



# Awareness of cervical cancer risk factors and practice of Pap smear testing among female primary school teachers in Kasarani division, Nairobi Kenya.

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## SUMMARY

**Cervical cancer is the leading cause of cancer-related death among women in developing countries. Population-based screening and early treatment reduces morbidity and mortality associated with cervical cancer. The objective of this study was to find out the awareness about cervical cancer, knowledge of risk factors and practice of Pap smear testing. A cross-sectional study design was adopted. Systematic random sampling was used to obtain the required sample size of 384 respondents. The study was conducted between May and July 2010. Data analysis was conducted using SPSS and Excel programmes. The study findings revealed that 87% of the women were aware about cervical cancer, while 75% knew about the Pap smear test. Among them only 39% knew that HPV infection was a risk factor for developing cervical cancer while only 41% had ever had a Pap smear test done. There was a crude association between awareness of cervical cancer risk factors and practice of Pap smear test with 1.04 increasing odds of having a Pap smear if women were aware of the risk factors. This association was however not significant (P=0.9).**

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## Introduction

Cervical cancer is a major global health problem, with nearly 500,000 new cases occurring each year worldwide [1]. Each year an estimated 270,000 women die from the disease with nearly 80% of the deaths occurring in developing countries. It is the leading cancer killer of women in the developing world [2] and is the second most common malignancy in women worldwide after breast cancer [2]. In the third world cervical cancer is the most common cancer, where over three quarters of the estimated half a million newly diagnosed cases occur annually [3, 4]. The highest incidence is observed in developing countries including the sub-Saharan Africa [5]. This high incidence is attributed to paucity of and inadequacy of screening programs as well as the unawareness of the disease in less developed countries [5]. Cervical cancer is a key reproductive health problem for women particularly in the developing countries where screening services are lacking or inaccessible for the majority [6].

Kenya has a population of 10.32 million women aged between 15 years and above who are at risk of developing cervical cancer [1]. Current estimates in Kenya indicate that every year 2635 women are diagnosed with cervical cancer and 2111 die from the disease in Kenya [1]. Cervical cancer ranks as the first most frequent cancer among women in Kenya, and the second most frequent cancer among women between 15 and 44 years of age [1]. In Kenya, cervical cancer accounts for 59% of all documented genital cancers [8].

The Papanicolaou test (also called Pap smear, Pap test, cervical smear or smear test) is a screening test used in gynecology to detect premalignant processes in the endocervical canal. Changes can be treated, thus preventing cervical cancer. The test was invented by and named after prominent Greek doctor Georgios Papanikolaou. In 1945, the newly formed American Cancer Society endorsed the use of the vaginal smear as an effective cancer prevention test for carcinoma of the uterine cervix [9].



In many developing countries, women's knowledge of cervical cancer and Pap smears is very limited. In a survey performed in Nigeria, 254 women were randomly assessed and asked about knowledge of cervical cancer [10], only 15% had ever heard of cervical cancer and even less knew about cervical screening. Ever since the concept of cervical smears was first described by Papanicolaou and Traut in 1941, both the incidence and mortality of cervical cancer have markedly decreased in most developed countries, mainly due to effective screening programmes [11].

Although there is overwhelming evidence that cervical cancer today is almost totally preventable to a large extent through screening and treatment of premalignant lesions, the service is unfortunately not readily available to the general population in most developing countries, including Kenya [12, 13].

Despite the advances that have been made, a recent study showed that cervical cancer is still a common cause of death in Africa and South-Central Asia. However non-cancer related deaths due to acquired immunodeficiency syndrome and tuberculosis have overshadowed cervical cancer awareness by the public at large [14].

Much of the recent research into women's knowledge of cervical cancer and screening has been conducted either in developing countries [15, 16, 17, 18] or among ethnic minorities in developed countries [19, 20, 21, 22]. Such studies usually identify low levels of knowledge, which, it is believed, contribute to low rates of screening uptake in these populations.

## **Materials and Methods**

### **Study site**

Kasarani Constituency is an electoral constituency located within Nairobi, which is the capital city of Kenya. It consists of northern and northeastern areas of Nairobi. Kasarani constituency has common boundaries with Kasarani Division of Nairobi. The entire constituency is located on the northern side of Nairobi County. The constituency has an area of 86 km<sup>2</sup>. The division has 25 public primary schools with approximately 600 teachers, from where the study participants were drawn.

### **Study population**

The study targeted all female teachers in public primary school within Kasarani Division, and those who agreed to participate after giving their informed consent.

### **Study design**

A cross-sectional study design was used which adopted quantitative approach through self-administered questionnaires.

### **Ethical considerations**

Ethical approval to carry out the study was obtained from the, the Scientific Steering Committee (SSC) and Ethical Review Committee (ERC) committees of Kenya Medical Research Institute. Only those participants who gave their personal and written consent were allowed to participate in the study.

### **Sample size and sampling technique**

The approximate number of female primary school teachers in Kasarani Division was 450 in the public schools was determined through records from Kasarani District Education Office, and the appropriate sample size for the study was calculated using Fisher's formula, based on 95% confidence interval and assuming the awareness of cervical cancer of 50%, as no data from previous studies among a similar population was available. Minimum sample size required was determined to be 384. All the 25 public primary schools were included in the study. A list of the number of female primary school teachers in the public schools was obtained from the Kasarani Division Education Office from the officer of the District Education Officer. Systematic random sampling was done, whereby the names of the female primary school teachers from each school were listed and numbered. From the list, every third teacher was approached; the next one was approached if the previous one declined to participate in the study. This was repeated until the required sample size was obtained. An average of 20 female teachers were picked from each school to fill the questionnaire. The selected teachers were requested to participate in the study, and upon giving written informed consent, questionnaires were administered to the participants.

### **Data collection**

Data was collected using a structured questionnaire which contained close ended and open-ended questions. The questionnaire was self administered by the respondent upon giving a written informed consent. The questionnaire contained questions on sociodemographic characteristics, individual level and health seeking characteristics which included; knowledge about cervical cancer, Pap smear testing, previous screening history, and knowledge of the risk factors associated with cervical cancer, personal perception of risk of developing cervical cancer and the source of information about the Pap test. The questionnaire was administered in English which is the favored medium of teaching and communication in Kenya.

The school authorities were approached in advance and they were requested to give a specific day on which the

questionnaires will be administered. On the selected day the participating female teachers were requested to meet in a specified room. This was done to ensure that there was minimal cross discussion among the teachers in order to avoid invalid, unreliable or biased responses. The teachers were requested to participate in the study and fill in the questionnaire; the exercise took about 15 minutes. The participating teachers were assured of anonymity, and confidentiality of the information they provided, in order to ensure that they gave honest and correct responses.

### Data analysis

Data was analyzed using Statistical Package for Social Sciences (SPSS) version 12.0. Descriptive analysis were done by developing frequency tables and charts while inferential analysis was done using the Chi-square ( $\chi^2$ ) test to establish the relationship between awareness of cervical cancer risk factors and practice of Pap smear testing. Test of significance was based on 95% confidence interval and *P* value of < 0.001.

### Results

Fourty one percent (159) of the women were in age groups 40–49 years, and 30–39 years 34% (129) while those in the age groups 20–29 years and 50–59 years contributing 17% (65) and 7% (30) respectively (Table 1). Only one woman was over the age of 60. Overall the mean age was 38 years. Sixty nine per cent (263) of the teachers were married, 19% (74) single, 4% (15) divorced/separated, and 4% (15) were cohabiting, while 5% (17) were widowed (Table 1). Seventy six per cent (289) of the teachers had a college diploma that is, while 21% (82) had acquired University degrees, and only 3% (13) had Kenya Certificate of Secondary Education as their highest level of education (Table 1).

**Table 1: Socio-demographic characteristics of respondents**

Variables	N=384	%
<b>Age in years</b>		
20-29	65	17
30-39	129	34
40-49	159	41
50-59	30	7
60+	1	1
<b>Marital status</b>		
Single	74	19
Cohabiting	15	4

Married	263	69
Divorced/separated	15	4
Widowed	17	5
<b>Education level</b>		
University degree	82	21
College diploma	289	76
Secondary certificate	13	3

### Awareness about cervical cancer and Pap smear test

Eighty seven percent (334) of the respondents had heard about cervical cancer while 13% had never heard of cervical cancer. Majority of the respondents 75% (288) knew about the Pap smear test and only 25% (9) did not know about the test (Table 2)

**Table 2: Knowledge of cervical cancer and Pap smear test**

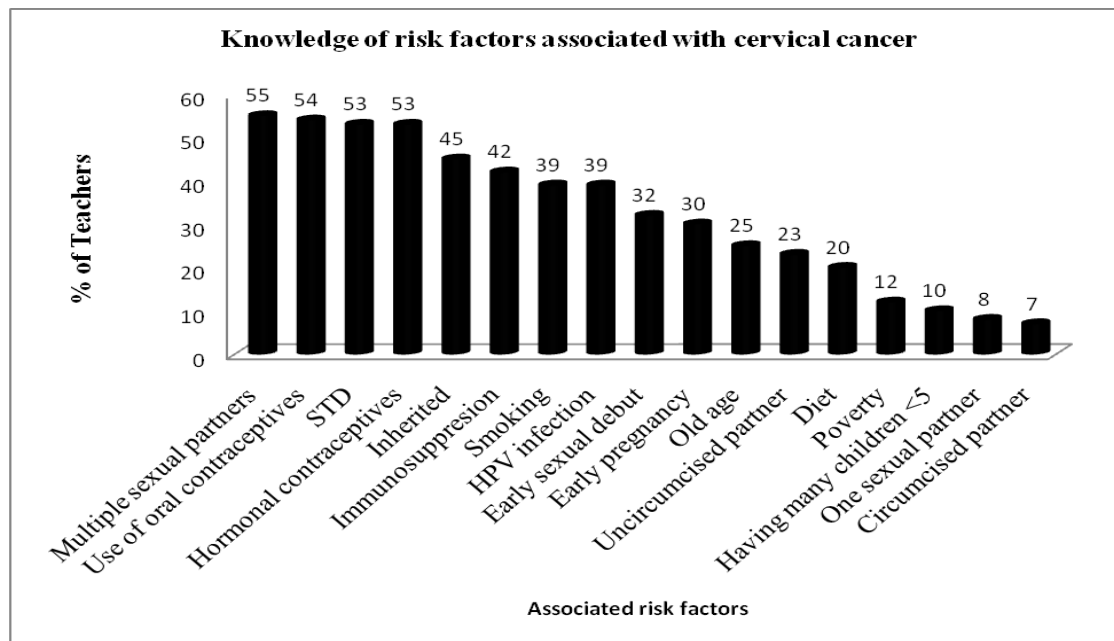
Variables	N=384	%
<b>Ever heard of cervical cancer</b>		
Yes	334	87
No	50	13
<b>Know Pap smear test</b>		
Yes	290	75
No	94	25

### Knowledge of risk factors associated with cervical cancer

Among the respondents 55% (211) of them identified having multiple sexual partners as a risk factor that could lead to the development of cervical cancer (Figure 1). An almost similar number 54% (207) identified use of oral contraceptive as a factor that could lead to cervical cancer development. Similarly 53% (204) identified presence or history of sexually transmitted diseases and use of hormonal contraceptive (injectables) as risk factors. Other risk factors that were identified by less than half of the respondents included: inherited disease from family 45% (173), Immunosuppression of immune system 42% (161), smoking 39% (150), early sexual debut 32% (123), and early pregnancy 30% (115). Twenty five per cent (96), 23% (88) and 20% (77) of the respondents thought that old age, having an uncircumcised partner and diet respectively could put one at risk of developing the disease. While 12% (46) of then thought that poverty could put one at risk, similarly 10% (38) identified having many children (more than five) as a risk factor, 8% (31)

thought that having one sexual partner could put one at risk, and 7% (27) of them thought that having a

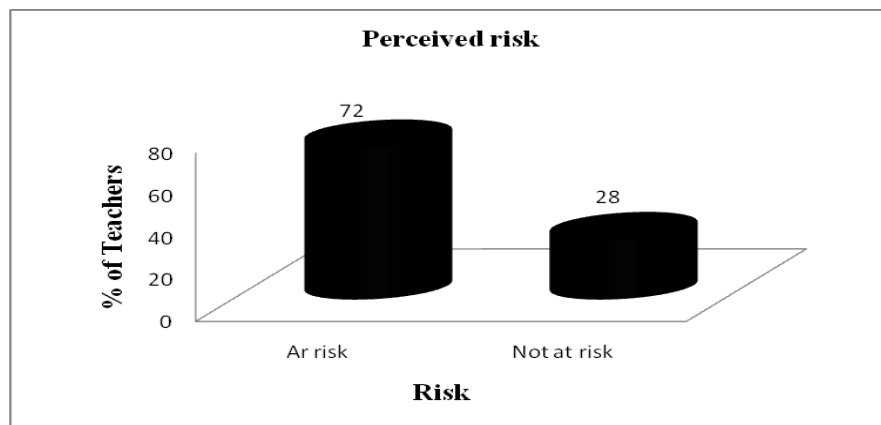
circumcised partner could still put a woman at risk (Figure1).



**Figure 1: Knowledge of risk factors associated with cervical cancer**

### Practice of Pap smear testing

Among the all respondents only 41% (158) had ever gone for a Pap smear test, while 59% (226) had never had a Pap smear test (Figure 2).



**Figure 2: Practice of pap smear testing**

### Reasons for going for a Pap smear test and frequency of testing

The mean age at which the respondents went for the first Pap smear was 34 years. Among those who had ever gone for a Pap smear test, majority had the Pap smear test done as a preventive measure 49% (63) while 25% (39) did the Pap smear test because their doctor recommended they do the test. To 21% (34) it was done for diagnostic purposes,

while 14% (22) heard about the test and decided to go for the test. Among those who had done the Pap smear test, 47% (75) had done the test only once, 21% (33) had done it more than three times. It had been performed twice to 19% (30), while only 13% (20) had done the test three times.

The time of performing the last test was more than 5 years ago to 26% (38) and 3 years ago for 13% (21) of



them. Among them, 24% (39) had their last test done 1 year ago. Others, 18% (28), had the last test 2 years ago while a similar number had the last test done less than a year ago.

**Table 3: Reasons for going for a Pap smear test and frequency of testing**

Variables	N=158	%
<b>Reason for doing Pap smear:</b>		
Preventive measure	63	49
Diagnostic measure	34	21
Heard about it	22	14
Doctor's recommendation	39	25
<b>Number of times tested:</b>		
Once	75	47
Twice	30	19
Three times	20	13
More than three times	33	21
<b>Time of last test:</b>		
Less than 1 year ago	28	18
One year ago	39	24
Two years ago	28	18
Three years ago	21	13
More than five years ago	38	26
Don't remember	4	1

**Reasons for the women not having done a Pap smear test**

Among the 59% (226) respondents who had never had a Pap smear performed, 37% (84) of them did not know about the test. To 15% (33), they did not know where to go for the test while for 12% (25) the test was too expensive. According to 11% (24), they did not feel sick so they didn't have to go for the test, and 10% (23) felt embarrassed to go for the test. The test was unnecessary for 8% (19), while 7% (18) didn't have time to go for the test (Table 4).

**Table 6: Mantel-Haenzel test for confounding and effect modification**

	Ever had a Pap smear test		Adjusted Odds Ratio	Lower 95%CI	Upper 95%CI	P value
	Yes n (%)	No n (%)				
<b>HPV virus</b>						
yes	137(41)	11(22)	1.03	0.56	1.90	0.9147
no	197(59)	39(78)				

**Table 4: Reasons for not having done a Pap smear test**

Variable	N=226	%
Don't know about test	84	37
Don't know where to go for test	33	15
Think it's not necessary	19	8
Feel embarrassed	23	10
It's too expensive	25	12
I don't feel sick	24	11
I don't have time to go	18	7

**Association between awareness of cervical cancer and having a Pap smear test**

There was a crude association between awareness of cervical cancer and having a Pap smear with 1.04 increased odds of having a pap smear if women were aware of cervical cancer although this association was not significant P= 0.9 (Table 5).

**Table 5: Association between knowledge and practice**

Done Pap smear	Ever heard of cervical cancer		Crude OR	Lower 95%CI	Upper 95%CI	p value
	Yes n (%)	No n (%)				
Yes	137 (41)	21 (42)				
No	197 (59)	29 (58)	1.04	0.57	1.90	0.895

**Bivariate analysis for association between awareness of cervical cancer risk factors and practice of Pap smear testing.**

Confounding and effect modification was tested for all the risk factors using the Mantel – Haenzel Method and none of the factors were found to have an effect on the crude association (Table 6).



<b>Having many children &gt;5</b>						
yes	32(10)	4(8)	1.05	0.57	1.92	0.8842
no	302(90)	46(92)				
<b>Sex at early age</b>						
yes	109(33)	15(30)	1.05	0.57	1.91	0.8856
no	225(67)	35(70)				
<b>Smoking cigarettes</b>						
yes	131(39)	19(38)	1.04	0.57	1.89	0.898
no	203(61)	31(62)				
<b>Contraceptives "pill"</b>						
yes	183(55)	24(48)	1.03	0.57	1.88	0.9194
no	151(45)	26(52)				
<b>Weak immune system</b>						
yes	141(42)	22(44)	1.05	0.57	1.91	0.8852
no	193(58)	28(56)				
<b>Inherited from family members</b>						
yes	147(44)	24(48)	1.03	0.56	1.90	0.9117
no	187(56)	26(52)				
<b>Diet</b>						
yes	59(18)	16(32)	1.04	0.57	1.91	0.8984
no	275(82)	34(68)				
<b>STDs</b>						
yes	182(54)	20(40)	1.05	0.57	1.92	0.8808
no	152(46)	30(60)				
<b>Old age</b>						
yes	83(25)	13(26)	1.04	0.56	1.91	0.9079
no	251(75)	37(74)				
<b>Multiple sex partners</b>						
yes	189(57)	21(42)	1.06	0.58	1.94	0.8528
no	145(43)	29(58)				
<b>One sex partner</b>						
yes	28(8)	4(8)	1.04	0.57	1.91	0.89
no	306(92)	46(92)				
<b>Early pregnancy</b>						
yes	100(30)	16(32)	1.04	0.57	1.91	0.8936
no	234(70)	34(68)				
<b>Circumcised male partner</b>						
yes	21(6)	6(12)	1.01	0.55	1.87	0.9653
no	313(94)	44(88)				
<b>Uncircumcised male partner</b>						



yes	73(22)	15(30)	1.05	0.57	1.92	0.88
no	261(78)	35(70)				
<b>Use of contraceptives</b>						
yes	175(52)	29(58)	1.05	0.57	1.92	0.8772
no	159(48)	21(42)				

### Multivariate Analysis

Since there was no confounding effect modification, a multivariate model was built to determine prognostic risk factors for having a pap smear amongst women who were aware of cervical cancer. A stratified analysis using Mantel-Hanszel methods was carried out to identify or control for any confounding. Crude stratum specific and adjusted odds ratios with their corresponding 95% confidence intervals and significance levels are presented (*presented above as the bi-variate analysis*). Variables

whose p values were <0.05 and those identified from literature as possible confounding factors were taken further into the multivariate model that was built incrementally by adding one explanatory variable at a time and likelihood ratio test (LRT) was used to determine the most stable model. A LRT of <0.05 was used as the cut-off for determining factors that predicted the likelihood of having a pap smear amongst women who were aware of cervical cancer (Table 7).

**Table 7: Multivariate model for knowledge of risk factors for cervical cancer that determine Pap smear testing**

		Odds ratio	Lower 95%CI	Upper 95%CI	P value
<b>Done pap smear</b>					
	yes	0.99	0.54	1.84	0.985
	no	(base)			
<b>HPV virus</b>					
	yes	2.26	1.11	4.62	0.025
	no	(base)			
<b>Diet</b>					
	yes	0.41	0.21	0.82	0.011
	no	(base)			
<b>STDs</b>					
	yes	1.96	1.04	3.69	0.037
	no	(base)			

After successful interactions, age and age of the woman at the birth of the first child were the main socio demographic predictor factors for pap smear testing with a LRT of 0.03 and an increased odds of 1.2 (CI 0.7 – 2.4). This was although this was not significant (p – value 0.9)

HPV, diet and sexually transmitted infections were the predictor factors for the risk factors for the pap smear testing with LRT of 0.02 and odds of 1(CI 0.5 – 1.8). This was although not significant (p – value 0.9), (Table 9).



**Table 8: Multivariate model for socio-demographic factors that predict Pap smear testing**

Variables	Odds ratio	Lower 95%CI	Upper 95%CI	P value
<b>Done pap smear</b>				
yes	1.24	0.65	2.35	0.517
no	(base)			
<b>Age group</b>	0.69	0.45	1.06	0.089
<b>Age at first birth</b>				
15-20 years	(base)			
Above 21 years	4.04	1.89	8.62	0
No child	6.26	1.43	27.48	0.015

## Discussion

It has been observed that the risk of developing cervical cancer is high for most women in the third world due to peculiar socio-economic characteristics including poverty and illiteracy [23]. Others are low prevalence of condom use, high parity and poor utilization of screening facilities [23]. This study shows that the risk factors for developing the disease are also prevalent among the female primary school teachers.

In many developing countries, women's knowledge of cervical cancer is very limited [24]. It has been demonstrated that the vast majority of women in some countries had not heard of cervical cancer and even more knew nothing about cervical screening [10, 25]. However this study had contrasting results whereby the majorities were aware of cervical cancer and Pap smear test. The awareness about cervical cancer was 87% among the teachers. This high awareness level could be attributed to the study population being in an urban setting and therefore have access to many forms of information through different avenues. This study further sought to find out if the respondents knew what a Pap smear test is, and 75% said they knew about Pap smear.

There are several studies showing that knowledge about cervical cancer and Pap testing influences uptake of cervical cancer screening services [26, 27]. This was especially true among Jordanian women where about 80% of those interviewed knew cervical cancer could be detected, only 30.9% referred to the Pap test as a means of prevention [24]. This gap in knowledge is one of the most important determinants of inadequate screening status. Many studies have shown that cervical cancer and Pap testing awareness positively influence the utilization of cervical cancer screening services [28, 29, 30].

One should therefore, consider improving public awareness of the program to further their knowledge by

educating women about risk factors and benefit of screening using Pap smear test. The role of media campaign should be considered as these are known to work best in promoting cervical cancer screening when multiple media are used [31]. Furthermore, improving the acceptability of screening to women by providing accessible, accurate information, reduce waiting times during screenings, results and treatment that are more acceptable. It seems that the discrepancy between developed and developing countries concerning rates of incidence and mortality of cervical cancer is paralleled by a similar discrepancy regarding education and knowledge of cervical cancer and its prevention is another reason for poor uptake [24].

High coverage of women at risk of cervical cancer is a key element in achieving a successful screening programme [32]. Since cervical cancer can be present for several years before the onset of symptoms, the most widely recognized early detection procedure is the Pap test, which involves the microscopic examination of cells from the cervical area. The Pap test can accurately and inexpensively detect up to 90% of cervical cancers even before symptoms develop, with the result that the mortality associated with this type of cancer has been reduced by more than 50% since Pap tests were introduced in developed countries [33].

Since the introduction of the Pap test as a screening method, the incidence of invasive cervical cancer in countries where the majority of women receive regular screening has decreased by more than 70% over the past 5 decades [34]. In contrast, some are still falling short of the objective of other countries that, by the year 2010, over 90% of all women will have had one cervical smear test within the preceding 3 years [35].

Among the 41% of the teachers who reported to have ever had a Pap smear test done, only 21% of them had done the test more than three times and majority had done



the test only once. This shows that the frequency of practice is not adequate as recommended. When asked when they had their last test done a majority 26.6% said they had done their last test more than five years ago, and 24.7% said they had their last test one year ago. These results indicate a worrying trend because it is recommended that the test to be done at least every year, but it seems that once they find out that the results are normal the women do not go for further test, therefore there is need to emphasize the importance of regular testing to women in order for there to be early diagnosis and treatment of the disease in its early stages. The American Cancer Society recommends that women should begin annual screening for cervical cancer with the Pap test at the age of 18, or after the onset of sexual activity, whichever comes first. After three consecutive negative Pap tests, screening can be performed less frequently at the discretion of the physician [36]. Most of the reasons give by the respondents' show that more needs to be done to show the importance of women going for the test, most of the women knew about the test but to report that they did not know where to go for the test is worrying.

Some other factors reducing women's participation in cervical screening programs include poor awareness of the indications and benefits of the cervical smear test; lack of knowledge of cervical cancer and its risk factors, fear of embarrassment, pain, or cancer; anxiety caused by receiving an abnormal cervical smear result; and poor understanding of cervical screening procedures [37, 38]. Women may face multiple barriers, including a lack of trust in attitudes towards cancer, and a general rejection of the pelvic exam [39, 40]. In some communities the barriers have been from male opposition to women seeking medical attention out of ignorance and suspicion. Public health researchers have been quite categorical in their views that regular Pap smears can detect invasive disease early and improve the odds for successful treatment. Countries such as Denmark and Sweden have reported a 60% decrease in cervical cancer morbidity and mortality with nationwide Pap test programmes [41]. Unfortunately, only 5% of women in developing countries have access to Pap tests, compared with 50% in developed countries such as the USA where it is mainly the poor and minority women who have insufficient access due to inadequate health insurance [41]. In a recent report, it is shown that only 5% women in low income countries have undergone a Pap smear test [42].

Despite the best efforts to screen for cervical cancer by Pap smear or VIA methods, their impacts of preventing

cervical cancer will be minimal unless there is enough knowledge and compliance of women to be screened [43, 44]. In developed countries, infrequent uptake of cervical smear tests is more often recorded among women who are older, poorer or from minority backgrounds [45]. Furthermore, demographic factors such as age, education and ethnicity, and sociopsychological factors such as social class, personality, embarrassment, fear and lack of health insurance, and also structural factors such as beliefs, attitude and knowledge about the disease and the smear test have been documented as determinants of an individual's participation in cancer screening [46, 15]. It is important that cervical cancer screening programmes are affordable, accessible, and considered appropriate by the target population. To attend the programme, women have to be aware both of the disease and of the means of early detection and prevention.

As to the accuracy of this survey, the possibility of overestimation should be taken into account. It has previously been shown that self-reports overestimate participation in cervical cancer screening [47]. Some of the women may not have been able to distinguish between pap smears, pelvic examination and vaginal swab, and this may also have led to overestimation. Examining the agreement between health care provider records and patients' self-reports, it has been found that women overestimate the number of smears taken in previous years and how recently they had a Pap test [48]. The women who were aware of HPV infection, diet, and history of sexually transmitted infections as risk factors were more likely to go for a Pap smear test although the association was not significant. In a study conducted among patients at Kenyatta National Hospital in Nairobi, Kenya the multivariate analysis revealed that, previous Pap smear testing was significantly more likely if the patient had cervical cancer (AOR 1.5) or was aware about cervical cancer (AOR 2.1). [17]. Patients with some education (AOR1.9) or those who had used family planning (AOR 2.4) and condoms (AOR 1.9) were also significantly more likely to have had a Pap smear in the past. Patients greater than 35 years old were also more likely to have been screened for cervical cancer [17]. However, perception of risk of cervical cancer was not associated with history of previous Pap smear testing (OR 1.3, P=0.334) [17].

Accurate knowledge of the risk factors for cervical cancer may not be a guarantee for screening service uptake; it may inadvertently work against service uptake [49]. Fears stemming from negative images of cancer and gynecological care determine whether women will go for



screening. In this study some of the respondents thought that cervical cancer has no cure, that it just occurs and hence cannot be prevented, it such sentiments that prevent women to go for screening since they have misconceptions about cancer in general. Women interviewed in a variety of countries reported having powerful and quite frightening images of cancer. These fears may contribute to a woman's reluctance to get screened. Images are associated with words such as "devour or eating", "putridity", or "plague" [50]. The findings suggest, however, that knowledge alone is not the major factor determining whether a woman will go for cervical screening.

### Conclusion

The study shows that there is no correlation between awareness of cervical cancer risk factors and practice of Pap smear testing, knowledge of the phenomenon does not translate into action. Therefore there are more underlying reasons as to why women do not go for screening despite knowing the benefits.

### Recommendations

The first step in cervical cancer prevention is through public education. An aggressive campaign with in depth teaching about cervical cancer including its existence, risk factors, and methods of prevention by radio or by health care providers, mainly general practitioners, should be conducted. Consequently, numerous lives could be spared. We hope to see declining death rates from cervical cancer during the next decade.

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