

“Knowledge Regarding Cervical Cancer and HPV Vaccination Among High School Children at Selected School in Coimbatore, Tamil Nadu”

Dr. Sreerenjini.B,Ph.D.(N), Prof. Priya.V, Mrs.Dharshana.A.J, M.Sc.(N),Ms.Santhiya.M,M.Sc.(N).,

Department of Obstetrics and Gynecological Nursing,

PSG College of Nursing, Coimbatore

ABSTRACT

Introduction: Cervical cancer is a significant public health concern with the Human Papilloma virus (HPV) being the primary cause. It is the fourth most common cancer among women worldwide, with an estimated 5,28,000 new cases and 2,66,000 deaths annually (WHO, 2022) Studies have consistently shown that high school children have limited knowledge about HPV, cervical cancer and HPV Vaccination (Kumar et. Al., 2018) Human Papilloma virus (HPV) can also be sexually transmitted infection worldwide causing a variety of benign and malignant conditions. Nearly all occurrences of cervical cancer (99%) are associated with high-risk human Papilloma virus (HPV) infection. HPV is a very common virus that is spread through sexual contact. **Methodology:** Quantitative research, Descriptive cross sectional research design was used. Participants were 378 high school children with the age of 14 to 18 years from selected school. Survey was conducted by using self-administered questionnaire. **Results & Discussion:** The mean and standard deviation on knowledge regarding cervical cancer and HPV Vaccination among high school children was 4.64 ± 2.297 . It was found to be inadequate among high school children. The calculated Chi square value was higher in class of studying 16.23 than the tabulated value (7.99), at the level of $p < 0.001$. Hence it reveals that there was a significant association between the 8th standard school students on knowledge regarding cervical cancer and HPV Vaccination among high school children. **Conclusion:** The study finding suggests that further educational interventions needed to enhance knowledge regarding cervical cancer and HPV vaccination among adolescents.

Key words: Knowledge, Cervical cancer, HPV vaccination, High school children, Human Papilloma Virus

INTRODUCTION

Cervical cancer develops in a women's cervix. Before cancer appears in the cervix, the cells of the cervix go through changes known as dysplasia, in which abnormal cells begin to appear in the cervical tissue.^[1] Cervical Cancer is one of the leading causes of cancer related deaths among women worldwide. It is the second most common cancer in women. In India Early detection and screening can significantly reduce the risk of cancer cervix .It is one of the most successfully treatable forms of cancer as long as it is detected early and managed effectively.^[2]

Human papilloma virus (HPV) can also be sexually transmitted infection worldwide causing a variety of benign and malignant conditions. Nearly all occurrences of cervical cancer (99%) are associated with high-risk human papillomavirus (HPV) infection. HPV is a very common virus that is spread through sexual contact. While the majorities of HPV infections clear up on their own and don't cause any symptoms, persistent infections can lead to cervical cancer in females.^[3]

HPV vaccinations have been proven to be effective in preventing both benign and malignant disease and it is readily accessible in more developed countries. All girls between the ages of 9-14 years should get HPV vaccination before they become sexually active. WHO recommends catch up vaccine up to 26 years. It is a very effective way to prevent HPV infections, cervical cancer and other HPV related cancers. The vaccine may be given as one or two doses, Teens and young adults who start the series later, at ages 15 through 26 years, need three doses of HPV vaccine. Improvements in vaccination formulations, for treatment as well as prevention, are actively being sought from a variety of mechanisms. Despite these advancements, there has been substantial delay in obtaining adequate vaccination coverage^[4]

NEED FOR THE STUDY

Cervical cancer is the fourth most common cancer in women worldwide, with an estimated 604,000 new cases and 342,000 deaths in 2020. The highest rates of cervical cancer incidence and mortality in low in middle income countries. India has a population of 366.58 million women aged 15 years and older who are at risk of developing cervical cancer.^[2]

In India, cancer of the cervix is the third most common cancer with an Incidence rate of 18.3% (123,907 cases) and the second leading cause of death with a mortality rate of 9.1% as per GLOBOCAN 2020. This highlights the significant inequalities that exist in terms of national HPV vaccination coverage, cervical screening, and treatment services, as well as social and economic factors. HPV Vaccine prevents most cervical cancers (70%) among adolescent girls. It is an essential element of sound primary health care.

VarerAkpinar C, et. al.,(2023)^[6]conducted a cross sectional study to evaluate the HPV related knowledge among school children, 43.6% of the students had never heard of HPV, 50.6% of them had never heard of HPV screening tests or HPV vaccination. Only 2.7% of the students were vaccinated against HPV and 15.7% were willing to receive HPV vaccination. The mean HPV knowledge score was quite low (6.74 ± 7.13 out of 29 points).

World Health Organization (WHO) and United Nations Children's Fund (UNICEF) aims to increase the HPV vaccination global coverage to 90% of adolescent girls by 2030 globally.(WHO, July 2025)^[7]

STATEMENT OF THE PROBLEM

"A study to assess the knowledge regarding HPV vaccination among High School Children at Selected School in Coimbatore, Tamil Nadu"

OBJECTIVES

1. To assess the knowledge regarding Cervical Cancer and HPV Vaccination among High School children

2. To associate the level of knowledge with selected background variables of High School Children.

HYPOTHESIS

H₁: There will be a significant association between the level of knowledge with the selected background variables of High School Children.

METHODOLOGY:

1. Study design : Descriptive cross sectional research design was used.
2. Participants : 378 high school children with the age group of 14 to 18 years from selected schools at Coimbatore.
3. Data collection : Survey was conducted by using self-administered questionnaire.

DATA COLLECTION PROCEDURE:

Data collection period was from 14.10.2024 to 19.10.2024. After getting the ethical clearance from IHEC (Institutional Human Ethical Committee, Proposal No. 23/562) the permission was obtained from Principal of PSG College of Nursing and also Head of PSGR Krishnammal Secondary School for Girls and PSG Vedapatti High School and On the first day, 75 students were selected. After selecting the study participant's informed consent was obtained (explain every steps of consent form to the high school students). The second day knowledge was assessed regarding cervical cancer and HPV Vaccination by using self-structured questionnaire. On the third day the interventions were detailedly explained through lecture and case based discussion method and powerpoint presentation for about 35 to 40 minutes and on the last day pamphlets regarding the awareness of cervical cancer and HPV Vaccination was given to the high school students. The collected data was analyzed by descriptive and inferential statistics.

RESULTS :

Demographic characteristics

N=378

S.No.	Demographic characteristics	f	%
1.	Age		
	a) 13 years	193	51
	b) 14 years	155	41
	c) 15 years	30	8
2.	Socio economic status		
	a) High	77	20
	b) Middle	241	64
	c) Low	60	16

3.	Gender			
	a)	Male	274	72
	b)	Female	104	28

Cervical Cancer and HPV vaccination

N=378

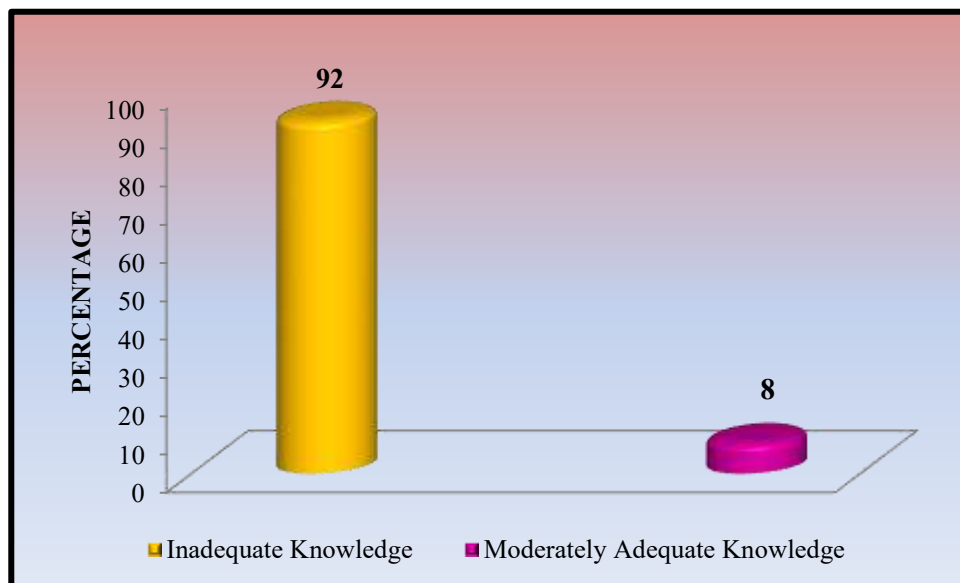


Figure 1 –Percentage distribution of Pretest Level of Knowledge regarding cervical cancer and HPV Vaccination among high school children

The above Figure 1 depicts Pretest Level of Knowledge regarding cervical cancer and HPV Vaccination among high school children. The mean and standard deviation on knowledge score regarding cervical cancer and HPV Vaccination among high school children was 4.64 ± 2.297 . 348 (92%) study participants had inadequate knowledge, 30 (8%) study participants had moderately adequate knowledge and none of them had adequate knowledge regarding cervical cancer and HPV vaccination. It clearly shows that the high school students have inadequate knowledge on causes, symptoms, risk factors and purposes and doses of HPV vaccination and the cervical cancer. So significant knowledge gaps were identified particularly regarding symptoms and risk factors for cervical cancer.

Association between knowledge and standard of study ; students from higher standards had significantly higher knowledge scores compared to lower standard students The calculated Chi square value was 16.23 than the tabulated value (7.99), at the level of $p < 0.001$. Hence it reveals that there was a significant association between the standard of study in high school and knowledge regarding cervical cancer and HPV Vaccination among high school children.

Studies have consistently shown that high school children have limited knowledge about HPV, cervical cancer and HPV Vaccination (Kumar et. Al., 2018).

Several studies conducted to assess the knowledge regarding cervical cancer and HPV Vaccination. However fewer studies reported among adolescents.

Conclusion:

This study assessed the knowledge about cervical cancer and HPV vaccination among the high school students, the school students had a lower depth of knowledge and awareness about cervical cancer. In addition, the students reported that they had a high desire to be informed about these issues. Thus, it is recommended that training programs, informational activities, and counseling services about prevention of cervical cancer and awareness can be provided to younger individuals. This approach will enable young individuals to improve their quality of life, protect their future health, and produce healthy offspring. Raising awareness among the young population is important for the prevention of HPV. It is thought that providing education will be effective in reducing the incidence of HPV infection and HPV related cancers, such as cervical, vulvar, vaginal, penile, anal, and oral cancers. It can also affect the mortality rates related to these diseases. This study highlights the need for educational interventions to improve knowledge and awareness about cervical cancer and HPV vaccination among high school children.

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