Cervical cancer prevention practices amongst flower farm workers in Naivasha, Kenya

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Abstract

Background: WHO estimates that every year 500,000 cases of cervical cancer are diagnosed each year worldwide representing 12% of all cancers in females, and more than half of them die from it. Regular screening for cervical cancer with PAP smears or VIA/VILI has been shown to reduce the risk of cervical cancer development. Workplace cervical cancer education and screening have been identified as useful prevention interventions.

Objectives: To assess the current knowledge of cervical cancer, attitudes and practices towards cervical cancer screening among the flower farm workers in Naivasha, Kenya.

Design: This was a descriptive cross-sectional study.

Methods: A random sample of 391 flower farm workers in five farms in Naivasha were interviewed using a standard questionnaire. Knowledge about cervical cancer, attitudes towards cervical cancer screening and practices regarding screening were measured.

Results: Of the 391 respondents, 32.2% were aware of cancer of the cervix, 72.2% of these knew that the disease is preventable. Fourty five point five percent associated cervical cancer causation with multiple sexual partners and HPV infection. Only 3.3% were aware of HPV vaccine. Seven point two percent of the female respondents had ever been screened for cervical cancer and of these 78.6% were screened within the past 1 year. Fourty six percent were screened voluntarily (own request) and another 46% were screened on providers' advice. Of the male respondents, only 25% had partners who had ever been screened.

Conclusion: The knowledge of cervical cancer and prevention by screening was low amongst the flower farm workers. The screening rate amongst the workers was very low. The findings of this survey warrant a very strong recommendation for the setting-up of workplace policies and mechanisms for cervical cancer education, screening and prevention interventions.

Keywords: Cervical cancer, Awareness, Prevention, Workplace

Introduction

Worldwide, cancer of the cervix whose etiology is Human Papilloma Virus (HPV) ranks as the second most frequent cancer among women between 15 to 44 years of age (1-3). It is estimated that 500,000 cases of cervical cancer are diagnosed each year worldwide representing 12% of all cancers in females, and more than half of them die from it (4, 5). Cervical cancer affects women of all races throughout their reproductive life and post reproductive period. Factors contributing to high risks of cervical cancer in Kenyan women include; multiple pregnancies, early age of first intercourse, hormonal contraceptives, smoking and HIV infection (6,7).

The natural progression of HPV infection to cervical cancer takes 10 to 15 years to develop. The early phase of the disease may be asymptomatic and may exist in a reversible phase of surface or *in situ* disease for many years. The precancer stages are detectable by currently available screening methods such as Pap smear and visual inspection with acetic acid (VIA) and are treatable (2,8-11).

There is clear evidence that cervical cancer screening programs are effective in reducing morbidity and mortality from the disease (12-17). Cancer prevention awareness in developing countries is low and most patients seek consultation only at advanced stages (14,15,17). Kenya, like most African countries is still feeling the burden of cervical cancer. Despite the magnitude of the problem in Kenya and the fact that it is easily preventable, the cervical cancer screening coverage in Kenya for all women 18 to 69 years of age is only 3.2% (18). The implementation of effective national screening program is still low, haphazard and opportunistic in low resource settings such as in Kenya and other sub-Saharan Africa countries. (15,18).

The workplace has become an increasingly important site for disseminating health information and implementing health promotion activities, including cancer screening. In this line Kenya adopted HIV /AIDS workplace programs which are being implemented to-date (19). However few studies have focused on the benefits and effectiveness of worksite programs for cervical cancer screening.

The objective of this study was to assess the current knowledge of cervical cancer, attitudes and practices towards cervical cancer screening and to identify socio-demographic variables affecting cervical cancer screening among the flower farm workers in Naivasha, Kenya.

Materials and Methods

Study design: This was a descriptive cross sectional survey.

Study area: This was conducted in five flower farms (Karuturi, Van Den Bergh, Finlays, Wildfire and Nini's) in Naivasha area , Nakuru County, Kenya. In Kenya the

flower farms employ up to 10,000 workers most of who live within the farms. Naivasha hosts 85% of the flower farms in the country (20). Each of the flower farms has established health facilities that provide various levels of medical services to the workers and their families; out-patient, in-patient, preventive and curative.

Study period: The study was conducted in Naivasha in the month of October 2012.

The study population: All farm workers above 18 years of age who were willing and consented to participate in the study were recruited. Those below the consenting age of 18 years and those who had been in employment in the farms for less than a month were excluded from the study.

Sampling frame: Fifty registered flower farms in Naivasha were listed and formed the sampling frame. These were stratified into 2 categories; residential and non-residential. A random selection of two farms from the residential and three farms from the non-residential were selected for the study accounting for 10% of the farms.

Sample size: The sample size for the study was calculated using Fisher's formula,

$$N = \frac{Z^2\, p(1-p)}{F^2}$$

Where N = required sample size, Z = Confidence level at 95% (standard value of 1.96)
P = estimated awareness of cervical cancer of 80%, and F = margin of error at 5% (standard value of 0.05).

$$N = \frac{1.96^2 \times 0.8(1-0.8)}{0.05^2}$$

N = 246

A minimum sample of 271 flower farm workers in five farms (Karuturi, Van Den Bergh, Finlays, Wildfire and Nini's) was targeted, however 391 flower farm workers participated in the study.

Data collection: The subjects were interviewed using a standard structured questionnaire to gather information on their knowledge, attitudes, behaviour and practices on matters related to cervical cancer

Data analysis: Data was keyed in an access database and exported to Statistical Package for Social Sciences (SPSS) version 17 for data analysis. The data was validated and analyzed. Means, standard deviations, range and median were determined for continuous data. Proportions were compared between groups using Chi-square for categorical variables. Level of significance was given at 0.05.

Ethical consideration: Ethical clearance was obtained from the National Council for Science and Technology. Permission to interview the workers was granted by the management of the respective flower farms. The questionnaire was administered on those willing to take part with full disclosure of the study purpose and confidentiality of all information obtained. There was no coercion or enticement to participate in the study. Names of the interviewees were not recorded for the study.

Results

Socio-demographic characteristics of the respondents: Of the 391 respondents who participated in the study, 204(52.2%) were female and 187 (47.8%) were male. The mean age (range) of the respondents was 30 (18-50) years, majority of them had up to secondary level education and were working as general workers on casual terms. The mean (median) monthly income in Kenya shillings was 10,837 (US $ 127) Mean (range) age at first coitus for the respondents was 18.39 (10 -28) years (Table 1).

Table1: Some socio-demographic characteristics of flower farm workers in Naivasha 2012

Demographic characteristic	No.	(%)
Sex		
Female	204	52.2
Male	187	47.8
Marital status		
Single	97	24.8
Separated/divorced/widowed	41	10.5
Married	253	64.7
Highest level of education		
Pre-primary	6	1.5
Primary	109	27.9
Secondary	233	59.6
Vocational college	30	7.6
University	13	3.3

Figure 1: Awareness of reproductive tract cancers amongst flower farm workers in Naivasha 2012
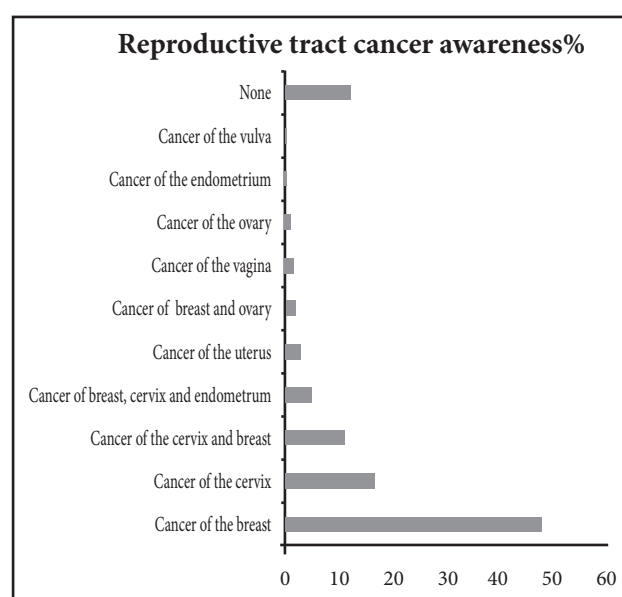
The reproductive tract cancer that more respondents were aware of was cancer of the breast 48.1% followed by cancer of the cervix. Twelve percent of the respondents were not aware of any reproductive tract cancer (Figure1).

Figure 2: Sources of information about female reproductive tract cancers amongst flower farm workers in Naivasha
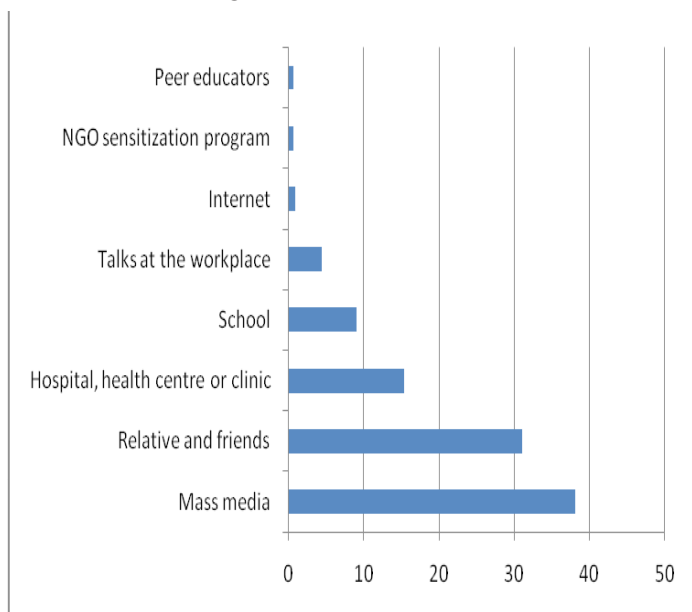
Their main sources of information on reproductive tract cancers were mass media, relatives and friends. Information from health facilities was 15.4% and talks at workplace accounts for 4.4% (Figure 2).

Relationship between respondents' variables and awareness of the cancer of the cervix: Of all the respondents 32.2% had ever heard of cancer of the cervix, of these more female than male respondents had heard of cancer of the cervix (Table 2).

Table 2: Relationship between awareness of the cancer of the cervix and socio-demographic variables of flower farm workers in Naivasha 2012

| Variables	Awareness of cervical cancer (%)	X^2	df	P-value
Gender				
Female	24.3			
Male	13.6	13.7	1	<0.05
Level of education				
Pre-primary	50			
Primary	23.9			
Secondary	37.8			
Vocational	66.7	32.13	4	0.003
University	84.6			
Marital status				
Single	24.8			
Ever married	75.2	8.58	1	0.003

The level of education had a significant impact on awareness of cancer of the cervix with those with primary education and below having low awareness of 50% and below compared to 84.6% in those with university education. Awareness was also higher in the ever married compared to the singles. The average monthly income of those aware of cervical cancer was Ksh. 16147 (US$190) compared to Ksh. 8312 (US98) in those unaware of the disease.

Figure 3: Awareness of conditions associated with causation of cancer of the cervix amongst flower farm workers in Naivasha 2012
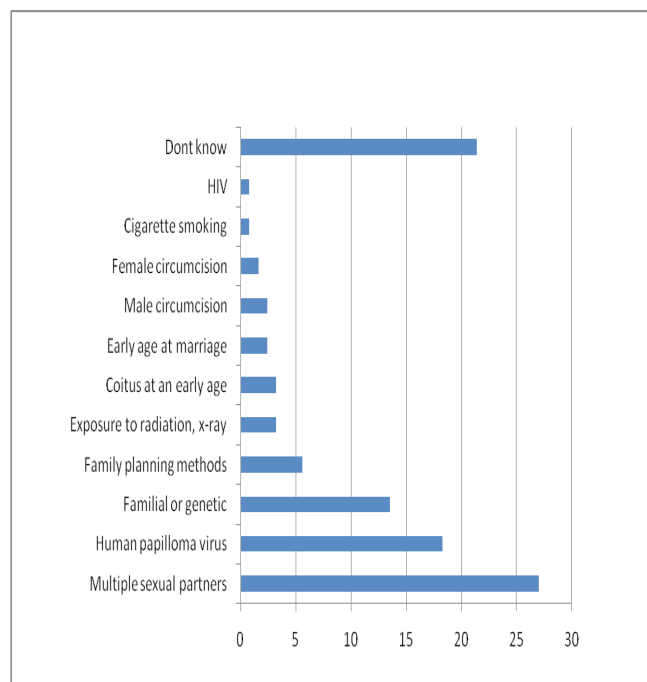
Forty five point five percent associated cervical cancer causation with multiple sexual partners and HPV infection while 21.4% of them did not know any risk factor. 72.2% of these knew that cervical cancer is a preventable disease(Figure3).

Figure 4: Cervical cancer prevention knowledge amongst flower farm workers in Naivasha 2012
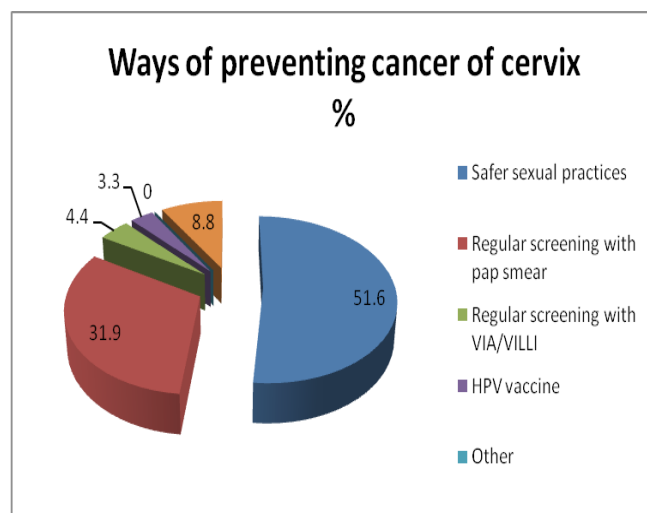
Only 3.3% were aware of HPV vaccine (Figure 4). Twenty four point seven percent of the respondents had more than one sexual partner and 46.7% had extramarital sex in the preceding one year. Only 67.7% used a condom in their last extramarital relationship. Awareness of cervical cancer was higher in those with single sexual partners compared to those with multiple partners but not statistically significant (p=0.15). Fifty four percent of the female respondents and 37% of the

male respondents recommended screening for cervical cancer in women of all age groups. Only 2.6% of the females and 2.1% of the males stated the recommended age range of 21-65 years for screening.

Cervical cancer screening was at 7.2% amongst the female respondents, and of the male respondents only 25% had partners who had ever been screened. Of those screened 78.6% were screened within the past one year and 46% were screened voluntarily (own request) and another 46% were screened during a family planning clinic on provider's advise. Up to 96.2% of those screened would recommend someone for cervical cancer screening. Only one lady had ever been vaccinated against cervical cancer. The main reasons advanced by the respondents for not screening for cervical cancer included; lack of sensitization (42%), not knowing where to access the service (18%) and lack of money to pay for the service (12%). Majority (49.7%) of the respondents preferred a public health facility for screening cancer with only 5.1% preferring the company/workplace facility.

HIV/AIDS and cervical cancer screening: All the respondents were aware of HIV/AIDS with 86.4% of them having had an HIV screening test. Of these only 39.7% were aware of cervical cancer which is comparable with 32.2% awareness in all respondents (p=0.331). Of those who had HIV screening test 40% had a cervical cancer screening test too, and of all who have been screened for cervical cancer 89.5% had an HIV screening test.

Discussion

At 32.2% the awareness of cervical cancer and prevention by screening was low amongst the flower farm workers in Naivasha. Female respondents were more aware of the disease than the male respondents, thus the need for more male involvement in matters of reproductive health. The higher awareness noted in the ever married compared to the singles, isolates non-married people as a special target for cervical cancer and reproductive health education.

The level of formal education had an influence on the awareness about cervical cancer. The study established a high prevalence of risk factors for cervical cancer among the flower farm workers including; early age at coital debut, multiple sexual partners, extra-marital sex and low condom usage. These may be tied to the low level of awareness on causation of cervical cancer with 21.4% not being able to identify any known causal factor. The main sources of information on reproductive tract cancers were mass media, relatives and friends. Information and talks at workplace accounts for only 4.4 %. This is despite the workplace being recognized as an important site for the dissemination of health information and implementing health promotion activities (19).

The flower farm workers awareness of HIV/AIDS was higher than of cervical cancer. This is also reflected in the high HIV screening rates amongst the workers. This could be attributed to the implementation of HIV/AIDS workplace policies and programs in all the participating farms. Unlike for HIV/AIDS the workplace has not been exploited adequately for cervical cancer screening and prevention. The health workers working in collaboration with farm workers with knowledge on cervical cancer screening can improve on voluntary screening. The integration of cancer screening and prevention interventions, into other workplace health programs should be encouraged and implemented. The government through the existing national cervical cancer prevention screening program needs to develop the essential infrastructural and manpower requirements for cervical screening in the workplace.

The cervical cancer awareness amongst the flower farmers is is quite low compared to findings from a study in Nairobi amongst female teachers in public primary school that revealed that 87% of the women were aware about cervical cancer (21) and 51% among patients at Kenyatta National Hospital (KNH) (22). At 7.2% the cervical cancer screening rates amongst the female respondents was low compared to 22% reported at KNH (7). The cervical cancer screening being undertaken is opportunistic and provider initiated for the most part. The main reasons given for not having the test were: not sensitized about it, do not know where to access the service and fear of expense. Importantly however, majority of those screened would recommend someone for cervical cancer screening. Only 5.1% of the respondents preferred the company/workplace health facility for cervical cancer screening. Whereas it was not possible to establish the reason behind this in this study, issues of stigma and privacy may play a deterring role.

This study reveals that this worksite has not been adequately covered in cervical cancer education, screening and prevention interventions. This situation could be the same in most flower farms and other agricultural plantations spread out in the country.

Conclusion

This study established that the knowledge of cervical cancer and prevention by screening was low amongst the flower farm workers. There existed high risk behaviour for developing cervical cancer and yet the screening rate amongst the workers was very low. It is necessary to set-up workplace policies and mechanisms for cervical cancer education, screening and prevention interventions. Health education and promotive services touching on cervical cancer amongst other conditions at the workplace targeting both male and female workers should be intensified.

Further studies are recommended to assess the benefits and effectiveness of worksite programs for cervical cancer screening compared to alternative approaches outside the workplace.

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