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Original Research Article

Awareness about cervical cancers among health workers in Shimla district, Himachal Pradesh, India

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ABSTRACT

Background: Cervical cancer, although largely preventable, remains the most common cause of cancer mortality among women in low-resource countries. Aim of this study was to assess knowledge and awareness of cervical cancer prevention among health workers in Shimla district, Himachal Pradesh.
Methods: A cross sectional study was conducted among multipurpose health care workers (both males and females) in Shimla district, Himachal Pradesh. A self-administered close ended questionnaire was used. The questionnaire, consisted of two parts. The first part comprised of questions relating to demographic data and the second part had questions on knowledge about cervical cancers. The data was analyzed using the statistical analysis program SPSS version 16.0. Tests used were Chi square, t test and ANOVA. A p-values <0.05 were considered statistically significant.
Results: Out of 122 subjects, there were 45 (36.9%) males and 77 (63.1%) females. The mean knowledge percent of the population was 55.9+16.4. Among the age groups it was highest for the age group of 21-30 years (62.5+23.6) and lowest for the age group of 51-60 years (53.6+16.4). Knowledge about risk factors was correctly reported by 44.3% of population. Who should be screened for cervical cancers was reported correctly by 29.5% and at what interval screening should be done was reported by 14.8%.
Conclusions: Half of the population had moderate overall knowledge about cervical cancers, but the knowledge about risk factors and screening eligibility and screening interval was inadequate. So, education programs should be arranged for the health workers in order to prevent cervical cancers.

Keywords: Cervical cancer, Health worker and knowledge

INTRODUCTION

Cervical cancer is the second leading cancer among women worldwide after breast cancer. Every year,500 000 new cases are diagnosed and 270 000 women die of this disease.[1] The world pattern of cervical cancer indicates that this is predominantly a problem of developing countries. India shares a staggering one fifth of this global burden, with one out of every five women in the world suffering from cervical cancer being an Indian.[2] In the state of Himachal Pradesh, cancer cervix is a major public health problem since it ranks as the number one female cancer as per the annual reports of Regional Cancer Center, Himachal Pradesh for the last 10 years.[3]

Cervical cancer has a long premalignant period that provides the opportunity to screen and treat before it

becomes invasive cervical cancer.[4] Along with this, it is largely preventable by effective screening programs and considerable reduction in cervical cancer incidence and deaths has been achieved with systematic cytological smear screening programs.[5,6] Primary prevention of cervical cancer aims at reducing the incidence of cervical cancer by controlling the causes as well as risk factors.

As per the national cancer control program, guidelines for cervical screening program, the backbone of the health system is the cadre of health workers, both male and female. They are also known as multi-purpose workers. The health workers pay home visits, maintain the family records and provide promotive and preventive services. The Medical Officer, Public Health Nurse, Health Assistant, and Health Workers will have to take a lead in the screening programme of cervical cancers. So, the multipurpose workers being the gross root workers are also accountable for prevention of cervical cancers.[2]

For effective education and communication by the multipurpose health workers, they need to have good knowledge about cervical cancers. To assure that they acquire appropriate knowledge and practices about cervical cancers, it is important to assess their existing knowledge and practices about cervical cancers. To our knowledge no such study has been conducted in this state, the present study was conducted to assess the knowledge and practices among multipurpose health care workers in Shimla district.

METHODS

A cross sectional study was conducted among multipurpose health care workers (both males and females) in Shimla district, Himachal Pradesh. Prior permission was taken from the Chief Medical Officer, Shimla district to conduct the study.

For administrative purposes, Shimla district is divided into nine developmental blocks, namely Mashobra, Rampur, Jubbal, Rohru, Theog, Chopal, Basantpur, Nankhari and Chuara.[7] Four blocks namely Mashobra, Rampur, Mathiana and Nankhari were selected randomly to conduct the study.

All the health workers working in the sub centers, PHC's, CHC's and Civil hospitals in these blocks were invited to participate in the study. Those health personnel who were willing to participate and who gave informed consent were included in the study. A total of 142 questionnaires were distributed. Out of 142, we received back 129 questionnaires. Out of 129, seven were incomplete and were excluded and thus making a total of 122 as a study population.

A self-administered close ended questionnaire was used. The questionnaire, which was used in the study, consisted of two parts. The first part comprised of questions relating to demographic data including age, gender, education, marital status and place of posting. The second part had ten questions on knowledge about cervical cancers such as risk factors, symptoms and screening procedures, and two questions on their attitude. For calculating mean knowledge, each correct answer was given a score of 1 and 0 for each incorrect answer. These scores were transformed into percentages of correct answers.

Hence, a subjects' total score could range from 0 (no answers correct) to 100 percent (all twelve answers correct). Subjects with a score less than 30 percent were considered to have weak knowledge, between 30 and 60 percent to have moderate knowledge, and between 60 and 100 percent to have good knowledge.

RESULTS

Out of 122 subjects, there were 45 (36.9%) males and 77 (63.1%) females. The mean age of the population was 48.6+5.6with a range of 25 to 59. In the present population, 92 (75.4%) were in the age group of 45-54 years followed by 15 (12.3%) in the age group of 35-44 yrs.

Most of the participants 66 (54.1%) had a qualification of matriculation followed by 12th pass 28 (23%). Half of the population 60 (49.2%) had almost 21-30 years of service (Table 1).

Table 1: Demographic profile of the subjects.

Variable	N	n (%)
Gender		
Male	45	36.9
Female	77	63.1
Marital status		
Married	118	96.7
Unmarried	4	3.3
Age groups (years)		
21-30	4	3.3
31-40	15	12.3
41-50	92	75.4
51-60	11	9.0
Level of education		
10^{th} pass	66	54.1
12^{th} pass	28	23.0
Graduation	23	18.9
Post graduation	05	4.1
Years in job		
1-10	3	2.5
11-20	49	40.2
21-30	60	49.2
31.40	10	8.2

The mean knowledge percent of the population was 55.9+16.4. The mean knowledge was higher for females (56.1+16.9) than males (55.5+15.6).

Among the age groups it was highest for the age group of 21-30 years (62.5+23.6) and lowest for the age group of 51-60 years (53.6+16.4). The mean knowledge was highest for those who had a qualification of graduation (Table 2).

Table 2: Mean knowledge according to gender, age and level of education.

Variable	N	Mean knowledge percent	p value
Gender			
Male	45	55.5±15.6	0.43
Female	77	56.1±16.9	
Age groups (years)			
21-30	4	62.5±23.6	0.58
31-40	15	60.0±11.3	
41-50	92	55.2±15.2	
51-60	11	53.6+16.4	
Level of education			
10th pass	66	58.1+15.1	0.08
12th pass	28	49.2+18.0	
Graduation	23	58.2+15.2	
Post graduation	05	52.0+21.6	

Approximately 53.3% of the population had moderate knowledge followed by good knowledge in 35.2% followed by poor knowledge in 11.5% of the population (Table 3).

Table 3: Knowledge levels of the population.

Level of knowledge	Gender		Total	P value
	Male	Female		
Poor	4 (8.8%)	10 (12.9%)	14 (11.5%)	0.50
Moderate	27 (60.0%)	38 (49.3%)	65 (53.3%)	
Good	14 (31.2%)	29 (37.6%)	43 (35.2%)	
Total	45 (100%)	77 (100%)	122 (100%)	

Cervical cancer is most common cancers in females in India was reported correctly by 75% of the subjects. Knowledge about risk factors was correctly reported by 44.3% of population.

Question on who should be screened for cervical cancers was reported correctly by 29.5% and at what interval screening should be done was reported by 14.8% of the population (Table 4).

Cervical cancer screening is an essential part of women's health care was reported by 98% of population and 68% said it should be started in the community.

Table 4: Correct responses to questions on knowledge about cervical cancers.

S. no	Statements	Correct response No (%)
1.	Cervical cancer is most common cancers in females in India	92 (75.4%)
2.	Risk factors for cancer of cervix include	54 (44.3%)
3.	Cervical cancer presents as	64 (52.5%)
4.	Pap test is used for detection of cervical cancer.	111 (91%)
5.	Pap test can detect precancerous lesions.	103 (84.4%)
6.	Early cervical changes are easily curable.	116 (95.1%)
7.	Who should be screened for cancer cervix	36 (29.5%)
8.	Screening interval should be	18 (14.8%)
9.	Diagnostic Modalities other than pap smear for detecting early cancer	76 (62.3%)
10.	Have you heard of HPV vaccination?	25 (20.5%)

DISCUSSION

The purpose of this study was to evaluate knowledge regarding cervical cancer among primary healthcare workers in Shimla because identification of strengths and weaknesses in healthcare workers' knowledge may be crucial in targeted information campaigns.

The mean knowledge percent of the population was 55.9±16.4 which means the overall knowledge of the population was moderate about cervical cancers. This is at par with the findings of Alali A who reported fair to good knowledge in his study.[8] The mean knowledge was slightly higher among females though not statistically significant.

The mean knowledge was highest in the age group of 21-30 yrs and it was lowest for the age group of 51-60 yrs. This may be because elderly age group have either lower educational qualification or joined their services long back and there was no reinforcement of knowledge about cervical cancers to the health workers. So, there should be continuous education programs to update the knowledge of primary health care workers about the cervical cancers.

Cervical cancer is most common cancers in females in India was reported correctly by 75% of the subjects which is higher than 62% as reported by Alali A.[8] 44.3% of the subjects had correct knowledge about all the risk factors of cervical cancers which is at par with 46.4% as reported by Ertem G and higher than 36% as was reported by Catherine M Kress.[9,10] In present study, very low levels of knowledge on individual risk factors were

reported as compared to findings by Tessaro and Herman [smoking (57.7%), early age at first sexual intercourse (90.6%), multiple sexual partners (95.9%), history of sexually transmitted disease (92.4%)] and by Ertem G [smoking (69.1%), early marriage age (72.2%),multiple sexual partners (81.4%%), history of sexually transmitted disease (87.6%)].[9,11]

In present study, the association of HPV with cervical cancer was reported by 11.5% which is less than 23.4% reported by Shashank et al, 54% as reported by Singh E and 90% as reported by Alali A.[8,12,13] Only 14.8% were aware of HPV vaccination which is at par with 18% as reported by Kress CM.[10] So, a clear understanding of the link between HPV infection and cervical cancer, as well as an awareness about a vaccine against HPV were low among this population. As HPV testing and vaccination become available in Public sector in India, uptake is likely to be strongly influenced by information received from these health care providers. Therefore, increasing such awareness among this group of providers will be critical to the success of any public health initiatives. Currently HPV vaccines are only beginning to be available and that too only in the private sector in India.

Present study shows that 91% are aware of pap smear test which is lower than as reported by Singh E and one from Turkey by Ertem G where almost all respondents had heard about the Pap smear.[9,13] In those two studies only one-half of the subjects knew that it can detect both cancerous and precancerous lesions of cervical cancer where as in our study, 84.4% reported this. The rest believed that it is to detect existing cancer and required to be done in symptomatic cases only.

Another important finding is that 70% of the participants, were not aware of the eligibility criteria for screening interval. A study by Alali A reported that 90% of their population was not aware of who should be screened for cervical cancer and at what interval.[8] On the contrary a study by Nganwai et al in thialand had very high proportion of population aware of screening eligibility and screening interval.[14] This could be attributed to the training they have attended.

In present study, 62% of the subjects, could identify Visual inspection with lugols iodine (VIL), Visual inspection with acetic acid (VIA) and Colposcopy as various other diagnostic modalities for cervical cancer. VIL was reported by 9.8% in our study and by 6.8% by Singh E.[13] Colposcopy was reported by 15% of subjects in our study and 19.6% by Singh E.[13]

The strength of the present study is that it is the first to assess knowledge regarding cervical cancer among female healthcare worker where incidence of cervical cancer is high and provide useful pointers for planning continuing education for healthcare workers.[3] On the other hand, the study has some limitations. Firstly,the questionnaires were self-administrated; many of those distributed were not returned. One could therefore expect those who were less confident to have chosen not to answer and this study is based on a self-reported measure that especially may affect reporting.

From the present study, it can be concluded that this study has shown that half of the population had moderate overall knowledge about cervical cancers, but the knowledge about risk factors and screening eligibility and screening interval was inadequate. And however, there are no significant differences between knowledge about cervical cancer risk factors or symptoms and screening methods regarding gender, age, marital status, years of experience. It is hereby recommended that Continuing education programs for health care workers should be conducted at the hospital level to spread knowledge about cervical cancer risk factors, screening intervals, screening eligibility and methods of prevention so that they can play a vital role in the prevention of cervical cancer especially in a country like India where where 70 percent of population lives in rural areas. Healthcare workers should be trained to encourage screening as was also reported by them.

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