

Awareness of Cervical Cancer Screening Among Women Attending Gynecology Outpatient Clinic and Maternal-Child Health Clinic, Naivasha Sub County Hospital, Nakuru County, Kenya.

*Ronald Omenge Obwoye¹ Evelyn Wanjiku Mungai¹

Department of Community Health, Faculty of Health Sciences, Egerton University, Nakuru, Kenya

Corresponding Author: Ronald Omenge Obwoye

Abstract: Cervical cancer occurs when abnormal cells on the cervix grow out of control. It is the fourth most frequent cancer in women. Early detection of the disease reduces treatment cost as well as morbidity even if mortality is unaffected. This can be achieved by cervical health awareness and adherence to screening practices. The study aimed to determine the awareness of cervical cancer screening among women attending the Gynecology and Maternal-Child Health Clinics. The study adopted a hospital based cross-sectional with 83 clients aged 18 years and above between 24th of April to 2nd of June. The participants were interviewed using an interview schedule after obtaining informed consent. The interview schedule consisted of demographic variables, knowledge of cervical cancer disease, awareness of cervical cancer screening, and factors affecting participation in cervical cancer screening. The results were analyzed using SPSS and presented in tables and pie charts. Study concludes that most women never knew; what causes cervical cancer (75%), age group that can be affected (47%), how disease presents (82%), whether it is preventable (285). Most were also not aware of cervical cancer screening modalities, and the practice of cervical cancer screening was low at 34% of the respondents screened while others were screened during free clinics. Lack of screening was mainly due to lack of awareness of the existence of hospitals offering screening services, lack of knowledge on the importance of screening, and poor attitude towards screening methods. Study recommends to health department to hold regular health talks and mass campaigns to increase awareness on the importance of screening and available methods.

Keywords: cervical cancer screening, health awareness, prevention, presentation

Date of Submission: 08-09-2017

Date of acceptance: 28-09-2017

I. Introduction

Cervical cancer occurs when abnormal cells on the cervix grow out of control. The cervix is the lower part of the uterus that opens into the vagina. Cervical cancer can often be successfully treated when it's found early. It is usually found at a very early stage through different methods of screening. Most cervical cancer is caused by a virus called human papillomavirus (HPV). One can get HPV by having sexual contact with someone who has it. There are many types of the HPV virus. Not all types of HPV cause cervical cancer. Some of them cause genital warts, but other types may not cause any symptoms. [www.webmd.com/cancer/cervical-cancer/cervical-cancer-cancer-topic-overview].

Cervical cancer is the most common gynecologic cancer in women. Compared with other gynecologic malignancies, cervical cancer develops in a younger population of women. Thus, screening for this neoplasia with Pap smear sampling typically begins in adolescence or young adulthood. Most early cancers are asymptomatic, whereas symptoms of advancing cervical cancer may include bleeding, watery discharge, and signs associated with venous, lymphatic, neural, or ureteral compression. Prevention lies mainly in early detection. For this reason, regular Pap smear screening is recommended by the American college of obstetricians and gynecologists (2003) and by the U.S preventive services task force. [William et al (2012)]. The incidence of this emerging cancer is steadily increasing in sub-Saharan Africa, with more than 75,000 new cases and close to 50,000 deaths a year, a toll further increased by HIV infection. According to the World Health Organization, cervical cancer will kill more than 443,000 women per year worldwide by 2030, nearly 90 % of them in sub-Saharan Africa. This increase in cervical cancer incidence in Africa is now counteracting the progress made by African women in reducing maternal mortality and increasing longevity. Nevertheless, cervical cancer is a potentially preventable non-communicable disease that can be averted or halted by primary (vaccination), secondary (early diagnosis of situations at risk), and tertiary (early diagnosis of proven cases of cervical neoplasia) prevention. The close links between HIV and HPV justify linking cervical cancer prevention,

screening, and management programs with AIDS programs as part of the "90-90-90" initiative of the UNAIDS, both nationally and regionally. Innovative strategies based on effective, rapid, inexpensive, and mobile screening tools, including at best molecular biology as well as vaccination and awareness programs, should be rapidly implemented and evaluated in Screening aims to detect precancerous changes, which, if not treated, may lead to cancer. Women who are found to have abnormalities on screening need follow-up, diagnosis and treatment, in order to prevent the development of cancer or to treat cancer at an early stage. [Mboumba, et al (2017)]

WHO has reviewed the evidence regarding the possible modalities to screen for cervical cancer and has concluded that:

- Screening should be performed at least once for every woman in the target age group (30-49 years) when it is most beneficial.
- HPV testing, cytology and visual inspection with acetic acid (VIA) are all recommended screening tests.
- Cryotherapy or loop electrosurgical excision procedure (LEEP) can provide effective and appropriate treatment for the majority of women who screen positive for cervical pre-cancer.
- "Screen-and-treat" and "screen, diagnose and treat" are both valuable approaches.

Regardless of the approach used, the key to an effective programme is to reach the largest proportion of women at risk with quality screening and treatment. Organized screening programmes designed to reach most women at risk are preferable to opportunistic screening. [www.who.int/mediacentre/factsheets/fs380/en/]

This study was done to determine the level of awareness of cervical cancer screening as a means of early detection among women attending Gynecologic outpatient clinic, Naivasha Sub county Hospital, Nakuru county

II. Methodology

2.1: Study Area:

The study was conducted at Naivasha level IV Sub county Hospital which serves the residents of Naivasha town and its environs. Naivasha town has a population of 181,966 (according to the 2009 National Census).

2.2: Study Design:

The study adopted ahospital-based cross sectional design. It aimed at providing data that is a subset representative of the entire population.

2.3: Study Population and sample:

The study targeted population was all women of reproductive age attending GOPC and MCHC at NSH.

2.4: Sampling technique and Sample Size determination:

The study used a Convenience random sampling technique to obtain respondents who fit the study population criteria and consented.

Determination of sample size:

$$n = \frac{Z^2 \sigma^2}{e^2}$$

Where;

- n** is the proper sample size
- Z** is the standard normal variable
- σ** is the population standard deviation
- e** is the maximum allowable error

Confidence level of 90% (thus Z is 1.64) that the estimate of population mean is off by less than 0.06 and the population standard deviation is 0.5, therefore the proper sample size is:

$$\frac{(1.64^2 \times 0.5^2)}{0.06^2} = 187$$

Thus the proper sample size for my research was 187 respondents.

However, the study accessed only 83 respondents for interviews.

2.5: Inclusion and Exclusion Criteria:

Inclusion criteria- women of reproductive age and above attending the GOPC and MCHC at Naivasha Sub county Hospital. Exclusion criteria- any other woman suffering from any cervical disease attending other clinics within the facility or in the wards.

2.6: Data collection methods and tools:

Data was collected through interviews. Semi-structured interview schedules were used, having pre-coded set of questions that the interviewer asked when interviewee.

2.7: Data analysis:

All data collected was analyzed according to the objectives of the study and variables. The data was analyzed using computer software's Microsoft excel and SPSS.

2.8: Data Presentation:

Analyzed data was grouped and classified in figures and presented in tables, bar graphs and pie charts.

III. Result

3.1: Socio-demographic characteristics of the respondents.

The age, marital status, level of education, occupation and religion of the 83 respondents was assessed and is presented in tables 1, 2, 3 and 4 below.

Table 1: Age of respondents

	Frequency	Valid Percent
<18	12	14.5
19-29	39	47.0
Valid 30-39	23	27.7
40-49	9	10.8
Total	83	100.0

This result indicates that majority by 47% of the women interviewed were aged 19 to 29 years, while the minority by 11% was aged 40 to 49 years. The high percentage of the respondents (53%) were married, with a few (27%) single while only 8% had separated from their husbands.

Single	22	26.5
Married	44	53.0
Valid Separated	7	8.4
Widowed	10	12.0
Total	83	100.0

Table 3: Level of education of respondents

	Frequency	Valid Percent
None	11	13.3
Primary	14	16.9
Valid Secondary	45	54.2
Tertiary	13	15.7
Total	83	100.0

This result indicates that majority by 87% had attained formal education, most (54%) of which had attained secondary education, 17% primary education, 16% tertiary and 13% had not attained formal education.

Table 4: Occupation of respondents

	Frequency	Valid Percent
Student	9	10.8
No formal employment	42	50.6
Valid Self-employment	9	10.8
Pensionable employment	23	27.7
Total	83	100.0

This result indicates half of the respondents (50%) had no formal employment. Majority by 28% of the other half had pensionable employment.

3.2.1: Awareness of the cause of cervical cancer disease in relation to the level of education.

The study analyzed what the respondents thought caused cervical cancer disease. The results are presented in table 5 below.

Table 5: Cause of cervical cancer disease

		What do you think causes cervical cancer?			Total
		Don't know	Germ	HIV/AIDS	
What is your level of education?	None %	72.7% (8)	27.3% (3)	0.0% (0)	100.0% (11)
	Primary %	78.6% (11)	14.3% (2)	7.1% (1)	100.0% (14)
	Secondary %	73.3% (33)	11.1% (5)	15.6% (7)	100.0% (45)
	Tertiary %	76.9% (10)	0.0% (0)	23.1% (3)	100.0% (13)
Total	%	74.7% (62)	12.0% (10)	13.3% (11)	100.0% (83)

This result indicates that majority by 75% of the respondents did not know what causes cervical cancer disease, 12% thought it is caused by a germ and 13% thought HIV/AIDS causes. Most of the respondents by 79% who did not know how cervical cancer disease presents had attained primary level education. Majority by 27% of those who said cervical cancer disease is caused by a germ had never attained any formal education and most of the respondents by 23% who said cervical cancer is caused by HIV/AIDS had attained tertiary level education.

3.2.2: Awareness of the age group affected by cervical cancer disease in relation to level of education.

The study sought to find out what age group the respondents thought is affected by cervical cancer disease and the results are presented in table 6 below.

Table 6: Age group affected

		What age group do you think gets cervical cancer?				Total
		Don't know	15-45	>45	Any age	
What is your level of education?	None	% 27.3% (3)	18.2% (2)	0.0% (0)	54.5% (6)	100.0% (11)
	Primary	% 21.4% (3)	28.6% (4)	0.0% (0)	50.0% (7)	100.0% (14)
	Secondary	% 22.2% (10)	24.4% (11)	4.4% (2)	48.9% (22)	100.0% (45)
	Tertiary	% 30.8% (4)	38.5% (5)	0.0% (0)	30.8% (4)	100.0% (13)
Total		% 24.1% (20)	26.5% (22)	2.4% (2)	47.0% (39)	100.0% (83)

This result indicates that majority by 47% said any age group of women can get cervical cancer disease, and only 2% said women >45years get cervical cancer disease. Most of the respondents (55%) who had never attained formal education said any age is affected. While most of the respondents (39%) of those who had attained tertiary level education said 15-45 years old are affected.

3.2.3: Awareness of presentation of cervical cancer disease in relation to the level of education

Respondents gave their opinion on how a person with cervical cancer disease may present in the hospital and the results of this are presented in the table 7 below.

Table 7: Presentation of cervical cancer disease

		How do you think cervical cancer disease may present?			Total
		Don't know	Abdominal pain, discharge, bleeding		
What is your level of education?	None	% 81.8% (9)	18.2% (2)		100.0% (11)
	Primary	% 57.1% (8)	42.9% (6)		100.0% (14)
	Secondary	% 84.4% (38)	15.6% (7)		100.0% (45)
	Tertiary	% 100.0% (13)	0.0% (0)		100.0% (13)
Total		% 81.9% (68)	18.1% (15)		100.0% (83)

This result indicates that majority by 82% of respondents did not know how a patient with cervical cancer disease presented in hospital, while 18% said they would have symptoms such as abdominal pain, per vaginal discharge or bleeding. 100% of the respondents who had attained tertiary level of education did not know how a patient with cervical cancer disease presents.

3.2.4: Awareness of whether cervical cancer disease is preventable.

Respondents were asked whether they thought cervical cancer disease can be prevented. The results of this are presented in figure 1 below.

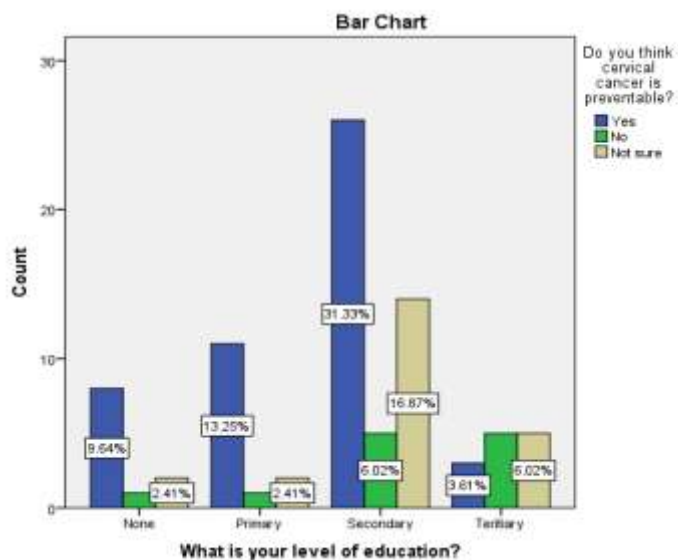


Figure 1: Prevention of cervical cancer disease awareness in relation to level of education.

Awareness of Cervical Cancer Screening Among Women Attending Gynecology Outpatient Clinic and

This result indicates that majority by 58% said cervical cancer is preventable, 28% were not sure and 14% said it cannot be prevented. Most of the respondents by 39% of those who had attained tertiary level education said cervical cancer disease is not preventable and 39% more said they were not sure.

3.2.5: Awareness of whether cervical cancer disease is curable

The study analyzed what the respondents thought on whether cervical cancer is curable. The results are shown in table 6 below.

Table 8: Whether cervical cancer can be cured

		Do you think cervical cancer is curable?			Total
		Yes	No	Not sure	
What is your level of education?	None	% 45.5% (5)	27.3% (3)	27.3% (3)	100.0% (11)
	Primary	% 21.4% (3)	50.0% (7)	28.6% (4)	100.0% (14)
	Secondary	% 24.4% (11)	42.2% (19)	33.3% (15)	100.0% (45)
	Tertiary	% 38.5% (5)	30.8% (4)	30.8% (4)	100.0% (13)
Total		% 28.9% (24)	39.8% (33)	31.3% (26)	100.0% (83)

This result indicates that majority of the respondents by 40% said cervical cancer disease is not curable, 31% were not sure and 29% said it cannot be cured. Most (46 %) of those who have never attained formal education said it can be cured, majority by 50% of those who attained primary level education said it cannot be cured, majority by 42% of those who had attained secondary level education said it is not curable, and majority by 39% of those who attained tertiary level education said it is curable.

3.3: Level of awareness of cervical cancer screening

The study’s second objective sought to establish the level of awareness of cervical cancer screening among women attending GOPC and MCHC at NSH. The results are presented in table 9 and figures 2 and 3 below.

3.3.1: Awareness of cervical cancer screening and its source

The study analyzed whether the respondents had ever heard about cervical cancer screening and from which source. The results are presented in table 9 below.

Table 9: Sources of information on cancer screening services

		If yes from which source?				Total
		Through media (Radio, Television)/Internet	Literature (books, magazines, newspaper articles)	From health workers/health center/hospitals/educational campaigns and seminars	Friends, colleagues, neighbors, relatives	
Have you ever heard about cervical cancer screening?	Yes	% 21.5% (14)	7.7% (5)	41.5% (27)	29.2% (19)	100.0% (65)
Total		% 21.5% (14)	7.7% (5)	41.5% (27)	29.2% (19)	100.0% (65)

The study result indicates that majority by 42% of those who had heard about cervical cancer screening had heard it from health workers, health centers/hospitals, educational campaigns and seminars.

3.3.2: Methods of cervical cancer screening known

Respondents were asked the methods of cervical cancer screening they knew. The results are shown in figure 2 below.

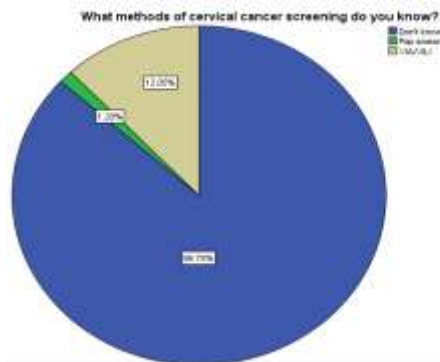


Figure 2: Methods of cervical cancer screening known

This study result indicates that majority by 87% of the respondents don't know any method of cervical cancer screening while 12% knew of VIA/VILI and 1% knew Pap smear.

3.3.3: Screening frequency

The study analyzed how many times the respondents thought women should be screened for cervical cancer. The results are presented in figure 3 below.

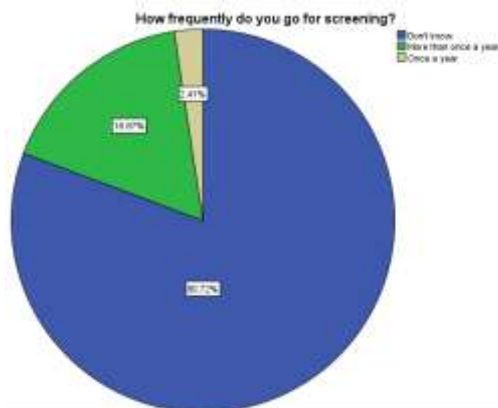


Figure 3: Screening frequency

This result indicates that majority by 81% did not know how frequently a woman should be screened for cervical cancer disease, 17% thought women should be screened more than once a year and 2% said they should be screened once a year.

3.4.: Practice of cervical cancer screening and factors that may hinder screening

The study's third objective sought to determine the factors that hinder cervical cancer screening among the women attending GOPC and MCHC at NSH. The results are shown in tables 10, 11, 12, 13, 14 and 15 and figures 4, 7 and 8.

3.4.1: Practice of cervical cancer screening

The study analyzed how many of the respondents had ever been screened for cervical cancer. The results are shown in figure 4 and tables 10 below.

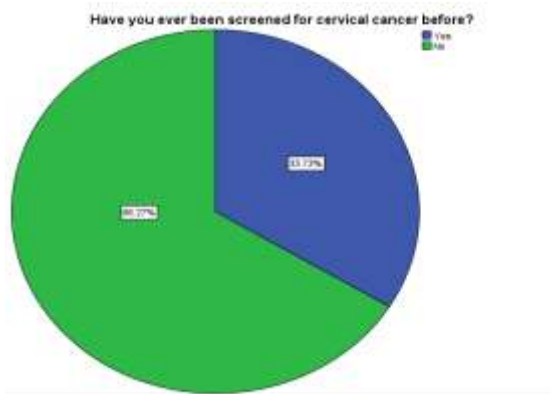


Figure 4: Screened for cervical cancer

This result indicates that majority of the respondents by 66% have never been screened for cervical cancer disease while only 34% have been screened.

Table 10: Those screened for cervical cancer disease in relation to their level of education.

What is your level of education?		%	Have you ever been screened for cervical cancer before?		Total
			Yes	No	
None		%	54.5% (6)	45.5% (5)	100.0% (11)
	Primary	%	57.1% (8)	42.9% (6)	100.0% (14)
	Secondary	%	17.8% (8)	82.2% (37)	100.0% (45)
	Tertiary	%	46.2% (6)	53.8% (7)	100.0% (13)
Total		%	33.7% (28)	66.3% (55)	100.0% (83)

Awareness of Cervical Cancer Screening Among Women Attending Gynecology Outpatient Clinic and

The study result indicates that majority by 55% and 57% of those who had not attained formal education and those who had attained primary education respectively had ever been screened for cervical cancer disease. However, majority by 82% and 54% of those who attained secondary level education and tertiary level respectively had never been screened for cervical cancer disease.

Table 11: Whether screening services were paid for or were free for those screened.

Have you ever been screened for cervical cancer before?	Yes	%	If yes to question 20 above, did you pay for the service or was it a free clinic?		Total
			Paid	Free clinic	
			21.4% (6)	78.6% (22)	100.0% (28)
Total		%	21.4% (6)	78.6% (22)	100.0% (28)

The study result indicates that majority by 79% of those who have ever been screened were screened during a free clinic unlike 21% who paid for the services in hospitals offering the screening services.

Table 12: Factors that contributed to lack of screening for those never screened

Have you ever been screened for cervical cancer before?	No	%	If never screened, what factors do you think hinder you from being screened?			Total
			Lack of awareness of the availability of service	Lack of knowledge on the importance	Other (Specify)...	
			49.1% (27)	21.8% (12)	29.1% (16)	100.0% (55)
Total		%	49.1% (27)	21.8% (12)	29.1% (16)	100.0% (55)

This result indicates that majority by 49% of those who had never been screened said it is due to lack of awareness of availability of the services, while 22% said it is due to lack of knowledge on the importance. 29% indicated that lack of time and fear of the procedure made them not to be screened.

3.4.2: Facilities offering screening services and easy access of the services

Awareness of facilities offering cervical cancer screening services and easy access to the services were sought as factors that may contribute to lack of screening practice. The results are shown in table 13, 14 and 15 below.

Table 13: Awareness of facilities offering cervical cancer screening services in relation to those screened.

Do you know any facilities offering cervical cancer screening near your home area?	Yes	%	Have you ever been screened for cervical cancer before?		Total
			Yes	No	
			48.2% (27)	51.8% (29)	100.0% (56)
	No	%	3.7% (1)	96.3% (26)	100.0% (27)
Total		%	33.7% (28)	66.3% (55)	100.0% (83)

This result indicates that most (52%) of the respondents who knew facilities offering cervical cancer screening services near their home area had never been screened before. Majority by 96% of those who never knew areas offering screening services had never been screened before, but 4% had never heard of any facilities offering screening services near their home area but had ever been screened.

Table 14: Awareness of facilities offering cervical cancer screening services in relation to easy access of the services.

Do you know any facilities offering cervical cancer screening near your home area?	Yes	%	If Yes, Do you easily access these services when you need them?		Total
			Yes	No	
			85.7% (48)	14.3% (8)	100.0% (56)
Total		%	85.7% (48)	14.3% (8)	100.0% (56)

The study results indicates that majority by 86% who knew areas offering cervical cancer services could easily access them if they needed the services and 14% of the respondents said they did not easily access the services.

Table 15: Factors contributing to lack of easy access to screening services

If Yes, Do you easily access these services when you need them?	No	%	If no to question 16 above, why?		Total
			Distance of the facility	Other (Specify)...	
			25.0% (2)	75.0% (6)	100.0% (8)
Total		%	25.0% (2)	75.0% (6)	100.0% (8)

This result indicates most of the respondents (75%) who said they did not easily access the screening services from the hospitals offering them said it was due to lack of time from their tight job schedules (100% of them were flower firm workers) while 25% said it was due to the distance of the health facilities from their homes.

3.4.3: Attitude towards health workers’ conduct

Respondents’ attitude towards health workers’ conduct was analyzed as a factor that may hinder seeking of the cervical screening services. The results are presented in figure 5 below.

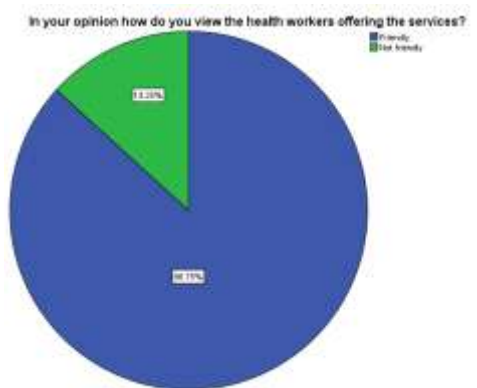


Figure 5: Health workers’ conduct

Clients by 87% said that health workers were friendly and they could easily seek services from them without fear while 13% said they were unfriendly. On whether lack of enough privacy in screening rooms was one of the factors that may hinder seeking of cervical cancer screening services. Study result indicates 100% of the respondents indicated that there was enough privacy in the screening rooms in hospitals they seek services from.

3.4.5: Practice of cervical cancer screening among other women known by respondents

The study analyzed whether other women in the respondents’ community are frequently screened for cervical cancer disease.

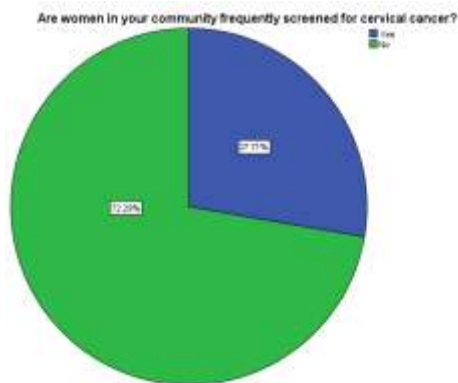


Figure 6: If women in the community are frequently screened

The study result indicates that majority by 72% of the respondents said that women in their community are not frequently screened while only 28% said women are screened frequently in their community.

IV. Conclusion And Recommendations.

4.1: Conclusion

Awareness of cervical cancer disease among the women attending gynecology outpatient clinic (GOPC) and maternal and child health clinic (MCHC) at Naivasha sub county hospital, Nakuru county is quite low. Most women never knew what causes it, age group affected, how one may present ones sick, whether it can be

prevented or treated. Most women are also not aware of cervical cancer screening modalities, though the health workers have put quite a big effort in trying to educate the residents of Naivasha.

The practice of cervical cancer screening is low. This is mainly due to lack of awareness of the community on existence of hospitals offering screening services, lack of knowledge as to the importance of screening, poor attitude towards screening, and even poor education status of the community are additionally socio-cultural limitations. Practice of routine cervical screening in this community is as low as that found in other studies of other African communities. This is mainly due to lack of education and low literacy levels in general.

4.2: Recommendations

The study recommends; regular health talks on the cervical cancer disease. Mass campaigns on creating awareness of cervical cancer screening, through organized workshops, community visits and local media. Lastly, to offer regular free cervical cancer screening clinics at community outreach free clinics. This is to encourage more women to be screened as most of those who had already been screened were screened at free clinics.

Conflict of interest

The authors declare that they have no conflict of interest regarding the publication of the paper.

Authors' Contribution

All authors participated by writing the study protocol, participated collecting data, data analysis, report writing, drafted the paper with subsequent revision and approved the final manuscript

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Ronald Omenge Obwoye. "Awareness of Cervical Cancer Screening Among Women Attending Gynecology Outpatient Clinic and Maternal-Child Health Clinic, Naivasha Sub County Hospital, Nakuru County, Kenya." *IOSR Journal of Nursing and Health Science (IOSR-JNHS)* , vol. 6, no. 5, 2017, pp. 43–51.