

## Original Article

### Knowledge of Carcinoma Cervix among rural women of Reproductive age in Trichy district, India

A.M Veerakumar.

Assistant Professor, Community Medicine, Chennai Medical College Hospital & Research Centre, Irungalur, Trichy

---

#### Corresponding author:

Dr A.M Veerakumar.

Assistant Professor, Community Medicine, Chennai Medical College Hospital & Research Centre, Irungalur, Trichy.

E-Mail : dr.veera10@gmail.com

---

#### Abstract

**Introduction and objectives:** Cervical cancer is one of the leading causes of morbidity and mortality worldwide. It is imperative for women to be aware about the disease and its prevention. So this study was carried out to assess the knowledge of cervical cancer among women in rural areas of Trichy District. **Materials and methods:** Community Based- Cross sectional study was conducted in the months of February and March 2016 in the rural areas of Vellanur and Pullambadi with a sample size of 300. Only Reproductive age group women (15 years-45 years) were included. Convenient sampling method was used. Data were entered in Microsoft Excel and Analysed by using SPSS v20. **Results:** Out of the 300 women studied, 89% had heard about cervical cancer, of which only 12.73% had good knowledge on cervical cancer. Knowledge regarding symptoms, risk factors, cause, preventability, availability of screening tests and vaccines were 11.61%, 19.48%, 30.71%, 41.95%, 60.30% and 9.36% respectively. A significant association was found between knowledge of cervical cancer with younger age and with higher education. **Conclusion:** Knowledge among women in the study area was found to be low. To reduce the incidence of cervical cancer, awareness regarding the disease has to be created among the public.

**Key Words:** Carcinoma Cervix, knowledge, rural areas

#### Introduction:

Cervical cancer is one of the major public health problems. It is the second most common cancer in women worldwide and most common in women of underdeveloped and developed countries.<sup>1</sup> Around 500,000 new cases have been diagnosed every year.<sup>2</sup> It is the single largest killer of middle aged women in India. It accounts for almost 20% of all female deaths in India<sup>2</sup>. Years of life lost

(YLL) due to carcinoma cervix in India is 936.3 in 2000.<sup>3</sup>

Carcinoma cervix is usually asymptomatic until later stage where cancerous cervical cells invade adjacent normal tissue. About 75-80 %cases are reported in advanced stages.<sup>2</sup> Most common presenting symptom is abnormal vaginal bleeding<sup>3</sup> which can be inter menstrual,

postmenopausal, post coital, and prolonged and/or profuse. Other symptoms include profuse foul smelling white discharge, pain during coitus and pelvic pain.

Most common cause of cervical cancer includes Human Papilloma Virus which is sexually transmitted.<sup>1</sup> Other risk factors are smoking, reproductive tract infection, poor nutrition, poverty, multiparity, long term use of oral contraceptives, age <17 at first full term pregnancy, use of diethylstilbestrol by pregnant mother, family history of carcinoma cervix.

Many simple tests are available for screening of cervical cancer. Most commonly

performed test is exfoliative cervical cytology using Pap smear.<sup>3</sup> In India, low levels of screening facilities coupled with poor literacy and lack of awareness among Indian women makes it difficult for earlier diagnosis of disease. Knowledge regarding availability of vaccine for prevention of HPV infection is also low.

This study was carried out to assess knowledge among women regarding the symptoms, cause, risk factors and preventive measures of cervical carcinoma, and to determine the willingness of women to undergo screening test for cervical cancer.

## Materials and Methods:

A cross sectional survey was conducted in rural areas of Vellanur and Pullambadi at Lalgudi, Trichy during the months of February and March 2016. The study was carried out among 300 women of age group 15-45 years, who were interviewed using a structured schedule. Sample size of 300 was obtained from calculating with absolute precision of 5% and 95% C.I from the previous study with result that 23.5% women had knowledge on cervical cancer. Women who had undergone hysterectomy were excluded from the study.

The schedule contained demographic details of the participants and 14 questions related to symptoms, risk factors and prevention of carcinoma cervix.

Convenient method of sampling was used. House to house survey was made by the interviewers. The purpose of the study was explained to the each participant individually before starting the survey. Only willing subjects were allowed to participate. Informed consent was obtained from all participants.

## Results:

Socio demographic details of the study population revealed that 42.67% subjects belonged to the age group of 26 – 35 years. One third of the study population had Primary education (37.33%) and majority had a

Anonymity of the population was maintained throughout the study. Each question had been explained to the participant in their understandable language and their response to the questions was collected. Each correct answer was scored with 1 with a total of 20. An overall score of less than 10 was considered as poor knowledge and 10 and above was considered as good knowledge. At the end of survey, participants were educated about cervical cancer - symptoms, risk factors, screening and its importance, and availability of vaccine against HPV infection.

The collected data was analyzed using MS Office Excel. Data were analyzed by using SPSS version 20. Details of the Socio-demographic variables were given as proportions. Knowledge regarding cervical cancer- symptoms, risk factors, cause, and prevention among study population were also given as proportions. Association between knowledge of cervical cancer and socio-demographic factors was found by using chi-square test. P value <0.05 is considered as statistically significant.

monthly income of Rs 5000 – 10000 (76.67%). Most (94.67%) of the women were married and the commonest age of marriage being 18 – 22 years was observed in more than half ( 55.33%) (Table 1)

**Table 1: Socio Demographic Details of the Studied Population (n=300)**

Sample Characteristics	Frequency	Percentage
<b>Age in years</b>		
15 – 25	57	19.00%
26 – 35	128	42.67%
36 – 45	115	38.33%
<b>Education</b>		
Primary	112	37.33%
High school	91	30.33%
Higher Secondary	35	11.67%
Graduate	62	20.67%
<b>Income per month</b>		
<Rs 5000	22	7.33%
Rs 5000 – 10000	230	76.67%
>Rs 10000	48	16.00%
<b>Marital Status</b>		
Married	284	94.67%
Unmarried	16	5.33%
<b>Age at Marriage(Yrs)</b>		
<18	47	15.67%
18 – 22	166	55.33%
>22	71	23.67%
Unmarried	16	5.33%

It was observed that only 267 participants had heard about cervical cancer and the most common source of information was hospital and health personnel (140.45%).Table 2

**Table 2: Heard about Carcinoma Cervix and Source of Information**

Characteristics	Frequency	Percentage
<b>Heard about Carcinoma Cervix (n = 300)</b>		
Yes	267	89%
No	33	11%
<b>Source of Information (n = 267)</b>		
Media and Books	106	39.70%
Hospital and health personnel	108	40.45%
Friends and Family	53	19.85%

The present study revealed that only 12.73% women had good knowledge on cervical cancer (i.e a score of  $\geq 10$  out of 20); 11.61% had good knowledge on symptoms (a score of  $\geq 4$  out of 8), 19.48% about risk factors (a score of  $\geq 4$  out of 8), 30.71% on cause of cervical cancer (i.e., HPV infection);

41.95% agreed it was preventable. Of the 267 people studied, 60.30% knew that screening tests were available for early detection of cervical cancer and 9.36% subjects had heard about the availability of HPV vaccine.( Table3)

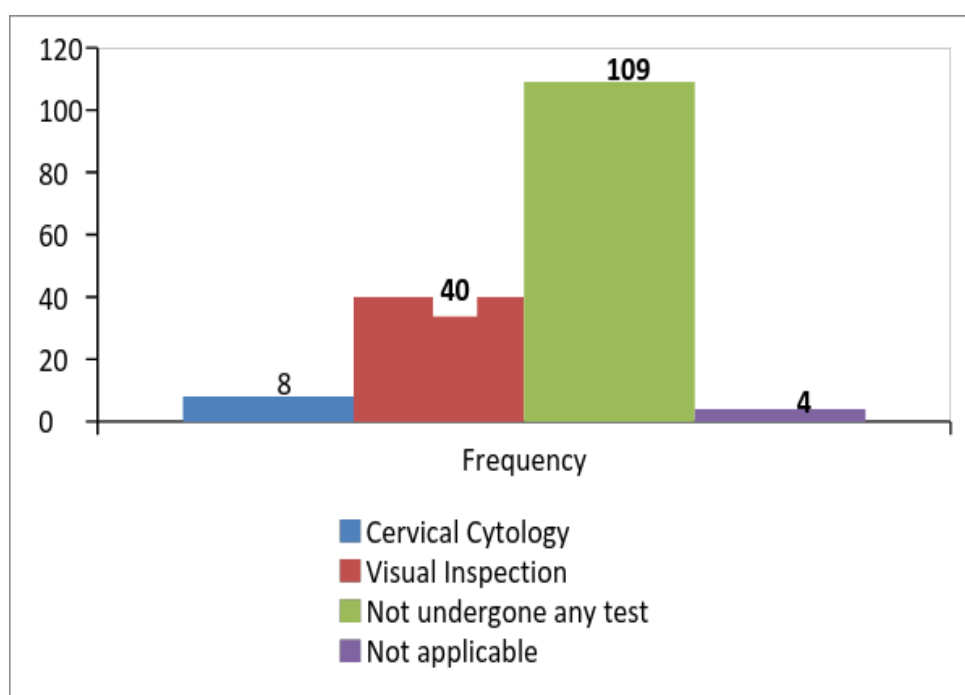
**Table 3: Knowledge on different categories**

Knowledge (n = 267)	Good	Percentage	Poor	Percentage
Overall knowledge	34	12.73%	233	87.27%
Symptoms	31	11.61%	236	88.39%
Risk factors	52	19.48%	215	80.52%
Cause	82	30.71%	185	69.29%
Preventable	112	41.95%	155	58.05%
Availability of Screening tests	161	60.30%	106	39.70%
Availability of vaccine	25	9.36%	242	90.64%

Out of the 161 person who were aware about the presence of screening tests, only 8 had undergone cervical cytology and 40 visual

inspections. 4 unmarried women were aware of screening tests.(Figure1)

**Figure 1: Screening tests underwent by the population (n = 161)**



Almost all (95%) of the study population were willing to undergo screening test in the future. There was a significant association between knowledge and selected

variables like age and education. It was found that women of middle age and women who were better educated had a good knowledge on cervical cancer (Table4)

**Table 4: Association between knowledge and selected variables**

Variable (n = 267)	Good knowledge	Poor knowledge	Total	X <sup>2</sup>	df	p - value
<b>Age in years</b>						
15 – 25	6 (2.24%)	44 (16.47%)	50			
26 – 35	23 (8.61%)	92 (34.45%)	115	11.11	2	0.003**
36 – 45	5 (1.87%)	97 (36.32%)	102			
Total	34	233	267			
<b>Education</b>						
Primary	4 (1.49%)	83 (31.08%)	87			
High school	13 (4.86%)	74 (27.71%)	87	8.18	3	0.026**
Higher Secondary	8 (2.99%)	27 (12.73%)	35			
Graduate	9 (3.37%)	49 (18.35%)	58			
Total	34	233	267			
<b>Income per month</b>						
<Rs 5000	2 (0.74%)	17 (6.36%)	19			
Rs 5000 – 10000	25 (9.36%)	176 (65.91%)	201	0.29	2	0.862
>Rs 10000	7 (2.62%)	40 (14.98%)	47			
Total	34	233	267			

## Discussion:

In spite of high incidence of cervical cancer in India, the knowledge regarding the disease was found to be low among women. It was observed from the population based cancer register that cervical cancer is on the decline but the rates are still high mainly in rural area and the absolute numbers has increased due to population growth.<sup>4</sup> In our study, it was found that women in Vellanur and Pullambadi region have a little knowledge of cervical cancer and its prevention.

Though most of the women (89.0%) had heard of cervical cancer, only 12.73% had good knowledge on cervical cancer. This result coincides with the study conducted by Raychaudhuri et al in North Bengal where 87.3% had heard about cervical cancer but the knowledge regarding the same is low.<sup>5</sup> Similar results were seen in other study conducted by Shankar et al in different states of India.<sup>6</sup>

The section of population who heard about cervical cancer came to know about the disease through hospital and health personnel (40.45%), media and books (39.70%). Study conducted by Johnson et al in Nepal showed that about one fourth of women in his study

gained information through medical professionals<sup>7</sup> and study conducted by Aswathy et al in Kerala described that media contributed to a large extent as a source of information (55.8%).<sup>8</sup> On the contrary, the results of Kharbanda et al in Lucknow showed that the knowledge of cervical cancer obtained was from friends and relatives.<sup>9</sup>

In our study, it was seen that low percentage of women (11.61% and 19.48%) knew about symptoms and risk factors respectively. These results were in concordance with the results obtained in the study conducted by Aswathy et al in Kerala where only half of the populations were aware about symptoms and majority were unaware of risk factors.<sup>8</sup> About 30.71% knew that infection was the cause of cervical cancer but none of them were aware about human papilloma virus. A study conducted by Saha et al in Kolkata among female students showed that 15% were aware about HPV a cause for cervical cancer.<sup>2</sup>

Though 41.95% of the population described that cervical cancer was preventable, they lacked awareness on the concepts of

prevention (screening and vaccination). A study conducted by Naik et al in Andhra Pradesh observed that 84.2% of the study population said that cervical cancer was preventable but only 30.8% were aware about the availability of vaccine.<sup>1</sup>

In our study, 60.63% of women were aware about the availability of screening tests but only 8 women had undergone cervical cytology (mainly pap testing) and 40 visual inspection. This was similar to the study conducted by Shah et al in Ahmedabad in which though 88.4% of women had knowledge on screening (pap test), 8% had undergone pap test.<sup>1</sup> Most of the women did not undertake the test considering that they are not at risk for cervical cancer, fear of being identified to have cervical cancer, not interested. This was in concordance with the study conducted by Owoye et al where most of the women considered themselves not being at risk for cervical cancer.<sup>11</sup>

Only 9.36% were aware about the availability of HPV vaccination and only one woman knew when to administer the vaccine. Similar result was obtained in the study conducted by Johnson et al in Nepal where only 7.5% of the participants were aware of HPV vaccination.<sup>7</sup>

In our study, middle aged and educated women had higher knowledge about carcinoma cervix. Similar correlation was found in the study of Raychoudhari et al in North Bengal where those who received higher education had greater knowledge about the disease,<sup>5</sup> and in the study of Siddharthar et al in Puducherry, where better education and occupation was found to create a significant impact on knowledge of cervical cancer.<sup>12</sup> It was also observed that the rural women were more eager to learn about cervical cancer. About 95% of women were willing to undergo screening for cervical cancer at the end of the survey.

## **Strength of the Study:**

- The study was carried out among 300 women in the rural area where similar study has not been done.
- To overcome the interviewer bias, training was given to the interviewers.
- The study was done using convenient method of sampling in nearby rural areas.
- Women of that region were less educated and had low income and so the results may not be generalized.
- The method of survey was interviewing rather than self-administered questionnaire which may influence some results.

## **Limitation of the Study:**

## **Conclusion:**

Though cervical cancer which is preventable is a leading cause of death of middle aged women in India and high number of cases has been reported only in late stages, the knowledge of women regarding the disease

is low. Creating awareness regarding the disease and encouraging the women to undergo screening and vaccination of women can reduce the incidence of the disease.

## **References:**

1. Shah V., Vyas S., Singh A., Shrivastava M. Awareness and Knowledge of cervical cancer and its prevention among the nursing staff of a tertiary health institute in

- Ahmadabad, Gujarat, India, *ecancermedalscience*, 2012; 6 : 2701
2. Saha A., Chaudhary A., Bhowmik P., Chatterjee R, Awareness of cervical cancer among female students of Premier colleges in Kolkata, India, *Asian Pacific Journal of Cancer Prevention*, 2010; 11 : 1085 – 1090
  3. Thovarayi SB., Noronha JR., Nayak S. Knowledge of cervical cancer screening among rural Indian women: a cross sectional study, *IOSR – Journal of Nursing and Health Science*, 2014; 3(3) : 51 – 55
  4. Rani A., Singh K., Thapa S. A Survey of awareness of Pap smear and cervical cancer vaccine among women at a tertiary care centre in Eastern Uttar Pradesh India, *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*, 2015; 4(2) : 439 – 441
  5. Raychaudhuri S., Mandal S. Socio-Demographic and behavioural Risk factors for cervical cancer and Knowledge, attitude and Practice in Rural and urban areas of North Bengal, India, *Asian Pacific Journal of Cancer Prevention*, 2012; 13 : 1093 - 1096
  6. Shankar A., Rath GK., Roy S., Malik A., Bhandari R., Kishor K., Barnwal K., Upadaya S., Srivastava V., Singh R. Level of Awareness of Cervical and Breast Cancer Risk factors and safe practices among College Teachers of Different States in India: Do Awareness Programmes have impact on Adoption of Safe Practices, *Asian Pacific Journal of Cancer Prevention*, 2015; 16(3) : 927 – 932
  7. Johnson DC., Bhatta MP, Gurung S., Aryal S., Lhaki P., Shrestha S. Knowledge and Awareness of Human Papilloma Virus (HPV), Cervical cancer and HPV vaccine among women in Two distinct Nepal Communities, *Asian Pacific Journal of Cancer Prevention*, 2014; 15(19) : 8287 – 8293
  8. Ashwathy S., Quereshi MA., Kurian B., Leelamoni K. Cervical cancer screening: Current knowledge & practice among women in rural population of Kerala, India, *Indian J Med Res*, 2012; 136 : 205 – 210
  9. Kharbanda P., Singh DK., Anand R., Singh A. Study of awareness amongst women in rural and urban areas about early detection of cervical cancer by pap smear, *Indian Journal of Pathology and Oncology*, 2015; 2(4) : 219 – 229
  10. Naik P., Nagaraj K., Nirgude AS. Awareness of cervical cancer and effectiveness of educational intervention programme among nursing students in rural area of Andhra Pradesh, *Healthline*, 2012; 3(2) : 41 – 45
  11. Owoeye IOG., Ibrahim IA. Knowledge and attitude towards Cervical Cancer screening among female students and Staff in Tertiary institution in the Niger Delta, *International Journal of Medicine and Biomedical research*, 2013; 2(1) : 48 – 56
  12. Siddharthar J., Rajkumar B., Deivasigamani K. Knowledge, Awareness and Prevention of Cervical Cancer among women attending Tertiary Care Hospital in Puducherry, India, *Journal of Clinical and Diagnostic Research*, 2014; 8(6) : OC01 – OC03