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Assessment of the Factors Affecting Cervical Cancer Screening Amongst the Youth in Ishaka, Bushenyi District Uganda

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ABSTRACT

Cancer cases have increased over the years, especially in sub-Saharan Africa, perhaps due to a rise in incidence or improvements in diagnosis. Cervical cancer was the leading cause of cancer-related deaths among women in Uganda, which is projected to continue increasing. Human papillomavirus (HPV) is a common sexually transmitted infection and the primary underlying cause of cervical cancer. Several risk factors are associated with HPV transmission and cervical cancer, and having good knowledge about them can significantly contribute to the fight against cervical cancer. In this descriptive study, which involved 150 participants and utilized questionnaires, we assessed the factors affecting cervical cancer screening among youth in Ishaka. According to the study, having multiple sexual partners was identified by the respondents as having the highest risk for cervical cancer. A significant majority, 85.23% of the youths, mentioned that having multiple sexual partners increased the chances of contracting cervical cancer, followed by early sexual debut (76.17%), smoking (42.28%), sexual contact with uncircumcised males (30.87%), and lastly, obesity (18.46%). Despite 254 respondents (85.23%) mentioning having multiple sexual partners as a risk factor, only 210 (70.46%) believed it was transmissible through sexual activity, and 246 (82.55%) believed that there was an organism responsible. Of those, only 182 correctly mentioned HPV, 15 (5.03%) believed *Trichomonas vaginalis* was responsible, and 49 of the 246 respondents did not know the organism responsible. These findings indicate that while participants had heard about cervical cancer, they did not possess sufficient understanding of the disease to prompt them to improve their health-seeking behavior regarding cervical cancer screening. The knowledge of youths in Ishaka concerning cervical cancer and cervical cancer screening was found to be above average, likely attributable to the education level attained by most of the participants. However, the utilization of cervical cancer screening services by youths remains very poor and calls for timely and appropriate interventions.

Keywords: Cervical cancer, Human papillomavirus, Trichomonas vaginalis, Cancer screening.

INTRODUCTION

Cancer is a disease with a global economic and health burden. It is one of the leading non-communicable fatal diseases. Cancer can take any part of the human body ranging from blood, colon, cervix, skin, womb, breast, prostate, lung, etc. Though cancer is a fatal disease, early detection is key to getting a good management outcome [1-3]. Methotrexate is the first drug of choice in the management of various types of cancer. However, methotrexate has some adverse effects [4, 5]. Cervical cancer, a malignancy of the cervix mainly due to being predisposed to the Human Papilloma Virus (HPV), is the 8th most common cancer in the world [6] and continues to be a common cancer in women worldwide, especially in less developed regions where advanced stage presentations are common [7]. Moreover, the rise in cervical cancer trends in the past two decades has coincided with the human immunodeficiency virus (HIV) epidemic, especially in the sub-Saharan African region, where young people (15 to 24 years old) are associated with many risk factors such as multiple sexual partners, early sexual debut, and high HIV incidences, which increase the chances of developing cervical cancer [8, 9]. Cervical cancer is an important public health problem worldwide, comprising approximately 12% of all cancers in women. For example, in Tanzania, the estimated incidence rate is 30 to 40 per 100,000 women, indicating a high disease burden [10]. Cancer screening is acknowledged as currently the most effective approach for cancer control, and it is associated with reduced incidence and mortality from the disease [11, 12]. Cervical cancer involves the preventive examination of the vagina and cervix smear, Pap test, and the HPV DNA test, which are remarkable diagnostic tools according to the American Cancer Association guidelines, for the investigation of asymptomatic women and in the follow-up of women after the treatment of pre-invasive cervical cancer [13]. Cervical cancer screening has

significantly reduced the incidence of cervical cancer [14]. Cervical cancer research in African countries has increased steadily over the past decade. However, there are several countries in Africa with little to no research ever conducted on cervical cancer [15, 16].

Despite the fact that the World Health Organization (WHO) recommends cervical cancer screening and vaccination programs as measures to combat cervical cancer, the uptake of these measures remains low in Uganda, most especially in rural areas. An understanding of the factors that influence women's decision to attend screening and willingness to have their daughters vaccinated against cervical cancer is essential for any attempts to increase uptake of these services [17]. A study in Zimbabwe revealed that the youth in Zimbabwe have an idea about cervical cancer and its seriousness but lack adequate knowledge of risk factors. Cervical cancer education and awareness emphasizing causes, risk factors, and care-seeking behavior should be commissioned and strengthened at the community, provincial, and national levels. Developing a standard cervical cancer primary prevention tool that can be integrated into schools can be a step towards addressing health inequity [18]. Despite widespread screening programs, cervical cancer remains the third most common cancer in developing countries[7, [19]. However, in populations with many preventive screening programs, a decrease in cervical cancer mortality of 50-75% has been observed over the past 50 years [20]. Example, though cervical cancer is the most common cancer among women in Kenya, only 3% of women are routinely screened [21]. Cervical cancer is the leading cause of cancer death among women in Uganda, and given the high prevalence of genital human papillomavirus infection, the current unavailability of radiotherapy, and the absence of a national cervical cancer prevention and control program, these deaths will likely increase[22]. Therefore, efforts to organize an effective cervical cancer screening and treatment program will require adequate financial resources, the development of infrastructure, training needed manpower, and surveillance mechanisms for the targeted women [22].

Cervical cancer is a worldwide public health concern, with approximately 85% of deaths occurring in developing countries [23]. The best estimates of cervical cancer incidence and mortality, presented using recently compiled data from cancer and mortality registries for the year 2008, showed that there were an estimated 530,000 cases of cervical cancer and 275,000 deaths from the disease in 2008. It is the third most common female cancer, ranking after breast cancer (1.38 million cases) and colorectal cancer (0.57 million cases) [24, 25]. Cervical cancer is almost entirely preventable through vaccination and screening, yet it remains one of the "gravest threats to women's lives," according to the World Health Organization[26]. However, despite effective screening methods, cervical cancer continues to be a major public health problem. The World Health Organization recommends cervical cancer screening and vaccination programs as measures to combat cervical cancer. However, the uptake of these measures remains low in Uganda, especially in rural areas. Understanding the factors that influence women's decisions to attend screening and their willingness to have their daughters vaccinated against cervical cancer is essential for any efforts to increase the uptake of these services[17].

Methodology

Study design and rationale

A quantitative cross-sectional study approach was conducted in order to determine the factors affecting cervical cancer screening among the youth in Ishaka town, Bushenyi-Ishaka municipality, in Bushenyi district.

Area of Study

The study was conducted in Ishaka town, Bushenyi-Ishaka municipality, located in Bushenyi district. Ishaka is situated in Igara County, within Bushenyi District, approximately 62 kilometers west of Mbarara, the largest city in the sub-region. It is also about 6 kilometers west of Bushenyi, which serves as 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, which is the largest metropolis in the district. According to the 2014 national population census, the population of Bushenyi, including Ishaka, was recorded at 41,063.

Study population

The study was conducted among youths aged 15-20 living in Ishaka town, Bushenyi-Ishaka municipality, in Bushenyi district.

Inclusion criteria

All youths aged 15-20 living in Ishaka town, Bushenyi-Ishaka municipality, in Bushenyi district at the time of data collection and willing to participate in the study were considered the target population.

Exclusion criteria

Youth outside the age group of 15-20 years and those who declined to participate in the study.

Sample size determination

The sample size was determined using Kish Leslie's formula [27] (1965)$n=(Za/2)^2p(1-p)$

e^2

Where 'n' is the desired minimum sample size, 'Z' is valued at $\alpha = 0.05$, which is 1.96, 'e' is the margin of error proposed to be 0.1, and 'p' is the proportion of youths between 15-20 years in Ishaka (If there is no literature about 'p', then 'p' is conventionally taken to be 0.5). Until this study was conducted, there were no published data about 'p'. So, a 50% proportion was used to calculate the maximum sample size, taking into account a 95% confidence interval ($Z\alpha/2 = 1.96$) and a marginal error (d) of 5%. In line with the above consideration, the minimum calculated sample size was 384 respondents. However, due to financial constraints, the researcher was able to interview only 300 respondents in this study.

Sampling procedure

Simpler random and purposive sampling techniques were used to choose respondents to participate in the study, from whom data was collected."

Dependent variables.

Cervical cancers screening

Independent variable

Awareness, perception, knowledge of cervical cancer screening, and socio-demographic factors like age, marital status, occupation, education, and religion.

Data collection method

Data were collected using an interviewer-administered questionnaire. The researcher met with the targeted respondents who participated in the study after obtaining permission for data collection. Each participant was required to provide informed consent before enrolling in the study. The researcher assisted the respondents in filling out the questionnaires by explaining any unclear items for clarification. The properly filled questionnaires were then collected, and the data were subsequently gathered for analysis. The researcher employed a structured questionnaire, and participants were asked similar questions. From the provided options, they selected the best alternative.

Data entry and cleaning

The data in the questionnaire was 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, specifically version 2019. The analyzed data was then presented in the form of tables and graphs, which served as the basis for discussion and drawing conclusions.

Quality control

To ensure quality control, the researcher conducted a pre-test using 10 questionnaires in the target population, and data was collected before the actual study to help in the reconstruction of the questionnaire where necessary.

RESULTS

Demographic Characteristics

Table 1

Variable		Frequency	Percentage(N=300)
Age group	18 –20	126	42
	21 –23	122	40.67
	24 –26	31	10.33
	27 –29	21	7
Religion	Catholic	102	34
	Anglican	165	55
	Moslem	18	6
	Adventist	15	5
	Single	276	92

Marital status	Married	24	8
Education level	Primary level	33	11
	Secondary(Ordinary level)	87	29
	Secondary(Advanced level)	83	27.67
	Tertiary level	97	32.33

As seen from the table above, the majority of the respondents 126(42%) were aged 18 to 20 years, followed by 122 (40.67%) who were aged between 21 to 23years,31(10.33%)aged between 24 to 26 years. Only 21(7%) were aged between 27-29 years. The mean age was 21.48 years. The majority (165) of the respondents were Anglicans. 102 youths were Catholics, 18 were Moslems and only 15 were Seventh-Day Adventists. Those that said that they were married were only 24 (8%). Some students had already started a family with 15 stating that they had one child, 4saying they had two while 2 had borne three children. Regarding their education level, 33(11%) had attained Primary level 87(29%) Secondary (Ordinary level), 83(27.67%) Secondary (Advanced level) while the majority 97 (32.33%) had attained Tertiary level. None of the participants had ever received any formal education.

Figure 1

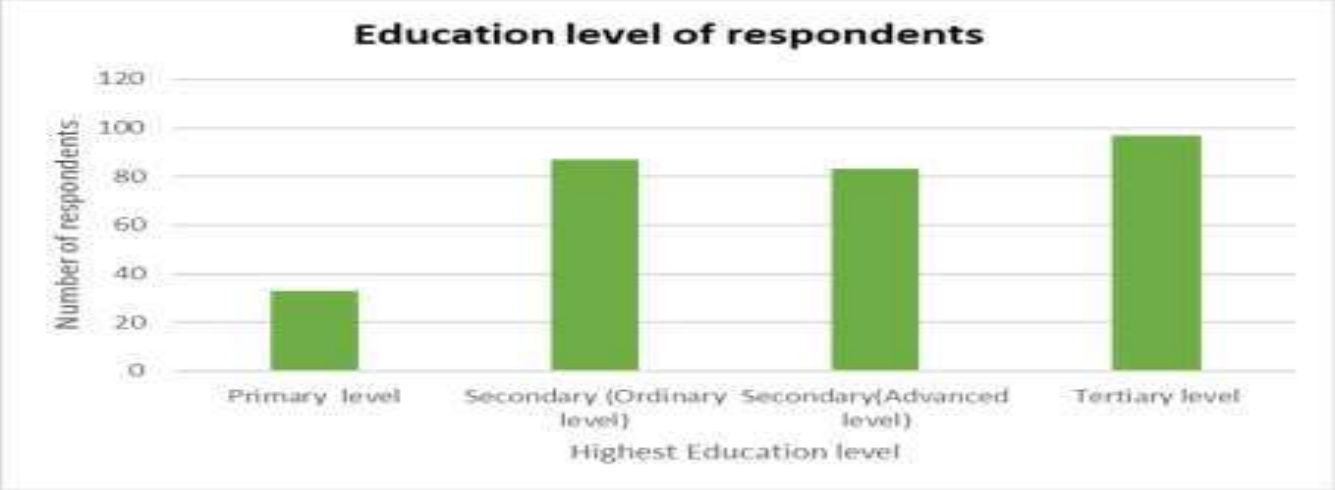
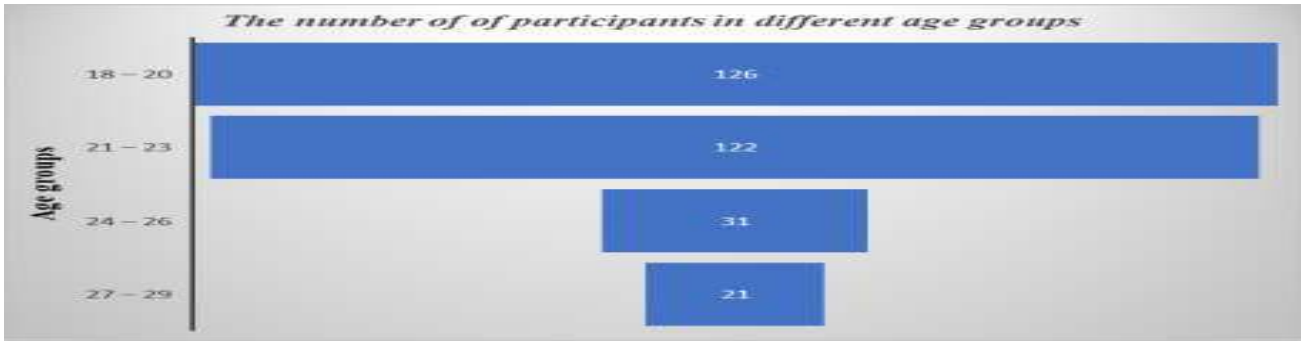


Figure 2

Majority of the respondents 126(42%) were aged 18 to 20 years, followed by 122(40.67%) who were aged between 21 to 23 years, 31(10.33%) were aged between 24 to 26 years. Only 21(7%) were aged between 27-29 years



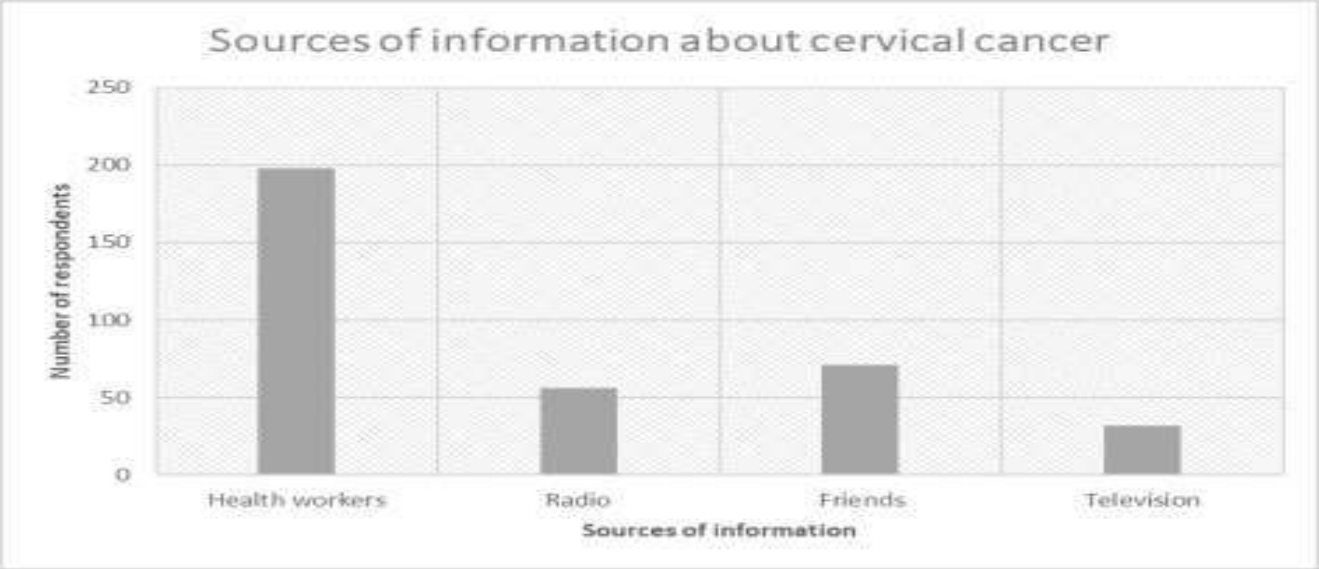
Knowledge and Awareness about Cervical Cancer and Screening

Table 2: Respondents' cervical cancer screening status

Variable		**Frequency (N=300)**	**Percentage**
Ever heard of cervicalcancer screening	Yes	298	99.33
	No	2	0.67
Ever had a cervical cancer screening test	Yes	59	19.7
	No	241	80.3
Ever been vaccinated against HPV	Yes	56	18.7
	No	223	74.3

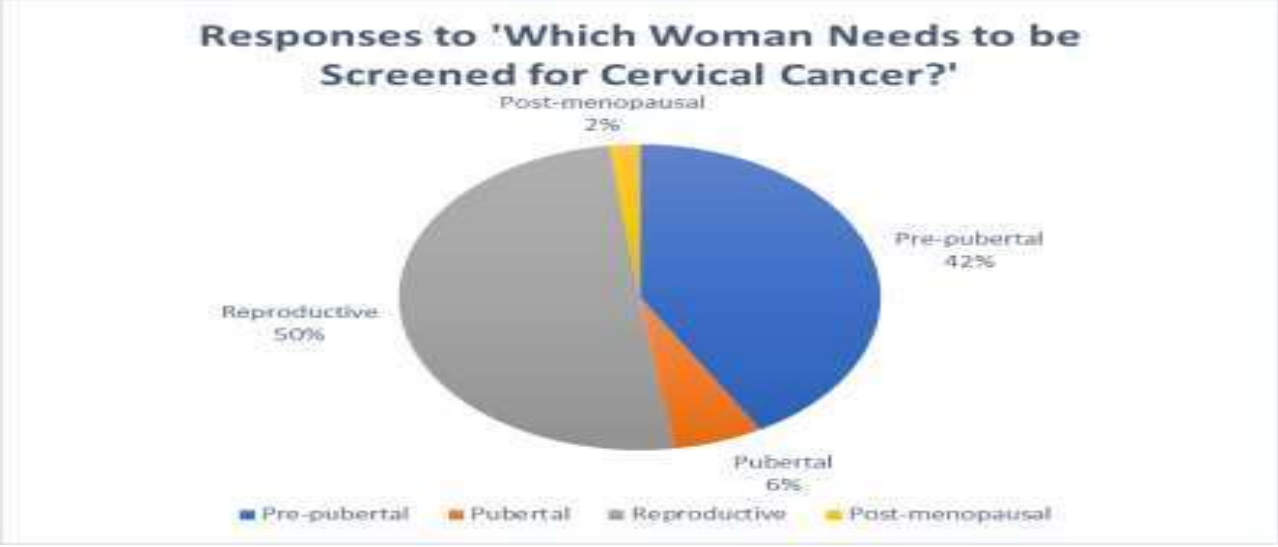
When asked about the different types of cancers they had heard about, the respondents mentioned breast cancer (293), cervical cancer (298) and Endometrial (157). Others that were commonly heard of were prostate, lung, ovarian throat and urinary bladder.

Figure 3: Almost all (99.33%) of the respondents were aware of cervical cancerand screening. 66.44% heard about it from health workers, 18.79% from radio, 23.83% fromfriends and only 10.74%from television



Almost all (99.33%) of the respondents were aware of cervical cancer and screening. Of these, 66.44% heard about it from health workers, 18.79% from radio, 23.83% from friends and only 10.74% from television. On what cervical cancer screening entailed, 152 of 298 respondents (51%)correctly mentioned the use of a Pap smear, while others (48.99%) were not sure or did not know.On the question of who was eligible for Cervical cancer screening, the responses were as shown in the figure below.

Figure 4 About 50% were of the opinion that women within reproductive agewere the ones who should be screened for Cervical cancer 42% said that pre-pubertal girls were eligible, and 6% thought it was pubertalgirls were eligible.



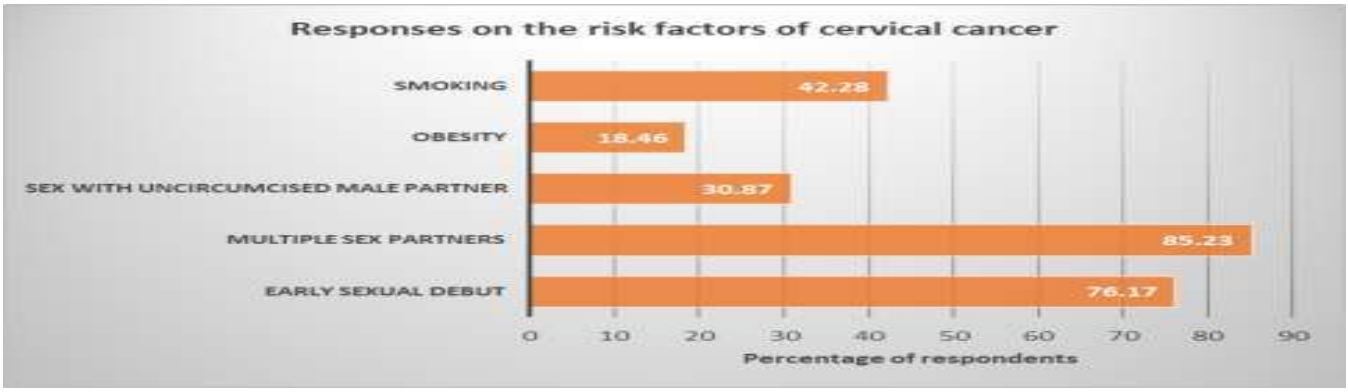
A bigger percentage of the youths (50%) were of the opinion that women within reproductive age were the ones who should be screened for Cervical cancer 42% said that pre-pubertal girls were eligible, 6% thought it was pubertal girls while only 2% rightfully thought that even post-menopausal women needed to be screened against cervical cancer.

Table 3: Knowledge of risk factors for cervical cancer

Responses	Frequency (N=298)	Percentage
Early sexual debut	227	76.17
Multiple sex partners	254	85.23
Sex with an uncircumcised male partner	92	30.87
Obesity	55	18.46
Smoking	126	42.28

According to the study, having multiple sexual partners was thought by the respondents to have the highest risk for Cervical cancer. 85.23% of the youths mentioned multiple sexual partners as a factor increasing the chances of contracting Cervical cancer, followed by early sexual debut (76.17%), smoking (42.28%), sexual contact with uncircumcised males (30.87%) and lastly obesity (18.46%). Despite the fact that 254 (85.23%) of the respondents had mentioned having multiple sexual partners as a risk factor, 210(70.46%) are the ones who thought it was transmissible throughsex, 246 (82.55%) said that there was an organism responsible but only 182 of the 246 correctly mentioned HPV, whereas 15 (5.03%) held Trichomonas vaginal is responsible and 49 of the 246 respondents did not know the organism responsible.

Figure 5



286 (96%) of the 298 respondents who knew about cervical cancer said that it was preventable through avoidance of the various risk factors and vaccination while 10(3.36%) said Cervical cancer was not preventable and 2 respondents did not know. 192 (64.43%) further stated that it was treatable through chemotherapy, radiotherapy, surgery or a combination of the three & 100 respondents said that Cervical cancer was not treatable.

Table 4: Preventability & treatability of cervical cancer

	Frequency (N=298)	Percentage
Cervical cancer is preventable	286	96
Cervical cancer is not preventable	10	3.35
Cervical cancer is treatable	192	64.43
Cervical cancer is not treatable	100	33.56

DISCUSSIONS

The socio-demographic characteristics of the sample population

From the population in this study, the majority of the respondents, 126 (42%), were aged 18 to 20 years, followed by 122 (40.67%) who were aged between 21 to 23 years, and 31 (10.33%) were aged between 24 to 26 years. Only 21 (7%) were aged between 27-29 years. The mean age was 21.48 years. The majority (165) of the respondents were Anglicans. 102 youths were Catholics, 18 were Muslims, and only 15 were Seventh-Day Adventists. Those who said that they were married were only 24 (8%). Some students had already started a family with 15 stating that they had one child, 4 saying they had two, while 2 had borne three children. Regarding their education level, 33 (11%) had attained Primary level, 87 (29%) Secondary (Ordinary level), 83 (27.67%) Secondary (Advanced level), while the majority, 97 (32.33%), had attained Tertiary level. None of the participants had ever received any formal education. Socio-demographic factors such as age, marital status, and educational level were reported in many studies to have an impact on women's choice and readiness to be screened for cervical cancer [28, 29]. Two studies in India found that younger women (30-39 years, optimally below 35 years) were more likely to be screened than older women [30]. A study in Latin America among women aged 15 and above found that those who knew about cervical cancer were on average younger than those who did not [31]. A study in Ethiopia found higher knowledge of cervical cancer screening among those aged below 30 years; the study also found little knowledge among married people than single people [32]. A study in Nigeria found that age had an effect on knowledge and screening for cervical cancer, as the screening and knowledge were higher among those older than 29 and those who were married [33]. A study carried out by Mengesha *et al.*, [34] showed that women with supportive patterns participated in cervical cancer screening compared to those with unsupportive patterns and those not married. In a study carried out by Cadman *et al.*, [35], women reported that consent from their husbands mattered a lot in receiving cervical cancer screening services. Salem *et al.*, [36] identified that married women in South Africa were convinced they were not at risk of developing cervical cancer and hence did not need cervical cancer screening.

Knowledge and awareness of cervical cancer screening services among the youth in Ishaka

This project aimed to explore the factors affecting cervical cancer screening among youth in Ishaka. When asked about the different types of cancers they had heard about, the respondents mentioned breast cancer (293), cervical cancer (298), and endometrial cancer (157). Others that were commonly heard of were prostate, lung, ovarian, throat, and urinary bladder cancer. This shows that the population had adequate awareness of cancer. Almost all (99.33%) of the respondents were aware of cervical cancer and screening. Of these, 66.44% heard about it from health workers, 18.79% from the radio, 23.83% from friends, and only 10.74% from television.

Regarding what cervical cancer screening entailed 152 out of 298 respondents (51%) correctly mentioned the use of a Pap smear, while others (48.99%) were not sure or did not know. This impressive knowledge level among the students in this study was higher than that found in a study by Waiswa *et al.* [37] in Health Centre IIIs in Oyam District, Uganda, where only 62.7% of the respondents had ever heard of cervical cancer screening. The differences may be attributable to the fact that the sample population was composed of students, the majority of whom were able to read and write. Education is one of the factors most frequently associated with knowledge of cervical cancer screening [38]. A study in Nigeria indicated that screened women were those who had higher educational levels, and furthermore, educational status has not only been found to be strongly associated with low knowledge and screening status but also served as a barrier to getting screened in the future [33]. The study conducted in Nigeria reported that women with low levels of education tended not to see the need for cervical cancer screening, while women with a higher level of education tended to be well-versed with the risk of not seeking cervical cancer screening [33].

According to the American Cancer Society [39], all women should begin screening at the age of 21 years. In the current study, half of the sample population (50%) was of the opinion that women within reproductive age should be screened for cervical cancer. 42% believed that pre-pubertal girls were eligible, 6% thought it was pubertal girls, while only 2% rightfully thought that even post-menopausal women needed to be screened against cervical cancer. Despite the fact that 51% of the sample population had ever had a cervical cancer screening test and only 19.7% had ever had the cervical cancer screening test, mainly because of personal factors such as fear of the procedure, cultural or religious reasons, and not being ill, this indicates a low level of knowledge of cervical cancer and the importance of the Pap smear test. The low knowledge of the Pap smear test could thus be due to a lack of understanding of the benefits of the test and the prevention of cervical cancer. In contrast, a study carried out among women attending outpatient departments in India reported low awareness, with only 16% having undergone cancer screening tests

[40]. In another study, 78.5% of women in rural areas of Uganda were not aware of cervical cancer screening services, which is why they are not utilizing cervical cancer screening services [17]. Women in urban areas and those with education have a high level of awareness of cervical cancer screening services compared to women in rural areas and those without education in a study carried out in Nigeria; therefore, urban women seek cervical cancer screening services more often [33].

Almost all (96%) of the 298 respondents who knew about cervical cancer said that it was preventable through the avoidance of various risk factors and vaccination. According to the study, having multiple sexual partners was thought by the respondents to have the highest risk for cervical cancer, with 85.23% of the youths mentioning multiple sexual partners as a factor increasing the chances of contracting cervical cancer, followed by early sexual debut (76.17%), smoking (42.28%), sexual contact with uncircumcised males (30.87%), and lastly, obesity (18.46%). Despite the fact that 254 (85.23%) of the respondents had mentioned having multiple sexual partners as a risk factor, only 210 (70.46%) believed it was transmissible through sex, and 246 (82.55%) said that there was an organism responsible, but only 182 of the 246 correctly mentioned HPV, while 15 (5.03%) held *Trichomonas vaginalis* responsible, and 49 of the 246 respondents did not know the organism responsible. The utilization of cervical cancer screening in this study was found to be low. Almost all (99.33%) of the respondents were aware of cervical cancer and screening. This is probably because most of the participants in this study were students, and the majority (32.33%) had achieved a tertiary level of education. However, only 51% of them had ever had a cervical cancer screening test, and only 18.7% had been vaccinated against HPV. These findings show that, even though the participants had heard about cervical cancer, they probably did not have a sufficient understanding of the disease to prompt them to improve their health-seeking behavior in relation to cervical cancer screening.

CONCLUSIONS

These findings showed that, even though the participants had heard about cervical cancer, they did not have a sufficient understanding of the disease to prompt them to improve their health-seeking behavior in relation to cervical cancer screening. The knowledge of youths in Ishaka concerning cervical cancer and cervical cancer screening was above average. This was attributed to the education level attained by most of the participants. The utilization of cervical cancer screening services by youths is very poor and necessitates timely and appropriate interventions.

RECOMMENDATIONS

There was a need for more sensitization of youths about cervical cancer and the importance of screening. Efforts should be made to influence the attitude and perception of youths through public health education. Appropriate environments should also be designed for cervical cancer tests.

Interventions should be directed at:

1. Raising awareness about the availability of the HPV vaccine and its importance for preventing cervical cancer, targeting the community at large, local health and community managers, local authorities, religious leaders, and civil society representatives.
2. Educating girls and their parents and other community members about the benefits of the HPV vaccine and other available cervical cancer prevention strategies.
3. Countering misinformation, rumors, and innuendos that undermine acceptance of vaccination by providing accurate information.
4. Vaccinating girls, either in the community, at schools, or other selected venues, and/or documenting vaccination-related activities.

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