

# Knowledge and Attitudes Towards Cervical Cancer Screening Among Students Aged 18-30 at Kampala International University

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## ABSTRACT

Around the world, cervical cancer is a severe public health issue. The odds of survival and treatment success are undoubtedly increased by early screening and identification. The acceptance and adoption of screening techniques are significantly influenced by solid knowledge and good attitudes. There is no comprehensive cervical screening program in place in Uganda, where cervical cancer is the most common cancer among women. But from the late 1980s, selective or opportunistic screening has been carried out. The Ministry of Health relies on screening since it allows for the early detection of pre-cancerous cells and early diagnosis, yet many women choose not to take the test, and no research has been done to determine why. In this study, student's attitudes and knowledge toward cervical cancer screening at Kampala International University were examined. A cross-sectional analysis was carried out to determine knowledge and attitudes towards cervical cancer. The study included women who were students at the Kampala International University and were between the ages of 18 and 30. The percentage of screened women was calculated using an interviewer-administered questionnaire, which also elicited their opinions on cervical cancer and screening. In spite of their impressive knowledge and attitudes—100% knew what cervical cancer screening was and what it involved (77.55%), 88.78% believed that Ca. cervix was one of the most common female cancers after breast (55.10%), and 72.45% acknowledged that they were at risk—only 51% of the 196 participants in the study had actually screened for the disease. Few respondents had received a screening, despite the present study's high acceptability rate for cervical cancer screening. Cervical cancer screening still has a lot of misunderstandings and little knowledge.

**Keywords:** Cervical cancer, Screening techniques, Cervical cancer screening, Women, Students.

## INTRODUCTION

Cancer is one of the leading causes of premature death globally. There are various types of cancer depending on the location. Thus, breast, lungs, intestinal, cervical, brain, blood, and prostate cancers. Cervical cancer is one of the common cancers among women [1-5]. Cervical cancer remains a leading cause of morbidity and mortality in Uganda [6, 7]. Despite earlier information, and campaigns to introduce human papillomavirus (HPV) vaccination, which also targeted cervical cancer, misinterpretation and misunderstanding of the subject remain high. Women in Uganda present with cervical cancer at an advanced stage due to poor health-seeking behavior, with an associated high mortality rate [8]. It is the second most common cancer among women in the developing world [9, 10]. Globally, a population of 2,784 million women aged 15 years and older are at risk of developing cervical cancer; 2,240.4 million of these women at risk of cervical cancer are in the less developed world, while 544.4million of these risk population are in the developed world [11]. Also, current estimates indicate that every year 527,624 women are diagnosed with cervical cancer, 444,546 of these cases are in the less developed world while 83,078 of the cervical cancer cases are diagnosed in the developed world, and 265,672 die from the disease of whom 230,158 deaths in developing world and 35,514 deaths in the first world [12]. In Africa like other developing regions in the world, studies have shown

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that cancer of the cervix is one of the major causes of morbidity and mortality among women aged 15 and above. 85% of the 265,672 cervical cancer-related deaths in the world occur in sub-Saharan Africa [13]. It has been reported that most of the cancer cases including cervical cancers in sub-Saharan Africa are detected in late stages, predominantly due to lack of information about the disease, and lack of screening services for the population at risk [14-16]. Interestingly, majority of these deaths are preventable through human papilloma virus vaccination for young girls and screening for precancerous lesions for women at risk [17, 18]. Studies suggest that increasing baseline screening coverage in a lifetime leads to comparable or better cancer risk reductions than a multiple screening in a single lifetime with lower baseline coverage in Uganda. Unfortunately, the baseline lifetime screening rate for cervical cancer in Uganda is reported to be between 4.8% and 30% [19] and according to the Uganda Cancer Institute (UCI) [20], 80% of the women who present with cervical cancer have advanced stage disease. In order to prevent deaths due to cervical cancer in Uganda, a multidisciplinary approach must be taken, which involves the effective identification and treatment of cervical precancerous lesions and early disease [19]. The government of Uganda for the past years since 2010 launched a campaign through the ministry of health's strategic plan for cervical cancer prevention and control aimed to reach out 90% of the population at risk with information education and communication materials about cervical cancer, and to screen up to 80% of eligible women aged 15-49 years [21]. This move yielded to the establishment of cervical cancer screening centers in national and regional referral hospitals, private-not-for-profit, and private-for-profit hospitals, and also community outreach [21]. While many university students underestimate their risk of contracting various sexually transmitted diseases, HPV has become a common sexually transmitted infection on campuses. University women have a greater risk of acquiring STDs than the general population because of the high-risk sexual behaviour in which they engage [22, 23]. Risk factors for cervical cancer include the early onset of sexual activities, multiple sex partners, long use of oral contraceptives, immunosuppressants, smoking and specific dietary factors [24]. The prevalence of HPV is very high among young, sexually active adult women [25]. Results of lots of studies have showed that women do not possess required knowledge and awareness on using and conducting Pap smear test and also on cervical cancer. Knowledge and attitude is one of the most important predictive factors for health behaviour and an effective factor in increasing screening rate [26].

In Uganda, cervical cancer incidence has been rising at the rate of 1.8% per year over a period of 20 years between 1991 to 2010 due to high prevalence of HPV infection among women (10-40%), high parity, early initiation of sex for women [27]. The high prevalence of Human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) could also be responsible. HIV/AIDS is a risk factor of cervical cancer [28-30]. Despite increasing incidence and high prevalence of risk factors for cervical cancer in Uganda, the proportion of women who have ever been screened is low, estimated to be approximately 5-30% of women. The uptake of the second dose of HPV vaccination for girls 10-14 years is also low at 41% against the target of 80% coverage [31]. Studies conducted in developed countries show that having adequate knowledge about cervical cancer increases the recognition of risk factors and is associated with increased receipt of a Pap smear [32]. In turn, women who do not have the basic knowledge about cervical cancer are also less likely to engage in cervical cancer preventive practices [33]. College women have a greater risk of acquiring STDs than the general population because of the high-risk sexual behaviour in which they engage. The reason for the increase of STDs is risky sexual behaviour, including sexual contact without the use of a condom or barrier [34]. Even when the cervical cancer screening services are available some women fail to utilize them and some of the reasons highlighted for this failure are lack of awareness or lack of information about screening services [35]. Apart from levels of knowledge, the other reasons cited by women for low participation in cervical cancer preventive practices include fear of embarrassment during the Pap smear and anxiety caused by receiving an abnormal cervical smear result [36]. Age, poor health and gender of the health professional have also been reported to affect the odds of getting a Pap smear [35]. Young women, including those in universities with a high level of education have been found to be mostly unconcerned about testing for STIs and have distorted beliefs and low enthusiasm about screening for cervical cancer [37]. Despite the fact that cervical cancer is the most common cancer affecting women in Uganda; yet community understanding of the disease is limited [27]. The purpose of this study therefore was to determine the knowledge and attitudes towards cervical cancer screening among students aged 18-30 at Kampala International University. The findings of this study shall be used to develop interventions to promote participation in cervical cancer preventive practices such as Pap smear, regular gynaecological examination, and condom use.

## METHODOLOGY

### Study design and rationale

A quantitative cross section study approach was conducted in order to determine the knowledge and attitudes towards cervical cancer and cervical cancer screening among students aged 18-30 at Kampala International University from January to October, 2022.

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### **Study site and setting and rationale**

The study was conducted at Kampala International University in Ishaka town, Bushenyi-Ishaka municipality, in Bushenyi district. Ishaka is located in Igara County, in Bushenyi District, approximately 62 kilometers, by road, west of Mbarara, the largest city in the sub-region. This is about 6 kilometers, west of Bushenyi, the location of the district headquarters. The coordinates of Ishaka are 0°32'42.0"S, 30°08'18.0"E (Latitude: -0.545006; Longitude:30.138343). Together with the neighboring town of Bushenyi, it forms the Bushenyi-Ishaka Metropolitan Area. It is the largest metropolis in the district. In 2014, the national population census put the population of Bushenyi, including Ishaka, at 41,063.

### **Study population and rationale**

The study was conducted among female students aged 18-30 in their first year undertaking medical courses at Kampala International University in Ishaka town, Bushenyi-Ishaka municipality, in Bushenyi district.

### **Inclusion criteria and rationale**

It included all female students in their first year undertaking a medical related course, and aged 18-30 at Kampala International University at the time of collecting data who were willing to participate in the study.

### **Exclusion criteria**

- i. Students outside the age group of 18-30 years and those who declined to participate in the study.
- ii. Students who were pregnant at the time of the study

### **Sample size determination and rationale**

The sample size was determined using Fishers et al. [38] formula i.e.  $N = Z^2PQ/D^2$ :

Where;

N is the desired sample size

Z is the standard normal deviation taken as 1.96 at a confidence interval of 95%.

P is the prevalence of uptake of modern contraceptives = 32.1% (2011 statistics as per Andi et al., [39])

D is the degree of accuracy= 0.05.

Q= (1-P) which is the population not on modern contraceptives.

Therefore,  $N = 1.96^2 \times 0.321 (1-0.321) / (0.05)^2 = 196$  is the sample size.

### **Sampling procedure**

A simple random sampling technique was used to choose respondents to participate in the study, from whom data was collected.

### **Dependent variables**

The dependent variable was cervical cancer.

### **Independent variable**

Knowledge and attitudes towards cervical cancer and cervical cancer screening plus socio-demographic factors like age, marital status, occupation, education, and religion.

### **Data collection method and tool**

Data was collected using an interviewer-administered questionnaire. The researcher met with the targeted respondents that took part in the study, after obtaining permission for data collection from respondents. Each participant was required to give informed consent before enrolling in the study. The researcher assisted the respondents in filling the questionnaires by explaining to the respondents for clarification. The properly filled questionnaires were then collected and then data was taken for analysis. They were asked to provide proof of participation in the study by putting their signatures.

### **Data entry and cleaning.**

The data in the questionnaire were checked for completeness, cleaned, and sorted to eliminate obvious inaccuracies and omissions. The data was then coded and entered into a computer.

### **Data analysis**

The qualitative data collected was statistically analyzed and documented using Microsoft Excel and Word version 2019 which was then analyzed using SPSS v.16. The analyzed data was then presented in the form of tables, charts, and graphs which were the basis for discussion and conclusion among others.

### **Quality control**

To ensure quality control the researcher conducted a pretest using 8 questionnaires and data was collected before the actual study to help in reconstruction of the questionnaire where necessary.

### **Ethical considerations**

Participants were given information regarding the research to seek consent. Each participant's choice to participate or not was respected and data collected from participants was kept confidential.

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## RESULTS

### Socio-demographic characteristics of the respondents

A sample size of 196 respondents was chosen using Krejcie and Morgan tables. A total of 196 questionnaires were issued to respondents, with an additional 196 being received for analysis. Because all 196 questionnaires were evaluated, the response rate was 100 percent.

#### Age, religion, and marital status of respondents (n=196)

Table 1: Age Distribution, Marital Status and Religion of Respondents (N=196)

Age Cluster (Years)	Frequency (N)	Percentage (%)
18 – 20	82	41.84
21 – 23	80	40.82
24 – 26	20	10.20
27 – 29	14	7.14
Religion	Frequency (N)	Percentage (%)
Catholic	66	33.67
Protestant	108	55.10
Moslem	12	6.12
Adventist	10	5.12
Marital Status	Frequency (N)	Percentage (%)
Single	180	91.84
Married	16	8.16
<b>Total</b>	<b>196</b>	<b>100</b>

According to Table 1, the bulk of the students were between the ages of 18 and 20 (82, or 41.84 percent), followed by those between the ages of 21 and 23 (80, or 40.82 percent), and those between the ages of 24 and 26 (20, or 10.20 percent). Only 14 (7.14%) were between the ages of 27 and 29. The average age was 21.48. Christian and single students made up the majority of the class. Muslims made up only 12 (6.12%) of the population, and those who reported being married were barely 16 years old (8.16 percent).

#### Knowledge of students about cervical cancer and cervical cancer screening

##### Awareness concerning ca. Cervix screening (n=196)

The students were all (100%) aware of cervical cancer screening. 6.632% of people learned about it via healthcare professionals, followed by 13.26% from radio, 11.22% from friends, and 9.18% from television. 44 respondents were unsure or had no idea what cervical cancer screening involved, while 152 (77.55 percent) correctly identified the use of the Papanicolaou smear. The responses to the query "Who was eligible for Ca. cervix screening?" are depicted in figure 2 below.

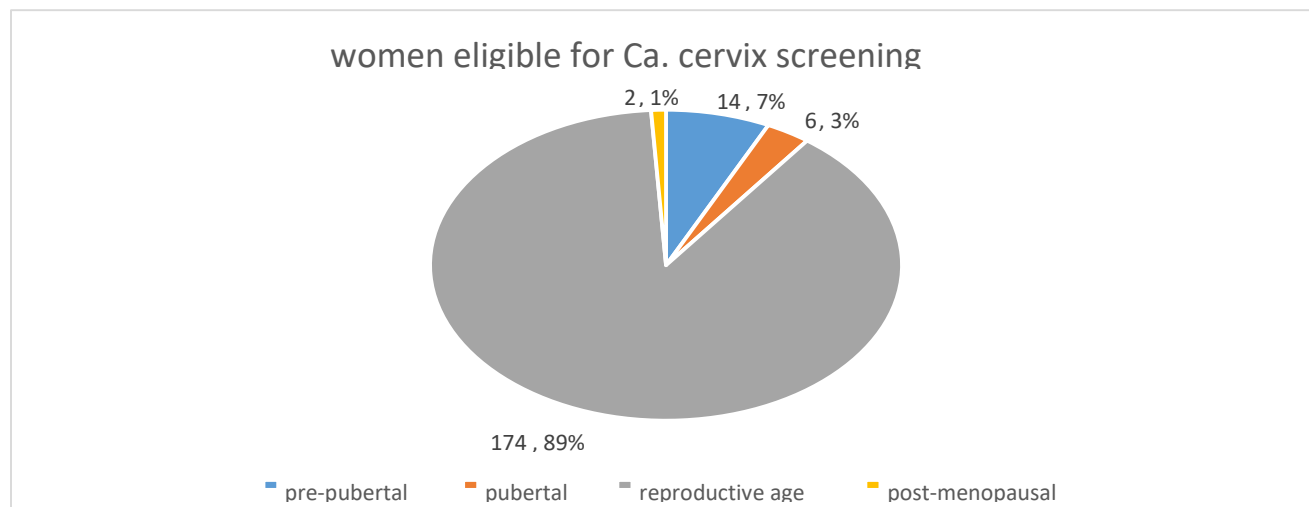
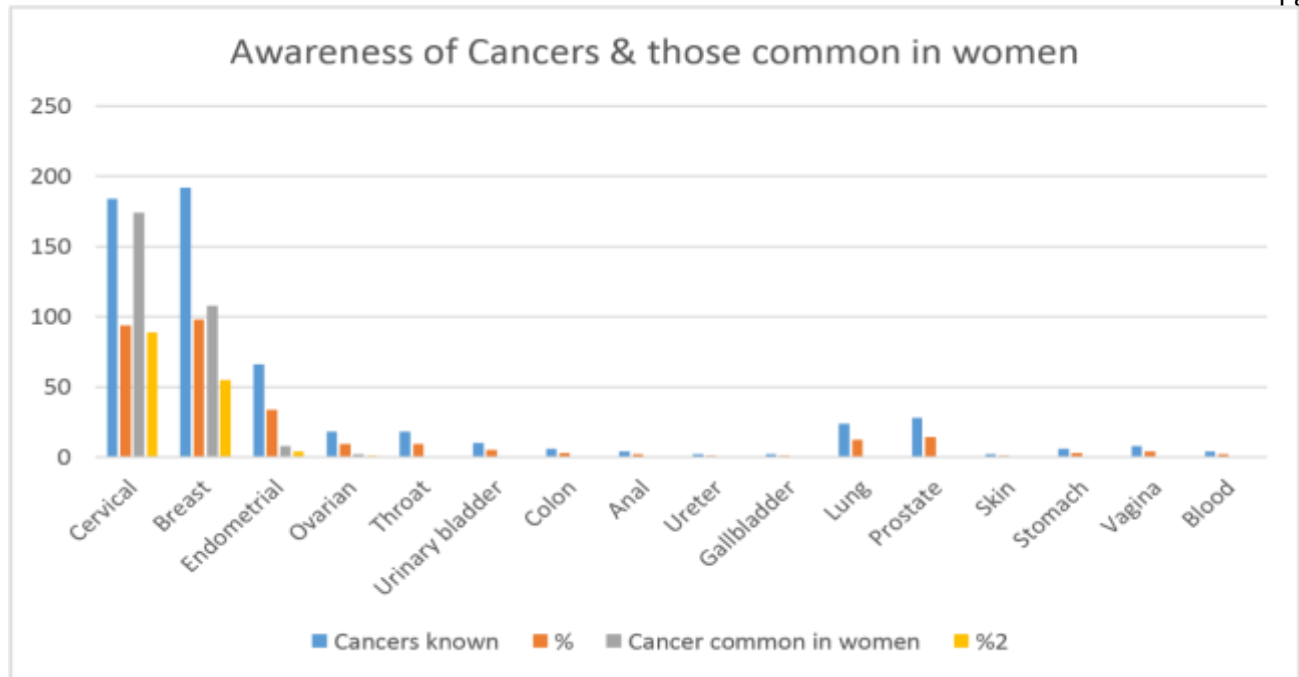


Figure 1: Which Woman Needs to be Screened for Cervical Cancer? (N=196)

The majority of the students (89%) said that women of reproductive age should be the ones who were screened for Ca. cervix. Only 1% correctly believed that even post-menopausal women needed to be checked for cervical cancer, whereas 7 percent incorrectly believed that pre-pubertal girls were eligible and 3 percent incorrectly believed that pubertal girls were eligible.

**Cancers ever heard of and most common in women (n=196)**



**Figure 2: Cancer Awareness Among Students (N=196)**

Breast (194), cervical (184), and endometrial malignancies (66) were the most frequently mentioned cancers among the responders. Others that were well-known included Ca. bladder (28), lung (24), ovary (18), throat (18), and prostate (28). (10). The most frequently mentioned cancer in women was ovarian, with one mention, followed by breast (54, 55.10 percent), endometrial (4, 4.08 percent), and cervix (87, 88.78 percent) cancers.

**Knowledge of risk factors for ca. Cervix (n=196)**

According to the student's interpretation from Figure 4 below, having several sexual partners carries the greatest risk for Ca. cervix. Multiple sexual partners were cited by 84.69 percent of the students as increasing the risk of developing Ca. cervix, followed by early sexual experience (75.51 percent), smoking (41.84 percent), sexual contact with uncircumcised males (20.61 percent), and obesity (last) (18.37 percent). Although 166 students (84.69%) mentioned having multiple sexual partners as a risk factor, 162 students (82.65%) believed it was transmissible through sex, and 190 students (96.94%) said there was an organism responsible, only 182 students correctly named HPV, while 4 students held *Trichomonas vaginalis* responsible, and 4 of the 190 students did not know the organism responsible.

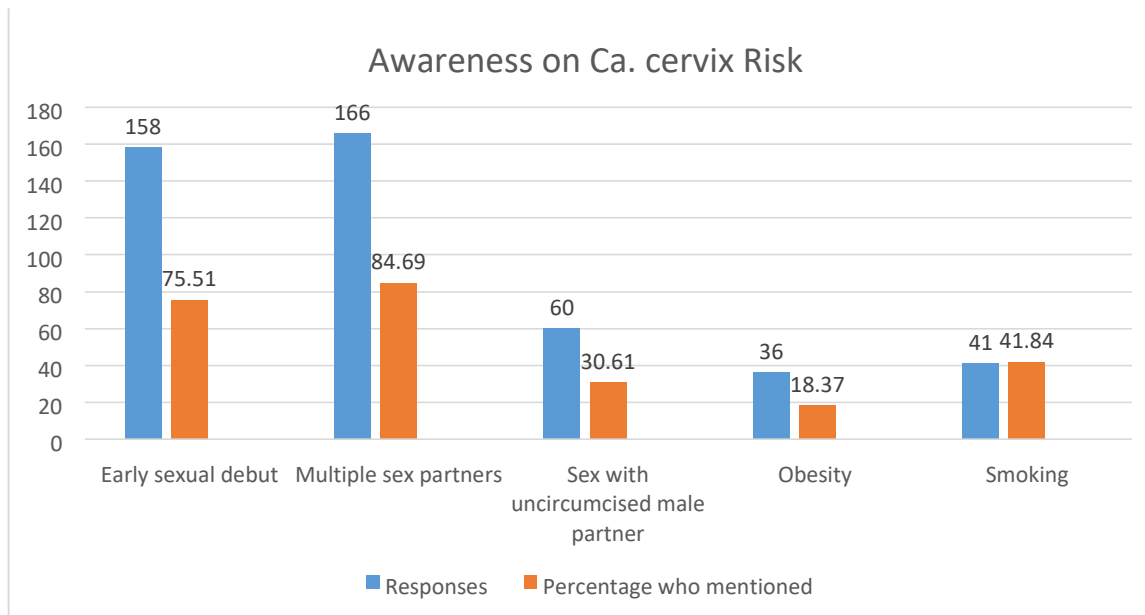


Figure 3: Knowledge of Students on Ca. Cervix Risk (N=196)

#### Preventability & treatability of ca. Cervix (n=196)

A total of 192 students, or 97.96%, believed that Ca. cervix could be avoided by avoiding risk factors and receiving vaccinations, while 2 disagreed and 2 were unsure. In addition, 192 (92.86%) answered that it could be treated with chemotherapy, radiation, surgery, or a combination of the three, while 4 said that Ca. cervix was incurable.

#### Attitudes towards cervical cancer & screening

Only 152 (72.45 percent) of the 196 students believed they could develop cervical cancer; 28 (14.29 percent) did not believe they could; and 26 (13.27 percent) opted to remain uncommitted. All 196 KIU students agreed that cervical cancer screening should continue since it was important.

### DISCUSSION

#### Knowledge of cervical cancer and cervical cancer screening

The student's general understanding of cancer was above average, especially when it came to the malignancies that affect women the most. Breast cancer (108), cervical cancer (174), endometrial cancer (8), and ovarian cancer were the four cancers cited by the students (2). All of the malignancies they highlighted in their list of the top eight cancers affecting women in 2018 [40]. Breast cancer is the most frequent cancer in women, followed by cervix, uterus, and ovarian cancers [40]. The Pap smear was accurately identified as the screening test by each of the 196 students who knew about it. Additionally, the majority of them claimed that postmenopausal women did not require screening but that women of reproductive age did, and that this included pre-pubescent and pubescent girls. The American Cancer Society recommends that all women start screening at age 21 [41]. More than 50% of the students correctly answered questions about cervical cancer's risk factors, preventability, and treatability, indicating that their knowledge was more than acceptable. This research's students had an excellent degree of knowledge, surpassing that of Waiswa et al survey's from health center IIIs in the Oyam District of Uganda, where only 62.7% of respondents had ever heard of cervical cancer screening. A bigger sample size may account for the variations. Other earlier studies have also found impressive attitudes toward cervical cancer and screening, including ones among medical students at the University of Los Andes [42], women in Qatar [43], and women in Hadiya, Southern Ethiopia [43].

#### Attitude towards cervical cancer screening

The study's participants exhibited favorable attitudes toward cervical cancer and cervical cancer screening, supporting the theory that learning new information alters one's viewpoint and, eventually, attitudes. Although roughly 27.55 percent of our respondents either did not believe they were at risk or opted to be uncommitted on the matter, all of them agreed that cervical cancer screening was vital and should continue. The correlation between impressive knowledge and a positive attitude found in this study is merely a replication of findings from other studies, including those among Turkish medical and non-medical students by Borlu et al. [45], Malaysian medical

students by Maharajan et al. [46], Nepalese students by Shrestha and Saha [47], and Zaria, Nigerian students by Ahmed et al. [48], where most respondents displayed a fair understanding of cervical cancer. However, having outstanding or sufficient information does not always convert into having a happy outlook. Although this seems to be the case in this study, the accuracy of the aforementioned statement has been demonstrated rather frequently in earlier research. Despite having remarkable knowledge, 44.7 percent of first-year female KIU students at Hawassa University College displayed negative attitudes. Despite having a high knowledge rate (76.88 percent) [49]. It was also the case among Indian medical and paramedical students [50]. However, it cannot be emphasized enough how attitudes concerning cervical cancer and screening are significantly impacted by a lack of or poor understanding. In terms of this fact, two studies in particular stand out: one conducted in New Delhi by Singh et al. [51] and the other in Nigeria [52].

### CONCLUSION

The female students at KIU-WC had above-average knowledge of cervical cancer and cervical cancer screening. In general, they had positive sentiments toward cervical cancer screening. Although the acceptability of cervical cancer screening was high in the present study, few respondents had been screened. There is still limited knowledge and lots of misconceptions about cervical cancer screening.

### RECOMMENDATIONS

Since women's knowledge and beliefs are the strongest predictors of repeated cervical cancer screening, there is an immense need for massive sensitization of the population at risk changing negative attitudes, and maximizing the acceptability of screening methods. Students should make personal efforts to get screened against Cervical cancer from the hospital. The author recommends that the Ministry of Health and Reproductive Health Department and Kampala International Hospital Teaching Hospital department should train all health workers on cervical cancer screening and ensure the screening is easily available and accessible by having more facilities offering the services. Kampala International University should conduct awareness campaigns on cervical cancer and its screening methods.

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