

# Knowledge and Awareness of Cervical Cancer and its Prevention amongst Nursing Staff in a Tertiary Care Hospital

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## ABSTRACT

**Objective:** To study the knowledge, attitude, and practices of nurses at a tertiary center regarding cervical cancer and preventive strategies.

**Materials and methods:** A cross-sectional survey of cervical cancer screening awareness was conducted amongst 200 nurses at a tertiary care hospital in Delhi. A questionnaire was circulated after taking informed consent. The main factors studied included risk factors, sign and symptoms, screening, and prevention strategies.

**Results:** In the present study, 70% of the staff nurses were aware of one or more symptoms of cervical cancer. Sixty percent were aware of HPV as a causative organism and 70% were aware of one or more risk factors. An estimated 76% of respondents were aware of a Pap smear as screening method, but only 11% had a Pap smear ever. Majority of them did not know about visual-inspection screening techniques. Only 58.9% were aware of the availability of a vaccine; of them only 27% knew about the age of administration of the vaccine and 10% were aware of the vaccination schedule.

**Conclusion:** Knowledge of cancer cervix screening and vaccination was low among nursing staff. There is a need for periodic reorientation courses and integration of cervical cancer prevention issues in their existing curriculum.

**Keywords:** Cervical cancer, Human papillomavirus, Pap smear, Postcoital bleeding.

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## INTRODUCTION

Cervical cancer is the fourth most common female malignancy in both incidence and mortality worldwide, accounting for 527,600 new cases and 265,700 deaths annually.<sup>1</sup> Eighty-five percent of cases and majority of deaths occur in developing countries.<sup>2</sup> On the basis of GLOBOCAN 2012 estimates, about 122,000 new cervical cancer cases and 67,477 deaths occurred in India.<sup>3</sup> The incidence and mortality remains high despite an identifiable precursor lesion, a long natural course of disease, and available strategies for prevention such as screening and vaccination.

Human papillomavirus (HPV) has been reported as the primary cause of cervical cancer, and repeated or persistent HPV infections increase the chances of developing the disease.<sup>4</sup> The various screening techniques are the Pap smear test, visual inspection tests with acetic acid (VIA), and HPV DNA.<sup>5</sup> However, in the absence of an organized screening program, more than three-fourths of cervical cancer patients are diagnosed at advanced stages, leading to a poor prognosis on the long-term survival and cure.<sup>6</sup>

Nurses are a major part of healthcare provider workforce and a useful link in providing health education and preventive healthcare. They are a major workforce in rural public health centers and sub centers of India because of a low doctor-patient ratio. 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.<sup>7</sup> 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.<sup>8</sup>

Currently, scanty information is available on the knowledge base of the Indian nurses on cervical cancer and the present study was undertaken to assess knowledge in terms of cervical cancer etiology, symptoms, risk factors, screening, and prevention among nursing staff.

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## MATERIALS AND METHODS

This study was a descriptive cross-sectional survey of cervical cancer screening amongst nurses working or had ever worked in the obstetrics and gynecology department in a tertiary care government hospital in Delhi. The sample size was calculated using a 95% confidence level and 5% error with a response rate of 50%, the sample size needed was 180. Adding a 10% drop out rate, 200 nurses were considered to participate in the survey.

After obtaining an informed verbal consent, data were collected using a preformed open-ended and closed-ended structured questionnaire. The latter had responses as yes or no. The questionnaire had sections on sociodemography, symptoms, and risk factors of cervical cancer as well as cervical cancer screening and vaccination. The questions were short, clear, and understandable to the staff nurses 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. Names were not used for identification. The filled questionnaire was collected the next day by a single data collector. The form was

excluded from analysis if it was less than 50% complete, or if there was more than one answer to a question.

Only descriptive summary statistics were used for analysis using SPSS 20.0 software.

## RESULTS

Totally, 200 nurses participated in the study and all of them were aware about the disease while only 30% knew about cervical intraepithelial neoplasia or any precancerous state. Baseline variables of the participants are summarized in Table 1. Majority of them (70%) could correctly answer regarding the symptoms of cervical cancer and stated that the source of information was mainly through books. The most common symptom according to them was postmenopausal bleeding and foul smelling discharge, as shown in Table 2.

A varying response was observed regarding the different risk factors of the cervical cancer. Sixty percent identified HPV as the etiological agent of cervical cancer, and having multiple sexual partners was the most common risk factor according to them. Interestingly, 79.3% said that not participating in cervical cancer screening is a risk factor, but only 11% of the study population had themselves undergone screening. However, after completing the questionnaire, 85% agreed to undergo screening themselves.

**Table 1:** Sociodemographic characteristics of respondents

Characteristics	No. (%)
Age (years)	
20–30	67 (33.5)
31–40	74 (37)
41–50	38 (19)
51–60	21 (10.5)
Marital status	
Married	196 (98)
Unmarried	4 (2)
Religion	
Hindu	120 (60)
Muslim	2 (1)
Christ	77 (38.5)
Buddhist	1 (0.5)
Nursing experience (years)	
0–5	64 (32)
5–10	54 (27)
10–15	41 (20.5)
>15	41 (20.5)

**Table 2:** Knowledge regarding cervical cancer symptomatology

Postmenopausal bleeding	86.3%
Foul smelling vaginal discharge	83.2%
Irregular periods	74.1%
Postcoital bleeding	72.1%
Chronic pelvic pain	67.5%
Unexplained weight loss	67.5%
Intermenstrual bleeding	65%
Dyspareunia	51.8%
Back pain	29.4%
Unresponsive diarrhea	18.3%

The knowledge regarding risk factors is summarized in Table 3.

Only 58.9% were aware of the availability of the vaccine. Of those who knew about the availability of the vaccine, only 27% knew regarding the age of administration of the vaccine and 10% knew the vaccination schedule. Seventy-six percent were aware of the cervical cancer screening methods, with the most common method being a Pap smear. Upon visual inspection, none of them commented on using acetic acid as a screening method and only 8% knew about colposcopy. The knowledge regarding a Pap smear as a screening method was mostly through their classes, books, and through hospital.

## DISCUSSION

Cancer of cervix is a preventable disease and a key aspect of its prevention is detection of the premalignant form by cervical screening.

There is no national cervical cancer screening program in India,<sup>9</sup> and in such a setting, opportunistic screening is only feasible when women come to procure health services for other ailments. In such a system, the onus is on the health worker to offer screening to eligible women and nursing staff plays a very important role. It is very important to understand the level of knowledge of the latter so that the gap can be covered and their services can be utilized effectively.

In a study conducted by Urasa among nurses in a hospital in Tanzania, 38.7% could correctly identify HPV infection as the etiology while in a study carried out by Naik et al. among nurses in rural areas of Andhra Pradesh, less than a quarter of nurses had a correct answer.<sup>10,11</sup> In the present study, 55.9% correctly answered about HPV as a causative agent. Though the results in our study are better than previous studies, it still shows a considerable lack of knowledge.

The respondents had a good knowledge about the symptoms of the cervical cancer. Similar to other studies, eighty percent of respondents suggested postmenopausal bleeding and foul smelling discharge as symptoms of the cervical cancer.<sup>12,13</sup> About 72% patients knew postcoital bleeding as one of the symptoms of the cervical cancer unlike other studies, where only 35–45% suggested postcoital bleeding as an important symptom.<sup>8,10,14</sup>

In the present study, 75.6% were aware of a Pap smear as a screening method. The results were similar to those of the study conducted by Singh et al.,<sup>8</sup> which reported that 73.7% respondents were aware of a Pap smear as a method of detection of cancer cervix. Similarly, Awodele et al. in their study reported a 91% awareness of a Pap smear as a screening test for the cervical cancer.<sup>15</sup> Despite a good level of awareness about a Pap smear, only 11% had undergone screening, which is lower than other studies, where one-fifth to a quarter of participants had themselves

**Table 3:** Awareness of various risk factors for cervical cancer

Multiple sexual partners	72.6%
Multiparity	60.4%
Long term OCP use	54.3%
Sex <17 years	46.7%
<i>Chlamydia</i> infection	42.6%
Smoking	41.6%
Weak immunity	36%
Uncircumcised sexual partner	23.8%
Hereditary	9%

undergone Pap testing.<sup>12,16</sup> Similarly, in another study by Singh et al.,<sup>8</sup> 89% respondents had never screened themselves as they did not find them vulnerable to disease. This observation suggests that unless nursing staff understands the importance of screening, they cannot motivate patients attending healthcare facilities for the same. Cervical cancer is readily preventable unlike most other malignancies but still various studies have shown a low level of awareness about the availability of the vaccine. In our study, only 58.9% were aware of the availability of the vaccine, 27% knew about the age of administration, and 10% knew the schedule of vaccination. The results are similar to those of the study conducted by Naik et al. in Andhra Pradesh, where only 30.8% were aware of the availability of the vaccine.<sup>11</sup> Low level of awareness (9%) about the vaccine was also observed in studies conducted in other countries.<sup>17,18</sup>

## CONCLUSION

This study concludes that nurses do have a good knowledge of cervical cancer symptoms and risk factors, but have a limited understanding of cancer screening techniques and vaccination. These gaps in knowledge necessitate an institutional-based workshop and training on the cervical cancer.

## REFERENCES

1. Torre LA, Bray F, et al. Global cancer statistics, 2012. *CA Cancer J Clin* 2015;65(2):87–108. DOI: 10.3322/caac.21262.
2. Bermudez A, Bhatla N, et al. Cancer of the cervix uteri. *IJGO* 2015;131(Suppl 2):S88–S95. DOI: 10.1016/j.ijgo.2015.06.004.
3. Ferlay J, Soerjomataram I, et al. Cancer incidence and mortality worldwide: sources, methods and major patterns in GLOBOCAN 2012. *Int J Cancer* 2015;136(5):E359–E386. DOI: 10.1002/ijc.29210.
4. Bosch FX, Lorincz AT, et al. The causal relation between human papillomavirus and cervical cancer. *J Clin Pathol* 2002;55:244–265. DOI: 10.1136/jcp.55.4.244.
5. Oche MO, Kaoje AU, et al. Cancer of the cervix and cervical screening Current knowledge, attitude and practices of female health workers in Sokoto, Nigeria. *Int J Med Med Sci* 2013;5:184–190.
6. Postgraduate Institute of Medical Education and Research. Guidelines for cervical cancer screening programme. Government of India-World Health Organization Collaborative Programme (2004–2005). Chandigarh, India: Postgraduate Institute of Medical Education and Research; 2006.
7. Chirenje ZM, Chipato T, et al. Visual inspection of the cervix as a primary means of cervical cancer screening: results of a pilot study. *Cent Afr J Med* 1999;45:30–33.
8. Singh E, Seth S, et al. Awareness of cervical cancer screening among nursing staff in a tertiary institution of rural India. *J Gynecol Oncol* 2012;23:141–146. DOI: 10.3802/jgo.2012.23.3.141.
9. Sankaranarayanan R, Budukh AM, et al. Effective screening programmes for cervical cancer in low- and middle-income developing countries. *Bull World Health Organ* 2001;79:954–962.
10. Urasa M, Darj E. Knowledge of cervical cancer and screening practices of nurses at a regional hospital in Tanzania. *Afr Health Sci* 2011;11(1):48–57.
11. Naik PR, Nagaraj K, et al. Awareness of cervical cancer and effectiveness of educational intervention programme among nursing students in a rural area of Andhra Pradesh. *Healthline* 2012;13:41–45.
12. Devi SS, Babu VA, et al. Nursing staff awareness of cervical cancer and Pap smear screening in a remotemedical college hospital in South India. *Int J Res Health Sci* 2014 Oct 31;2(4):1085–1090.
13. Shashank S, Sharma C, et al. Cervical cancer screening, KAP among nursing staff in a tertiary level institution of rural India. *Asian Pac J Cancer Prev* 2013;14:3641–3645.
14. Goyal A, Vaishnav G, et al. KAP about cervical cancer and screening among nursing staff in a teaching hospital. *Int J Med Sci Public Health* 2013;2:249–253. DOI: 10.5455/ijmsph.2013.2.247-251.
15. Awodele O, Adeyomoye AAA, et al. A Study on Cervical Cancer Screening Amongst Nurses in Lagos University Teaching Hospital, Lagos, Nigeria. *J Cancer Educ* 2011;26:497. DOI: 10.1007/s13187-010-0187-6.
16. Mutyaba T, Mmiro FA, et al. Knowledge, Attitudes and Practices on cervical Cancer screening among the medical workers, Uganda. *BMC Med Educ* 2006;6:13. DOI: 10.1186/1472-6920-6-13.
17. Ali SF, Ayub S, et al. Knowledge and awareness about cervical cancer and its prevention amongst interns and nursing staff in tertiary care hospitals in Karachi, Pakistan. *PLoS One* 2010;5(6):e11059. DOI: 10.1371/journal.pone.0011059.
18. Hoque ME. Cervical cancer awareness and preventive behaviour among female university students in South Africa. *Asian Pac J Cancer Prev* 2010;11(1):127–130.