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Knowledge regarding the awareness of pap smear screening, cancer cervix and human papillomavirus infection in urban women, Bangalore

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Abstract
Background: Cervical cancer is the commonest cancer among women in India and its prevalence is much higher than that of the developed countries, with also the highest mortality. The incidence of the disease can be reduced by the practice of routine screening for precancerous lesion and also by administration of human papilloma virus vaccine to adolescent girls.
Objective: To determine the baseline information about the knowledge of cervical cancer and explore attitude and practice of Pap smear screening among the urban women.
Methods: A cross sectional survey of women attending Gynaecology Out-Patient Department (OPD) in a tertiary care hospital in Bangalore was conducted. Information regarding their knowledge of cervical cancer, awareness of screening modality, and their socio demographic characters were collected in a perform.
Results: Mean age of the study population was 40.45 ± 12 years. 142(47.3%) women knew about cervical cancer. 96(32%) women knew about prevention of cervical cancer and a majority-16 (5.3%) of them knew about the vaccination for prevention for cervical cancer. Of the total 300 women, only 86 (28.6%) had previously performed cervical cancer screening. The commonest reason for not undergoing Pap smear testing was neglect, lack of financial resources and the fear of discovering a serious disease.
Conclusion: In our study we found that women had a very poor knowledge regarding cervical cancer and were unaware of the concept of prevention. Extensive health education regarding, screening modality for cancer cervix and incorporation of pap smear in a national program can help to reduce the disease burden.

Keywords: Cervix, cancer, knowledge, attitude, pap smear

Introduction
Cancer cervix is the fourth most common cancer worldwide, with a rough estimate of 528,000 new cases detected and 266,000 deaths in 2012 [1]. A virus named Human papillomavirus (HPV) is the most common sexually transmitted infection and as high as 75% of sexually active human have had HPV infection at least once in their life [2]. In our country, cancer cervix is the most common cancer among women, and it is found that one woman dies every 8 minutes. Worldwide about 530,232 women are diagnosed with cancer cervix and 275,008 die due to this disease [3]. The data from the National Cancer Registry Program by Indian Council of Medical Research (ICMR) in the year 2007, states that about 132,082 are affected by cancer cervix every year in India and 74, 1118 women succumb to it. Various on going studies shows the rising prevalence of cancer cervix in India, in the year 2011; 96,156 cases were detected and estimated to be as high as 148,813 in the year 2026 [4]. Cancer cervix is a condition which when detected in the early stage can be prevented from developing into cancer [5].
Even today in developing countries like ours, death related to cancer cervix is the common cancer related death [6], where as in developed countries due to routine practice of screening the prevalence of the condition is found to have reduced significantly [7, 8]. In spite of the heavy burden of the condition, these women's knowledge about cancer cervix, HPV and pap smear is found to be very low [9-12]. In India cancer cervix is considered to be a major health burden, no established data is available regarding the awareness and knowledge of cervical cancer, causative agent amongst women. Hence this study was conducted to study the knowledge and awareness of cervical cancer, HPV and Pap smear testing in Indian women and also to study the factors preventing them from performing the smear and the source of information.

Material and methods

A descriptive cross-sectional study was performed in Mallaswaram garments factory, Bangalore, on a total of 330 female over a period of three months from 1st march to 31st May 2017. Of the 330 women, only 310 women accepted to participate in the study. The questionnaire was formed in the local language and only 300 women returned the complete questionnaire, making the sample size 300. The gynaecology and community medicine department structured the questionnaire together to cover all the aspect of the cancer cervix. The demographic data of the patients, the knowledge on the causative agent, risk factor, the clinical features, screening modality, patients attitude and practice about cancer cervix and screening were recorded and all the questions were of the recognition type. The knowledge about the eligibly to undergo screening and the interval were according to the American Congress of Obstetricians and Gynaecologists (ACOG) guidelines [13]. The data collected were tabulated in the Microsoft Excel and analysed using SPSS version 17. The various variables were expressed in mean and standard deviation. Probability value less than 0.05 was considered statistically significant.

Results

In table 1 the basic demographical data of the patients are tabulate. The mean age of the women in our study was 40.45 ± 12 years. 94.6% of the women were married, 80.6% of the women had 1 to 3 children. 58.3 % of the women had primary education and the education status influenced their awareness of screening.

Table1: Demographic characteristics of the patient

Characteristics of the patients	Number of patient	Percentage (%)
Age:		
<30	23	7.6
30-39	146	48.6
40-49	102	34
>/=50	29	9.6
Marital status		
Unmarried	16	5.3
Married	284	94.6
Occupation		
Student	9	3
Home maker	49	16.3
Employed	242	80.6
Education		
Not attended school	96	31
Primary school	175	58.3
Secondary school	25	8.3
University	4	1.3
Parity		
Nulligravida	16	5.3
1-3	242	80.6
>3	42	14
Income		
Low	105	35
Medium	195	65
High	0	

158 (52.7%) of the women had not heard about cancer cervix before in their life. Less than 35% of the population were aware of the risk factors for developing cancer cervix and 27% of the women obtained the knowledge about cancer cervix via the health education in the work place. 86 (28.6%) of the women had performed pap smear before the day of study. Less than 25% of the women had the knowledge about HVP virus.

Table 2: Knowledge and attitude towards cancer cervix, pap smear and HPV

Question	Number of patients	Percentage (%)
Cancer Cervix: Heard of cancer cervix prior to today:		
Yes	142	47.3
No	158	52.6
Concerned of developing cancer cervix:		
Yes	156	52
No	144	28
Risk factors for developing cancer cervix Multiparty	16	5.3
Multiple sexual partners Early age of menarche and late	106	35.3
menopause	62	20.6
Early age of marriage	24	8
Smoking	64	21.3
Lack of hygiene	52	17.3
Alcohol and drugs	56	18.6
Recurrent abortion	34	11.3
Heredity	201	67
Information provided about pap smear:		
Medical personal	75	25
Media	51	17
Friends and family	23	7.6
Health education at work place	81	27
PAP SMEAR Heard of pap smear prior to today:		
Yes	96	32
No	204	68
The use of pap smear:		
To diagnose precancerous lesion	96	32
Diagnose cancer cervix	76	25.3
Prevent cancer cervix	23	7.6
Prevent infection	123	41
Undergone pap before:		
Yes	86	28.6
No	214	71.3
Motivation to perform pap smear:		
On doctors suggestion	75	25
Friends	23	7.6
Yourself	11	3.6
Pain during performing pap smear:		
Yes	164	54.6
No	136	45.3
Embarrassment to perform pap smear:		
Yes	154	51.3
No	146	48.6
Frequency to perform pap:		
Once a year	11	3.6
Once in 2 years	54	18
> 3 years	31	10.3
HPV VIRUS		
Causes urine infection	9	3
Principle risk for cancer cervix	8	2.6
Causes genital warts	8	2.6
Sexually transmitted	42	14
Condoms prevent its transmission	65	21.6

The most common reason for not performing Pap smear was the fear of pain 164 (54.6%), followed by embarrassment, negligence and fear of detecting cancer.

Table 3: Reason for not performing the Pap smear

Reason	Number of patients	Percentage (%)
Embarrassment	154	51.3
Fear of pain	164	54.6
Negligence	102	34
Financial resource	0	0
Fear of detecting a grave disease	96	32

Discussion

In our paper we studied the socio-demographic variation, the knowledge about cancer cervix associated risk factors, awareness about screening, prevention and control of cervical cancer in an urban population. In our study we found 142 (47.3%) of the women were aware of cancer cervix, 96 (32%) were aware of pap smear. In comparison to a study conducted by Aswathy *et al* more than ¾ of the women were aware of cancer cervix and pap smear [14]. 44.5 % and 18% women knew about cancer cervix and pap smear respectively in a study conducted by Jansirani Siddharthar *et al* [15]. The above can be clearly explained by the difference in the education status. In consistent with a study conducted by Wufeng County, China, women who were well educated and working in a place with routine health education were well aware of cancer cervix and pap smear [16, 17]. The age of the women and the health facility available for the patient did not have any significant effect on the women to utilise screening services. Unlike other studies; predominantly in developed countries where women who were younger and educated had a higher knowledge [18, 19]. In a study conducted in Tanzania identified that women's knowledge about cervical cancer, were directly related to the accessibility to pap facility [20]. The study conducted by Aswathy *et al* found the reason for not performing pap smear was due to the lack of awareness about screening, no symptoms and fear of pain during the procedure [14]. 65 (21.6%) of the women had heard of HPV virus and 16 (5.3%) had heard about HPV vaccination, which was higher than that studied by Jansirani *et al* were the study population awareness of pap was 6.5% and 2.8% for HPV virus [15]. The knowledge among the study was relatively low in spite of the National Cancer Control Program in India, and the probable reason could be over patient load and limited resources [21].

Conclusion

Our study demonstrates the very low knowledge about cancer cervix, pap smear and HPV vaccine in spite of the very high disease burden of cancer cervix in our country. Awareness program needs to be initiated about cancer cervix, pap smear and vaccination via the help of media and health care professionals, mobile camps to be formed to reach the rural areas and remote women as well as to help in the incorporation of the HPV vaccine in the national program.

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