



EFFECT OF PLANNED TEACHING ON THE KNOWLEDGE, ATTITUDES AND PRACTICES OF WOMEN PERTAINING TO CERVICAL CANCER, SCREENING AND ITS SECONDARY PREVENTION

Mrs Varsha Kadam

Phd Nursing Student, MGM Institute of Health Sciences, Kamothe Navi Mumbai, Raigad, Maharashtra

Dr Prakash Doke

Professor, Department of Community Medicine, Bharati Vidyapeeth Pune, Former Director, Government of Maharashtra, Maharashtra

Dr Mary Mathews

Principal, College of Nursing, Sanpada Navi Mumbai, Maharashtra

ABSTRACT

Introduction: Cervical cancer remains an important health problem worldwide and more in developing nations. It is the fifth most common cause among deaths due to cancer in the world and the second largest cause of cancer mortality in India. Cervical epithelial cell abnormalities in the Papanicolaou smear represent a spectrum of cellular abnormalities that lie along the pathway, from in-situ lesions to invasive cancer. Currently India accounts for 1/4th of the global cervical cancer burden. Though the incidence of cervical cancer has declined in developed countries, in developing countries like India where women do not undergo routine cervical cancer screening it is still a major health problem among women population.

Aims and Objectives: This study was designed to assess the status of women's knowledge, attitudes and common practices pertaining to cervical cancer and its preventive aspects, symptoms, and the importance of Pap (Papanicolaou) smear test for screening. The participants were 937 women aged 25 to 62 years. The data was collected using a validated knowledge, attitudes and practices questionnaire.

Findings: This study has shown that women lack knowledge of cervical cancer and its preventive aspect. Almost all of the study population, 98.5% had poor knowledge regarding cervical cancer screening. There was no apparent difference in the mean and standard deviation of knowledge scores in the different categories of cervical cancer, symptoms and Papanicolaou smear test. Effective female education and mass screening are necessary for successful implementation of cervical cancer screening program in India especially within the rural sector inhabitants.

KEYWORDS : Papanicolaou, Cervical Cancer, Structured Education

Introduction

Cancer is leading cause of death worldwide. Out of total 58 million deaths worldwide in 2005, cancer accounts for 7.6 million (13%) of all deaths occurred in low and middle income countries. Deaths from cancer in the world are projected to continue rising with estimated 9 million people dying from cancer in 2005 and 11.4 million dying in 2030.¹

Worldwide 31% of cancer in women is in the breast or uterine cervix. Cancer of the uterine cervix is one of the leading causes of cancer death among women. The estimated cancer cervix cases per year is 500,000 of which 79% occur in the developing countries, where it is consistently the leading cancer and there are in excess of 230,000 deaths from the diseases.² This is particularly relevant to India, since cancer of the cervix is the most frequent cancer among Indian women, where resources available for prevention, diagnosis and treatment of cancer are limited or nonexistent.³

This cancer is caused by a virus, the human papilloma virus (HPV), which is transmitted sexually or because of poor hygiene practices among women. HPV is estimated to be responsible for 82.5% of cervical cancers. Adequate knowledge about control of cancer of cervix is available; hence all countries can, at some useful level, implement the four basic components of cancer control;

- a) Prevention
- b) Early detection
- c) Diagnosis and treatment and,
- d) Palliative care.

It is beyond doubt that these strategies can avoid and cure many cancers, as well as palliating the suffering.¹

It is usually advised that each woman should get a Pap test done every three years after becoming sexually active. Moreover, it is an uphill task to undertake systematic screening for a large number of populations because of lack of infrastructure and trained manpower in India. The alternative and additional strategy is introduction of the HPV vaccine in immunization schedule at puberty. The available vaccine provides immunity against two common strains of virus, HPV 16 and HPV 18, and protects both men and women from the HPV infection and the risk of cancer. Together these two strains are responsible for over 80% of the cervical cancers in India.⁴

Awareness of cervix cancer, and its causes, encourages screening program and this in term can help in reduction of morbidity and mortality among women due to cervical cancer.⁵ This cancer progresses gradually, and these changes range from mild dysplasia or cervical intraepithelial neoplasia (CIN1), to moderate (CIN2), to high-grade lesions (CIN3). They can also resemble cancer cells without invasion, also known as carcinoma in situ. All these stages can be detected via Pap smear screening.⁶

Other strategies which might help in reducing risk of cervical cancer include male circumcision, use of condoms, and abstinence from sexual intercourse during menses time, and celibate status.⁷ In the context of following three aspects viz. (i) occurrence of cervical cancer in a comparatively early age with high magnitude, (ii) possibility of early detection and halting, and (iii) reluctance of women to volunteer for examination due to lack of knowledge, thorough studies are needed. Therefore this study was planned and conducted with following objectives;

1. To compare the knowledge of women in relation to selected aspects of cervical cancer before and after administering the teaching programme
2. To compare the women's attitudes in relation to selected aspects of cervical cancer before and after administering the teaching programme
3. To compare the practices of women in relation to selected aspects of cervical cancer before and after administering the teaching programme

Materials and methods

Study type- This is an interventional study

Variables

Planned teaching programme on knowledge, attitudes and practices in relation to prevention of cervical cancer and importance of screening was the independent variable. Score obtained in knowledge and attitudes of women related to prevention of cervical cancer and the importance of screening were the dependent variables.

Inclusion criteria

1. Women in the age group of 25 to 62 years
2. Women who resided in the selected area for more than six months.

Exclusion Criteria

- 1 Diagnosed and treated patients of cancer of cervix.
- 2 Women having any other critical illness e.g. advanced stage of diabetes, hypertension etc.
- 3 Women who have undergone hysterectomy and,
- 4 Widows.

Study Area

This study was conducted in rural areas of Raigad District Maharashtra, India. Raigad District has a rural population of 2,635,394 as per Census 2011, out for which 1,287,305 is female population. District Raigad consist of 15 Blocks. Village wise list with population was prepared for each block. One mostly densely populated village from each block was selected. The 15 villages so selected are listed below; Lohare, Mandad, Pabhare, Chirner, Kadav, Nizampur, Nere, Dighi, Ambewadi, Dasgaon, Varhadjam, Rajpuri, Revdanda, Rave and Chowk.

Study population

The total population of women among these 15 villages was 64,182 as per Census 2011. Married women in the age group of 25-62 years were the study participants from these rural communities.

Sampling

Sample size for the study was finalised by following formula,

$$n = \frac{Z^2 X (p-q)}{d^2}$$

Where; p=43.49% (women have knowledge based on a pilot study)7, Z=1.96, d=2.36, q=100-p=46.51%.

Required sample size on basis of calculation is 888.

Sample size was finalized adding 5% to accommodate non-response to 932.

The investigator assigned number of women to each selected village proportionate to population to get the desired number of women in the total sample

Study period

The study was conducted from May 2015 to July 2017.

Study tool

A self reporting semi structured questionnaire was prepared for collecting the data. It had four sections. Section one consisted of demographic data, obstetrical and sexual history of the participants. Section two consisted of 5 subsections with 20 items about knowledge related cervical cancer, causes, treatment modalities, signs and symptoms and, secondary prevention. Section three consisted practices seen in the participants with a view towards screening, and Section four consisted of 30 items to evaluate the attitudes of women in relation to the problem statement. A five point Likerts scale was used to assess the attitudes of women in relation to cancer of cervix and their views about importance of screening.

Validity of the tool

The questionnaire and details of the planned teaching program was submitted to twelve experts from the respective fields along with the blue print and objectives of the study to establish the content validity of the tool. The modifications suggested by the experts were incorporated in the finalized tool.

Reliability of the questionnaire

The reliability of the tool was done through the test retest method. Then Kuder-Richardson coefficient of reliability was calculated. For Section 1 (Knowledge) the computed KR20 coefficient was 0.56. For Section 2, (Attitudes) the computed KR20 coefficient was 0.66.

Ethical clearance

Permission from ethical committee of MGM University was sought before commencement of data collection.

Data collection

Official permission was taken from concerned authority District Health Officer Alibaug, Taluka Medical officer and Medical officers of PHCs were contacted on phone requesting to arrange meeting for conducting the study. The concerned PHC was visited and the schedule of meeting with women was prepared and communicated to ASHA, ANM. ASHA and ANM help was taken for assembling women and to visit each village for three to four times. A good rapport was created and maintained with the women population of these areas. The salient features of questionnaire were explained to those women.

Pretest was conducted for about 45-50 minutes. Appropriate assistance was extended to women who were unable to read and write, for the fulfilling the questionnaire. On the same day of pretest, planned teaching was administered to the subjects. Similar schedule was followed on second day as some of the women participants were unable to attend the session on first day.

Planned teaching was given to women in group by using various methods of teaching with use of audio visual aids in the form of power point presentation, charts and posters and distribution of handouts. Total interactive session taken about was one and half hour. Pap smear was obtained of women who showed willingness for self screening in presence of ANM and Medical Officer. Pap smear samples were screened and interpreted from JJ Hospitals.

After planned teaching, again the knowledge, attitudes and practices were assessed with the use of same semi structured questionnaire in 1st post test along with distribution of Pap smear reports on day seven, 2nd post test after six month and 3rd post test after twelve month's duration. Each time the data collection process was terminated after thanking the participants for their participation and co-operation.

Data analysis

Analysis of Demographic data, knowledge and attitudes regarding cancer of cervix and its secondary prevention was done with the help of frequency, percentage, and z-test.

Data compilation and analysis

The collected data was entered in Excel sheet and was analyzed and presented as descriptive statistic of frequency and percentage and inferential statistics like mean, standard deviation. Appropriate tests like Non-Parametric Tests - Kruskal-Wallis Test, and paired 't' test for difference were used. The conventional level of significance was set at 0.05.

Results

A total of 937 women participants completed all three post tests envisaged in the study.

Table no.1: Change in knowledge scores after intervention Raigad District 2015-2017

	Mean	Pre test	Post test -1	Post test-2	Post test -3
Section A Knowledge of cervical cancer	Mean	0.19	8.08	8.09	8.08
	N	950	946	940	937
	SD	0.389	1.961	1.944	1.950
Section B Preventive strategies	Mean	0.03	5.75	5.75	5.75
	N	950	946	940	937
	SD	0.163	1.812	1.805	1.795
Section C Sign& symptoms	Mean	0.05	4.38	4.41	4.40
	N	950	946	940	937
	SD	0.215	2.026	2.030	2.029
Section D Screening	Mean	0.15	6.66	6.68	6.67
	N	950	946	940	937
	SD	0.355	1.915	1.922	1.921
Section E Treatment modalities	Mean	0.06	1.57	1.55	1.59
	N	950	946	940	937
	SD	0.241	0.938	0.939	0.936
TOTAL	Mean	0.47	26.45	26.50	26.50
	N	950	946	940	937
	SD	0.68	5.33	5.31	5.30

The table 1 shows that the mean score of knowledge of participants in pretest was 0.47, whereas it has raised to 26.45 in post test one, and to 26.50 in post two and post test three. The difference between pre-test and each post test is highly significant with $p = 0.001$. The score almost remained same for all three post tests. The difference between the scores of pre and post test among the knowledge and attitudes of participants was tested using z test for comparison between mean scores of the subjects.

Table no.2: Change in attitude scores after intervention Raigad District 2015-2017

	N	Attitude Score	
		Mean	SD
Pre test	950	0.16	0.48
Post test -1	946	16.62	3.46
Post test-2	940	16.67	3.45
Post test-3	937	16.67	3.46

Table 2 shows that in pretest, the mean score for attitude of women participants was 0.16 which increased to 16.62, 16.67 and 16.67 in three post tests. This improvement is statistically significant with $p = 0.001$. The mean score remained same at post test two and post test three. This shows that there is a significant change in the attitudes of the women participants after teaching.

Table no.2: Change in practices scores after intervention Raigad District 2015-2017

	Women accepting for self screening	Practices Score %
Pre test (N=950)	17	1.8
Post test three (N=937)	490	52.2
Total Pap smear screening done (N=937)	507	54.1

Among the women who attended the session only 17 showed readiness for self investigation in pre test before implementing the teaching programme. The number of women participants who showed readiness for Pap smear screening in three post tests after implementing planned teaching was 490. The total number of Pap smear screening obtained among the women was 507. The details are given in table no 3.

Discussion

Cancer of the cervix is the commonest cause of death among women in developing countries, and the second most common cancer among women aged 15–44 years.⁸ The reason for high incidence of cervical cancer is that many cancers does not cause any symptoms in early stages. So by the time symptom develops, the cancer is already in advance stage.

Every year in India, 122,844 women are diagnosed with cervical cancer and 67,477 die from the disease. India has a population of 432.2 million women aged 15 years and older who are at risk of developing cancer.⁹ India also has the highest age standardized incidence of cervical cancer in South Asia at 22, compared to 19.2 in Bangladesh, in Sri Lanka, and 2.8 in Iran.¹⁰

Awareness of cervix cancer, its causes and the screening program can help in reduction of morbidity & mortality among women & helps to reduce disease burden on health care services¹¹

In this study the most densely populated village from each block was selected to obtain required number of women. The study was conducted in villages of Raigad district which was conveniently selected due to financial and time constraints. In spite of proximity to Greater Mumbai, this study has shown that women in rural areas of Raigad district lack knowledge of cervical cancer and its prevention. The findings of the present study show that 98.5% had poor knowledge regarding cervical cancer screening.

The cancer mostly affects middle- aged women between 40 and 55 years, especially those from the lower economic status who fail to

carry out regular health check-ups due to financial inadequacy. In urban areas, cancer of the cervix account for over 40% of cancers while in rural areas it accounts for 65% of cancers as per the information from the cancer registry in Barshi. 12 Similar study in Kerala showed which is having very high female literacy rate, it was found that among 809 women where only half of the study population was aware of symptoms and the majority (89.2%) were unaware of the risk factors for cervical cancer 13 The absence of adequate knowledge is almost universal and reflected in Nigeria (29.4%) 14. This is also supported by another study done by in Texas. The study assessed the knowledge regarding Pap test results indicated that women of low socioeconomic status had poor understanding of Pap testing 15. It is a known fact that the knowledge of cervical cancer prevention is very poor in developing nations because of poor education and limited awareness programmes. This is reflected in this study also with observation of better knowledge among more educated compared to the less educated. Though 43% had good knowledge about symptoms and 39% had good knowledge about screening guidelines but poor knowledge about the Pap test as a screening measure¹⁶.

Most of the women in this study (91%) got their health related information from their family members which could be one of the reasons for the poor knowledge regarding cervical cancer. A limitation of the study may be the potential for information bias which exists in the accurate disclosure of personal information.

Our women traditionally approach the doctor only when they have some problem, hence they seek help late. In India, especially women from rural areas are very reluctant to get checked and they visit doctor only when symptoms arise and by that time not much can be offered to them. 17 Women may be hesitant to report having multiple sexual partners, their age at initiation of sexual activity, and history of STDs. The Pap test allows for the early detection of cervical cancer and that leads to successful treatment and fewer deaths. This test can be done during a routine pelvic exam where cells are collected from the cervix and examined under a microscope. But the uptake in India is different. This is probably because of lack of awareness to encourage women to take the test. "In India that kind of screening is just not feasible,"¹⁸ says an expert.

Things can change dramatically and positively if these women are screened early and regularly to detect the cancer in its very early stage in which it remains for 15-20 long years by offering simple treatment at minimum cost which in turn can completely cure these women of their precancerous state and increase the lifespan.¹⁹ Therefore, it is vital to understand the epidemiology of cervical cancer in India.²⁰ It is well-known that, older and poor women who are at the highest risk of developing cancer are least likely to undergo screening. Opportunistic screening in various regions of India varied from 6.9% in Kerala to 0.006% and 0.002% in the western state of Maharashtra and southern state of Tamil Nadu, respectively.^{19,20} In Maharashtra, high-risk HPV was associated with increasing age, low education level, manual work, early age at first sexual intercourse, and widowhood/separation.²¹

Researcher selected the setting for the following reasons; Familiarity with the setting, Easy availability of the group of women and Economic feasibility of conducting the study. The women who bear high risk were included in the study. Study was feasible and acceptable, both in terms of participation rate and the experiences of women. The findings of the study showed that the women have little knowledge regarding cervical cancer and its secondary prevention and screening measures. After implementing structured teaching program, there was significant increase in the knowledge of the subjects in all areas of prevention of cervical cancer and also showed readiness towards self screening thru Pap smear.

The paired't' test computed between mean pretest knowledge and attitudes scores and mean posttest knowledge and attitudes scores, which indicated a highly significant difference in the scores. Thus it is concluded that the planned teaching program on knowledge about cancer of cervix and secondary prevention was effective to create awareness among the rural women population and make a change in their attitudes which shall provide with a positive and productive outcome.

A study conducted by an expert says that each woman should get a Pap test done every three years after becoming sexually active, but the

infrastructure in India makes systematic screening for a large section of the population impossible. Thus, creating awareness among the women of its prevention, its causes and screening program can help in reduction of morbidity and mortality among women which in turn can help to reduce disease burden on health care services.³

Conclusion

In conclusion, undergoing regular cervical cancer screening is important in the prevention of invasive cervical carcinoma. The knowledge about cervical cancer screening is very poor among rural Indian women. There is need for organized education programmes to create awareness about cervical cancer and screening among Indian women.

The study shall serve to evolve pertinent messages in health education about a very important social cause of cervical cancer which affects a large number of women in Indian population which seems to be continually on a rise. It can be prevented through rendering early awareness, disseminating knowledge, careful planning and implementation of teaching and screening schedule on a periodic basis among the women masses especially who are residing in a rural areas, which in turn can help in early identification of premalignant cases and to provide immediate referral and follow up services through proper periodic guidance and counselling.

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