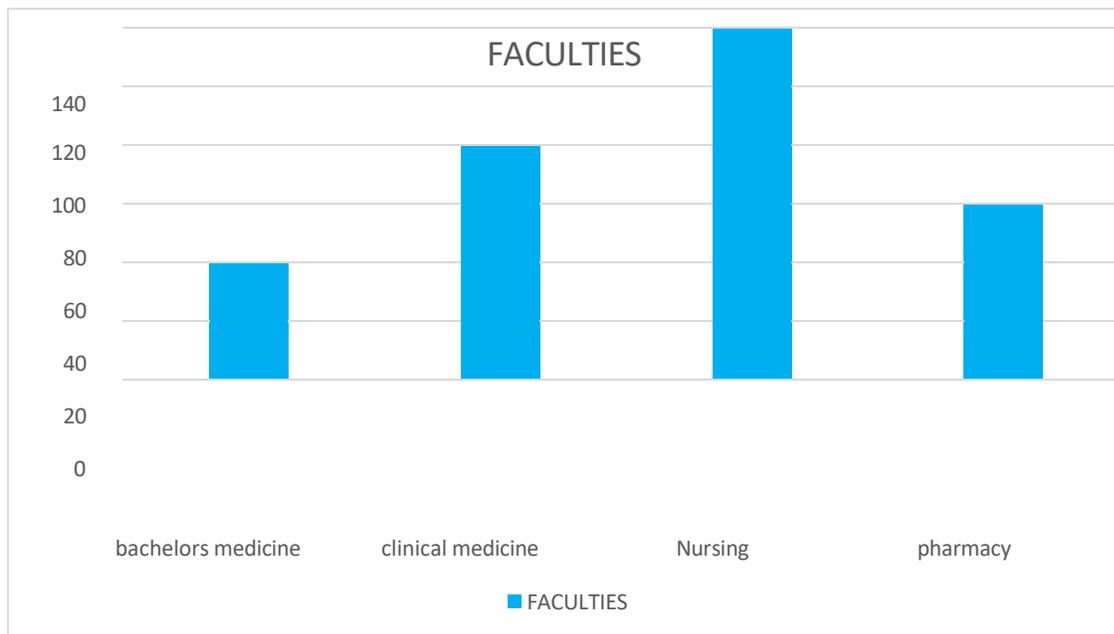
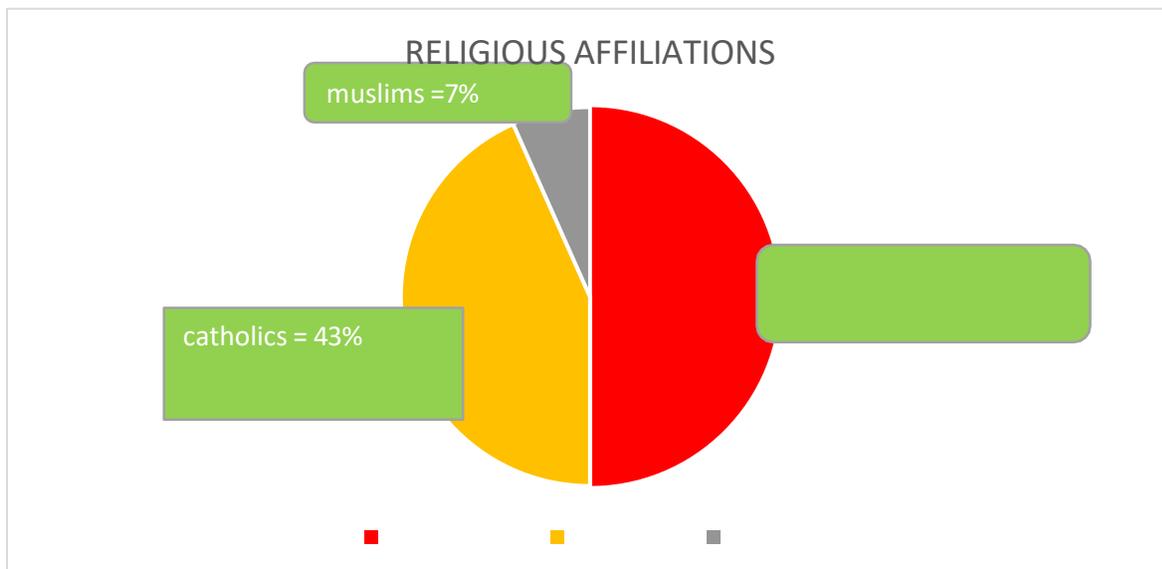


FIGURE 1: A photograph showing the grouping of respondents according to the faculties (N=300).

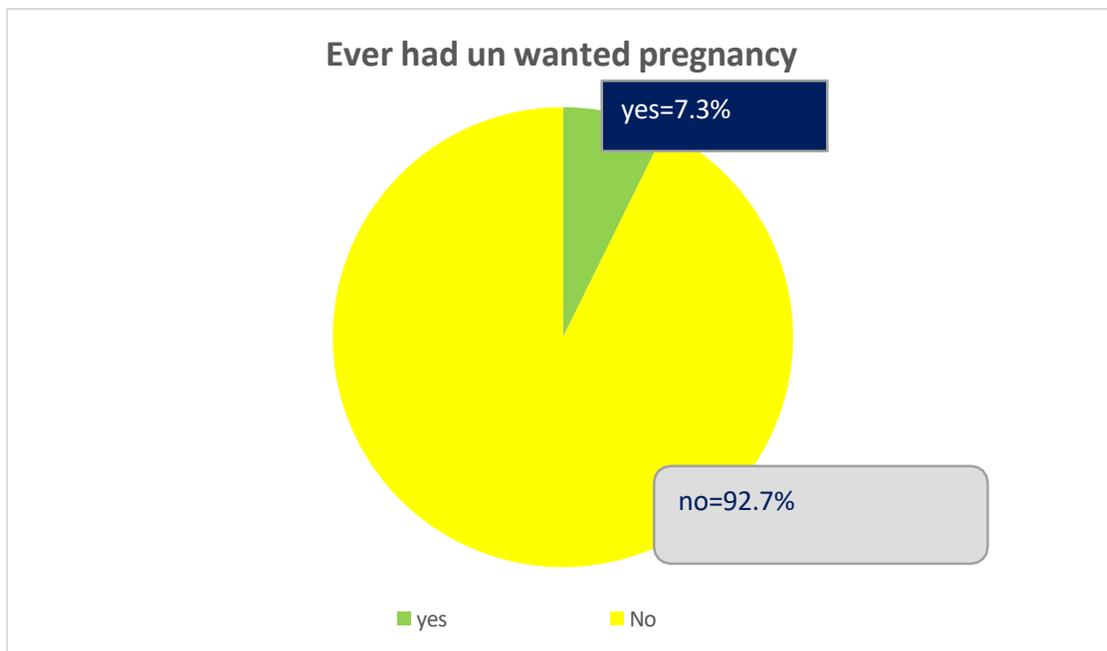
Nurses 120 (40%) made up the largest part of respondents followed by clinical medicine students 80 (27%), pharmacy students 60 (20%), and lastly medical students 13 (7%).

Religion of Respondents



**Figure 2: A pie chart showing the religion of respondents (N=300)**  
From Figure two above, 50% of the respondents were of protestant affiliation, 43% catholic affiliation and lastly 7% were of Muslim affiliation.

**Prevalence of unwanted pregnancy**



**Figure 3: Shows the prevalence of female students who have ever had unwanted pregnancies.**

Figure 3 above, shows that 7.3 % of female students have ever had un wanted pregnancy

compared to 92.7% who have never carried un wanted pregnancy.

**Socio-economic factors associated with unwanted pregnancy among female university students at KIU-WC**

**Table 2: A table showing the prevalence of unwanted pregnancy among female university students at KIU-WC**

Variables	Unwanted pregnancy		No unwanted pregnancy		Odds Ratio	p-value
	Freq (22)	%age	Freq (278)	%age		
<b>Age</b>						
15-24	10	45.5	172	61.9	Ref	
25-35	12	54.5	106	38.1	0.57(0.01-1.05)	0.005
<b>Sexual relationship</b>						
In relationship	09	59.1	67	24.1	0.81(0.05-3.18)	0.112
No sexual relationship	13	40.9	211	75.9		
<b>Sexual partners</b>						
One	19	86.4	269	96.8	Ref	
More than one	03	13.6	09	3.2	0.27(0.08-7.45)	0.068
<b>Sponsorship</b>						
Self-sponsored	20	90.9	262	94.2	Ref	
Government aided	02	9.1	16	5.8	0.45(0.25-9.36)	0.155
<b>Contraceptive education</b>						
Received	14	63.6	224	80.6	Ref	
Not received	08	36.4	54	19.4	0.23(0.01-3.32)	0.201
<b>Contraceptive emergencies</b>						
Good knowledge	10	45.5	188	67.6	Ref	
Poor knowledge	12	54.5	90	32.4	0.91(0.24-1.47)	0.001

From Table 2 above, which shows the association between social demographic characteristics and unwanted pregnancies, it was shown that the majority of the participants who had ever had an unwanted pregnancy were aged 25–35 years, while at least 172 (61.9%) of the students. The Participants who had never gotten an unwanted pregnancy were between 15 and 24 years old. The study showed that the age of 25–35 years was significantly associated with the occurrence of an unwanted pregnancy at an odds ratio of 0.57 (0.01–1.05) and a p-value of 0.005. The study also showed that the majority of the students who had experienced unwanted pregnancy—13 (40.9%) and 211 (75.9%) of those who had never experienced unwanted pregnancy—said that they were not in an active sexual relationship. The study showed that sexual relationships were not significantly associated with the occurrence of unwanted pregnancy at an odds ratio of 0.81 (0.05–3.18) and a p-value of 0.112. The study also showed that the majority of the participants, 19 (86.4%), had experienced an unwanted pregnancy. The study also showed that the number of sexual partners was not significantly associated with the occurrence of an unwanted pregnancy at an odds ratio of 0.27 (0.08–7.35) and a p-value of 0.068. The study also showed that the majority of the students were on self-sponsorship: 20 (90.9%) for those who had ever experienced unwanted pregnancy and 262 (94.2%) for those who had never experienced unwanted pregnancy. The study shows that the nature of sponsorship was not significantly associated with occupancy of unwanted pregnancy at an odds ratio of 0.45 (0.25–9.36) and a p-value of 0.155. From the

table, the association between contraceptive use and the occurrence of unwanted pregnancies showed that the majority of the participants, both those who had experienced unwanted pregnancies and those who had never experienced unwanted pregnancies, said they had received contraceptive indication at an odds ratio of 0.23 (0.01–3.32) and a p-value of 0.201. The study showed that having received health education on contraception was not significantly associated with the occurrence of an unwanted pregnancy. The study also shows that the majority of the students who had gotten unwanted pregnancies had poor knowledge regarding contraceptive emergency use, while at least 188 (67.6%) of those who had not gotten unwanted pregnancies knew about contraceptive use emergencies. The study shows that having good knowledge of contraceptive emergence was significantly associated with the occupancy of unwanted pregnancies at an odds ratio of 0.91 (0.24–1.47) and a p-value of 0.001. The study also shows that the majority of the student participants, both those who experienced and those who had never experienced unwanted pregnancy (17 (77.3%) and 246 (88.6%), respectively, said they could easily access contraceptive services at an odds ratio of 0.75 (0.04–0.88) and the p-value value of 0.108, the study showed that having easy access to contraceptive services was not significantly associated with the occupancy of unwanted pregnancies. The study also showed that the majority of the student participants (59.1%) who had had an unwanted pregnancy used contraceptive methods, but it was not associated with an unwanted pregnancy at an odds ratio of 0.60 (0.36–6.67) and a p-value of 0.004.

## DISCUSSION

### Prevalence of Un-wanted Pregnancy

From the study, a majority of 278 (92.7%) of the participants said they had never had an unwanted pregnancy, while at least 22 (7.3%) of the students said they had ever had an unwanted pregnancy. This could be due to low knowledge of contraceptive methods as well as poor sex education knowledge, which would otherwise help to prevent the occurrence. When compared with other studies, it shows a correlation with a report by the WHO in 2020 [18], which showed that in developing countries more than one-third of all pregnancies are considered unwanted and about 19% will end up in abortion, which are most often unsafe, accounting for 13% of maternal deaths globally.

### Socio-demographic factors associated with an unwanted pregnancy

The study showed that the majority of the participants who had had unwanted pregnancies (54.5%) were aged 25–35 years, while at least 172 (61.9%) of the student participants who had never gotten unwanted pregnancies were aged 18–24 years. The study showed that the age range of 25–35 years was significantly associated with the occurrence of unwanted pregnancies at an odds ratio of 0.57 (0.01–1.05) and a p-value of 0.005. This could be because by this age most ladies are engaged in sexual relationships in which they can get unplanned pregnancies, when compared with other studies. Meh et al. [19] studies also showed that an estimated 10–14% of young women around the world experience

unwanted pregnancies. The study also showed that the majority of the students who had experienced unwanted pregnancy—13 (40.9%) and 211 (75.9%)—were not in an active sexual relationship. The study showed that sexual relationships were not significantly associated with an odds ratio of 0.81 (0.05–3.18) and a p-value of 0.112, this could be due to academic demands and parental restrictions not to engage in sexual relationships. Although some students are involved in undisclosed sexual relationships, when compared with other studies, it shows a difference from studies by Wakasa et al. in [20], who showed that in high school students in Addis Ababa, 38% were reported to be sexually active, 71% of students had experienced their first sex between the ages of 14 and 16 years, and poor academic performance and early school leaving were strongly associated with unwanted pregnancies. The study also showed that the majority of the participants, 19 (86.4%), had experienced unwanted pregnancies. The study showed that the number of sexual partners was not significantly associated with the occurrence of unwanted pregnancies at an odds ratio of 0.27 (0.08–7.55) and a p-value of 0.068. Having one sexual partner helps to prevent sexually transmitted diseases like HIV as well as the risk of unwanted pregnancies [21] [22]. When compared with other studies by Meh et al. [19], it also showed that the number of sexual partners that a person has could also establish the likelihood of unwanted pregnancies. Nalwadda et al. [23] also showed that the more partners one had, the greater the likelihood of having an unwanted pregnancy. This is the case because most of the time the relationship is not stable and the couple is not ready to have a child. The study also showed that the majority of the students were on self-sponsorship 20(90.9%) of those who had ever experienced unwanted pregnancy and 262(94.2%) of those who had never experienced unwanted pregnancy the study shows that the nature of sponsorship was not significantly associated with occupancy of unwanted pregnancy at an odds ratio 0.45(0.25 - 9.36) and p-value of 0.155, a need for funds to cater for academic and personal needs make most adolescents into unhealthy sexual relationships to meet their needs which leads them into unwanted pregnancies, while self-reliant students such as those paid for, by the government also indulge in sexual relationships because of being independent of their parents, when compared with other studies, A study by Choudry et al. [24] showed that in Uganda,

university enrolment also marks the beginning of independent living by moving out of parents' homes into hostels on or off campus. There, students participate in numerous social activities and functions, such as dance clubs, sporting events, and binge drinking, which may lead to some students experimenting with sexual activities, these activities may facilitate unplanned and unwanted sexual advances, contributing to the spread of HIV [25, 26].

#### **Factors associated with unwanted pregnancy**

The study showed that the majority of the participants, both those who had experienced unwanted pregnancies and those who had never experienced unwanted pregnancies, said they had received contraceptive education at an odds ratio of 0.23 (0.01–3.32) and a p-value of 0.201. The study showed that having received health education on contraception was not significantly associated with the occurrence of unwanted pregnancies. Health education is good because it helps to enrich females with more knowledge about the prevention of unwanted pregnancies. When compared with other studies, a cross-sectional study by Viza P. et al. in 2021 also cited that increasing awareness of emergency contraceptives among youths is one of the strategies to prevent unintended pregnancies. The study also shows that the majority of the students who had gotten unwanted pregnancies had poor knowledge regarding contraceptive emergency use, while at least 188 (67.6%) of those who had not gotten unwanted pregnancies knew about contraceptive use emergencies. The study also shows that the majority of the student participants, both those who experienced and those who had never experienced unwanted pregnancy, said they could easily access contraceptive services at an odds ratio of 0.75 (0.04–4.88) and a p-value of 0.108. The study showed that having easy access to contraceptive services was not significantly associated with the occupancy of unwanted pregnancies. The availability of family planning at the hospital enables easy access to contraceptive services, which helps to prevent unwanted pregnancies among females. A recommendation by the Uganda National Family Planning Guidelines and Standards in 2020 also cited that all men and women, including young people, irrespective of their parity and marital status, are eligible to access accurate and complete family planning information, education, and services [27]. Although this policy allows teenagers to access reproductive health services, it is not effectively

implemented in most of the areas, as teenagers are still facing difficulties when they need the services. The study also showed that the majority of the student participants (59.1%) who had had an unwanted pregnancy used contraceptive methods, but it was not associated with an unwanted pregnancy at an odds ratio of 0.60 (0.36–6.67) and a p-value of

The study concludes that at least 7.3% of the students had ever gotten an unwanted pregnancy. The study also showed that age between 18 and 24, a p-value of 0.005, and an odds ratio of 0.57 (0.01–1.05) were significant factors in the occupancy of unwanted pregnancies. The study also concludes that having good knowledge of contraceptive use at odds ratios of 0.91 (0.24–1.47)  $p < 0.001$ , and proper use of contraceptives,  $p < 0.004$ , OR 0.60 (0.36–6.67) were significant factors towards the reduction of unwanted pregnancies.

## CONCLUSION

## Recommendation

The study recommends that students should be encouraged to use family planning to reduce the occurrence of unwanted pregnancies. The study also recommends that the government should provide more family planning services to hospitals for easy accessibility. The study also recommends that female adolescents should also be health-educated on the use of contraception to reduce the stigma associated with contraceptive use.

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