

Original Research Article

Awareness and knowledge about cervical cancer and pap test among nursing staff at a rural tertiary care hospital

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ABSTRACT

Background: Cervical cancer is a common gynecological malignancy and public health problem that can be prevented, but the utilization of screening is just 2.6%-5% in India. Healthcare providers mainly nursing personnel are crucial and play a vital role in raising awareness and educating the public about implementation of low-cost cervical cancer screening approaches in low-resource settings. Objectives were to determine baseline information about knowledge of cervical cancer and explore attitude and practice of pap smear screening among staff nurses.

Methods: The questionnaire containing mostly recognition and some recall type questions about demographics, knowledge about cervical cancer, its risk factors, screening techniques, attitudes towards cervical cancer screening and its practices and their knowledge was tested.

Results: Analyses of knowledge showed that majority of nurses recognized the risk factors and symptoms associated with carcinoma of cervix. A considerable lack of knowledge was observed on the treatment of cervical cancer but a significant portion of nurses knew about prevention. A positive attitude was observed on all aspects of cervical cancer and its prevention.

Conclusions: This study demonstrates a good knowledge and positive attitude about carcinoma of cervix and its prevention amongst the nurses which plays a key role in the campaign to prevent cervical malignancy. Poor practice seen in this study emphasizes the need to translate the awareness to practice. Easier availability of HPV testing and better distribution of HPV vaccine is paramount to successfully prevent cervical cancer in future.

Keywords: Cervical cancer, Questionnaire, Knowledge, Attitude

INTRODUCTION

Cervical cancer is the commonest gynecological malignancy across the globe. Among the tumors of the female genital tract, it ranks second in mortality and morbidity.¹ Worldwide, approximately 570,000 cases of carcinoma cervix are reported with 300,000 deaths, annually. In 2018 in India, the reported incidence of carcinoma cervix was 96,922 cases, with 60,078 deaths.² In Karnataka, approximately 5,000 new cases are reported every year.³

The age of presentation of cervical cancer is reported to be between 55-59 years, with a mean age of presentation

of approximately 52 years. The risk factors for carcinoma cervix include sexually transmitted diseases, human papillomavirus (HPV) infection, multiparity, early age at marriage, poor personal hygiene, smoking, poor socioeconomic status, immunosuppression, and the use of oral contraceptive pills.⁴

Almost all cervical cancers are caused by HPV and, hence they, are largely preventable. Over the past several decades, the incidence of cervical cancer has decreased in developed countries is mainly due to increased awareness and more effective screening and prevention strategies employed in these countries. In addition, nowadays HPV vaccine has contributed to a decline in the incidence rate

of cervical cancer.⁵⁻⁷ Three types of tests are currently available and are widely used for screening of cervical cancer. These include tests for HPV, cytology-based Papanicolaou test (Pap test) and unaided visual inspection with acetic acid (VIA).⁸ However, public awareness of these tests especially in developing countries is limited.

Cervical cancer is potentially a preventable disease if detected early. It is preceded by precancerous conditions or precursor lesions. Hence, if early detection of these precursor lesions is made by screening programs incidence of cervical cancer can be reduced.

Nurses are a major part of healthcare provider workforce and a useful link in providing health education and preventive healthcare. Since doctor-patient ratio is less nurses are the major workforce in rural public health centers and sub centers of India. Studies have shown that it is possible to train nurses to screen for cervical cancer using a Pap smear examination or VIA-like methods, and this will improve manifold the detection rates of an early cervical cancer.⁷ Nursing staff are expected to have more knowledge about screening programs, but studies have shown the contrary and have reported negative attitudes toward cancer screening among nurses despite being aware of its gravity as a disease.⁸

In India, both early detection and screening remains a major area of concern coupled with poor literacy and low level of awareness amongst Indian women. Staff nurses are the personnel who can help in spreading awareness regarding this problem in the target population. To have a successful cancer control program, nursing staff must be aware of facts about cervical cancer and screening tests themselves. With this background the present study was conducted to assess the level of knowledge and attitude regarding cervical cancer etiology, symptoms, risk factors, screening, and prevention among nursing staff.

METHODS

This study was a descriptive cross-sectional survey of cervical cancer screening done between May 2023 to December 2023 at R. L. Jalappa hospital amongst nurses working in a tertiary care hospital conducted after obtaining institutional ethical clearance. The study was carried out among the female staff nurses working in the tertiary care teaching institute. For sample calculation we used 95% confidence level and 5% error with a response rate of 50%, with this the sample size obtained was 190.

Inclusion criterion

The staff nurses who agreed to participate and gave consent were included in study.

Exclusion criterion

Staff nurses who were not willing to participate in the study were excluded.

After obtaining an informed verbal consent, using a preformed open-ended and closed-ended structured questionnaire data was collected. The latter had responses as yes or no. Questionnaire had sections on demographic profile, risk factors of cervical cancer, signs and symptoms, regarding cervical cancer screening and vaccination.

The questions were understandable, short and clear with only few medical terminologies. The participants were mainly required either to tick the appropriate boxes provided for each option given or to write a one-word answer. The anonymity and confidentiality of the participants were taken care of and the collected data were maintained. The filled questionnaire was collected the next day by a single data collector. The form was excluded from analysis if it was less than fifty percentages complete, or if there was more than one answer to a question.

Statistical analysis

All of the data were input into Microsoft Excel sheets, and SPSS software version-2024 was used for the statistical analysis. Data was analysed by frequency and percentage.

RESULTS

Among respondents, age group of 31 to 40 years formed the largest with 50% of them belonging to this age group and 26% of respondents were from 21-30 years. Among the marital status majority were married accounting to 74.7% and unmarried were 30.5% (Table 1).

When the questions related to knowledge regarding cervical cancer were asked 25.2% respondents told family history has the common risk factor followed by multiple sexual partner and HPV infection respectively (Table 2).

About 23.1% knew that it can present as abnormal uterine bleeding and 20% were aware that it can present as post-menopausal bleeding, but only 18.9% knew that it can even present as post coital bleeding. The 13.6% of the respondents stated that it can present with foul smelling discharge. Only 5.7% knew that the cancer cervix can present without any symptoms (Table 3).

In this study 23.1% knew cancer cervix is preventable and 15.2% knew about pap smear that it can detect cancer, 27.3% knew about both screening and treatment. Very few participants 10.5% aware of VIA and VILI (Table 4).

About 12.8% participants knew that screening should begin at 21 years or within 3 years of starting of sexual activity, whichever is earlier. About 57.8% of the participants thought that every woman is to be screened after 30 years of age, whereas 29.4% of the respondents

agreed that all married women should be screened for cancer cervix after 40 years of age (Table 5).

The attitudes about pap smear screening showed that about 47.3% of the staff nurses thought that they should undergo cervical screening (Table 6) and 39.4% nurses knew that all women have to undergo cervical screening.

Regarding attitude of how often pap test to be done 39.4% responded as 6 monthly and 25.2% responded as 1 yearly (Table 7).

Table 1: Demographic profile, (n=190).

Demographic profile	N (%)
Age (in years)	
21-30	56 (26)
31-40	112 (50)
41-50	32 (20)
Marital status	
Unmarried	58 (30.5)
Married	142 (74.7)

Table 2: Knowledge regarding risk factors of cervical cancer.

Questions related to knowledge on risk factors	Responded yes, N (%)
HPV infection	42 (22)
Sexual intercourse at early age	46 (24.2)
Smoking	30 (15.7)
More than one sexual partner	48 (25.2)
Family history of cervical cancer	24 (12.6)

Table 3: Knowledge regarding symptoms of cervical cancer.

Knowledge regarding symptoms of cervical cancer	Responded yes, N (%)
No symptoms	11 (5.7)
Foul smelling discharge	26 (13.6)
Post coital bleeding	36(18.9)
Post-menopausal bleeding	38 (20)
Abnormal uterine bleeding	44 (23.1)
Abdominal pain	35 (18.4)

Table 4: Knowledge related to cervical cancer screening.

Knowledge related to cervical cancer screening	Responded yes, N (%)
Is cervical cancer preventable	44 (23.1)
Cervical cancer can be detected even before symptoms appear	5 (2.6)
Have you ever heard about pap smear	29 (15.2)
Pap smear can be used as	
Screening modality	40 (21)
Screening and treatment	52 (27.3)
Aware of VIA or VILI	20 (10.5)

Table 5: Knowledge related to cervical cancer screening age and duration and age when screening should be started.

Age when screening should be started at	Responded yes, N (%)
More than 21 years or within 3 years of starting sexual activity	24 (12.8)
Age >30 years	110 (57.8)
Age >40 years	56 (29.4)

Table 6: Attituded related to cervical cancer screening.

Attitude related to cervical cancer screening age and duration	Responded yes, N (%)
Pap smear testing is a doctor's procedure	35 (18.4)
Do you think you should undergo cervical screening	90 (47.3)
Do you think all women should undergo cervical screening	75 (39.4)

Table 7: Attitude regarding how often Pap smear testing to be done.

How often do you think pap test to be repeated	Yes, N (%)
No idea	56 (29.4)
6 monthly	75 (39.4)
1 yearly	48 (25.2)
3 yearly	11 (5)

DISCUSSION

Cervical cancer in spite being the commonest genital cancer of women in India, there are no properly organized screening programs for cervical cancer in any of the provincial states of India. Data from population-based cancer registries indicate a slow, but steady, decline in the incidence of cervical cancer. However, the rates are still too high, especially in the rural areas, and the absolute number of cases is on an increase due to population growth. In the absence of a systematic screening program the expected practice is to screen eligible women when they come to health units for other services.¹⁻³

In our institution the pap smear is exclusively performed in the gynecological department and all eligible women from other units are referred there for screening. Studies have shown it is possible to train nurses to screen for cervical cancer. This study was undertaken to test the knowledge and practice of the nurses regarding the cervical cancer and the pap smear screening.

In this study age group of 31 to 40 years formed the largest with 50% of them belonging to this age group, in the similar study done by Mahajan et al showed majority

of the patients between 41-50 years.¹¹ In present study 74.7% were married.⁹

About 23.1% of the participants agreed that cancer cervix can present abnormal uterine bleeding, 20% with post-menopausal bleeding, 18.9% with post coital bleeding whereas only 13.6% were aware about foul smelling discharge as the presenting symptoms and these findings were similar to the study done by Hafizur et al.¹⁰

The analysis of knowledge regarding of risk factors, revealed that 24.2% responded as multiple sexual partners as the common risk factor followed by starting sex at early age, which is less in comparison to 70% in the study by Shekhar et al 32% of the respondents in present study, 22% knew that HPV infection is a risk factor for carcinoma cervix, whereas this awareness was noted in 54.1% in the study by Singh et al.^{11,12}

When questions related to cervical cancer and screening were asked 23.1% knew it is a preventable disease and 27.3% knew about the pap smear as the screening method for cervical cancer when compared to Shekhar et al where 77% respondents knew that Pap smear is used for detection of cervical cancer.¹¹ The participants showed positive attitude towards prevention of cervical cancer using screening tests and HPV vaccination.

A good knowledge on risk factors and screening can go a long way in reducing the incidence of cervical malignancy in the country. So, our study shows good awareness that when implemented on a long run can bring about positive change.

About 57.8% thought that every woman to be screened after 30 years of age in present study, whereas only to 55.5% have agreed for the same in the study by Jain et al.¹³ Above 18.4% of the respondents in present study, thought that pap test is a doctor's procedure which is comparable to 71% in the study by Shekhar et al.¹¹

This study demonstrates a moderate knowledge and positive attitude towards cervical malignancy and its prevention, which plays a key role in the fight against cervical cancer, but it is important to translate the awareness to practice. Although nurses identify certain aspects of cervical cancer, their knowledge is not adequate. They are aware of burden of cervical cancer but their knowledge regarding risk factors, cause and symptoms is limited. The knowledge of pap smear as screening procedure is adequate but practice is very low. Before involving them as key persons in cervical cancer programme, there is a need for proper training of nursing and other paramedical staff.

Limitations

This study had few limitations-It was conducted only in one center and hence the results cannot be generalized to the nurses at other institutions. The study was done only

in nurses but a comparison study of the knowledge, attitude and practice among other physicians practicing doctors can be considered to see for the gap in knowledge, attitude and practice of different groups.

CONCLUSION

This study demonstrates a good knowledge and positive attitude towards cervical malignancy and its prevention, which plays a key role in the fight against cervical cancer, but it is important to translate the awareness to practice. Easier availability of HPV testing and better distribution of HPV vaccine is paramount to successfully prevent cervical cancer in the future. Educating the nursing personnel in form of continuing medical education, workshops and seminars will strongly contribute to strengthen the knowledge and attitude regarding cervical cancer screening so that nursing staff can and should educate the masses to help increase health awareness in women.

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