



AWARENESS AND KNOWLEDGE REGARDING PAP SMEAR AMONG NURSING STAFF IN TERTIARY CARE CENTRE

Obstetric & Gynaecology

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ABSTRACT

BACKGROUND Cervical cancer is one of the most common cancers worldwide. In India, it is one of the leading causes of mortality among women accounting for 23.3% of all cancer deaths. Screening by Pap smear has reduced the incidence in developed countries, but implementation of this screening technique has not been successful in developing countries due to the lack of knowledge and awareness. Nursing staff with adequate knowledge can play a huge role in the implementation of this screening strategy.

OBJECTIVE To determine the awareness and knowledge regarding Pap (papanicolaou) smear as a screening test for cervical cancer among nursing staff in a tertiary care centre

METHODS This is a cross-sectional study, was carried out among 100 nursing staff aged 20 – 65 years at Kempegowda Institute of Medical Sciences and Research Centre over a period of 3 months. Structured questionnaires were used to collect the data. The staff nurses were interviewed for seeking information about the socio-demographic profile, their knowledge about cervical cancer symptoms, risk factors and prevention, and their awareness and knowledge regarding screening methods and pap smear in particular for cervical cancer.

RESULTS Majority of the participants in the study were from 30 – 40 years age group (44%) and majority were married (95%). Most of the participants had received information about cervical cancer from doctor (68%) and media (17%). 71 % of the study population mentioned that HPV infection is the major risk factor for cervical cancer and 65 % opted foul smelling vaginal discharge as the main symptom followed by post-coital bleeding (44%). Even though majority had information about pap smear (93%), only 33 % knew about HPV DNA as a method of screening for cervical cancer. Most of the participants were of the opinion that married and sexually active females need to be screened. But only 27 % knew correctly that pap smear needs to be repeated every 3 years.

CONCLUSION Nurses can identify only certain aspects of cervical cancer correctly. Their knowledge and understanding of cervical cancer, as well as its screening process, is satisfactory, but there is a vast scope for improvement. Nursing staff with adequate knowledge can play a huge role in the implementation of the screening strategy and reducing the mortality due to cervical cancer.

KEYWORDS

cervical cancer, Pap (papanicolaou) smear, HPV (human papilloma virus) DNA, screening, staff nurses, knowledge

Worldwide, cervical carcinoma continues to be a significant health care problem. In developing countries, where health care resources are limited, cervical carcinoma is the second most frequent cause of cancer death in women¹. Screening by Pap smear has reduced the incidence in developed countries, but implementation of this screening technique has not been successful in developing countries due to the lack of knowledge and awareness. In the absence of organised screening programmes, opportunistic screening is an alternative where a female presenting to the hospital should be screened for cervical cancer.

In 2020, Globocan estimated 123,907 incident cases of cervical cancer in India and 77,348 deaths, with an age-standardized incidence rate of 18 per 100,000 women and a cumulative risk of 2.01%²

The usual 10-20 years of natural history of progression from mild dysplasia to carcinoma cervix makes this cancer as relatively early preventable disease and provides the rationale for screening³.

Because cervical cancer is preventable, it is imperative that gynecologists and other primary health care providers for women be familiar with vaccination programs, screening techniques, diagnostic procedures, and risk factors for cervical cancer and management of pre-invasive disease¹

Nurses form a large proportion of the health-care provider workforce. They act as primary care providers, especially in poor resource settings and remote areas. They are also a useful link in providing health education.

Human papillomavirus (HPV) infection is the causal agent of cervical cancer. Screening programs are effective at decreasing the incidence of cervical cancer. Vaccines help decrease the incidence of cervical cancer¹.

Cervical cancer is one cancer the world can actually eliminate according to the World Health Organization, and a global strategy to achieve this was launched in November 2020⁴.

The elimination programme aims to achieve the following targets by 2030:

- 90% girls fully vaccinated by 15 years of age with two doses of HPV vaccine;
- 70% women screened with a high-performance test at 35 and 45 years of age; and,
- 90% of women with cervical pre-cancer and cancer receive treatment to achieve a goal of less than four cases per 100,000 women.

HPV vaccines have been licensed in India since 2008 for females aged 9 to 45 years and the National Technical Advisory Group on Immunization (NTAGI) has approved their use. The Indian Academy of Paediatrics Committee on Immunisation (IAPCOI) recommends it for all females starting from 9 years of age. FOGSI recommends 9–14 years as the ideal time for vaccination, with vaccination of older age cohorts to be considered with an understanding that vaccination in sexually active females may be less effective as they may already be infected, but may provide some benefit against the types to which they have not been exposed earlier⁵

Vaccination of adolescents against HPV 16 and HPV 18, which cause approximately 70% of cervical cancers, can prevent the majority of cervical cancer cases⁶

The most efficient and cost-effective screening techniques include pap smear, visual inspection with acetic acid (VIA) or Lugol's iodine (VILI) and HPV DNA testing.

In spite of the successful prevention methods, one study reported that lifetime screening prevalence for Indian women ages 15 to 49 was only 29.8% in India⁷

In addition to the lack of a national screening campaign for cervical cancer, several studies have shown that knowledge of cervical cancer, prevention, and screening are limited among women across different settings in India^{8,9,10,11}

As the doctor to patient ratio is low in India i.e., 1:1,500 staff nurses if trained properly, can make aware and screen all the women coming / admitting to hospital for any of their problems. They can also help in motivating the peripheral health workers to bring all the sexually active females to the hospital for the cervical cancer screening.

KAP (knowledge, attitude and practice) study will bring forth the weak points among nurses, so that a comprehensive practical training for staff nurses can be organized. Therefore awareness among nurses is a basic requirement to implement a successful screening program and actually reduces the incidence of cervical cancer in developing countries like India.

MATERIALS AND METHODS

This is a cross sectional study conducted in Kempegowda Institute of Medical Sciences, Bengaluru over a period of 3 months from July 2021 to September 2021. One hundred staff nurses working in various Departments were included in the study.

Structured questionnaires were used to collect the data. Written informed consent was taken. The staff nurses were interviewed for seeking information about the socio-demographic profile, their knowledge about cervical cancer symptoms, risk factors and prevention, and their awareness and knowledge regarding screening methods and pap smear in particular for cervical cancer.

AIM AND OBJECTIVES

To assess the knowledge among nursing staff about cervical cancer symptoms, risk factors and screening methods

To determine the awareness and knowledge regarding Pap (papanicolaou) smear as a screening test for cervical cancer

RESULTS

Table 1 - Socio-demographic Characteristics Of Study Population

CHARACTERISTICS		PARTICIPANTS	%
Age	20 - 30	26	26
	30 - 40	44	44
	40 - 50	25	25
	>50	05	05
Marital status	Married	95	95
	Unmarried	05	05
Parity	Nulliparous	18	18
	One child	34	34
	Multiparous	48	48
Contraception	Natural	08	08
	Barrier	17	17
	OCPs	15	15
	IUCD	22	22
	Sterilization	33	33
	None	05	05

In our study, majority of the participants were from the 30 - 40 years age group (44%). 26 % of the participants were from 20 - 30 years age group and 25 % were from 40 - 50 years age group. We had only 5 % in the > 50 years group.

Most of the staff nurses (95%) in the study group were married and only 5 % were unmarried.

48% of the staff nurses in study were multiparous, 34 % had one child and 18 % were nulliparous.

33 % of the staff nurses had undergone permanent sterilization. 22 % of the study population were using IUCD, 17 % were using barriers and 15 % were taking OCPs as a method of contraception. 5 % were not using any method of contraception in the study.

Table 2 - Responses Related To Awareness Of Risk Factors, Symptoms And Signs Of Cervical Cancer

Variables		Participants	%
Risk factors	Early coitus	22	22
	Multiple sexual partners	28	28
	HPV	71	71
	STD	30	30
	Don't know	0	0
Symptoms and signs	Foul smelling vaginal discharge	65	65
	Pain	12	12
	Post-coital bleeding	44	44
	Inter-menstrual bleeding	16	16
	Mass per abdomen	01	01
	Don't know	00	00

HPV is cause for cervical cancer and risk factors include early onset of sexual activity, multiple sexual partners, history of sexually transmitted diseases, smoking, high parity, immunosuppression, low socioeconomic status, prolonged use of oral contraceptives. In our study, majority of the participants (71%) had told that HPV infection is the cause for cervical cancer followed by STD infection (30%) and multiple sexual partners (28%) among the risk factors for cervical cancer.

Majority (65%) of the staff nurses told that foul smelling vaginal discharge is the most common symptom of cervical cancer. 44 % commented that post coital bleeding is the mode of presentation and abdominal pain was told by 12 %.

Table 3 - Responses Related To The Screening For Cervical Cancer

Variables		Participants	%
Screening methods	Pap smear	93	93
	HPV DNA	33	33
	VIA	24	24
	VILI	16	16
	Don't know	00	00
Source of information about cervical cancer and the screening methods	Friend	15	15
	Doctors and Hospital	68	68
	Media	17	17
Who should be screened	Married women	76	76
	Sexually active women	65	65
	>21 years	38	38
Frequency of screening	1 year	58	58
	3 years	27	27
	5 years	15	15

In the present study, majority of the participants had received information about cervical cancer from hospitals and doctors (68%).

Most of the participants knew about pap test (93%) as a screening method for cervical cancer but only 33 % mentioned about HPV DNA and 24 % about VIA as a screening method for cervical cancer.

Majority of the participants had replied that only married and sexually active women must be screened. Only 38% of the participants had told that women >21 years must be screened.

Majority of the staff nurses in the study told that pap smear has to be repeated yearly (58%) only 27 % mentioned that pap smear has to be repeated every 3 years.

Table 4 - knowledge And Practices Regarding Pap Smear And Hpv Vaccines

Variables		Participants	%
Underwent pap smear	Yes	22	32
	No	78	68
Knowledge regarding pap smear and reasons for not getting screened	No need to do if asymptomatic	34	34
	Causes discomfort	15	15
	Embarrassing	29	29
	Need not be repeated after a normal report	34	34
	Need not be repeated after menopause	28	28
Knowledge about HPV vaccines	Present	35	35
	Absent	65	365

Even though, majority of the study population had information about pap test, only 22 % had undergone pap smear testing for themselves and they gave the reason as embarrassing and discomfort for not getting screened. Many of them felt that they needn't get screened as they are asymptomatic. Most of the participants felt that pap test need not be repeated after a normal report (34%) and after menopause (28%) In our study, 35% had knowledge about HPV vaccines and 65% did not know about HPV vaccines.

DISCUSSION

Cervical cancer despite being the commonest genital cancer of women in India, there are no properly organized or high-level opportunistic screening programs for cervical cancer in any of the provincial states

of India.¹²

Even though there is a slow and steady decline in the incidence of cervical cancer, the rates are still high, especially in rural areas due to the absence of a systematic screening programme. Even in our institution the opportunistic screening of the eligible women with pap smear is practiced when they come for other services. If health workers in the antenatal, postnatal and STD clinics and ART centres are trained in screening techniques, they can bring a change in the existing practice.

The present study is a cross sectional study conducted in Kempegowda Institute of Medical Sciences, Bengaluru over a period of 3 months. A structured questionnaire was used to interview the selected nurses for seeking information about their socio-demographic profile, their knowledge about symptoms, risk factors and prevention, their attitude and practices regarding Pap smear as a screening device for cancer cervix.

In our study, majority of the participants were from 30-40 years age group (44%), and 95% of the participants were married. 48% of the participants in study were multiparous while 34% had one child and only 18% were nulliparous. Similar findings were noted in a study by Abiodun et al in which the average age of the participants was 32.7 years¹³. Similar results were noted in a study by Devi et al in which the age group of 31-40 years formed the largest 32% and 93% of the participants were married¹⁴. In our study, 33 % of the participants had undergone permanent sterilization which is in accordance with the study by Devi et al¹⁴ where 47.6 % had undergone tubectomy.

Among the risk factors for cervical cancer, majority of the participants in our study mentioned about HPV infection (71%) followed by STDs (30%) and multiple sexual partners (28%). Even in a study by Mahajan et al¹⁵ majority of the females said HPV infection as the major risk factor for cervical cancer. The risk factors like early coitus and multiple sexual partners were known to only 22% and 28% of the respondents respectively.

65% of the participants said foul smelling vaginal discharge as the common presentation of cervical cancer followed by post-coital bleeding in our study. Similar results were noted in a study by Mahajan et al¹⁵ in which 65.78% of the participants mentioned that discharge p/v is the main symptom of cervical cancer. Even in a study by Dhodapkar et al¹⁶ majority of the staff nurses opted malodorous vaginal discharge as the most common symptom (42.4%).

Regarding the diagnosis and screening of cervical cancer, 93% of the respondents knew that pap smear can be used for the early detection of cancer cervix but only 33% were aware of HPV DNA. Only 24% and 16% of the participants knew that VIA and VILI can be used for the detection of precancerous lesions of the cervix. In a study by Shekhar et al¹⁷ similar results were obtained where 77% respondents knew that Pap smear is used for detection of cervical cancer. Only 23.4% knew human papilloma virus infection as a risk factor. Even in a study by Mahajan et al¹⁵ 79.06% participants had knowledge about PAP test as a screening test for cancer cervix.

In our study, majority of the participants (68%) responded that they received information about cervical cancer and its screening techniques from doctors and hospitals. Other sources like media and friends were mentioned by only 17% and 15 % of the respondents respectively. Similar results were observed in Mahajan et al¹⁵ study where 70% mentioned about hospitals as source of information and media and friends were mentioned by 14% and 7% respectively.

In our study, even though most of the participants had responded that pap smear has to be done in married and sexually active women, only 38% reported correctly that pap smear screening should be started at 21 years. Majority of the staff nurses in the study told that pap smear has to be repeated yearly (58%) only 27 % mentioned that pap smear has to be repeated every 3 years.

Even in Dhodapkar et al¹⁶ study only 40.3% of the participants correctly reported that Pap smear screening should be started at 21 years of age and 50.4% responded that Pap smear should be done every year.

Even though most of the participants had knowledge about pap smear only 22% had undergone pap smear testing for themselves in our study. In a study by Shekhar et al¹⁷, 77% respondents knew that Pap smear is used for detection of cervical cancer. Only 17 (7%) of the staff nurses

had themselves been screened by Pap smear, while 85% had never taken a Pap smear of a patient. Even in the study done by Chamaraja Thippeveeranna et al only 11.6% had Pap smear at least once previously¹⁸.

Most of the respondents (34%) stated that they did not get Pap smear because they had no symptom, while 29 % stated that they feel embarrassed to get screened. Even in Mahajan et al¹⁵ study about 43.8% respondents stated that they did not get Pap smear because they had no symptom, while 15.34% stated that they feel shy to get screened and 16.2% stated that they were afraid of the possible outcome. In Dhodapkar et al¹⁶ study the reasons for not having it done were mainly not having any symptoms 64 (56%), not having any risk factors 36 (31.5%).

In our study, 35% of the respondents knew about HPV vaccines. In a study by Gupta et al found that 19% knew that Pap smear is used for detection of pre-invasive cervical cancer and 30% of the respondents knew about HPV vaccine.¹⁹

CONCLUSION

Nurses can identify certain only aspects of cervical cancer correctly. Their knowledge and understanding of cervical cancer, as well as its screening process, is satisfactory, but there is a vast scope for improvement. Nurses being an important link between the doctors and female patients in OPD or wards, they can play an integral role in educating women in prevention of diseases and health promotion. Therefore, knowledge among nurses, regarding cervical cancer and its prevention is very important to promote informed decisions about cervical cancer screening.

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