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## **Acceptance of Human Papillomaviruses screening by Fort-Portal market-women at risk of cervical carcinoma in Kabarole District, Uganda.**

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### **ABSTRACT**

**Background:** Cervical cancer is the second most common cancer among women worldwide and many of these cancers are linked to Human Papilloma Virus (HPV) genital infection. Access to a screening of cervical cells for HPV and carcinogenesis, commonly associated with high female mortality rates attributed to poor socio-economic, socio-cultural, and behavioral factors may have an underlying poor acceptance of this procedure as a factor defining the epidemic of female mortality in this region.

**Objective:** To evaluate the acceptance rate of HPV screening as a predictor of cervical carcinoma by market women in Fort portal municipality.

**Material and Methods:** In this descriptive cross-sectional study, 270 market women randomly drawn from 6 markets within Fort portal municipality were questioned on their acceptance of HPV and cervical cell screening for carcinogenesis using quantitative and qualitative methods. Information about acceptance included: knowledge, attitude, practice, social, cultural, economic, geographical, demographic, and medical. With the Epi-info program, Chi-square, Odds Ratios (OR), and Relative Risk (RR) were used to measure the strength of associations between variables, Yates correction was for minimal error margin.

**Results:** Marriage, occupation, religion, and educational level significantly ( $p < 0.05$ ) influenced the acceptance including its implication on cervical HPV carriage and predisposition to precancerous lesions are fully discussed. of HPV screening while tribe played no significant ( $p > 0.05$ ) role. Only 7.29% knew the procedure, 31% had their first sex before age 16, and 18% had 2-3 children while 14% had many sexual partners. About 74% had uncircumcised partners' Poor awareness of sources of service delivery and safety concern, Poor knowledge, high costs of clinical services, high waiting time, poor access plan to clinics where necessary, social barriers and stigma, and fatalistic misconceptions all hindered the acceptance of the test procedure.

**Conclusion:** The acceptance rate of cervical HPV screening is still very low among the studied population and the issues behind this observation

**Keywords:** Cervical Cancer, Precancerous Lesion Screening, Human Papilloma Virus, Socio-Cultural practices.

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## Introduction

Cervical cancer is the uncontrolled growth of cells on the cervix. It is unique because it can take 10 to 20 years for invasive cancer to develop after mild dysplasia is identified (1). This slow progression from early lesions to overt cancer provides the basis for early screening, detection, and treatment. It is mainly caused by infection with the Human Papilloma Virus (HPV). HPV is one of the most common sexually transmitted infections (STIs). Most infections with HPV resolve spontaneously within one to two years, but some persist causing chronic HPV infection. This chronic HPV cervical infection is known to be a high-risk factor for the development of early precancerous lesions. Host factors such as early sexual debut (before age 16), closely spaced frequent births; behavioral and environmental factors are known to facilitate cervical cancer development.

Epidemic serotypes of HPV are known to include HPV serotypes- 45, 52, 16, 18, 35, and 58 respectively. It has a global distribution from the developing to the developed world. A Guinea HPV study reported 47.9% prevalence in women, followed by the following serotypes and

corresponding percentage prevalences in bracket: HPV45 (4.7%), HPV 52 (4.0%) and HPV 18, HPV 35 and HPV 58 (3.2%) respectively. The lowest HPV prevalence of 10.5% was found in a Nigerian study (2). HPV prevalences in East Africa ranged from 3.2% in Sudan (3) to 41.4% in Mozambique (4). In South Africa, HPV prevalence among women with normal cytology ranged from 15.5%, (5), to 20.4% (6). The only study from central Africa was from the Democratic Republic of Congo reported as 8.7% (7). The most common HPV type detected among invasive cervical cancers was HPV16, ranging in prevalence from 38.5% in Mali (8) to 81.8% in Tanzania (9). The prevalence of HPV16 and 18 ranged from 56.4% (10) to 91.5% (11).

It has been reported (12) that HPV type distribution in women with invasive cervical cancer from South Africa, Ghana, and Nigeria showed 93.7% of women were HPV-positive and 86.8% were infected with a single type (HPV: 16, 18, 35, and 45). HPV35 was 4.9%, suggesting that its oncogenic potential is less than that of HPV16 or 18. de Sanjosé S *et al*, (13) reported that multiple infections were most commonly found in Sub-Saharan Africa (SSA). In SSA, a wide regional

variation of infection with multiple types from 2% in Ethiopia (14) and South Africa (15) to 34% in Mozambique (16) was probably due to undiagnosed or unknown concurrent HIV infection. An increase in the proportion of multiple infections with HPV is well described in HIV-positive women (17). An Uganda report of 84% was among HIV patients, and the most common HPV types were HPV16, 18, 45, and 35 (18).

Cervical cancer is the second most common cancer in women, globally, with the majority of the affected coming from developing countries (1, 19). It is the most common cancer of women in sub-Saharan Africa with a survival rate of 21% compared to 70% from the USA (19, 20). The incidence rate for cervical cancer in Uganda is 45.6 per 100,000 women and it is the leading (40%) cancer in women in Uganda (1). Clinical reports for 2006 indicate that 80% of women were diagnosed with late-stage disease, 70% died and more patients die before 5 years of disease carriage (21- 23).

For the disease to be fully controlled more women need to know their status, and knowing the status will be possible if women which are considered the most vulnerable population, accept to be counseled and screened for the virus. There is therefore the need to scale up the awareness of the screening methods, availability of the methods, good knowledge of the disease, and the need for prevention instead of cure. These may impact the uptake of screening for precancerous lesions and hence the reduction of morbidities and mortalities resulting from cervical cancer, especially in sub-Saharan Africa. This study was therefore designed to assess the acceptance of Human Papillomaviruses screening as a predictor of cervical carcinoma by a market woman in Fort-Portal Municipality, Kabarole district, Uganda

## Materials and Methods

In this descriptive cross-sectional survey, we surveyed the socio-demographic variables, knowledge, and acceptance of Human Papillomaviruses screening as a predictor of

cervical carcinoma by a market woman in Fort-Portal Municipality, Kabarole district, Uganda. This study was conducted in Fort Portal found in Kabarole District and the Toro Kingdom, 320 km (200 mi) by road, west of Kampala, Uganda's capital city. The coordinates of the town are: 0° 39' 36" North, 30° 16' 30" East (Latitude: 0.6600; Longitude: 30.2750). It had a population of 41,000 according to the 2002 population census. In 2010, the Uganda Bureau of Statistics (UBOS) estimated the population of the town at 46,300. In 2012, UBOS estimated the mid-year population of Fort Portal at about 48,000 inhabitants. The study primarily targeted all-female traders (market women) in Fort portal municipality living within the enclave of the municipality and undertaking their trading activities in it. To obtain a representative sample for my target population, Cochran (24) modified formulae  $n = \frac{t^2 P(q)}{d^2}$  was used for the estimation of a representative sample where  $n$ =sample size,  $t=1.96$  standard,  $d$ =error,  $p$ = Proportion of population with same characteristics of interest,  $q=1-p$  and 245 were obtained

## Sampling technique and procedure

Fort portal municipality was purposively chosen for the study because it is among the few places in Uganda where screening for cervical precancerous lesions is carried out, promoted, and advocated by a couple of hospitals and NGOs. Fort portal municipality has a lot of markets spaces, therefore: 81(30%) from Kabundaire market, 14 (5%) Kisinyi market; 67(25%) Mpanga market, 27(10%) Kitumba trading center, 14 (5%) Kachwamba trading center and 54% (20). Fort portal central business areas were purposively chosen for data collection. The proportionate distribution of respondents according to markets was according to the estimates giving in percentage by the chairperson of traders union in the municipality (Kabundaire market). The allocated estimate was accepted due to the lack of availability of data as the socio-demographic characteristic of the respondents under study seem homogenous. The first respondent in every

included market was sampled with a toss of a pen and every 3rd market woman was systematically included based on the assumption by Kabundaire market chairperson that the ratio of men to women doing business in the market is 1:3. If the selected 3<sup>rd</sup> woman did not meet the inclusion criteria, she was replaced by the next person.

A standardized interviewer-administered structured and semi-structured questionnaire was used to administer the original questions and the translated version into Rutooro for those who did not understand English. The questions were aimed at gathering information regarding respondent's knowledge of cervical carcinoma their attitudes, barriers towards screening for premalignant cervical lesions, and socio-cultural practices capable of increasing risk factors of cervical lesions and carcinoma.

The questionnaire was also designed to obtain relevant socio-demographic characteristics of the respondents. The team held two (2) group interviews (discussions, GD) sections using an open-ended interview guide, which covered only one thematic area of the survey. The thematic area was; Factors affecting screening behavior for cervical precancerous lesions (social, personal, and institutional barriers).

### Data processing

Data were processed by manual compilation of the information captured in the questionnaires. Epi-info database program was used for computation of Chi-square test to measure the strength of associations between variables, p-value used for statistical significance; Yates corrected figures were only considered due to its minimal error margin while Odds Ratios (OR) and Relative Risk (RR) was implored for the strength of likelihood for the causative association.

### Ethical consideration

The respondents were given a detailed explanation of the importance of the survey; they were then let to decide on whether to participate or not in the survey to ensure respondents' right to self-

determination and autonomy. The respondents who agreed to participate gave verbal consent.

The study was however not aimed at inflicting any physical or psychological harm to the respondents and therefore not exploited in any way. The respondents were treated with respect and their rights to privacy and confidentiality were observed. The ethical clearance was sought and obtained from appropriate authorities.

### Results

The mean age of 270 respondents that participated in the study is 30.2 (SD 14.7), modal age of 32 years. The married women are the majority of those who have been screened for cervical precancerous lesions, 23(74%) out of the 31 respondents that have been screened for precancerous lesions with an OR 3.61 significance at  $P=0.003$ . ( $p<0.05$ ) The least screened category are the widows, with only 1(3%) of the 31 screened respondents in this category.

The educational characteristics of women with the most screened respondents are those who have attended secondary school 21(70%) out the 31 that were screened with OR 4.08 significant at  $P=0.0008$  followed by those with a university degree with OR 3.00 significant at  $P=0.050$ . ( $p<0.05$ ) The Muyankole and Mukonjo respondents show a greater level of screening with both 7(23%) out of 31 screened respondents with Muyankole showing an OR 4.69 significant at  $P=0.003$  and Mukonjo showing OR 3.38, significant at  $P=0.22$  respectively. ( $p>0.05$ ).

About 83.9% (26 of 31) Christians were screened while 16.1% (5 of 31) Moslems were screened for the virus. There was no significant difference ( $p>0.05$ ) when acceptance of screening for HPV was compared to the religious inclination of participants. The trading or marketing capacity of respondents was access and those who own or do their trades in build-up or lock-up shops show a vast attitude towards screening with 26(79%) of 31 respondents screened, with an OR 23.87, significant at 0.000, while those with open stalls 7(21%) and make-shift vendors 0(0%) of all 31 screened respondents ( $p<0.05$ ).

The aggregate score on knowledge shows respondents with low knowledge about severity, symptoms, causes, mode of transmission, and prevention measures of cervical cancer with about 166(61%) able to give only 2-3 answers out of the 12 structured questions and only 1(0.37%) respondent was able to correctly give 9-10 answers.

In evaluating the level of knowledge of cervical cancer, only 19(7.29%) of the respondents had satisfactory and good knowledge about cervical cancer, and the majority, 250 (92.71%) of them had poor knowledge of the disease. The aggregate knowledge score for cervical precancerous lesion screening was relatively satisfactory with 107(39%) respondents answering 6-7 questions and 92(34%) respondents answering 4-5 questions out of 10 structured components. The components range from outlets for cervical precancerous lesion screening, which is susceptible to the disease, frequency of screening sessions, and in what part of the body is the screening conducted. In evaluating the level of knowledge of cervical precancerous lesion screening, more than half 155(57.4%) of the respondents had satisfactory knowledge about precancerous lesion screening, 28(10.37%) had good knowledge but 28(10.37%) of them had poor knowledge on screening places, procedure, and duration for screening follow-up.

The age at first sexual experience was examined as one of the risk factors of developing cervical cancer in later life, show that about 83(31%) of respondents had their debut before the age of 15 years and showing low screening characteristics while those with debut after 15 years were 187(69%) showing better screening index with OR 4.65 significant with P-value 0.000 ( $p < 0.05$ ) and  $X^2 = 10.93$ . Only 31% had their first sex before age 16, and 18% had 2-3 children while 14% had many sexual partners. About 74% had uncircumcised partners Examining the parity of respondents, those with 2-3 children, 49(18%) exhibit higher screening characteristics with OR 7.85 and  $P = 0.000$  with  $X^2 = 24.91$  this association means that they are less exposed to the disease

compared to 74(28%) respondents with high parity of six (6) and above with less screening characteristics with  $P = 0.02$  and  $X^2 = 9.19$ .

The number of sexual partners among the women were assessed for the past 2 years in comparison with screening for cervical precancerous lesion, those with 1-2 partners 39(14%) show a higher screening index with OR 5.92 significant at  $P = 0.000$  and  $X^2 = 18.98$  than those with 3-5 partners 167(62%), OR 0.62 significant at  $P = 0.29$  and  $X^2 = 1.10$  and those with 6 partners and above in the past 2 years, 64(24%) have the least screening index with OR 0.20 and  $X^2 = 4.74$ . The circumcision status of male partners reduces the risk of transmission of the human papillomavirus (HPV). The majority of the respondents 201(74%) had not all their partner(s) circumcised with a low screening index of OR 0.05, significant at  $P = 0.000$  and  $X^2 = 52.64$  while those with all partner(s) circumcised 69(26%) exhibited a very high screening index with OR 18.47 significant at  $P = 0.000$  and  $X^2 = 52.64$ . The screening index concerning frequent use of condoms was examined and it was generally poor with only 39(15%) of respondent said that they frequently use condoms and attitudes towards cigarette smoking was generally good with only 2(1%) with history of cigarette smoking in prime ages but 28(10%) with history of exposure to passive smoking. Those who had no history of both passive and active smoking had a very good screening index with OR 4.14 and  $X^2 = 1.40$

The likelihood for acceptance of “Omusajja ntayangwa” as a socio-cultural practice relative to screening for cervical was examined. Those who accept it as a culture were 30(11%) with  $X^2 = 1.40$ . The second cohort which is the majority said it can be considered selectively, were 131(49%) and those who disagree were 109(40%) with screening characteristics of OR 1.94 and  $X^2 = 2.40$ .

Poor awareness and knowledge on the subject matter. Some participants expressed fear of how safe the screening method is and on consequences of not having the screening and not knowing one's HPV status. The most discouraging factor outlined by members of the focus group was the cost of the

clinical services as being cost-prohibitive or very expensive in addition to the long waiting time which was mentioned to be longer than necessary in which the time to get services may take up to 8 hours. Social barriers and poor publicity were mentioned as setback factors for acceptance when participants complained that they find it difficult to open their genitalia to other people for the experiment when they are not sick.

They noted that screening is different from sickness and that privacy should be violated only when one is sick and that prevention of sickness is not enough to go naked in the presence of the

opposite sex. It was opined that the situation would have been different if female doctors attend to female participants while male doctors examine male participants. The fatal misconception was noted to play a part in the acceptance rate because participants who objected to the screening said it is the screening for HPV that causes cancer and sterility in females and therefore decided to abstain from it to avoid cancer and sterility. Participants came to the screening with the wrong notion that the use of Condon causes cancer.

Table 1. Knowledge of cervical cancer and pre-cancerous screening among the studied population

Distribution	CC n=270	PCS n=270	CC = 270	PCS n=270	Tot al (%)
0-1	14	4	5.18	1.48	5.18
2-3	166	39	61.48	14.45	66.66
3-4	57	92	21.11	34.07	87.77
5-6	23	107	8.53	39.63	96.3
7-8	9	28	3.33	10.37	99.63
9-10	1	0	0.37	0.0	100
Total	270	270	100	270	100

CC=cervical cancer PCS = pre-cancerous screening

Table 2

Correlates	Screened n=31 (%)	Not screened n=239 (%)	Total n=270 (%)	OR; RR at 95% CI	P value; $\chi^2$ at 95% CI
<b>A:</b> 10-11	2 (7)	26 (11)	28 (10)	0.56; 0.60	0.65; 0.20
12-13	28 (90)	209 (87)	237 (88)	1.34; 1.30	0.86; 0.03
14>	1 (3)	4 (2)	5 (2)	1.96; 1.77	0.91; 0.01
<b>B:</b> 10-12	0 (0)	11(5)	11(4)	0.00; ----	0.40; 1.49
13-15	3 (10)	69 (29)	72 (27)	0.26; 0.29	0,039; 4.23
16-18	25 (80)	113 (47)	138 (51)	4.65; 3.99	0.000; 10.93
19>	3 (10)	46 (19)	49 (18)	0.45; 0.48	0.29; 1.11
<b>C:</b> 0-1	8 (26)	31(13)	39 (14)	2.33; 2.06	0.10; 2.69
2-3	17 (55)	32 (13)	49 (18)	7.85; 5.48	0.000; 24.91
4-5	5 (16)	102 (43)	107 (40)	0.26; 0.29	0.008; 7.01
6>	1 (3)	74 (31)	75 (28)	0.07; 0.09	0.002; 9.19

<b>D:</b>	1-2	13 (42)	26 (11)	39 (14)	5.92; 4.28	0.000; 18.98
	3-5	16 (52)	151 (63)	167 (62)	0.62; 0.66	0.29; 1.10
	6>	2 (6)	62 (26)	64 (24)	0.20; 0.22	0.29; 4.74
<b>E:</b>	circumcised	25 (81)	44 (18)	69 (26)	18.47; 12.14	0.000; 52.64
	not circumcised	6 (19)	195 (82)	201 (74)	0.05; 0.08	0.000; 52.64
<b>F:</b>	Always	3 (10)	36 (15)	39 (15)	0.60; 0.63	0.59; 0.28
	Not always	20 (64)	96 (41)	116 (43)	2.71; 2.41	0.01; 5.68
	Never	8 (26)	104 (44)	112 (42)	0.45; 0.49	0.091; 2.85
<b>G:</b>	Yes	0 (0)	2 (1)	2 (1)	0.00;----	0.54; 0.36
	Passive	1 (3)	27 (11)	28 (10)	0.26; 0.29	0.28; 1.15
	Never	30 (97)	210 (89)	240 (89)	4.14; 3.75	0.23; 1.40
<b>H:</b>	Yes	1(3)	29 (12)	30 (11)	0.24; 0.27	0.23; 1.40
	Selective	13 (42)	118 (49)	131 (49)	0.74; 0.77	0.55; 0.35
	Never	17 (55)	92 (39)	109 (40)	1.94; 1.79	0.02; 2.40

OR: Odds Ratio; RR: Relative Risk; X<sup>2</sup>: Chi-square. a= Age at first menstruation, b= Age at first sexual experience, c= Parity, d= Number of sexual partners in the past 2 years, e= Circumcision status, f= Frequent use of condoms, g= History of smoking, h= Acceptance of "Omusajja ntayangwa.

## Discussion

The major findings in this study were that 89% of the participants had never been screened for cervical cancer before the study and 92.7% of the targeted respondents had poor knowledge of cervical cancer and 32.32% had poor knowledge of screening procedure, probably underscoring the reason such a high proportion of people who were never screened for the virus. These findings are similar to those of other researchers in sub-Saharan countries (2, 3, 9, 25-27, and 10). In developing countries, where screening services are sporadic because of unpredictable funding and poor infrastructure, HPV screening for the cervical precancerous lesion is a promising activity in the fight against cervical cancer. In this study the age of participants significantly ( $p < 0.05$ ) influenced the acceptance rate of the screening procedure with the mean age of 270 respondents being 30.2 (SD 14.7) and modal age of 32 years. Women more than 45 years were less likely to seek screening compared with women who are within the sexually active child-bearing age bracket of 25-35 years. The married women made the majority 74% (23/31) of those who received the HPV screened for cervical precancerous lesions ( $p < 0.05$ ). Married market women were

more likely to accept screening for HPV than their unmarried colleagues. The main issue here is pleasing the sexual partner and pleasing the society as well. Thus it is very clear that culture and traditions demand that women should allow their male partners to be in charge. Partners may be sex-mate next door with no relationship, sex-mate cohabiting in the same room with the hope of formalizing the marriage relationship and it may also be a married couple. Socio-cultural dynamics of disease transmission in southwestern Uganda (28) relatively support high sexual activities among married women aged 15-49 years old. Factors underlying the different sexual behavior of

different age groups may include social, economic, demographic, geographic, cultural, or even religious (28-29).

Higher educational attainment was a significant ( $p < 0.05$ ) factor for health-seeking behavior among the studied population. The educational characteristics of women with the most screened respondents are those who have attended secondary school 21(70%) with OR of 4.08 significant at  $P = 0.0008$  followed by those with a university degree with OR 3.00 significant at

$P=0.050$ . This implies that financial independence is a factor capable of increasing health-seeking behavior among the market in Fort portal municipality. This observation is important and promising in the education of the public on the need to accept and be screened for HPV as an indicator of precancerous lesions among women studied. This is different from previous reports where education was not significant ( $p>0.05$ ) factors that determined disease distribution (28). There is, therefore, a need to clarify that while health-seeking behavior is promoted by education ( $p<0.05$ ), social habit leading to indulgence in risky behaviors for disease transmission may not ( $p>0.05$ ) be influenced by educational attainment.

In developed countries people seem to be aware of cancer and screening services are widely available and utilized compared to Low and Middle-Income countries with a wide margin. In a study in two (2) hospitals in London, the acceptance of screening was found to be 76.2% by Yu and Rymer (230). This study was set to establish the acceptance of screening for Hepatitis B and C by market women in Fort portal municipality, and very few respondents 31(11%) accepted to have been screened for cervical precancerous lesions while 239(89%) had never been screened for the disease. Comparing this study to the study by Sa'ad et al in Zaria (31), Nigeria, among market women, the acceptance of screening of about 19.6%. The low trend of acceptance was recorded in a Cameroun study at Maroua, Northern Cameroun (32), which had a proportion of 28%. Both the Nigeria and Cameroun study were in similar urban towns comparable to Fort portal but the proportion among targeted populations was far lower at 11%.

In this study, the aggregate score on knowledge of cervical shows respondents with low knowledge about severity, symptoms, causes, mode of transmission, and prevention measures of cervical cancer with about 166(61%) able to give only 2-3 answers, 80(29.63%) gave 4-6 answers correctly out of the 12 structured questions and only 1(0.37%) respondent was able to correctly give 9-

10 answers. In evaluating the level of knowledge of cervical cancer, only 19(7.29%) of the respondents had satisfactory and good knowledge about cervical cancer, and the majority, 250 (92.71%) of them had poor knowledge of the disease.

In evaluating also the level of knowledge of cervical precancerous lesion screening, more than half 155(57.4%) of the respondents had satisfactory knowledge about precancerous lesion screening, 28(10.37%) had good knowledge but 28(10.37%) of them had poor knowledge on screening places, procedure, and duration for screening follow-up. In regards to knowledge of women towards cervical cancer and screening, it was analyzed that there is a statistically significant relationship between their perceived susceptibility and risk of developing cervical cancer. Those who perceive that they could have pre-cancer lesions also perceive that they could have some degree of risk, either a big risk or a small risk. Those who don't believe that they have pre-cancer lesions also perceived that their risk is either low or they don't know and the same picture is seen for those who don't know about their susceptibility and risks. The problem could be with those who don't know their susceptibility and their risks since these women are unaware of why cervical cancer screening is important.

There are some important socio-cultural factors widespread in Africa and are also related to HPV transmission. Some of them are high parity and early age of marriage and thus early first sexual contact. Similarly, high parity is common among various cultures in especially in Uganda with high fertility of 6.3 and increases the risk of cervical cancer for women. In some cultures, the girls are married too early to old men and are exposed to HPV infection. This also increases the reproductive period and number of pregnancies and thus increases the risk of cervical cancer. The history of the presence of sexually transmitted diseases (STDs) is a risk factor for cervical cancer. Multiple STDs are cofactors for cervical cancer. The human immunodeficiency virus (HIV) which is responsible for immune suppression



significantly increases the risk of cervical cancer in comparison to the women who are not infected with HIV.

The age at first sexual experience was examined as one of the risk factors of developing cervical cancer in later life, show that about 83(31%) of respondents had their debut before the age of 15 years and showing low screening characteristics while those with debut after 15 years were 187(69%) showing better screening index with OR 4.65 significant with  $p=0.000$  and  $X^2=10.93$ . The screening characteristic in those who had sexual debut when above 15 years must be due to educational training as when girls are in schools their sexual activities is delayed which is protective in terms of increase in knowledge and delayed exposure to the risk of acquiring cervical cancer.

Examining the parity of respondents in this study, those with 2-3 children, 49(18%) exhibit higher screening characteristics with OR 7.85 and  $p=0.000$  with  $X^2=24.91$  this association means that they are less exposed to the disease compared to 74(28%) respondents with high parity of six (6) and above with less screening characteristics with  $P=0.02$  and  $X^2=9.19$ , are more exposed to developing cervical and again, they have a poor screening attitude, increasing their susceptibility.

The number of sexual partners among the women assessed for the past 2 years in comparison with screening for cervical precancerous lesion, those with 1-2 partners 39(14%) show a higher screening index with OR 5.92 significant at  $P=0.000$  and  $X^2=18.98$  than those with 3-5 partners 167(62%), OR 0.62 significant at  $P=0.29$  and  $X^2=1.10$  and those with 6 partners and above in the past 2 years, 64(24%) have the least screening index with OR 0.20 and  $X^2=4.74$ . A higher number of sexual partners is a risk factor increasing one's chances of developing the disease. The circumcision status of male partners reduces the risk of transmission of the human papillomavirus (HPV). The majority of the respondents 201(74%) did not have all their partner(s) circumcised and this showed a low screening index of OR 0.05, significant at  $P=0.000$  and  $X^2=52.64$  while those with all

partner(s) circumcised 69(26%) exhibited a very high screening index with OR 18.47 significant at  $P=0.000$  and  $X^2=52.64$ . The high odds ratio of screening among women with past and present partners all circumcised have a high impact on them not harboring the virus as well as not developing cervical cancer as both variables are protective. The majority of 201(74%) who said not all their partners were circumcised is 18.47 times likely to develop cervical cancer in the future. This is statistically significant by  $X^2=52.64$  and  $P=0.000$ .

The screening index concerning frequent use of condoms was examined and it was generally poor with only 39(15%) of respondents said that they frequently use condoms and attitudes towards cigarette smoking was generally good with only 2(1%) with a history of cigarette smoking in prime ages but 28(10%) with history of exposure to passive smoking. Those who had no history of both passive and active smoking had a very good screening index with OR 4.14 and  $X^2=1.40$ . The frequent use of condoms is highly protective against both unwanted pregnancy and STI's

Omusaija ntayangwa is a colloquial name used to indicate the readiness of a woman to accept a man for a sexual relationship. Acceptance of "Omusaija ntayangwa" as a socio-cultural practice relative to screening for cervical carcinoma was examined for those who accept it as a culture and we found that the likelihood of its acceptance was 30(11%) with  $X^2=1.40$ . The second cohort which is the majority who said it can be considered selectively were 131(49%) and those who disagreed with the practice were 109(40%). This culture of readiness to accept a man for sexual relationship due to culture and not love has been debated in several dimensions vis-à-vis its effects on the dignity of Tooro women. The older women 30 years above seem to object to the idea but the younger ones tend to agree but based on the fact that the man has something to offer in return. The implication of this is that the women can offer themselves in exchange for a reward which could be money.

Lack of awareness on the safety of cervical precancerous screening procedure and where to

access the service if/when it is available, was a very conspicuous hindrance for acceptance as evidenced by the following comments by one of the key stakeholders *“I heard that they insert chemicals in the vagina; how are we sure that the chemical is safe? Because my friend said that she started having vaginal discharges after the screening”* and it is possible this screening can make someone sterile preventing one from giving birth in the future. If this statement represents the minds of the women in the fort-portal, then there is a need for an increased awareness campaign to educate the women on the disease and debunk the erroneous impression regard to dangers of screened methods currently opined as a predisposing factor for cervical carcinoma.

Again lack of adequate knowledge about the disease, its risk factors, and susceptibility was also noted by women as being the reason why they were in a haste to accept the screening for it as indicated by the following statement *“we don't know so much about the disease; why will I test for something you do not know?”* Women should therefore be informed that the Ministry of Health and its outlet's health services are solely responsible for service provision. Service provision should be offered by different levels specified below. Village health teams, community-based organizations, and community leaders: Community mobilization and sensitization. Health center II: Health education, HPV vaccination of target groups, Referrals for screening and treatment. Health center III: Health education and counseling, HPV vaccination of target groups, Cervical screening, Referral for cryotherapy, Basic palliative care, Referrals for cervical cancer diagnostic tests, surgery, and radiotherapy. It is now up to the government and relevant non-governmental organizations to support studies and interventions that will close the knowledge gap among the most vulnerable women population in the study region. High costs of clinical services, unacceptable long waiting time for healthcare, social barriers, and Negative misconceptions about the screening and associated disease were also pointed out as factors against accepting the screening methods together

with its associated disease in the study area as evidenced by the following comments *“when one goes to the hospital, you will spend all your money, spend the whole day thereby making losses especially us that depends on our daily sales for family upkeep”* Others asked *“is there no other alternative method for screening? And are there no female doctors or nurses carrying out the screening? I cannot go naked before a man who not my husband or boyfriend because men can hardly be trusted with naked women's bodies when not sick.”*

In sub-Saharan Africa, sometimes even if medical and health services are provided free of charge they are not assessed due to long distances. The cost of clinical services has been a challenge to the women at market locations in Fort portal as they said if these services are not offered freely they cannot afford the cost of screening. Again, most of the market women spend their daytime hours trading their products defying the harsh weather but do have a notion that an hour spent in the hospital is long and unnecessary. The market women were not conformable exposing their genitalia to medical or health workers of the opposite sex for fear of sexual intimidation. The awareness campaign should therefore educate women about the screening methods underscoring the role of ethics in securing the integrity of medical practice. Effective intervention may also include multi-sectoral efforts to support the services.

## Conclusion

This study has shown that the acceptance and subsequent screening of cervical precancerous were very low among market women in Fort portal municipality. And utilization of screening services in both government and NGO's health facilities was also very low. The participants were eager to know more about cervical cancer and screening methods. The major barriers to the majority of the respondents are the lack of knowledge on the disease and its etiology, the unawareness of their susceptibility, and the institutional barriers of cost of services and long waiting times. Thus there is an urgent need to improve awareness as well as provide affordable

cervical cancer screening services. Public health workers need to include cervical cancer as one of the topics to be discussed in the clinics as it is a very important reproductive health issue because if the life of a woman is safe, a generation is perfectly conserved.

### Recommendations

More awareness and education programs need to be implemented to target market places and women about cervical cancer and precancerous lesion screening because most existing awareness programs are conducted on the radio within the daytime when most of the women are out for their businesses. The District Health Office can work in partnership with market unions and NGOs to motivate women socially, mentally, and physically to alleviate any fears regarding medical procedures for screening and treatment if found to be positive. There is a need to provide more competent female health providers to conduct Visual Inspection with Acetic acid to detect developing lesions. The District Health Office and Municipality Health Office should as a matter of urgency implement the Ministry of Health/PATH guidelines for the prevention of cervical cancer and train its health workforce on various tasks such as counseling, educating, and conducting the screening. The healthcare providers should ensure that the women receive their results face to face so their results could be discussed thoroughly with them and encourage them for further follow-up clinics. Possibility of the provision of a mobile caravan to accommodate outreach clinics in the markets and trading centers will be highly effective, thus increasing the proportion of screening in the municipality.

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