

## RESEARCH ARTICLE

# Knowledge, Attitude and Practice of the Pap Smear as a Screening Procedure Among Nurses in a Tertiary Hospital in North Eastern India

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### Abstract

**Background:** Cancer of the uterine cervix is one of the most common cancers among women worldwide. Industrialized countries have dramatically reduced the incidence of mortality from cervical carcinoma in the last 50 years through aggressive screening programs utilizing pelvic examinations and Papanicolaou (Pap) smears but it still remains a major problem in the developing world. **Objectives:** This study was performed to determine knowledge, attitude and practice of Pap smear as a screening procedure among nurses in a tertiary hospital in north eastern India. **Material and Methods:** This cross sectional study was carried out with a questionnaire survey covering the socio demographic factors, knowledge, attitude and practices about Pap smear screening among 224 nurses in Regional Institute of Medical Sciences, Imphal, Manipur, India during December 2011. **Results:** Two hundred and twenty one participants (98.6%) had heard about cervical carcinoma but 18.3% lacked adequate knowledge regarding risk factors. Knowledge about the Pap smear was adequate in 88.8% of the respondents. Out of these, only 11.6% had Pap smear at least once previously. The most common reasons for non-participation in screening were lack of any symptoms (58.4%), lack of counselling (42.8%), physician does not request (29.9%) and fear of vaginal examination (20.5%). **Conclusion:** Although knowledge of Pap smear as a screening procedure for cervical cancer is high, practice is still low. The nurses who should be responsible for opportunistic screening of women they care for are not keen on getting screened themselves. If we can improve the practice of Pap smear screening in such experts, they should be able to readily provide appropriate and accurate information and motivate the general population to join screening programs.

**Keywords:** Cervical cancer - pap smear - knowledge - attitude - practice

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### Introduction

Cancer of the cervix is a major burden on women's health worldwide. Cervical cancer is the second most common cancer in women worldwide (12%) following cancer of the breast; in developing countries however it is the most common cancer among women (WHO, 2006). In India this is the commonest cancer among women and this country has the largest burden of cervical cancer patients in the world. India accounts for one-fifth of the world burden of cervical cancer (Desai, 2004). In many of the developed countries the annual incidence and mortality from this cancer has gone down by 50-70% since the introduction of population based screening (Adeleke et al., 2007).

Apart from the fact that incidence of cervical carcinoma is low in developed countries compared to what obtains in developing countries, the clinical features also show contrasting features. In developed countries 75% of patients present in early while in developing countries 75%

of patients present in advanced stage where cure is not to be expected (Sankaranarayana et al., 1998). According to the WHO, 80% of the 288,000 deaths out of 471,000 new cases globally were from developing countries in 2000 (WHO, 2002).

More than 35 types of the HPV are known to infect the genital tract out of which approximately 20 are associated with cervical cancer, with the most common types 16 and 18 and types 6 and 11 are more commonly associated with genital warts (Bosch et al., 1995; Arends et al., 1998). Early sexual debut, multiple sexual partners, HPV infection, smoking, genetic predisposition and compromised immunity are associated with development of cervical cancer (Munoz et al., 2003; McFarlane-Anderson et al., 2008). Recent studies have shown a link between HIV-1 and invasive cervical cancer (Kahesa et al., 2008). Fortunately cervical cancer has a long premalignant period that provides an opportunity for screening and treating before it turns to be invasive cervical cancer

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(Sawaya et al., 2001).

The recorded decrease in the incidence and mortality rates of 70-80% of cervical cancer in western countries over the years is largely due to widespread screening. The Papanicolaou (Pap) smear introduced in 1943 for the detection of precancerous and cancerous changes in the cervix is widely recognised as the most cost effective cancer screening test yet devised and serves as a model for screening of other malignancies (Aboyeji et al., 2004). Studies have shown sensitivity and specificity of Pap smear screening to be 50-75% and 98-99% respectively (Arends et al., 1998; WHO, 2002).

Nurses are the most visible, frontline personnel providing health education to patients and the general population. Because nurses play an integral role in educating women in prevention of diseases and health promotion, they influence cervical cancer screening adherence and health activities among most women. Moreover, it has been shown that recommendation of cervical cancer screening to individuals by medical professionals, including nurses, effectively improves screening coverage among the general population (Yoshino et al., 2012). Therefore, nurses should have current and accurate knowledge about Pap smear and Cervical cancer to promote informed decisions about cervical cancer screening.

## Materials and Methods

This cross sectional study was carried out with a questionnaire survey covering the socio demographic factors, knowledge, attitude and practices about Pap smear screening among 224 nurses in Regional Institute of Medical Sciences, Imphal, Manipur, India during December 2011.

No personal identifying information was collected in the anonymous questionnaire. All participants were given a full explanation of the methodology and purpose of the project and an assurance of confidentiality. Participants were also assured that their participation in the study was voluntary and that they could refuse to participate at any time during the interview.

The questionnaire was designed based on the literature review and consisted of four sections: Socio-demographic characteristics (eleven questions); knowledge about cervical cancer (four questions); knowledge, attitude and practice of Pap smear test (ten questions); and finally barriers to undergoing Pap smear screening (ten questions).

Knowledge, attitude and practice regarding the Papanicolaou examination were evaluated as follows: Adequate knowledge - when the woman reported having heard about the examination, knew it was to detect cancer in general, or specifically of the cervix, and was able to cite at least two precautions necessary before performing the examination.

Inadequate knowledge, when the woman reported never having heard about the examination or had heard about it but did not know that it was to detect cancer; or was unable to cite at least two precautions that should be performed before the examination.

Adequate attitude, when the woman presented prevention of cervical cancer as a reason for performing the Papanicolaou examination. When she reported as a reason the fact that it is a routine examination or a desire to know that she was in good health, an adequate attitude was only considered if she also had adequate knowledge about the examination.

Inadequate attitude, when the woman presented reasons for the examination other than the prevention of Cervical Cancer.

Adequate practice, when the woman had performed her last preventive examination within the previous three years; returned to receive the result of the last examination performed and sought a consultation to show the result of the examination.

Inadequate practice, when the woman had performed her last preventive examination more than three years before or had never taken an examination, even after having commenced sexual activity more than a year before; or when she had not returned to receive the last result; or had not sought a consultation to show the examination results.

The association between adequacy of knowledge, of attitude and of practice of the examination and some socio-demographic characteristics, such as age, education, marital status, commencement of sexual intercourse, work outside the home, proximity of the residence to the health unit was analysed statistically by computing proportions and percentages.

## Results

The socio-demographic characteristics of the study sample are displayed in Table 1. A total of 224 nurses were included in this study. Nurses aged between 30-39 years constituted the majority (54.4%). 92.4% were married. Maximum numbers of the participants were from the low socioeconomic status (39.2%). Majority of them were non-smokers (91.6%) and did not chew tobacco (54.4%).

Knowledge of study participants on Risk Factors for Cervical Cancer is shown in Table 2. Highest number

**Table 1. Socio-demographic Characteristics of Participants**

Variable	No.	%
Age in years	20-29	34 15.10
	30-39	122 54.40
	40-49	56 25.00
	50-59	12 5.30
	>60	
Marital status	Single	16 7.10
	Married	207 92.40
	Divorced	1 0.40
Socioeconomic status	Low	88 39.20
	Middle	78 34.80
	High	58 25.80
Smoking	Yes	18 8.00
	No	206 91.60
Tobacco chewing	Yes	102 45.50
	No	122 54.40
Family history of cancer		22 9.80

**Table 2. Respondents' Knowledge on Risk Factors for Cervical Cancer**

Variables	No.	%
Heard of cervical cancer from		
(a) Family	45	20.00
(b) Health care provider	154	68.70
(c) Magazines	76	33.90
(d) Television /News Paper	134	59.80
(e) Radio	76	33.90
(f) Internet	34	15.10
(g) Friends	88	39.20
(h) Pamphlets	39	17.40
(i) Relatives	47	20.90
(k) Doctor- Family physician/Gynaecologist	163	72.70
Knowledge on risk factors		
(a) Early age of coitus	41	18.30
(b) Multiple sexual partners	45	20.00
(c) Early age of first pregnancy	76	33.90
(d) Too many / too frequent births	34	15.10
(e) Low socio-economic status	25	11.10
(f) Poor personal hygiene	19	8.40
(g) High risk male partner	26	11.60
(h) Sexually transmitted diseases	47	20.90
(i) Genital infection – HPV, HIV, Chlamydia	88	39.20
(k) Smoking habits	39	17.40
Cervical cancer be prevented		
Yes	217	96.80
Don't know	7	3.10

**Table 3. Respondents' Knowledge and Attitude of Pap Smear Test**

Variables	No.	%
Knowledge:		
Heard about PAP smear	224	100
Know PAP smear is done as a screening procedure for cervical carcinoma	199	88.80
Knows the age at which PAP smear should be started	25	11.10
Knows the interval between PAP smear	18	8.00
Attitude: Adequate	205	91.50
Inadequate	19	8.50

**Table 4. Respondents Practice of Pap Smear**

Variables	No.	%
Ever had done Pap smear	26	11.60
Within last three years	19	8.40
Known result	16	7.10
Sought consultation for the result	15	6.60
Reasons for not doing PAP smear		
(a) Fear of vaginal examinations	46	20.50
(b) Embarrassment	29	12.90
(c) Lack of any symptoms	131	58.40
(d) Being busy	11	4.90
(e) Carelessness	31	13.80
(f) No encouragement from the partner	11	4.90
(g) Physician does not request	67	29.90
(h) Long distance from the hospital	3	1.30
(i) Doctors are not cooperative	8	3.60
(j) Lack of counselling.	96	42.80

of participants (72.7%) has heard about cervical cancer from doctor -family physician/gynaecologist. 81.7% had adequate knowledge about risk factors of cervical cancer it means they could identify at least three risk factors of cervical cancer. 96.8% knew that cervical cancer can be

prevented.

Knowledge about Pap smear was adequate in 88.8% of the participants and 91.5% showed adequate attitude towards performing Pap smear (Table 3).

Only 26 participants had ever done Pap smear test. Of those only 16 knew their result and 15 of them had sought consultation for the result (Table 4). The most common reasons for avoiding the screening were lack of any symptoms (58.4%), lack of counselling (42.8%).

## 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. 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, particularly in the rural areas, and the absolute number of cases is on an increase due to population growth (Sankaranarayana et al., 1998). Pap smear is the appropriate screening test for detection premalignant lesion of cervical cancer in India but the coverage of the Pap smear is quite low in Indian population. Studies have shown it is possible to train nurses to screen for cervical cancer.

The majority of the nurses in this study had inadequate knowledge of causes, risks and prevention of cervical cancer, as has been seen in other studies in Uganda, Turkey and Nigeria (Urasa et al., 2011). Our nurse respondents needed more knowledge about the causes and risks of cervical cancer, especially with respect to HPV as 39.2% correctly understood that an HPV infection was associated with cervical cancer. However, this was better than the result from study by Moreira et al. (2006) in which only 17.6% of their respondents had a correct understanding. Another important risk factor, but not directly related to sexual behaviours and HPV infection, is smoking: only 17.4% of respondents had a complete understanding which could limit their effectiveness in conveying cervical cancer prevention behaviour to the general population.

In our study, all the respondents have heard about Pap smear test but only 11.6% have ever done a Pap smear. The most common reasons for avoiding a Pap smear test were lack of any symptoms (58.4%), lack of counselling (42.8%), physician does not request (29.9%) and fear of vaginal examination (20.5%). From the literature review, the most common reasons in patient who avoid Pap smear are fear of vaginal examination and embarrassment (Oranratanaphan et al., 2010)

In conclusion, in India like in most developing countries nurses are the majority of health personnel. It is important that they are well educated regarding cervical cancer, due its public health importance in India and the world, as they have a large role to play in informing the general public and promoting preventive practices given their influence in society. Although knowledge of Pap smear as a screening procedure for cervical cancer is high, practice is still low. The nurses who should be responsible for opportunistic screening of women they care for are not keen on getting screened themselves. If we can improve

the practice of Pap smear screening in such experts, they should be able to readily provide appropriate and accurate information and motivate the general population to join screening programs.

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