

A Study on Knowledge and Practice about Cervical Cancer among nursing staff of one of the tertiary care Hospital in Ahmedabad, India

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Abstract :

Background: Carcinoma of the cervix is the second most common cancer in women worldwide, while it is the commonest cancer among Indian women. Awareness regarding cervical cancer and its prevention is quite low amongst Indian women. The Pap test is a simple and cost effective technique for early diagnosis of cervical cancer. **Objectives:** 1) To assess knowledge level regarding symptoms, risk factors, and preventive measures for cervical carcinoma among nursing staff; 2) To find out the attitude and practice of respondents regarding preventive measures of cervical carcinoma; 3) To identify the socio demographic determinants affecting the level of knowledge among participants. **Methodology:** A Hospital-based survey regarding knowledge levels about cervical carcinoma was conducted among the nursing staff from one of the tertiary health institutes in Ahmedabad, India. A structured questionnaire with multiple choices was used for data collection. Provision for open-ended responses was also made in the questionnaire. Department-wise stratification was carried out, and thereafter 25% of the total nursing staff from all departments was selected randomly to include a total of 100 nurses in the current study. Data entry was done in Microsoft Excel. IBM SPSS Statistics for Windows, Version 20.0. Armonk, NY: IBM Corp. statistical software was used to generate statistical parameters like proportion, mean standard deviation, etc. The CHI-SQUARE test was used as a test of significance considering P value of <0.05 as the level of significance. **Result:** Out of all respondents, 88 respondents were aware about CA cervix. Only 5% of them have good and 39% have average knowledge about the sign and symptoms, risk factors and preventive measures of CA Cervix. Major source of information to respondents were educational textbooks and doctors. Only 1 out of 88 women have undergone Pap smear test and no one has taken HPV vaccination. **Conclusion & recommendations:** Majority of the participants had poor knowledge about CA cervix. There is no association between marital status and age of the participants to the level of knowledge among participants regarding CA Cervix. Educational programmes for nursing staff can help to improve the knowledge regarding CA Cervix and practicing preventive measures.

Key Words: Cervical Cancer, Knowledge and practices, Nursing staff.

Introduction :

Carcinoma of cervix (CA cervix) is the second most common cancer in women worldwide, while it is the commonest cancer among Indian women. ⁽¹⁾ Awareness and prevention regarding cervical cancer is quite low amongst Indian women. According to International Agency for Research on Cancer (IARC), India has the highest number of cervical cancer cases in the world. There are an estimated 1,32,000 new cases and

74,000 deaths every year which occur due to cervical cancer in India. ⁽²⁾ CA cervix may be completely asymptomatic in early stages. In advanced stages, it may present as unusual bleeding per vagina, persistent pelvic pain, unusual vaginal discharge, bleeding after sexual intercourse, unexplained weight loss. ⁽³⁾

Cervical cancer is a deadly disease once it reaches invasive stages, but out of all the female genital tract cancers, it is the only preventable cancer if detected at its early stages. The worldwide prevalence of HPV in cervical carcinomas is 99.7 per cent. Infection with human papilloma virus (HPV) types 16 and 18 cause 75% of cervical cancer globally. ⁽⁴⁾ Thus, Sexually transmitted infection with Human Papilloma Virus

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(HPV) is fundamental to development of carcinoma of cervix. HPV prevalence also increases with multiple sexual partners and poor genital hygiene. Of the 100 HPV types, 18 have been categorized as high-risk types for cervical cancer, while others are of low-risk types.⁽⁵⁾ The tobacco consumption, multiple sexual partners, early age of sexual intercourse, increasing parity, prolonged use of oral contraceptive pills, and sexually transmitted diseases are identified as other risk factors for CA cervix.⁽⁶⁾ The Pap test is a simple and cost effective technique for early diagnosis of cervical cancer. These two types of vaccine are available for use by community with private health care providers. Cervarix® made by Glaxo SmithKline (GSK) is a bivalent vaccine that protects against HPV strains 16 and 18, and Gardasil® by Merck is a quadrivalent vaccine that protects the individual against HPV strains 16, 18, 6 and 11.⁽⁷⁾

Currently, the Indian government is investigating whether to implement a HPV vaccination program. Population-based screening with Pap smear is an important secondary preventive measure for cervical cancer that leads to a high-cure rate among cervical cancer patients. The facilities to carry out Pap smear are available in the institute where the study has been carried out.

Nurses can provide health promotion counseling to the patients they serve in their day-to-day practice. They can fulfill a key role in health promotion and disease prevention, and they are in an ideal position to provide health education to young girls and women. It is necessary that the nursing staff be educated about cervical cancer, so that they can impart knowledge regarding cervical cancer and its prevention to public.

Methodology:

A Hospital-based study was carried out among the nursing staff of one of the tertiary health institute in Ahmadabad, India. The duration for the study was from March to June, 2018. A total of 390 nursing staff were registered and working at the institute under the institute at the time of study. 25 % of staff was randomly selected using a table of random numbers after department-wise stratification. The calculated sample size was 104. For practical feasibility, 100 nurses were selected for the study. Verbal informed consent was

sought from the study subjects. A pre-defined semi-structured questionnaire was designed. The selected nurses were interviewed for seeking information about their socio-demographic profile, knowledge about symptoms, risk factors and prevention, attitude and utilization of Pap smear as a screening test and HPV vaccine for prevention of CA Cervix. Pre-testing of the questionnaire was done; after which necessary changes were made, and the questionnaire was re-administered. Data entry was done in MS EXCEL, and IBMSPSS Statistics for Windows, Version 20.0.Armonk, NY: IBM Corp. statistical software was used to generate statistical parameters like proportion, mean, standard deviation, etc. CHI SQUARE test was

Questions	Scores
Risk Factors	
HPV infection	2
Improper vaginal hygiene	1
Multiple Sexual partners	1
Early Marriage	1
Early Pregnancy	1
Smoking	1
Others*	1
Sign & Symptoms	
Abnormal vaginal bleeding and discharge	2
Abnormality in menstruation	2
Pain in Pelvis	2
Bleeding after intercourse	2
Others#	1
Preventive Measures	
Good genital hygiene	1
HPV vaccination	2
Screening by Pap test	2
Use of barrier methods	1

*Others=Repeated pregnancy, Prolonged use of Oral contraceptive pills, Early Coitus

#Others=Fatigue, Weight loss, Loss of appetite

used as a test of significance considering P value less than 0.05 for statistical significance with 95% confidence interval. The scoring system was applied to assess the knowledge level regarding risk factors, signs, symptoms, and preventive measures regarding CA cervix among participants, which is mentioned below. Then, the responses were classified on based of total score as good (17-23 score), average (10-16 score) and poor (0-9 score) knowledge.

Result:

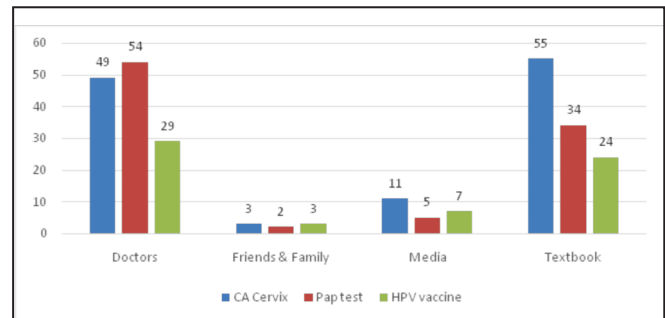
Table 1: Socio-demographic profile of study participants (N=100)

Socio-demographic variable	Proportion
Age (in years)	
21-30	79%
>31	21%
Marital status	
Married	39%
Unmarried	61%
Socioeconomic class*	
Upper Class	62%
Upper Middle Class	33%
Middle Class	5%
Lower Middle Class	0%
Lower Class	0%
Total	100%

*According to Modified Prasad Classification (Based on CPI of January 2017)

Table 1 shows that out of 100 staff nurses, 79% belonged to the age group of 21-30 years. The mean age of the study population was 26 years. The majority of respondents (61%) were unmarried. It was found that none of the respondents belonged to lower middle or lower class.

Figure 1: Source of information regarding CA Cervix, Pap test and HPV vaccine among study participants. #



* Media includes radio, TV, newspaper, social media

Multiple responses

Out of 100 respondents, 88 respondents were aware about CA cervix. Figure 1 suggests that out of the total responses, educational textbooks were the commonest source of information on CA Cervix with 55 responses, whereas doctors and healthcare workers were commonest sources with 54 and 29 responses, respectively for Pap test and HPV Vaccine. There is visible difference between the awareness about Pap test and HPV vaccine with respondents having more awareness about Pap test from different sources. From the above data, it can be inferred that since friends and family were least common source of information, there is inadequate interaction among family and friends regarding such matters. As observed from the above available data there is evidently less social campaigning and awareness programmes through mass media.

Table 2 shows that out of the total 88 respondents, 61 responders had knowledge about risk factors and as per knowledge of most common risk factor according to respondents was HPV infection 34(57.73 %) followed by improper vaginal hygiene 33(54.09 %) and multiple sexual partners 30 (49.18%). Out of the total 88 respondents, 63 responders had knowledge about signs and symptoms. As per knowledge of the symptoms of cervical cancer, 47(74.60%) respondents stated pain in pelvis as most common symptom. The percentages of respondents who mentioned menstrual abnormality and abnormal vaginal discharge as symptoms, were 21 (33.3%) and 41 (65.07%) respectively. Out of the total 88 respondents, 67 responders had knowledge about preventive measures and as per knowledge of

Table 2: Knowledge about CA Cervix among nursing staff

Knowledge about CA Cervix	Frequency	Percentage
Risk factors(N = 61 RESPONSES)		
HPV infection	34	57.73%
Improper vaginal hygiene	33	54.09%
Multiple Sexual partners	30	49.18%
Early Marriage	28	45.90%
Early Pregnancy	23	37.70%
Smoking	23	37.70%
Others*	11	18.03%
Sign and symptoms (n=63 responses)		
Abnormal vaginal bleeding and discharge	41	65.07%
Abnormality in menstruation	21	33.33%
Pain in Pelvis	47	74.60%
Bleeding after intercourse	18	28.57%
Others#	26	41.26%
Preventive measures(n = 67 responses)		
Good genital hygiene	48	71.64%
HPV vaccination	29	43.28%
Screening by Pap test	27	40.29%
Use of barrier methods	17	25.37%

*Others=Repeated pregnancy, Prolonged use of Oral contraceptive pills, Early Coitus

#Others=Fatigue, Weight loss, Loss of appetite

Table 3 : Practice and attitude by the participants about Pap test and HPV vaccination

Responses Pap Test	H/O screening by Pap test	Willingness for Vaccination	H/O HPV	Willingness for HPV Vaccination
Yes	01(1%)	77(88%)	00	74(84%)
No	87(99%)	08 (9%)	88	5(6%)
Can not decide	—	03 (3%)	—	9(10%)

preventive measures, 48 (71.64%) thought good genital hygiene as a good preventive measure followed by HPV vaccination 29 (43.28%) and Screening by Pap test 27(40.29%).

Figure 2: Overall knowledge about CA Cervix among the respondents

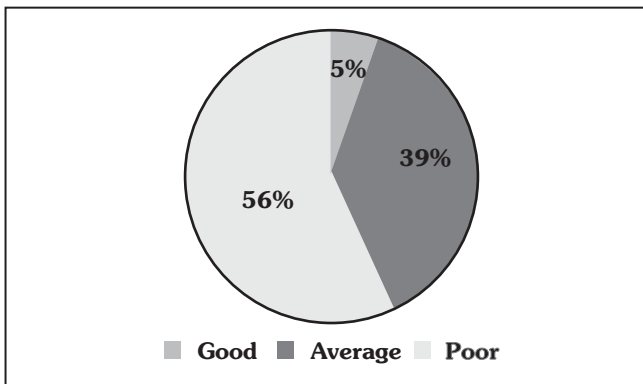


Figure 2 suggests that out of the total 88 respondents, 4 (5%) had good knowledge, 34 (39%) had average and 50 (56%) had poor knowledge according to scoring system mentioned in methodology.

Table 3 shows that out of the total (88) respondents, only 1 participant had been screened for CA cervix by Pap test and no one went for HPV vaccination. One of the main reasons for not taking Pap test was lack of concern and for not receiving HPV vaccination, it was lack of awareness.

Chi Square test was conducted to find out the significance of association between marital status and level of knowledge of respondents regarding CA Cervix. The calculated chi-square value was 0.39, which was found to be less than χ^2_{tab} (5.99) at a degree of freedom of 95% at P value of >0.05. Thus, there was not statistically significant association found between marital status and knowledge among participants regarding CA Cervix. (Table 4)

Association between age of the respondent and their level of knowledge regarding CA Cervix was found using chi square test. The calculated chi-square value was 0.042, which was found to be less than χ^2_{tab} (5.99) at a degree of freedom of 95% at P value of >0.05. Thus, there was no statistical significant association found between age of respondent and level of knowledge regarding CA cervix. (Table 5)

Table 4: Association between Marital status and level of knowledge about Ca.Cervix among the participants

Marital status	Level of knowledge about Ca.Cervix			Total
	Poor	Average	Good	
Married	24 (61%)	14(36%)	1(3%)	39(39%)
Unmarried	38 (62%)	20(33%)	3(5%)	61(61%)
Total	62(62%)	32(32%)	4(4%)	100(100%)

Table 5: Association between the age and level of knowledge about Ca.Cervix among the participants

Age (in years)	Level of knowledge about Ca.Cervix			Total
	Poor	Average	Good	
21-30	49(62%)	27(34%)	3(4%)	79 (79%)
> 31	13(62%)	7(33%)	1(5%)	21(21%)
Total	62(62%)	34(34%)	4(4%)	100 (100%)

Discussion:

The present study was conducted among staff nurses of the tertiary care hospital in order to evaluate their knowledge regarding cervical carcinoma.

Knowledge of cervical cancer:

In the present study, 5% and 39% respondents have good and average knowledge respectively about the CA Cervix. It is better than the study conducted by HN Harsha Kumaret al ⁽⁸⁾ in the Mangalore city which showed comparatively poor knowledge (81.9%) of respondents. Similar study conducted by Narayana G et. al ⁽⁹⁾ in south India also showed poor result. The reason behind this might be that the other studies involve non-medical personnel while our study inculcates paramedical staff (i.e. Nurses) which might be the reason that para medics being health care providers would have better knowledge. However, the level of knowledge is far less than in developed countries. In a study done in Kuwait⁽¹⁰⁾ -52% had good knowledge and in London ⁽¹¹⁾ -76% had adequate knowledge. The lack of knowledge is may be due to inefficient mass media campaigns, lack of proper educational curriculum and inadequate educational training. In the present study, respondents stated pain in pelvis (47, 74.60%), abnormal vaginal discharge (41, 65.07%) and abnormality in menstrual cycle as common symptoms of cervical cancer, while in a study⁽⁸⁾ conducted in Mangalore city, abnormality in menstrual cycle (22, 26.5%) and abnormal vaginal discharge (21, 25.3%) were stated as common symptoms for CA Cervix. Also in the study done by Agama Bansal ⁽¹²⁾ in Bhopal showed inter menstrual bleeding as the most common symptom.

Attitude and practice:

There is a gap between attitude and practice in the present study. Women who were aware of symptoms, risk factors, and preventive measures showed positive attitude towards cervical cancer screening and taking HPV vaccination but the main reason why they did not take tests and vaccine was 'lack of concern' and 'lack of awareness', respectively . These reasons are prevalent in other parts of the country as observed from other similar studies. ^(8,9)

Limitations:

The major limitation was that it is a hospital-based survey conducted in resource-limited settings, and hence the findings cannot be projected on the large scale at state or country level. It is also possible that some women were educated and advised about cervical cancer and it's screening, but there might have been recall bias.

Conclusions:

Out of all respondents, less than 40% had good or average knowledge regarding risk factors, signs, symptoms, and preventive measures of ca cervix. As per information regarding knowledge of the risk factors regarding cervical carcinoma, 34 (46.6%) respondents stated HPV infection and sexually transmitted infection as causative factor for CA Cervix and pain in pelvis as commonest symptom. The good genital hygiene was found as the commonest preventive measure for CA Cervix. Doctors/health profession and textbooks were major sources of information regarding cervical cancer, Pap smear, HPV vaccination among respondents. Only one respondent had been screened for CA Cervix with PAP test and no one has received the HPV vaccination. Most common reasons were lack of concern and lack of awareness among participants regarding not undergoing for Pap smear test and not receiving HPV vaccination, respectively. Out of all Nursing Staff >80% are willing to go for PAP TEST screening and HPV vaccination. Therefore, they have positive attitude towards the Prevention and Screening for the CA Cervix.

Recommendations:

Education Programs for the Nursing staff through various means can help to improve the awareness regarding the CA Cervix and help reducing the mortality due to cancer. Nursing staff, if properly aware of this disease, can educate the patients along with their relatives and hence increase health-seeking behavior in women. The government can provide the screening test (PAP test) under the provision of the cancer research and control programme to vulnerable age group of 21-65 years & can also provide the HPV vaccination for the prevention with cost benefits and counsel them not to fear about it.

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