

Original Research Article

KNOWLEDGE OF RISK FACTORS AND PREVENTION OF CERVICAL CANCER AMONG FEMALE HEALTHCARE PROFESSIONALS IN NORTHERN INDIA

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Abstract

Background: Ninety percent of deaths from cervical cancer occur in low- and middle-income nations. It is the second most frequent malignancy among women worldwide. In India, there are roughly 96,922 new instances of cervical cancer detected each year.

Materials and Methods: This cross-sectional study of all female healthcare practitioners, including medical professionals, nurses, and first-, second-, and third-year MBBS students, was carried out in the Obstetrics and Gynecology Department of the Venkateshwara Institute of Medical Sciences in Gajraula, Uttar Pradesh.

Result: Multiple sexual partners and HPV infection were the two most common risk factors for cervical cancer, according to 108 participants, or 69.2% of the sample. 41.7% of participants were aware that an early pregnancy increases the risk of cervical cancer, compared to 105 (67.3%). Physicians have the greatest level of risk factor awareness across all variables, followed by nurses and students. **Conclusion:** It takes effective information, education, and communication tactics to raise women's awareness of cervical cancer.

INTRODUCTION

In 2018, there were 31000 cervical cancer-related fatalities worldwide and 570,000 cervical cancer cases. A malignant tumor that develops from the cervix's cells is called a carcinoma of the cervix. Globally, there were 604,100 newly diagnosed cases of cervical cancer, leading to 341,831 deaths, according to Globocan2020.^[1] Cervical cancer is a danger for 436.76 million women in India who are 15 years of age or older. Cervical cancer is surprisingly the second most common cancer among women who are reproductively age.^[2] Human papillomavirus (HPV) is thought to be the cause of cervical cancer (CC), with HPV-16 and HPV-18 being the main viruses responsible for 70–80% of instances. Research conducted in India suggests that 82.7% of invasive cervical malignancies have HPV-16 or HPV-18 present. Poor personal hygiene, low socioeconomic status, human papillomavirus infection, multiple sexual partners, multiple childbirths, early marriage and sexual practice, early childbirth (before the age of 20), HIV infection, use of oral contraceptives, smoking, and other factors are common risk factors associated with carcinoma cervix.^[3] Of all the diseases of the female genital tract, cervical cancer is one that can be avoided if caught early. In affluent nations, organized cervical

screening programs have lowered cervical cancer incidence and mortality by 80%.^[4] Cervical cancer cases will decrease as long as effective primary (HPV vaccine) and secondary (cervical cancer screening and treating precancerous lesions) prevention strategies are used. Cervical cancer can be detected by PAP smear screening, although most women in developing and disadvantaged nations lack access to this useful technique. Their non-participation in screening programs is the main obstacle.^[5] In India, just 1.9% of women are screened for cervical cancer; the rate varies from 0.2% in Gujarat to 9.8% in Tamil Nadu.^[6] The incidence of cervical cancer in India is extremely concerning, even over ten years after the HPV vaccination was first developed; widespread cervical screening is still a need.^[6] Indian women are not very aware of cervical cancer and how to prevent it. Medical personnel must be educated on cervical cancer in order for them to inform the public about the disease and how to prevent it.^[7] The observed barriers to cervical cancer screening include underutilization of preventive interventions due to stigma and misconceptions regarding gynecological diseases, as well as a lack of awareness and knowledge of symptoms and risk factors. Well-informed healthcare personnel have a significant impact on public attitudes and behaviors, so it is

important to continuously evaluate and refresh their knowledge. The current study evaluates female healthcare professionals' and medical students' basic understanding of cervical cancer, its risk factors, and preventive methods.

MATERIALS AND METHODS

This cross-sectional study of all female healthcare practitioners, including medical professionals, nurses, and first-, second-, and third-year MBBS students, was carried out in the Obstetrics and Gynecology Department of the Venkateshwara Institute of Medical Sciences in Gajraula, Uttar Pradesh. The 156 participants in total who provided their consent to be part of the study were included. The pre-written online survey was administered via the Google Forms platform, and each respondent provided their informed consent on the poll's initial introductory page. After a thorough analysis of the literature, the questionnaire was developed based on research findings already in existence.^[8-11] To ensure confidentiality, participant names and IDs were excluded from the survey. There were three sections on the questionnaire. Section A asks questions about the participants' demographic makeup. Section B asked questions about early sexual activity, having multiple partners, HPV infection, and other risk factors for cervical carcinoma. Section C asked questions about cervical cancer being the most common cancer among Indian women and that it can be prevented, among other things, to gauge the participants' knowledge of the disease and its preventive measures. There were two choices for each question in Sections B and C: YES,

or AGREE, and NO, or DISAGREE. After that, the scale was dichotomized, with 0 representing "NO" and 1 representing "YES."

Data analysis: For the qualitative variables, percentages and frequencies were calculated. Version 20 of the SPSS program was used to enter and analyze data. The Institutional Ethics Committee granted approval for the project.

RESULTS

The study involved 156 female participants in total, comprising 27 physicians, 45 nurses, and 84 first-, second-, and third-year medical students.

The demographic features of the participants are outlined in [Table 1]. The age group of 20 to 30 years old comprises the majority of the study individuals (67.3%). At the time of the research, the highest degree of education attained by 53.8% of participants was a senior secondary certificate, while 76.9% of respondents were single.

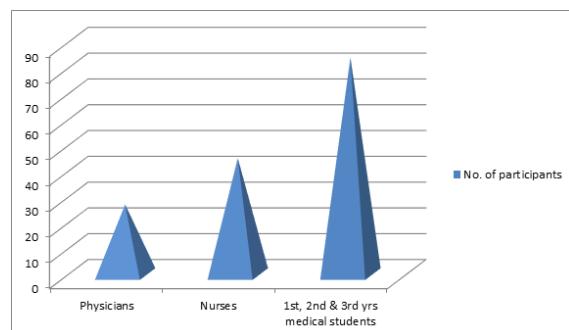


Figure 1: Shows the number of participants.

Table 1: Participant demographics

Variables		Doctors N=27	Nurses N=45	Med. Students N=84	Total N=156
Age in Years	<20	00(0.0%)	00(0.0%)	27(32.14%)	27(17.3%)
	20-30	12(44.4%)	36(80.0%)	57(67.85%)	105(67.3%)
	>30	15(55.6%)	09(20.0%)	00(0.0%)	24(15.4%)
Marital Status	Married	19(70.4%)	17(37.8%)	00(0.0%)	36(23.07%)
	Unmarried	08(29.6%)	28(62.2%)	84(100.0%)	120(76.9%)
Education	PCL	00(0.0%)	00(0.0%)	84(100.0%)	84(53.8%)
	Bachelor	06(22.2%)	45(100.0%)	00(0.0%)	51(32.7%)
	Master	21(77.7%)	00(0.0%)	00(0.0%)	21(13.5%)

Table 2: Participants' awareness of the risk factors for cervical cancer

Variables		Medical Professional	Nurses	Med. Students	Total
R1	Early Sexual intercourse	22(81.5%)	26(57.8%)	36(42.9%)	84(53.8%)
R2	Early pregnancy	19(70.4%)	20(44.4%)	26(30.95%)	65(41.7%)
R3	Multiple Births	18(66.7.4%)	22(48.9%)	27(32.1%)	42(26.9%)
R4	Multiple Sexual partners	23(85.2%)	34(75.6%)	48(57.1%)	105(67.3%)
R5	Cigarette Smoking	21(77.8%)	33(73.3%)	37(44.04%)	91(58.3%)
R6	HIV infection	23(85.2%)	28(62.2%)	47(55.95%)	98(62.8%)
R7	HPV infection	27(100.0%)	39(86.7%)	42(50.0%)	108(69.2%)

Table 3: Participants' awareness of cervical cancer prevention

Variables		Medical Professional	Nurses	Med. Students	Total
P1	Cervical Carcinoma is a leading cause of death among all cancers in India among females(agree)	26(92.29%)	40(88.9%)	53(63.09%)	119(76.3%)
P2	Cervical cancer is preventable(agree)	27(100.0%)	42(93.3%)	59(70.23%)	128(82.05%)
P3	Screening helps in its prevention(agree)	27(100.0%)	42(93.3%)	59(70.23%)	128(82.05%)
P4	Have you heard about pap smear test for Cervical	27(100.0%)	37(82.2%)	41(48.8%)	105(67.3%)

	Carcinoma screening (yes)				
P5	Do you know HPV vaccination helps in the prevention of carcinoma of the cervix (yes)	27(100.0%)	35(77.8%)	39(46.4%)	101(64.7%)

Multiple sexual partners and HPV infection were the two most common risk factors for cervical cancer, according to 108 participants, or 69.2% of the sample. 41.7% of participants were aware that an early pregnancy increases the risk of cervical cancer, compared to 105 (67.3%). Physicians have the greatest level of risk factor awareness across all variables, followed by nurses and students [Table 2]. Participants' knowledge about cervical cancer prevention is shown in Table 3. Of the participants, 128 (82.05%) were aware that screening can help prevent cervical cancer and that the disease is avoidable. Doctors have the greatest level of knowledge regarding all aspects of cervical cancer prevention.

DISCUSSION

Among the Gynecological malignancies that can be prevented is cervical cancer. Early identification and treatment during the pre-invasive period are the main goals. Cervical cancer can be effectively detected by pap smear screening, and primary protection against cervical cancer is provided with HPV vaccine.^[12]

Since healthcare professionals are vital in disseminating information to the public, their knowledge, perspectives, and attitudes are crucial. The purpose of this study was to assess medical students' and healthcare professionals' knowledge, awareness, and orientation regarding cervical cancer and its preventive strategies. The majority of nursing staff (80.0%) in this study were between the ages of 21 and 30, which is younger than those in earlier studies and single (62.2%) than in other studies.^[7,13] in which a higher proportion were wed. All specialists concurred that HPV infection is the cause of cervical cancer and that HPV vaccination and pap smear screening can prevent cervical cancer. Among doctors, early pregnancy and numerous births were the least associated risk factors, with HIV infection (85.2%) and multiple sexual partners ranking as the second most prevalent risk factors.

Healthcare professionals knew a fair amount about cervical cancer (84.06%), according to Chawla et al,^[14] but only 81.01% were aware of the HPV vaccine. In a different study, Heena et al,^[15] discovered that just 11% of doctors had fair awareness of cervical cancer and only 3% had good understanding of the disease, while Swapnajaswanth et al,^[16] reported that 78.9% of doctors had very good knowledge of the disease.

While nevertheless sufficient, nursing staff members' knowledge is comparatively lower than that of physicians. Of the participants, 86.7% acknowledged that cervical cancer is caused by HPV infection. Compared to earlier studies, where

54.1%,^[17] 25%,^[18] 39.2%,^[19] and 49.5%,^[20] of nursing staff acknowledged HPV infection as a cause of cervical cancer, awareness of HPV infection has improved. According to the current study, the most frequent risk factor for cervical cancer is HPV infection. The results align with research conducted by Devi et al,^[21] (2017) and Thipeveeranna et al (2015),^[22] while other studies identified early pregnancy, multiparity, non-maintenance of personal hygiene, several sexual partners, and nine as the most frequent risk factors. In contrast to previous research where only 30%,^[23] 43.7%,^[20] and 58.4%,^[24] of nursing staff were aware of HPV vaccination, 77.8% of nursing employees acknowledge prevention with HPV vaccine. 82.2% of nurses were aware of the Pap smear test for cervical cancer screening, which is almost identical to the results of earlier research.^[18,19]

several births were thought to be the least common role to play in this study, however HIV infection and having several sexual partners were regarded by medical students as the most prevalent risk factors, at 55.95% and 57.1%, respectively. The majority of students (50.0%) acknowledged HPV infection as a risk factor for cervical cancer, which is somewhat low when compared to research by Chaudhery et al,^[25] and Shetty et al,^[26] but about the same as observed in earlier studies by Ganju et al,^[27] (56.75%), Anusha et al,^[28] and others (54.8%). 46.4% of medical undergraduates knew that HPV vaccine can prevent cervical cancer, which is much less than the knowledge of students in studies by Chaudhery et al,^[29] (75%) and Pandey et al,^[30] (75.6%), and about the same as that of students in Shetty et al,^[31] (59.7%).

Only 48.8% of students knew what a pap smear test was, despite the fact that 70.23% of them felt that cervical cancer is avoidable and that screening aids in its prevention. This study's findings are comparable to those of Anusha et al,^[28] (52.5%), while Singh et al,^[2] found that 78.78% of first-, second-, and third-year MBBS medical students were aware of the pap smear test. Previous research on medical students found that depending on their educational background, medical undergraduates had varying degrees of expertise. Final year MBBS students knew more than third year students and so on.

First, second, and third year MBBS students were included in the current study, and since cervical cancer had not been covered in their academic curriculum, their knowledge appropriately reflected their level of medical education. Seniority of the semester was linked by Pandey et al,^[32] and Wanderley et al,^[33] to medical students' growing trend of knowledge.

The fact that every participant in this study came from a single institute limits the generalizability of the findings.

CONCLUSION

Healthcare professionals, especially physicians, demonstrated an amazing level of knowledge regarding the risk factors and preventive methods for cervical cancer in this extensive research project. Their knowledge covered a wide range of this important health issue's aspects. Conversely, nursing staff was knowledgeable about pap smears, HPV infection, and vaccination, but their comprehension appeared limited when it came to identifying other common risk factors in the particular setting of Indian society. This emphasizes how important it is to close these gaps in order to promote a wider understanding. The study also revealed an important finding: medical undergraduates had a noticeable knowledge gap regarding cervical cancer risk factors and preventative strategies. This information emphasizes how urgent it is to implement focused educational initiatives to raise the next generation of healthcare workers' awareness and readiness to effectively combat cervical cancer. For a more comprehensive and informed approach to cervical cancer prevention and management going forward, it will be essential to close these knowledge gaps among students and healthcare professionals alike. The inclination of the society for female patients to feel more comfortable with women in healthcare jobs is the reason behind the study's concentration on female healthcare personnel as participants. This degree of comfort encourages candid communication. Therefore, the study underscores the importance of increasing awareness, especially among female healthcare professionals who can be key players in spreading knowledge and understanding about this significant health concern.

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