

# Awareness of Carcinoma Cervix and Human Papilloma Virus Vaccine among Women of Different Age Groups in Pune City

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## ABSTRACT

**Background:** Carcinoma cervix or cervical cancer affects the mouth of the uterus and is a slowly progressive disease. Every year cervical cancer is diagnosed in 500,000 women globally and responsible for 260,000 deaths annually. India alone accounts for one fourth burden of the disease globally. Most often, this cancer is caused by Human Papilloma Virus (HPV) infection. There is need to generate India specific data on epidemiology of HPV and the vaccination efficacy. Therefore, this study was conducted among women of different age groups.

**Objectives:** To assess awareness of Carcinoma Cervix and Human Papilloma Virus vaccine among women of different age groups

**Materials and Methods:** This was a community based cross sectional study conducted in Pune city. The sample included 20 teenagers, 20 adults and 20 elderly women. The data was collected using a structured questionnaire.

**Results:** Sixty four percent subjects were aware of Carcinoma Cervix and only 13 subjects (34%) were aware of Human Papilloma Virus vaccine.

**Conclusion:** The knowledge of cervical cancer and vaccination for the same among women of different age groups is poor. Therefore, it is need to increase awareness of the population.

**Keywords:** Awareness, Ca cervix, carcinoma, females, Human Papilloma Virus, vaccine

## INTRODUCTION

Carcinoma cervix [Ca cervix] or cervical cancer affects the mouth of the uterus and is a slowly progressive disease.

<sup>[1]</sup> The lining of the cervix is affected as there is growth and proliferation of cells. The cervical lining is made up of squamous cells that are resistant to injury and columnar cells that secrete mucus like fluid. In the region of the cervix there is a transition from one type of cell to the other and this is the area that is most prone to develop cancer. As the cancer of the cervix progresses gradually they are classified as

low grade or high grade. <sup>[1]</sup> Carcinoma in situ is a localized malignant growth that may spread to the adjacent tissues. In the early stages of the disease it does not present with any signs or symptoms. Every year cervical cancer is diagnosed in 500,000 women globally and responsible for 260,000 deaths annually. It has been reported that by 2050, the global burden of cervical cancer will be more than 1 million cases per year.

<sup>[2]</sup> It is the second most common cancer among women followed by breast cancer. <sup>[3]</sup> In the year 2010, 550,700 cases were diagnosed and 266,823 deaths were

estimated to be because of cervical cancer. India alone accounts for one fourth burden of the disease globally. [4] Women of the lower socio economic group and those not undergoing regular health check-ups are affected commonly as in them it goes undiagnosed. [5] Most often, this cancer is caused by Human Papilloma Virus [HPV] infection. HPV causes oropharyngeal cancer in males and genital cancer in females. Studies also report that 80% of the population acquires HPV infection at some point in life. The HPV vaccine prevents cancer caused by HPV mainly the cervical cancer. [2] The World Health Organization [WHO] recommends vaccination to prevent cervical cancer as well to reduce morbidity, mortality and out of pocket expenditure associated with the disease. Vaccination is effective in the age group of 11-26 years and in preventing cervical cancer upto the age of 45 years. [2] Studies suggest that there is need to generate India specific data on epidemiology of HPV and the vaccination efficacy. [2] Therefore, this study was conducted among women of different age groups so as to assess their knowledge related to the disease, its causes and vaccination for the same. This will help in knowing the percentage of females who are aware of the disease and vaccination based on which further policies and programmes can be implemented to reduce the burden of cervical cancer which is preventable.

### **Objectives:**

1. To assess awareness of Carcinoma Cervix and Human Papilloma Virus vaccine among women of different age groups
2. To study the association between the demographic characteristics and awareness of Carcinoma cervix and Human Papilloma Virus vaccine

### **MATERIALS AND METHODS**

This was a community based cross sectional study conducted in Pune city. The study was approved by the ethical committee of Deccan Education Society's

Brijlal Jindal College of Physiotherapy. Sixty females were included in the study. The sample included 20 teenagers, 20 adults and 20 elderly women. Females were randomly selected and interviewed using a structured questionnaire after obtaining written consent. Only those women who refused to participate were excluded from the study. The first section of the questionnaire included questions on socio demographic characteristics and the second section included questions on awareness of Ca cervix and HPV vaccine.

### **Statistical analysis**

The data was entered and analysed using Statistical Package of Social Sciences (SPSS) version 21. The data was analysed for descriptive and inferential statistics. Descriptive statistics was used to calculate the percentage and frequencies. Chi square test was used to determine the association and Odds ratio was calculated to determine the strength of association.

### **RESULTS**

In the present study, 60 females (20 teenagers, 10 young adults, 10 adults and 20 elderly women) were interviewed. It was seen that ten percent were post graduates. Majority of the females were graduates (24%) followed by secondary or higher secondary education (21%). Five percent were illiterates or were educated up to the primary level.

#### **Awareness of Ca Cervix and HPV Vaccine**

Figure 1 shows that Sixty four percent subjects were aware of Ca Cervix and only 13 subjects (34%) were aware of HPV vaccine for the same.

Among those who were aware of the vaccine only 2% of subjects in the age group of 20-35 years were aware of the dosage, costs, side effects and types of vaccines.

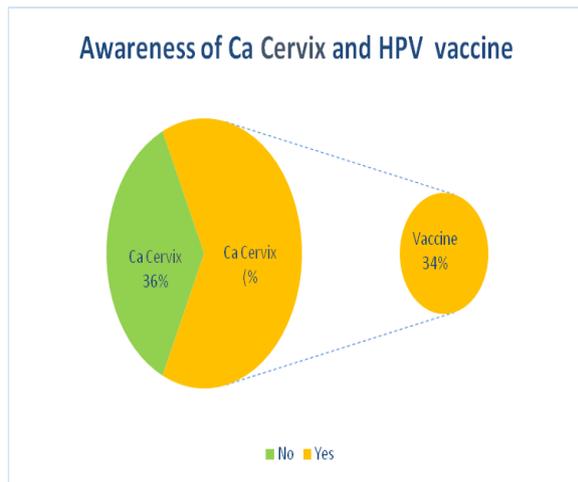


Figure 1: Awareness of Ca Cervix and HPV Vaccine

Table 1 shows that out of 60 subjects, 38 subjects (64%) were aware of cervical cancer. The percentage of subjects who had heard of cervical cancer increased with increase in age. The observed difference was highly significant ( $p$  value  $<0.006$ ). Awareness was also high among the graduates and post graduates. Among those who were aware of Ca cervix 50% of the subjects were aware of the signs and symptoms, causes of the disease and 40% were aware of the mechanism of spread and treatment after being diagnosed with Ca cervix.

### Demographic characteristics of the subjects and awareness of Ca cervix

Table 1: Demographic characteristics of the subjects and awareness of Ca cervix

Variables	Aware of Ca cervix N (%)	Not Aware of Ca cervix N (%)	Chi square value	P value
Age in years			12.50	0.006 Significant
11-19	4(7)	10(16)		
20-35	12(20)	8(13)		
36-59	18(30)	3(5)		
>60	4(7)	1(2)		
Education			0.143	Not significant
Illiterate or upto primary	5(8)	0		
Secondary & higher secondary	10(17)	11(18)		
Graduates	16(27)	8(13)		
Post graduates	7(12)	3(5)		

### Willingness to take the vaccine

None of the subjects took the vaccine and only 20% of the subjects in the age group of 20-35 years were willing to take the vaccine (figure 2).

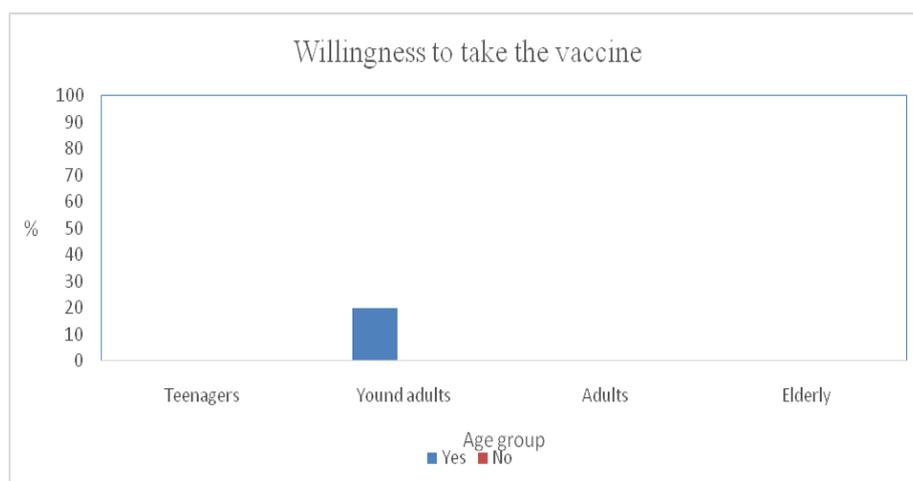


Figure 2: Willingness to take the vaccine

### Importance of awareness of vaccination according to different age groups

Awareness and spread of the knowledge of vaccination is considered extremely

important by the elderly (100%) as compared to any other age group (figure 3).

Importance of awareness of vaccination according to different age groups

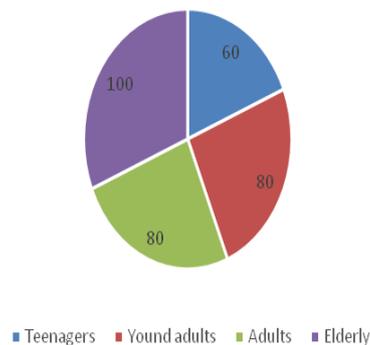


Figure 3: Importance of awareness of vaccination according to different age groups

### Source of information of cervical cancer among women

The subjects were asked about the source of information regarding knowledge of cervical cancer. School/college education was the main source of information (40%) followed by family physician or gynaecologist, family or friends and only 10% of the subjects answered media or newspaper as the source.

Table 2: Source of information of Ca cervix among women

Source of information	N (%)
Family physician/gynaecologist	11 (28)
Family/friends	8 (22)
School/college	15 (40)
Media/newspapers	4 (10)

## DISCUSSION

In this study it was found that 64% were aware of cervical cancer and 34% were aware of vaccination for the same. A study done in India, Nepal and Sri Lanka has reported that in India 66% were aware of cervical cancer similar to the findings of the present study. [6] A study done in the rural parts of India reported that only 38% were aware that cervical cancer is the most common cancer. [4] Study done among the nursing staff in Central India reported that 86% were aware of cervical cancer and another study done in Puducherry reported that 45% were aware of cervical cancer and 3% were aware of the vaccination. [7,8] In a study conducted in China, 13% were aware of the vaccine. [9] A study done among

couples in Mumbai reported that 37.7% women were aware of cervical cancer. [10] Awareness level increased with increase in education similar to the study done in Kolkata and Puducherry. [11,8] The present study also reported that age was a significant factor that played an important role in awareness of the disease. Half of the subjects [50%] were aware of the signs, symptoms similar to the findings of rural population of Kerala [12] and causes whereas only 40% were aware of the mechanism and treatment. Studies done in other parts of the country have also reported a low percentage of awareness among the subjects. [11,13,14] In the present study, only 20% were willing to take the vaccine as compared to a study done in Kolkata in which 75% were willing to take the vaccine. [11] This could be explained by the difference in the sample size and age group of the population. A study done in Mangalore reported that media was the main source of information regarding cervical cancer as compared to the present study in which the source of information among the subjects was school or college. Media was reported by only 10% of the subjects. [13]

### Implications

There is need to generate data on awareness of cervical cancer and vaccination.

### Limitations

The limitation of the study was that it was done on a small sample size and only females were included in the study.

## CONCLUSION

The knowledge of cervical cancer and vaccination among women of different age groups is poor. Policies and programmes should be implemented to educate as well as enhance vaccine acceptance rate among women. This will help in early detection and prevent further complications, spread to adjacent organs, hysterectomy and deaths.

### Recommendations

1. Studies can be done on a larger sample size

2. Awareness of males can be assessed

## REFERENCES

1. Crum CP, McLachlin CM. Cervical intraepithelial neoplasia. *Journal of Cellular Biochemistry*. 1995 Jan 1;59 (S23):71-9.
2. Pandhi D, Sonthalia S. Human papilloma virus vaccines: Current scenario. *Indian Journal of sexually transmitted diseases*. 2011 Jul;32(2):75.
3. Bosch FX, Munoz N, De Sanjose S. Human papillomavirus and other risk factors for cervical cancer. *Biomedicine & pharmacotherapy*. 1997 Jan 1;51(6-7):268-75.
4. Arunadevi V, Prasad G. Knowledge and awareness of cervical cancer among women in rural India. *International Journal of Current Research and Review*. 2015 Nov 1;7(21):29.
5. Sreedevi A, Javed R, Dinesh A. Epidemiology of cervical cancer with special focus on India. *International journal of women's health*. 2015;7:405.
6. Joy T, Sathian B, Bhattarai C, Chacko J. Awareness of cervix cancer risk factors in educated youth: a cross-sectional, questionnaire based survey in India, Nepal, and Sri Lanka. *Asian Pacific Journal of Cancer Prevention*. 2011;12:1707-12.
7. Jain SM, Bagde MN, Bagde ND. Awareness of cervical cancer and Pap smear among nursing staff at a rural tertiary care hospital in Central India.
8. Siddharthar J, Rajkumar B, Deivasigamani K. Knowledge, awareness and prevention of cervical cancer among women attending a tertiary care hospital in Puducherry, India. *Journal of clinical and diagnostic research: JCDR*. 2014 Jun;8(6):OC01.
9. Jia Y, Li S, Yang R, Zhou H, Xiang Q, Hu T, Zhang Q, Chen Z, Ma D, Feng L. Knowledge about cervical cancer and barriers of screening program among women in Wufeng County, a high-incidence region of cervical cancer in China. *PloS one*. 2013 Jul 2;8(7): e67005.
10. Donta B, Begum S, Nair S, Naik DD, Mali BN, Bandiwadekar A. Awareness of cervical cancer among couples in a slum area of Mumbai. *Asian Pacific Journal of Cancer Prevention*. 2012; 13(10):4901-3.
11. Saha A, Chaudhury AN, Bhowmik P, Chatterjee R. Awareness of cervical cancer among female students of premier colleges in Kolkata, India. *Asian Pac J Cancer Prev*. 2010 Jan 1;11(4):1085-90.
12. Aswathy S, Quereshi MA, Kurian B, Leelamoni K. Cervical cancer screening: Current knowledge & practice among women in a rural population of Kerala, India. *The Indian journal of medical research*. 2012 Aug;136(2):205.
13. Kumar HH, Tanya S. A study on knowledge and screening for cervical cancer among women in Mangalore city. *Annals of medical and health sciences research*. 2014;4(5):751-6.
14. Thovarayi S, Noronha JA, 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):51-5.

How to cite this article: Ansari HA, Bhole D. Awareness of carcinoma cervix and human Papilloma virus vaccine among women of different age groups in Pune city. *Int J Health Sci Res*. 2017; 7(10):129-133.

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