

# Uptake of Cervical Cancer Screening Among Women Aged 21-65 Years Seeking Health Services in Uasin-Gishu District Hospital

Thomas Bor<sup>1</sup> John Kwalimwa<sup>1\*</sup> James Mwaura<sup>2</sup> Margaret Muiva<sup>2</sup> Alex Chebor<sup>1</sup> David Kaniaru<sup>3</sup>

<sup>1</sup> School of Nursing and Midwifery, Masinde Muliro University of Science and Technology, Kenya

<sup>2</sup> School of Nursing Sciences, University of Nairobi, Kenya

<sup>3</sup> School of Public Health, Masinde Muliro University of Science and Technology, Kenya

## Abstract

Cervical cancer poses a great challenge in the world and especially in developing countries. Global cancer statistics ranked the disease seventh of all the cancers. It is the leading cause of death from cancer among women in the developing countries where 90% of the cases are reported. Cervical cancer is a preventable disease, and if high uptake of screening is achieved, a great reduction in the incidence and the disease burden can be realized. The main objective of this study was to determine the uptake of cervical cancer screening among women of ages 21-65 years seeking health services in Uasin-Gishu district hospital. A quantitative and qualitative descriptive cross-sectional hospital based study was conducted on women aged 21-65 years seeking health services in Uasin-Gishu district Hospital. There was a very low uptake of cervical cancer screening at the facility. The respondents reported to have screened for cervical cancer were 8.8% and 91% not screened. There was an association between knowledge of cervical cancer symptoms and age [25-29 (p=0.03)] [30-34(p=0.001)], tertiary education (p=0.002) and marital status (p=0.04). There was an association between knowledge of risk factors and tertiary education (p=<0.001), salaried employment (p=0.03), and those respondents who had 1-4 children (p=0.01). There was an association between knowledge of prevention strategies of cervical cancer and secondary education (p=0.03), tertiary education (p=<0.001), and salaried employment (p=0.001).

**Keywords:** Uptake, cervical cancer, cervical cancer screening.

## 1. Introduction

### 1.1 Background

Cervical cancer is the second most common form of cancer in women worldwide, and currently affecting over one million women (WHO, 2009). It is the leading cause of death from cancer among women in developing countries, where over 90% of the cases is reported (WHO, 2009). In 2002, there were almost 500,000 cases (80% occurred in developing countries), and 274,000 women died of the disease (WHO, 2007). In 2008, Global cancer statistics ranked the disease seventh of all the cancers and estimated that 530 000 new cases were diagnosed; over 85% of the global burden occurs in developing countries where it accounts for 13% of all female cancers (Globocan, 2008). High risk regions for cancer incidence are eastern and western Africa where Age Standardized Ratio (ASR) is greater than 30 per 100, 000 (Globocan, 2008). The disease was responsible for 275 000 deaths in 2008, about 88% of which occurred in developing countries: 53 000 in Africa, 31 700 in Latin America and the Caribbean, and 159 800 in Asia (Globocan, 2008). Current estimates in Kenya indicate that every year 2,454 women are diagnosed with cervical cancer and 1676 die from the disease (WHO, 2010).

The main objective for this study was to determine the uptake of cervical cancer screening among women of ages 21-65 years seeking health services in Uasin-Gishu district hospital.

### 1.2 Research Problem

The incidence of cervical cancer reported amongst women in Kenya is very high with a crude incidence rate of 23.4 per 100,000 women (Globocan, 2008). This can be attributed mainly to low participation of the target group in effective prevention and screening programs. To address this problem, the Ministry of Public Health and Sanitation and Ministry of Medical Services in 2010 came up with a National cancer control strategy program whose aim was to build strong cancer prevention and control capacity, both in public and private sector through awareness, human resource, equipment, surveillance and research (Kenya Ministry of Public Health and Sanitation and Ministry of Medical Services, 2009). Despite this step by the government, the number of women in the country that have cervical cancer screening is still very low. Cervical cancer screening for all women 18-69 years stood at 3.2% (Ministry of Health, 2012).

## 2.0 Literature review

Cervical Cancer is a disease in which the normal mechanisms of cellular control of growth and proliferation have been altered; it is invasive spreading directly to surrounding tissues as well as new sites in the body. Cancerous cells differ from normal cells in appearance, growth and function, the cells are altered or transformed but multiply, grow and spread very rapidly. (Loise, 2002)

A study conducted in Los Angeles established that women of lower social class are more likely to be

affected with squamous cell carcinoma than those of higher social class. Incidence in the United States of America (USA) as a whole has gradually dropped over time, although that is less true among the residents of high-risk census tracts (Mack, 2006). The decrease in frequency of cervix carcinoma probably reflects a combination of increasingly accessible screening and a decrease in the frequency of unprotected sexual activity. The geographical distribution of high-risk census tracts reflects the poverty and poor education that promote unprotected sexual activity and less access to screening (Mack, 2006).

In a study carried out among African Americans and Hispanics, it was shown that cervical cancer is a health issue that is preventable through regular screening at the recommended levels. Unfortunately, African American and Hispanic women of low socioeconomic status, low educational attainment, and those lacking healthcare coverage obtain Pap smear testing infrequently and continue to suffer greater incidence and mortality from cervical cancer (Kelly et. al., 2007).

### **3.0 Research methodology**

#### **3.1 Design and Method**

A descriptive cross sectional design was used in this study. A questionnaire was administered and focused group discussions were conducted to women aged 21-65 years seeking health services in Uasin-Gishu district hospital. Key informant interview with the Medical officer of Health was contacted to elicit information on the capacity of Uasin-Gishu hospital to offer cervical cancer screening.

#### **3.2 Sampling method**

Uasin-Gishu district hospital was purposively selected. Service delivery points, maternal child health clinics and outpatient clinics were purposively selected because these are the points where women seek health services. Systematic random sampling method was used to select 168 respondents for filling in the questionnaire. The sampling interval was determined by dividing the target population by the sample size 300/168 which is approximately 2, therefore sampling interval was 2. The 2<sup>nd</sup> value i.e. every second client reporting to the facility was determined randomly from the sampling interval by writing papers and picking one paper at random to be the starting point, every 2<sup>nd</sup> client from the starting point was included in the study. Two focused group discussions were conducted to elicit qualitative data. Women who participated in FGD were randomly selected from all the women seeking health services in MCH and outpatient.

#### **3.3 Research Instrument**

A questionnaire was developed for the study and was designed to collect quantitative data in the study. A focused group discussion guide was also developed to collect qualitative data in the study. A key informant interview tool was designed to collect data on the capacity of the hospital in offering the cervical cancer screening services. The questionnaire items were derived from literature and guided by the research objectives. A pilot test was done to ensure reliability of the instrument at Kapsabet district hospital, which is a similar level facility in the neighbouring district. The data from the study was analyzed using statistical data analysis (Stata) version 20.0 software.

#### **3.4 Ethical consideration**

Approval to conduct the study was obtained from Kenyatta National Hospital' Ethics and research committee (KNH-ERC). The permission to access Uasin-Gishu district hospital was sought through the Medical officer of health Eldoret East district and the Medical Officer in charge of the facility. Participants voluntarily accepted to participate and would withdraw from the study at any time they wish to do so. Participants were not coerced to participate in the study and all the information were treated with confidentiality.

### **4.0 Results**

#### **4.1 Socio-Demographic Characteristics**

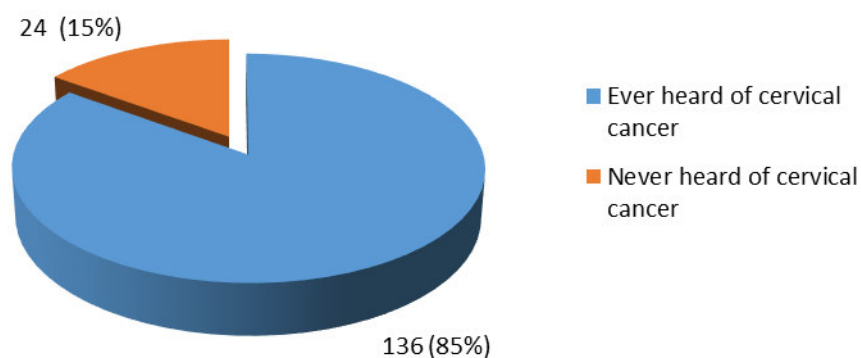
A total number of 160 questionnaires were analyzed. The mean age of the respondents was 29 years (SD 4.9, and the range was 20-49 years). Majority of the respondents (44.4 %, n=71) were between the age of 20-24, (78.1% n=125) were married, (41.3% n=66) had tertiary level education, (54.2% n=78) were unemployed house wives, (71.3% n=114) were protestants and (78.6% n=125) had between one to four children.

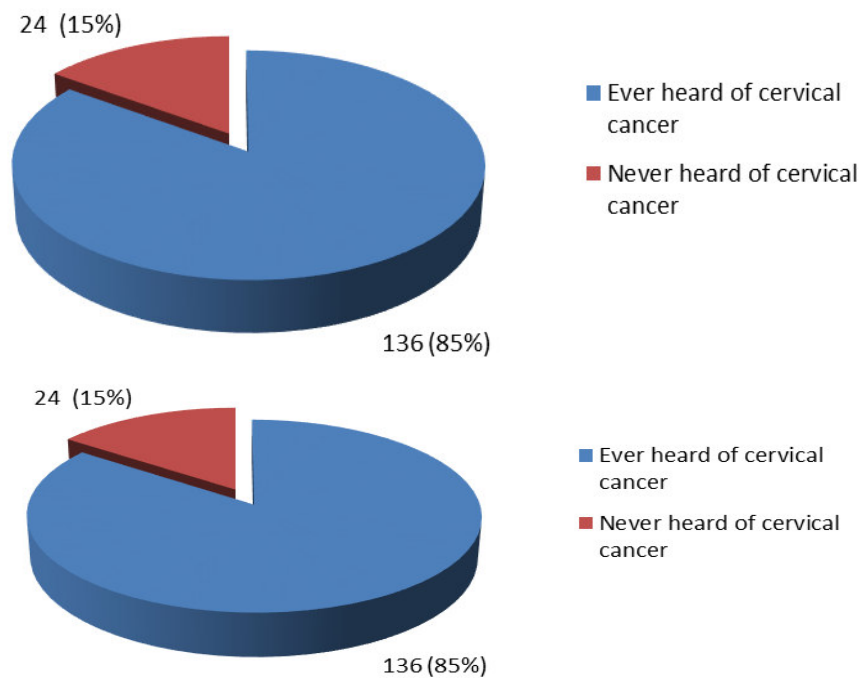
**Table 1: Socio-demographic characteristics of female clients seeking health services at Uasin-Gishu District Hospital**

	Frequency (n)	Percent (%)
<i>Age group (n = 160)</i>		
20-24 years	71	44.4
25-29 years	52	32.5
30-34 years	29	18.1
35 years and above	8	5.0
<i>Marital status (n = 160)</i>		
Single	21	13.1
Married	125	78.1
Cohabiting	10	6.3
Separated	4	2.5
<i>Education level (n = 160)</i>		
None	2	1.3
Primary	42	26.3
Secondary	50	31.3
Tertiary	66	41.3
<i>Occupation (n = 144)</i>		
Unemployed housewife	78	54.2
Self employed	37	25.7
Salaried Employment	29	20.1
<i>Religion (n = 160)</i>		
Protestant	114	71.3
Islam	2	1.3
Catholic	44	27.5
<i>Parity (n = 159)</i>		
Nullipara	28	17.6
1 – 4 children	125	78.6
≥ 5 children	6	3.8

#### 4.2 Respondents' knowledge on cancer of cervix

Respondents were asked if they have ever heard about cervical cancer. Majority of the respondents (85%, n=136), had ever heard of cervical cancer while (15%, n=24) had never heard of cervical cancer. (Figure 1).

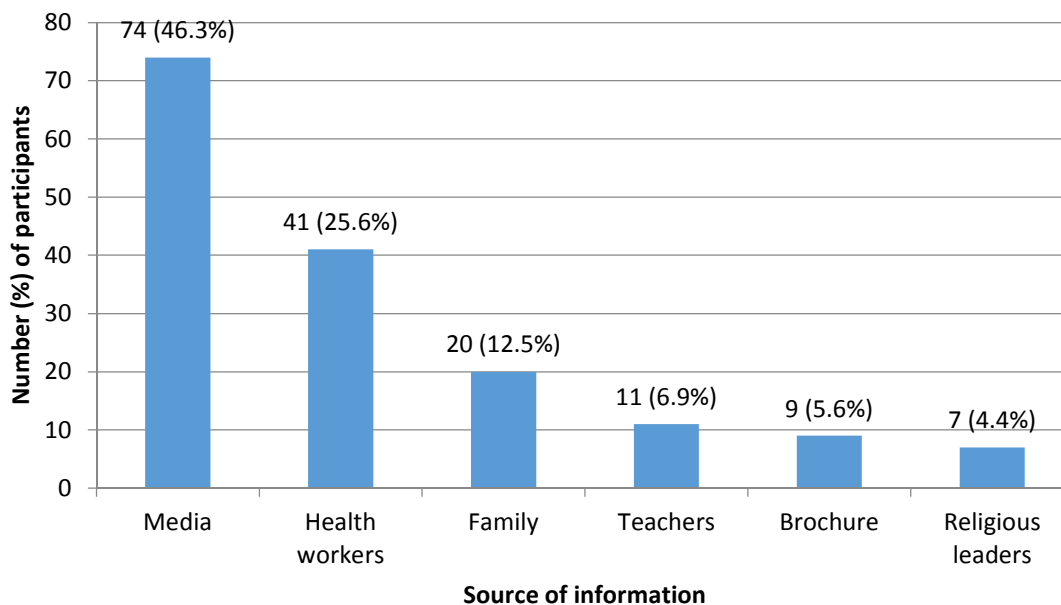




**Figure 1: Knowledge of cancer of cervix among females at Uasin-Gishu District Hospital**

#### 4.3 Sources of information on cancer of cervix

Majority (46.3%, n=74), got the information through media, (25.6%, n=41) heard it from health workers (12.5%, n=20) from the family, (6.9%, n=11) heard it from the teachers, (5.6%, n=11) from brochures and (4.4%, n=7) heard it from religious leaders. (Figure 2).



**Figure 2: Reported source of information for cancer of the cervix among females at Uasin-Gishu District hospital**

#### *Knowledge of symptoms of cervical cancer*

Respondents were asked to mention the symptoms of cervical cancer. Majority (69.4%, n=111), of the respondents did not know the symptoms (Table 2).

**Table 2: Respondents knowledge of symptoms of cancer of cervix**

	Frequency (n)	Percent (%)
Vaginal bleeding and smelling discharge	12	7.5
Vaginal bleeding	23	14.4
Smelling discharge	10	6.3
Did not know any sign	111	69.4
Other signs	4	2.5
	160	100.0

#### 4.4 Knowledge of risk factors and prevention of cancer of the cervix

Respondents were asked to mention the risk factors and prevention of cervical cancer. Majority of the respondents did not know the risk factors (60.6%, n=97). (Table 4)

**Table 3: Respondents knowledge of risk factors and prevention strategies of cancer of the cervix**

	Frequency (n)	Percent (%)
<i>Known risk factor for cervical cancer (n = 160)</i>		
Multiple sexual partners	34	21.3
Early sex	14	8.8
HPV	8	5.0
Smoking	7	4.4
Do not know	97	60.6
Other risk factors	3	1.9
<i>Known prevention for cervical cancer (n = 160)</i>		
Avoid multiple sexual partners	35	21.9
Avoid early sexual intercourse	14	8.75
Quit smoking	6	3.75
through vaccination of HPV vaccine	16	10
Do not know	100	62.5
Other preventive strategies	2	1.3

#### 4.5 Correlations between socio-demographic characteristics and symptoms of cervical cancer

There was an association between age of respondents of 20-24 years (p=0.03), 30-34 years (p=0.001), respondents who were married (p=0.004), respondents with tertiary education (p=0.002) and symptoms of cervical cancer.

**Table 4: Socio-demographic factors associated with knowledge of symptoms of cervical cancer**

	Knowledge of clinical signs		OR (95% CI)	P value
	Yes	No		
<i>Age group (n = 160)</i>				
20-24 years	13	58	1.0	
25-29 years	19	33	2.6(1.1-5.9)	0.03
30-34 years	15	14	4.8(1.9-12.3)	0.001
35 years and above	2	6	1.5(0.3-8.2)	0.649
<i>Marital status (n = 160)</i>				
Married	2	19	0.2(0.05-0.9)	0.04
Single	42	83	1.0	-
Cohabiting	5	5	2.0(0.5-7.2)	0.30
Separated	0	4	NA	NA
<i>Education level (n = 160)</i>				
None	0	2	NA	NA
Primary	7	35	1.0	-
Secondary	11	39	1.4(0.5-4.0)	0.52
Tertiary	31	35	4.4(1.7-11.4)	0.002
<i>Occupation (n = 144)</i>				
Unemployed housewife	20	58	1.0	-
Self employed	11	26	1.2(0.5-2.9)	0.65
Salaried Employment	12	12	2.0(0.8-5.0)	0.12
<i>Parity (n = 159)</i>				
Nullipara	8	20	1.0	-
1-4 children	38	87	1.1(0.4-2.7)	0.85
5 or more children	3	3	2.5(0.4-15.1)	0.32

#### 4.6 Correlation between socio-demographic characteristics and cervical cancer risk factors

There was an association between those respondents who had received tertiary education ( $p < 0.001$ ), salaried employment ( $p = 0.03$ ), those respondents who had 1-4 children ( $p = 0.01$ ) and knowledge of risk factors.

**Table 5: Socio-demographic factors associated with knowledge of cervical cancer risk factors**

	Knowledge of risk factors		OR (95% CI)	P value
	Yes	No		
<i>Age group (n = 160)</i>				
20-24 years	21	50	1.0	-
25-29 years	22	30	1.7(0.8-3.7)	0.15
30-34 years	8	21	0.9(0.3-2.4)	0.84
35 years and above	1	7	0.3(0.04-2.9)	0.33
<i>Marital status (n = 160)</i>				
Married	7	14	1.0	-
Single	39	86	0.9(0.3-2.4)	0.85
Cohabiting	4	6	1.3(0.3-6.3)	0.72
Separated	2	2	2(0.2-17.3)	0.53
<i>Education level (n = 160)</i>				
None	0	2	NA	NA
Primary	6	36	1.0	-
Secondary	13	37	2.1(0.7-6.1)	0.17
Tertiary	33	33	6.0(2.2-16.1)	<0.001
<i>Occupation (n = 144)</i>				
Unemployed housewife	18	60	1.0	-
Self employed	11	26	1.4(0.6-3.4)	0.44
Salaried Employment	13	16	2.7(1.1-6.7)	0.03
<i>Parity (n = 159)</i>				
Nullipara	15	13	1.0	-
1-4 children	36	89	0.4(0.2-0.8)	0.01
5 or more children	1	5	0.2(0.02-1.7)	0.13

#### 4.7 Correlation between socio-demographic factors and prevention

There was an association between having secondary education ( $p = 0.03$ ), having tertiary education ( $p < 0.001$ ), salaried employment ( $p = 0.001$ ) and knowledge of prevention strategies of cervical cancer.

**Table 6: Socio-demographic factors associated with knowledge of prevention strategies**

	Knowledge of prevention strategies		OR (95% CI)	P value
	Yes	No		
<i>Age group (n = 160)</i>				
20-24 years	18	53	1.0	-
25-29 years	24	28	2.5(1.2-5.4)	0.02
30-34 years	9	20	1.3(0.5-3.4)	0.56
35 years and above	2	6	1.0(0.2-5.3)	0.98
<i>Marital status (n = 160)</i>				
Married	8	13	1.0	-
Single	39	86	0.7(0.3-9.2)	0.52
Cohabiting	4	6	1.1(0.2-5.1)	0.92
Separated	2	2	1.6(0.2-13.9)	0.66
<i>Education level (n = 160)</i>				
None	0	2	NA	NA
Primary	4	38	1.0	-
Secondary	14	36	3.7(1.1-12.3)	0.03
Tertiary	35	31	10.7(3.4-33.5)	<0.001
<i>Occupation (n = 144)</i>				
Unemployed housewife	18	60	1.0	-
Self employed	11	26	1.4(0.6-3.4)	0.44
Salaried Employment	15	14	3.6(1.5-8.8)	0.01
<i>Parity (n = 159)</i>				
Nullipara	14	14	1.0	-
1-4 children	38	87	0.4(0.2-1.0)	0.05
5 or more children	1	5	0.2(0.02-1.9)	0.17

#### 4.8 Knowledge of cervical cancer treatment

Respondents were asked on the knowledge of treatment of cancer of the cervix. Majority, (79.4%, n=127) said

cancer of the cervix can be treated if detected at an early stage, (2.5%, n=4) said it cannot be treated if detected at an early stage and (18.1%, n=29) do not know if it can be treated if detected at an early stage. (Table 7)

**Table 7: Knowledge on treatment of cancer of cervix**

	Frequency (n)	Percent (%)
<i>Cancer of cervix is treatable at early stages (n = 160)</i>		
Yes	127	79.4
No	4	2.5
Do not know	29	18.1
<i>Treatment modalities (n = 160)</i>		
Herbal remedies	16	10.0
Surgery	19	11.9
Specific drugs given by hospital	72	45.0
Radiotherapy	18	11.3
Do not know	48	30.0
<i>Costs of cancer treatment (n = 160)</i>		
free of charge	13	8.1
reasonably priced	15	9.4
somewhat/moderately expensive	15	9.4
very expensive	86	53.8
Don't know	32	20.0

#### 4.9 Correlation between socio-demographic characteristics and knowledge of cervical cancer treatment

There was no association between the knowledge of cervical cancer treatment and age, marital status, education and occupation. Respondents aged 25-29 (p=0.42), 30-34 (p=0.48), 35 years and above (p=0.25). Respondents who were single (p=0.81), cohabiting (p=0.57), separated (p=0.44), respondents who had primary education (p=0.28), secondary (p=0.45), respondents who were self-employed (p=0.43), salaried employed (p=0.21) (Table 9).

**Table 8: Socio-demographic characteristics associated with knowledge of cervical cancer**

	<i>Ever screened</i>		<i>OR (95% CI)</i>	<i>P value</i>
	<i>Yes</i>	<i>No</i>		
<i>Age group (n = 160)</i>				
20-24 years	24	47	1.0	-
25-29 years	14	38	0.7(0.3-1.6)	0.42
30-34 years	12	17	1.4(0.6-3.4)	0.48
35 years and above	1	7	0.3(0.03-2.4)	0.25
<i>Marital status (n = 160)</i>				
Married	39	86	1.0	-
Single	6	15	0.9(0.3-2.4)	0.81
Cohabiting	4	6	1.5(0.4-5.5)	0.57
Separated	2	2	2.2(0.3-16.2)	0.44
<i>Education level (n = 160)</i>				
None	0	2	-	-
Primary	17	25	1.6(0.7-3.5)	0.28
Secondary	12	38	0.7(0.3-1.7)	0.45
Tertiary	20	46	1.0	-
<i>Occupation (n = 144)</i>				
Unemployed housewife	29	49	1.0	-
Self employed	11	26	0.7(0.3-1.7)	0.43
Salaried Employment	7	22	0.5(0.2-1.4)	0.21

#### 4.10 Knowledge on cervical cancer screening

Respondents were asked on knowledge of cervical cancer screening. Majority (73.3%, n=74) said screening is done once every year, (9.9%, n=10) said that screening is to be done every three years, (2.0%, n=2) responded any other.

**Table 9: Knowledge on cervical cancer screening**

	Frequency (n)	Percent (%)
<i>Aware of screening procedures for cervical cancer</i>	134	83.8
<i>Frequency of screening (n = 101)</i>		
Once every year	74	73.3
Once every three years	10	9.9
Once every 5 years	2	2.0
Any other	15	14.9
<i>Indication for screening</i>		
Women of 25years and above	78	48.8
Prostitutes	7	4.4
Elderly women	8	5.0
<i>Procedures used in screening for cervical cancer</i>		
VIA	8	5.0
VILLI	2	1.3
Pap smear	37	23.1
Don't know	113	70.6

#### 4.11 Attitude towards cervical cancer

Respondents were asked questions to reflect on their attitude towards cervical cancer. The responses were on a scale of five namely; strongly agree, agree, neither agree nor disagree, disagree and strongly disagree. Majority of the respondents (79.9%, n=127) strongly agreed that any adult including her can acquire cancer of the cervix. About 90.6%, n=144 strongly agreed that if screening was free and causes no harm they would be willing to screen. Majority (25.5%, n=40) strongly disagreed that cancer of the cervix cannot be transmitted from one person to another (Table 8).

**Table 10: Attitude towards cervical cancer**

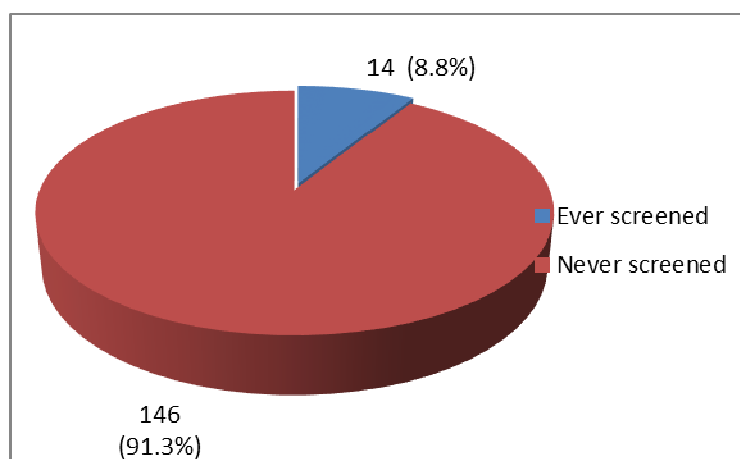
*1=strongly agree; 2=Agree; 3=neither agree nor disagree; 4=Disagree; 5=strongly disagree*

	1	2	3	4	5
Carcinoma of the cervix is highly prevalent in our country and is a leading cause of deaths amongst all malignancies in Kenya	101(63.5)	20(12.6)	21(13.2)	12(7.5)	5(3.1)
Any adult woman including you can acquire cervical carcinoma	127(79.9)	14(8.8)	11(6.9)	4(2.5)	3(1.9)
Carcinoma of the cervix cannot be transmitted from one person to another	42(26.8)	8(5.1)	48(30.6)	19(12.1)	40(25.5)
Screening helps in prevention of carcinoma of the cervix	98(61.6)	13(8.2)	28(17.6)	8(5.0)	12(7.5)
Screening causes no harm to the client	95(60.1)	12(7.6)	37(23.4)	5(3.2)	9(5.7)
Screening for premalignant cervical lesions is not expensive	85(53.5)	13(8.2)	26(16.4)	11(6.9)	24(15.1)
If screening is free and causes no harm, will you screen	144(90.6)	4(2.5)	3(1.9)	1(0.6)	7(4.4)

#### 4.12 Cervical cancer screening practices

Respondents were asked whether they had screened for cervical cancer. Majority (91%, n=146) have never been screened while (8.8%, n=14) had screened for cervical cancer (Figure 3).





**Figure 3: Prevalence of previous cervical cancer screening among females seeking health services at Uasin-Gishu District Hospital**

#### 4.13 Correlation between socio-demographics characteristics and screening practice

There was an association between the age of respondents and screening, respondents aged 20-24 years ( $p=0.001$ ) however there was no association between marital status. Level of education, occupation, parity and religion

**Table 11: Socio-demographic factors associated with screening practice**

	<i>Ever screened</i>		<i>OR (95% CI)</i>	<i>P value</i>
	<i>Yes</i>	<i>No</i>		
<i>Age group (n = 160)</i>				
20-24 years	1	70	0.1(0.01-0.6)	0.01
25-29 years	9	43	1.0	-
30-34 years	2	27	0.4(0.1-1.8)	0.20
35 years and above	2	6	1.6(0.3-9.2)	0.60
<i>Marital status (n = 160)</i>				
Single	0	21	-	-
Married	12	113	1.0	-
Cohabiting	1	9	1.0(0.1-9.0)	0.97
Separated	1	3	3.1(0.3-32.6)	0.34
<i>Education level (n = 160)</i>				
None	0	2	-	-
Primary	4	38	1.0	-
Secondary	3	47	0.6(0.1-2.9)	0.53
Tertiary	7	59	1.1(0.3-4.1)	0.86
<i>Occupation (n = 144)</i>				
Unemployed housewife	8	70	1.0	-
Self employed	4	33	1.1(0.3-3.8)	0.93
Salaried Employment	2	27	0.6(0.1-3.2)	0.60
<i>Parity (n = 159)</i>				
Nullipara	1	27	0.3(0.04-2.5)	0.28
1-4 children	13	112	1.0	-
5 or more children	0	6	NA	NA
<i>Religion (n = 160)</i>				
Protestant	11	103	1.0	-
Catholic	3	41	0.7(0.2-2.6)	0.58
Islam	0	2	NA	NA

#### 4.14 Screening frequency and reasons for failure to screen

Respondents were asked about their screening frequency .Out of the 8.8%,  $n=14$  who have ever screened for cervical cancer 71.4%,  $n=10$  had screened only once and 28.6%,  $n=4$  have screened more than once. Majority of them, (71.4%,  $n=10$ ) screened within the past 3 years and 28.6%,  $n=4$  screened more than 3 years ago (Table 12)

**Table 12: Screening frequency and failure to attend screening**

	Frequency (n)	Percent (%)
<i>Frequency of previous screening (n = 14)</i>		
Once	10	71.4
More than once	4	28.6
<i>Most recent screening attended (n = 14)</i>		
Within past 3 years	10	71.4
More than 3 years ago	4	28.6
<i>Reasons for failure to attend screening</i>		
Not informed or Knowledgeable	57	39
Undecided about testing	48	32.9
I am healthy	14	9.6
Feels shy	7	4.8
Fears that screening will reveal cancer	3	2.1
Expensive	3	2.1
Painful	3	2.1
Husband disapproves	1	0.7
Painful	3	2.1
Feels shy	7	4.8
Other	10	6.9

#### 4.15 Participant's perception of cervical cancer

The ten clients participating in the focused group discussion all showed some fear and varying levels of understanding of the curability and prevalence of cervical cancer in the Kenyan population. Cervical cancer was perceived as a fatal disease that is very difficult to treat.

“Cancer is a bad disease”-R 2(FGD 1)

“It’s a scaring (scary) disease, it’s like death is here” (paramount) -R3 (FGD 1)

“It is a killer disease”-R4 (FGD 1)

Despite the fact that none of the respondents reported having a relative or close friend who had cervical cancer or knowing anyone in the community who suffers from the disease their perception of the disease reflected an apparently close experience with the ravaging effects of the disease. They also thought that cervical cancer was a prevalent disease. Three of the respondents included a description of some form of body tissue damage in their definition of the disease.

“..A disease that destroys *huku ndani* [internal organs]. Answer as understood by researcher, “Cervical cancer is a type of cancer that affects the birth canal”-R1 (FGD 1)

#### 4.16 Screening for cervical cancer

None of the participants had ever been screened. When specifically asked to narrate their experience with cervical cancer screening services, the participants instead offered reasons why they had not attended screening but one respondent described a missed opportunity for screening resulting from health worker action.

On the other hand, it appeared that participants had difficulty (difficulties) in recognizing the difference between a screening and diagnostic test. One respondent indicated that lack of knowledge on the “danger” signs had hampered attendance of screening but expressed willingness to attend screening once these clinical signs became manifest to them.

Two of the participants showed a clear understanding of the anatomic location of the cancer of the cervix using terms like birth canal and even listing signs and effects of disease including vaginal discharge and secondary infertility.

“..Cervical cancer is a type of cancer that affects the birth canal”-R1 (FGD 1)

“...the way I understand is that cervical cancer affects the birth canal and can make someone infertile in the next years and if you see someone with vaginal discharge its likely you can guess that the person might be having cervical cancer, and needs to be screened to rule out (lay man language) the disease-R2 (FGD 1)

One respondent however admitted having no knowledge on what cancer was despite having heard the term severally. Separately, some of the respondents who described the effects of the disease in their definition of cancer were unaware of the possible causes of cervical cancer.

### 5.0 Discussion

This study revealed that there was a significant low uptake of cervical screening among women in Uasin-Gishu district hospital (8.8%, n=14), despite the availability of screening services in the hospital. The findings showed

(revealed) that there was an association between age and cervical cancer screening, those women who were between the age of 20-24 years ( $p=0.01$ ) were more likely to screen compared with women aged 25-29 years, implying that young women tend to accept screening because of their knowledge and understanding of risk factors of the disease than the older women. There was no association between marital status, education level, occupation and cervical cancer screening, meaning that marital status does not have any effect on whether one would screen or not (Table 4). These results are consistent with those of a study carried out in South Africa which indicated that women who did not access screening services tend to be older than 45 years (Patricia et al., 2004).

The knowledge and awareness of cervical cancer is generally high, (85%,  $n=136$ ) of the women knew about cervical cancer but a few get screened. There was no significant association between age, level of education, occupation and knowledge of cervical cancer. This indicates that even if the person is educated she might not have knowledge of cervical cancer and thus there is need to incorporate cervical cancer into the curriculum in Kenyan schools to increase the number of women's knowledge of the disease. The result of this study shows some variation with the results of other studies (Table 5, 6 & 9). A study carried out in Kenyatta National hospital revealed that, forty-nine percent of patients had no accurate knowledge about cervical cancer (Bwayo et al., 2003).

Most of the respondents received information about cervical cancer through media (46.3%,  $n=74$ ). The finding of this study is more than that of Nwanko et al (2011) study which found out that, (30.1%,  $n=38$ ) of the respondents received the information through the print and electronic media, Bwayo et al (2003) study revealed that 3% got information through media (newspapers, radio, and television) (Figure 1). The proportion is less than that of Aswathy et al., (2012) study in which it was found that (55.8%,  $n=41$ ) got information from media.

Knowing the causative/risk factors and preventive measures of cervical cancer can make a great difference, without the knowledge of cervical cancer, prevention is far more difficult to achieve.

In this study (69%,  $n=111$ ) of the respondents did not know the symptoms of cervical cancer and about (60.6%,  $n=97$ ) did not know the risk factors and therefore most of them did not know the prevention strategies (62.5%,  $n=100$ ). (Table 3). The result of this study is different from a study by Aswathy et al (2012). Where the respondents were able to mention the symptoms of cervical cancer such as, bleeding and pain in vagina region. This means that in general the respondents do not understand what causes the disease and its preventive measures.

The staff trained in cervical cancer screening according to the chief medical officer of health at Uasin-Gishu hospital is significantly low (8.2%,  $n=6$ ), these include two medical officers, two nurses, one clinical officer, and one laboratory technician. The staff number does not meet the demand of services by women seeking health services in the hospital. Considering that the staffs are also assigned other duties other than screening, they would rarely consider discussing screening but instead try to finish the assigned duties. The hospital screened a small number of women (93) in the immediate previous three months and this is an indication that the uptake is very low considering that many women seek services in the hospital. The hospital generally met the requirement for undertaking cervical cancer screening, the equipment used in the screening using VIA were all available and this means that the hospital was fully equipped to perform screening. The hospital met the requirements for infection prevention. This was in line with the requirement as stated by PATH (2004).

## Conclusion

There is a very low uptake of cervical cancer screening among women seeking health services in Uasin-Gishu hospital, most of the women generally lack information concerning cancer, symptoms and prevention strategies. Majority of women in the study were not aware of screening methods used to detect premalignant lesions and this is reflected by the low uptake of cervical cancer screening in Uasi-Gishu district hospital. The Government of Kenya (Gok) through the ministry of health (MoH) needs to invest in sensitization and mobilization programs, to decrease cases of late cervical cancer diagnosis.

## Recommendations

Gok and MoH should initiate health education programs that ensure that all women that seek health services are educated on cervical cancer and screening.

The hospital management should set aside separate room for performing VIA and have permanent staff serving clients in need of cervical cancer screening, rather than sharing the same room with clients for family planning.

The hospital management should place posters in strategic points within the hospital that inform the public that VIA is done within the hospital.

The hospital management should train more personnel in VIA in order to increase uptake of cervical cancer screening.

The GoK should set aside funds to be used in ensuring that the public get information on cervical cancer and screening methods. This can be done through media, public gatherings including churches, because this is where many people can be found frequently.

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