

Understanding Women's Awareness of Cervical Cancer at Mt. St. Mary's Hospital in the Kasese District, Uganda

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ABSTRACT

The investigation aimed to evaluate the level of awareness and understanding concerning cervical cancer among female attendees of the gynecology clinic at St. Mary's Hospital in the Diocese of Kasese (DOK), Uganda. Utilizing a cross-sectional approach, data was collected from a sample of 100 women through structured questionnaires. Although all participants were familiar with cervical cancer, the study revealed significant gaps in their awareness. Only 84% recognized the existence of cervical cancer screening, and merely 16% were aware of the recommended screening interval of three years for non-immunosuppressed women. Moreover, responses varied regarding the age for initial screening, with 40% suggesting screening before 25 years, 20% proposing screening between 25 to 64 years, and 4% indicating symptom-based screening. While 59% acknowledged the preventability of cervical cancer and could identify preventive measures, knowledge about risk factors remained insufficient. For instance, 69% were uncertain about or denied smoking as a risk factor, while less than three-quarters recognized viral causes (59%) and the link between sexually transmitted infections (71%) and weakened immune systems (45%) as potential risks. The study highlights a substantial lack of knowledge regarding cervical cancer among women, despite existing communication strategies in place.

Keywords: Cervical cancer, vaginal bleeding, Gynecology, Sexual partners, Coital bleeding.

INTRODUCTION

Cervical cancer is the fourth most common cancer among women globally with an estimated 604000 new cases and 342000 deaths in 2020. About 90% of the new cases and deaths worldwide in 2020 occurred in low and middle-income countries [1]. Uganda has one of the highest cervical cancer incidence rates in the world (54.8 per 100,000) [2]. Awareness and early detection of cancer are crucial to the management of various types of cancer [3-5]. The reasons for the high incidence and mortality from cervical cancer in sub-Saharan Africa include a lack of awareness of cervical cancer among the population, health care providers, and policymakers, and limited access to high-quality health care and screening services

[6, 7]. The most important significant risk factors that predispose to cervical cancer are the non-routine cervical cancer screening services and underpowered public information [8]. Cervical cancer is a potentially preventable disease if appropriate screening and prophylactic strategies are employed. However, a lack of knowledge can result in underutilization of the preventive strategies [9, 10]. The prevalence of human papillomavirus in the East African region is high estimated at 20% in the general population [11]. Cervical cancer is the leading cancer among Ugandan women contributing to 40% of all cases recorded in the cancer registry [12]. The Ugandan Ministry of Health's strategic plan for

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cervical cancer prevention and control 2010-2014 aimed at targeting dissemination of information about cervical cancer, prevention, and treatment to 90% of Ugandans, and screening and treatment of 80% of eligible women aged 25-49 years [13]. However, in a cross-sectional study about knowledge of cervical cancer risk factors and symptoms among women in refugee settlements in northern Uganda, less than half (40%

n=325) had heard of cervical cancer. Half of the women correctly recognized 7 to 11 symptoms of cervical cancer [14]. This therefore indicates a knowledge gap about cervical cancer despite the strategic plan by the Ministry of Health. This study therefore sought to assess the level of knowledge and awareness among women attending the gynecology clinic at Mt. St. Mary's Hospital Diocese of Kasese (DOK).

METHODOLOGY

Study design

A cross-sectional study was used to demonstrate the knowledge and awareness of cervical cancer among women attending gynecology clinics at St. Mary's DOK Hospital.

Area of Study

The study area was Mt. St. Mary's Hospital DoK in Kasese district in western Uganda. It is a private hospital. Kasese district is bordered by Kabarole District in the Northeast, Kamwenge District to the East, Bundibugyo District to the North, Rubirizi District to the South, and DRC to the West.

Study population

The study population was women attending the gynecology clinic at St. Mary's DOK hospital.

Inclusion Criteria

All women attending the gynecology clinic at Mt St. Mary's Hospital DOK

Exclusion criteria

Very sick patients attending the gynecology clinic at Mt. St. Mary's Hospital DOK. Those who didn't have consented.

Sample Size Determination

The Kish Leslie [15] formula $n = z^2 p(1-p)/E^2$ will be used to estimate the sample size for this study.

It is $n = z^2 p(1-p)/E^2$

n=estimated minimum sample size required.

P=proportion of a characteristic in a sample. (93%=0.93) (Mutya et al. [16])

Z=1.96(for 95% confidence interval)

e= margin of error set at 5%

$n = (1.96)^2 * 0.93(1-0.93)/(0.05$

$n = 3.573 * 28 = 100$

Sampling procedures

The simple random sampling technique was used. Several visits were made to the

gynecology clinic and those who consented were randomly picked to fill out the questionnaire.

Data collection methods and management

Data was collected using a structured interview-based questionnaire. The questionnaire was prepared in English language and translated to the local language of the participant during the interview process where necessary. Data was collected on socio-demographic variables, basic knowledge about cervical cancer, and knowledge with regard to risk factors and signs and symptoms. The questionnaire had both open and closed-ended questions.

Data analysis

The collected data was entered in Microsoft Access, analyzed using SPSS version 14, and presented in tables and pie charts.

Ethical considerations

The research proposal was subjected to approval by the KIU-WC research board and an introductory letter was issued to the researcher to present to the hospital administrator of Mt. St. Mary's Hospital DOK which is the area of study. Care was taken to ensure that all who agreed to participate in the study did so willingly by signing the consent forms. To obtain informed consent the aims and objectives of the study were explained to the participants and they were given the opportunity to ask for clarification. The information collected was kept confidential and no names appeared on the research documents.

RESULTS

Socio-Demographic Characteristics

The socio-demographic characteristics are shown in Table 1. Of the respondents, 37% were in the age group of 18-25, 37% within 26-30, 26% above 30 years. With regards to nationality, 100% were Ugandans, 99% were from Kasese municipality, and 1% were from Busongora North County in Kasese district. With regards to the level of education, none had a master's degree, 7% were degree holders, 4% with diplomas, 33% were certificate holders 4% were senior six leavers, 18% were senior four leavers and 34% had not gone beyond

primary education. With regards to marital status the majority were married 63%, single was 22% divorced 4% and none was widowed.

In terms of parity, 25% were nulliparous, 41% had 1-2 children, 15% with 3-4 children, and 19% had more than five children. With regards to occupation, 25% were peasants 15% were teachers, 15% were business women, 7% were students, 25% with no occupation, 5% were health workers, 1%, 1%, 2%, 3%, were tailors, librarian, hairdressers, cleaners respectively.

Table 1: Socio-demographic characteristics of women attending gynecology clinics in the study

Variable		Frequency(n=100)	Percentage (%)
Age (years)			
a)	18-25	37	37
b)	26-30	37	37
c)	Above 30	26	26
Total		100	100
Nationality			
a)	Ugandans	100	100
b)	Kenyan	00	00
c)	Tanzanians.	00	00
d)	Congolese	00	00
e)	Rwandese	00	00
Total		100	100
Address			
a)	Busongora north	1	1
b)	Kasese municipality	99	99
c)	Total	100	100
Marital status			
a)	Single	22	22
b)	Married	63	63
c)	Divorced	04	04
d)	Widowed	00	00
Total		100	100
Number of children.			
a)	00	25	25
b)	1-2	41	41
c)	3-4	15	15
d)	>5	19	19
total		100	100
Occupation			
a)	Peasants	25	25
b)	Teachers	15	15
c)	Accountants	01	01
d)	Health workers	05	05
e)	Businesswomen	15	15
f)	Hairdressers	02	02
g)	Students	07	07
h)	Cleaners	03	03
i)	Librarian	01	01
j)	Tailor	01	01
k)	Nil	25	25
Total		100	100

Source: study fieldwork data 2022

Basic Awareness of Cervical Cancer

The respondents were asked about some basics of cervical cancer to assess their general knowledge of cervical cancer. The responses are in Table 2. All the respondents had heard of cervical cancer i.e. 100% and of these 84% were aware of a

cervical cancer screening program as the rest of the 15% were not aware of any screening program. Of the 84% who were aware of cervical cancer screening 16% knew that the interval for screening is 3 years, 14% after 1 year, 10% said after 2 years and 44% didn't know what the

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interval was. The 84% of the respondents who were aware of cervical cancer screening made their suggestions on the age at which cervical cancer is screened where 40% said less than 25years, 20% said

it can be screened at any age between 25 and 64,4% said it can be screened when one sees the signs and symptoms,20% didn't make a suggestion of the age.

Table 2; Basic awareness of cervical cancer

Variable	Frequency(n)	Percentage (%)
Heard of cervical cancer.		
a) Yes	100	100
b) No	00	00
Total	100	100
Aware of cervical cancer screening program		
a) Yes	84	84
c) no	15	15
total	100	100
If yes, how often should one screen		
a) After 1 year	14	14
b) After 2 years	10	10
d) After 3 years	16	16
e) Don't know	44	44
Total	84	84
if yes, the age of the first screening		
a) < 25 years.	40	40
b) 25-64 years	20	20
c) when one sees the signs and symptoms	4	4
d) don't know	20	20
total	84	84

Source; study fieldwork data 2023

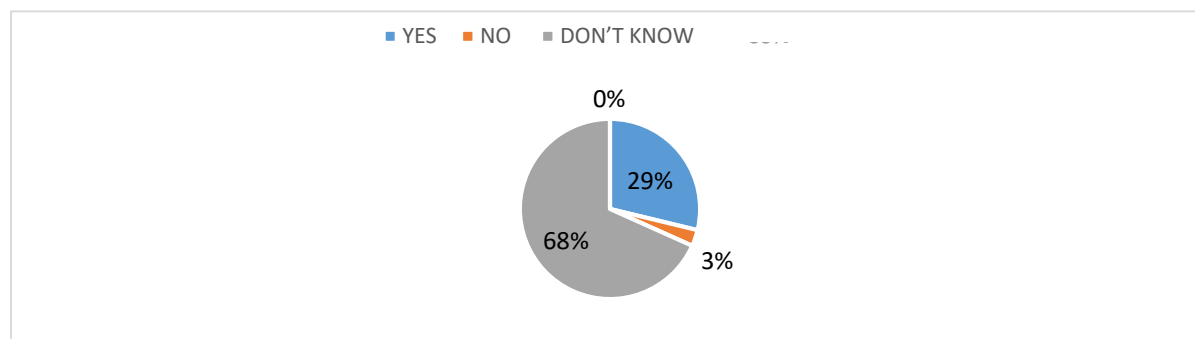
Views on the possibility of prevention and preventive measures for the development of cervical cancer

The respondents were asked whether cervical cancer is preventable or not. the results are presented in the pie chart below Those who said it was preventable were further asked about the preventive measures (at least one) of cervical cancer.59% of the respondents said it was preventable,6% said it was not preventable whereas 35% didn't know whether it was preventable or not.

Those who were knowledgeable about cervical cancer being preventable mentioned the following preventive measures

- Screening regularly
- Treating sexually transmitted infections
- Maintaining good personal hygiene
- Avoiding multiple sexual partners
- Immunization
- Sensitization of the public
- Having safe sex i.e using protective
- Encouraging safe male circumcision.

Figure 1: A Piechart Showing the Knowledge Possibility of Prevention of Cervical Cancer



Source: Study Field Work Data 2023

Knowledge of the Risk Factors of Cervical Cancer

To assess the level of knowledge on the risk factors of cervical cancer

development, the Likert psychometric response scale was used in the questionnaire. This is shown in Table 3.

Table 3: Respondent's ideas on the risk factors for cancer development

Risk factor	Agree N(%)	Strongly agree N(%)	Disagree N(%)	Strongly disagree N(%)	Not sure N(%)	Total
Long-term use of contraceptives	44(44.0)	38(38.0)	5(5.0)	1(1.0)	12(12.0)	100
Infection with human papillomavirus	25(25.0)	27(27.0)	7(7.0)	0(0.0)	41(41.0)	100
Having a sexually transmitted infection	45(45.0)	26(26.0)	3(3.0)	4(4.0)	41(41.0)	100
Smoking any form of cigarettes	21(21.0)	10(10.0)	11(11.0)	22(22.0)	36.0(36.0)	100
Having a weak immune system e.g. HIV/AIDS.	24(24.0)	21(21.0)	10(10.0)	10(10.0)	35(35.0)	100
Uncircumcised sexual partner	34(34.0)	43(43.0)	3(3.0)	5(5.0)	15(15.0)	100
Starting sexual intercourse too early	25(25.0)	45(45.0)	3(3.0)	5(5.0)	22(22.0)	100
Having unprotected sex with many sexual partners	38(38.0)	38(38.0)	2(2.0)	2(2.0)	20(20.0)	100
Giving birth to many children frequently	17(17.0)	19(19.0)	13(13.0)	8(8.0)	43(43.0)	100
Not seeking regular cervical cancer screening	30(30.0)	30(30.0)	3(3.0)	5(5.0)	32(32.0)	100
Having a sexual partner that has had many sexual partners	28(28.0)	38(38.0)	2(2.0)	3(3.0)	29(29.0)	100
Having a sexual partner whose wife had cervical cancer	63(63.0)	32(32.0)	0(0.0)	0(0.0)	5(5.0)	100

Source; study fieldwork data 2023

Knowledge of Signs and Symptoms of Cervical Cancer

This was also assessed using the psychometric scale with “yes”, “no” and “I

don’t know” options to determine the level of knowledge on the symptoms of cervical cancer marked out by the women who responded in this study.

Table 4; Respondents’ opinions on the symptoms of cervical cancer

Symptoms	Yes N(%)	No N(%)	Don’t know N(%)	Total
Vaginal bleeding between periods	64(64.0)	11(11.0)	25(25.0)	100
Persistent vaginal discharge with an unpleasant smell	62(62.0)	14(14.0)	24(24.0)	100
Continuous lower back pain	40(40.0)	14(14.0)	46(46.0)	100
Longer than usual and heavy menstrual periods	52(52.0)	16(16.0)	32(32.0)	100
Vaginal bleeding after menopause	65(65.0)	10(10.0)	25(25.0)	100
Painful sexual intercourse	66(66.0)	7(7.0)	27(27.0)	100
Bleeding during and after sexual intercourse	71(71.0)	7(7.0)	22(22.0)	100
Persistent pelvic pain	56(56.0)	10(10.0)	34(34.0)	100
Blood in stool or urine	40(40.0)	25(25.0)	35(35.0)	100
Having persistent diarrhea	13(13.0)	34(34.0)	53(53.0)	100
Unexplained weight loss	41(41.0)	17(17.0)	42(42.0)	100

Source; Study fieldwork data 2023

DISCUSSION

Basic awareness of cervical cancer

Cervical cancer is the most common female cancer and the leading cause of cancer-related deaths among women in low-income countries. It is estimated that 300,000 women die from cervical cancer every year and most of them are from low-income countries [17]. Nevertheless, the general knowledge about cervical cancer among women is still lacking yet there is proof that lack of awareness leads to late diagnosis and poor prognosis [18]. Many research studies on knowledge and awareness of cervical cancer, screening, and treatment have elaborated that the general population has limited information [19, 20]. This does not differ from this study where 84% of the women were aware of cervical cancer screening and of these only 16% knew that the recommended screening interval for

cervical cancer for non-immunosuppressed women is 3 years and of the 84%, 20 women suggested that the age of first screening is any age between 25 to 64 years. This slightly differs from a cross-sectional study done in Zimbabwe among mothers of girls aged 9 to 14 years, 416 women participated and the majority 238(63.4%) said the recommended interval for screening is 3 years, with 47.7% thought it’s every year, 19.3% consider it to be 5 years while over a third (140,34.6%) didn’t know [17]. The majority of the women in this study had the right knowledge that screening should be done at 21 to 65 years, 13% said if with symptoms, 15% said any time from birth, 9% said if with positive family history and 1% said all breastfeeding mothers should be screened.

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Prevention of the development of cervical cancer

Of all the respondents, 59% said cervical cancer is preventable, 6% said it is not preventable, 35% didn't know and all 59% were able to mention at least one preventive measure. This is almost similar to the findings of a cross-sectional community-based study conducted in Bugiri and Mayuge districts in eastern Uganda where 900 women participated and most women (562;62.4%) knew at least one preventive measure [21].

Knowledge of risk factors of cervical cancer

Risk factors that predispose to cervical cancer include HPV infection, sexually transmitted infections, long-term use of contraceptives, smoking, having a weak immune system, having an uncircumcised sexual partner, early sexual intercourse, having unprotected sex with many sexual partners, multiparity, HIV, not seeking for regular pap smear and sexual partners polygamy [22-24]. In this study, knowledge of risk factors was assessed with statements to determine the degree of agreement or disagreement, only less than three-quarters of them (59% n=59) agreed that it is caused by human papillomavirus, this differs from a study carried out in Zimbabwe by Zibako et al. [17] where 96% of the respondents mentioned that HPV causes cervical cancer, 24.6% didn't know what causes cervical cancer, 57.8% thought by witchcraft. In this study, 76% agreed that having multiple sexual partners, 95% agreed to have a sexual partner whose wife had cervical cancer, and 66% agreed that having a sexual partner with many sexual partners is a risk whereas in the study done in Zimbabwe, only 24% thought it can be sexually transmitted [17]. This also doesn't differ from a study carried out in a British population where only 14% of the respondents were aware of a link with sexual transmission and fewer than 1% named HPV [25]. In this study, only 31% agreed that smoking contributes to cervical cancer correlates with a population-based study in Addis Ababa where 24.17% recalled smoking as a risk factor [26]. For having an uncircumcised

sexual partner majority of them (77%) agreed and for having HIV/AIDS 45% agreed which differs from a study in Harare, Zimbabwe where only 5 were aware of the uncircumcised partner being a risk and only 7% were aware that HIV is a risk [27]. A good number of the respondents disagreed and were not sure (64%, 30%) that high parity and too early sex respectively, and long-term use of contraceptives (18%) were risks. This correlates with the study where the knowledge about these risks was insufficient [28]. Therefore, the knowledge of the risk factors of cervical cancer development was insufficient among the women that attended the gynecology clinic at Mt. St. Mary's Hospital DoK which calls for intensification of public awareness through the media and health education programs about the risk factors and how to avoid them. Knowledge of the risk factors of various types of cancers is important for early diagnosis and cancer management outcomes [29-31].

Knowledge of the symptoms of cervical cancer

As part of the assessment of knowledge of cervical cancer, the knowledge of symptoms was assessed. The respondents accepted that vaginal bleeding (64%), abnormal vaginal discharge (62%), vaginal bleeding after menopause (65%), painful sexual intercourse (66%), and bleeding during and after sex (71%) are symptoms of cervical cancer. This differs slightly from a study where the respondents correctly identified bleeding between periods (306; 52.8%), persistent pelvic pain (292;50.3%), foul-smelling discharge (288;49.7%), discomfort during sexual intercourse (276;47.6%), and post-coital discomfort (242;41.7%) [32]. However, the majority of the respondents in this study didn't know nor accept that persistent diarrhea (87%), longer than usual menstrual periods (68%), blood in stool or urine (60%), weight loss (59%), low back pain (60%) and persistent pelvic pain (44%) are symptoms of cervical cancer. This study doesn't differ from a study by Mukama et al. [21] in eastern Uganda where only a few of them knew very few of the symptoms of cervical cancer

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(postcoital bleeding, vaginal bleeding, and abdominal pain). Although for most of the symptoms, the majority were knowledgeable there is still insufficient knowledge in the broad picture about the symptoms of cervical cancer.

Basic awareness of cervical cancer

This study has revealed an insufficiency of basic knowledge on cervical cancer though all the respondents (100%) had heard of cervical cancer, most of them didn't have more knowledge about the screening and preventive measures and only 84% were aware of a screening program, and of these only 16% knew that the recommended interval for screening is 3 years, 20% suggested that it can be screened any time between 25 and 64 years. Of all the respondents only 59% affirmed that it was preventable and each of them was able to mention one preventive measure.

Knowledge of risk factors of cervical cancer

The knowledge on risk factors was insufficient with more than half of the women disagreeing and not sure whether smoking is a risk, only 59% agreeing that it is caused by a virus, 71% agreeing that having an STI is a risk, 82% agreed that long term use of contraceptives and 45% having a weak immune system e.g. HIV/AIDS. 36%, 60%, 76%, and 66% agreed

that giving birth to many children frequently, not seeking regular cervical cancer screening, having multiple sexual partners, and having a sexual partner who has had many sexual partners, respectively, are risk factors.

Recommendations

The hospital can increase awareness about cervical cancer among women by organizing regular health education talks in the hospital to all patients in the outpatient, those that attend the maternal and child health care clinic (MCH), and all the other clinics. The hospital can provide cheap if not free cervical cancer screening services after creating awareness of cervical cancer to encourage women to screen. The hospital can organize outreach to the community after the proper training of the health workers to go out in public places like churches, schools, and markets to educate the public about cervical cancer. The Ministry of Health, Uganda can play a big role in enhancing the knowledge and awareness of cervical cancer among health workers and the entire community by increasing the budget allocation for health services publicity which can be done through the local media like radios, televisions, and on rural platforms like market places, through local leaders like local council chairmen, religious leaders.

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