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A Study to Assess the Knowledge and Awareness of Cervovac HPV Vaccination among the mothers of School Going Childrens who are Residing at Vidyagiri Bagalkot in a View to Provide Information Guide sheet

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Abstract **Original Research Article**

Background: Cervavac, created together by the serum institute of India (SII) and the department of Biotechnology (DBT), cervavac is india's initial domestically produced quadrivalent human papillomavirus (QHPV) immunization. Its primary purpose is to protect against HPV-related cancers especially cervical cancer and also helps prevent genital warts. ***Methodology:*** A Descriptive Cross-Sectional design is used to assess the knowledge and awareness regarding Cervovac HPV Vaccination among the mothers of school going childrens, who are residing at Vidyagiri Bagalkot, in a view to provide information guidesheet. Here the non-random convenient sampling technique was used to select 100 mothers. The collected data were analyzed using both descriptive and inferential statistics. ***Result:*** Inferential and descriptive statistics were used to analyze the data. The results depicts that the majority of mothers of school going childrens, were (46%) found with intermediate knowledge, (34%) noticed with inadequate knowledge and only (20%) of women has adequate knowledge with a mean score was 13.61 and SD 5.85. Out of 100 mothers of school going childrens. Overall mean score of barriers 13.61 with SD 5.85. There was significant association between knowledge scores of mothers of school going childrens with their socio demographic variables, Religion (X2= 16.15 P value= 0.00031) Occupation (X2= 11.18 P value= 0.02), Monthly income (X2=9.29 P value= 0.009) and have you ever heard of the HPV before (X2=6.05 P value= 0.04). ***Conclusion:*** The study concluded that, after assessing the knowledge and awareness of Cervavac HPV vaccination among mothers of school-going children, most of the mothers (46%) had only an intermediate level of knowledge. This indicates a gap in awareness about the Cervavac HPV vaccine. Therefore, more research on this topic is needed to better understand and improve mothers' knowledge and awareness.

Keywords: Mothers of school going children, knowledge, awareness, assessment socio demographic variable and Cervavac HPV vaccination.

INTRODUCTION

Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide, if when and how often to do so.[1]

Two of the most common cancers affecting women are breast and cervical cancers. Early detection of these both cancer is key to keeping women alive and healthy. The latest global figures show that around half a million women die from cervical cancer and half a million from breast cancer each year. [2]

Cervical cancer is cancer that starts in the cells of the cervix. The cervix is the lower, narrow end of the uterus (womb). The cervix connects the uterus to the vagina (birth canal). Cervical cancer usually develops slowly over time. 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. Over time, if not destroyed or removed, the abnormal cells may become cancer cells and start to grow and spread more deeply into the cervix and to surrounding areas.[3]

The human papillomavirus (HPV) is a non-enveloped, double-stranded, circular DNA virus that is responsible for causing multiple epithelial lesions and cancers. It can manifest as cutaneous and anogenital warts, which depending on the subtype, may progress to carcinoma.[4]

HPV vaccine protects against infection with human papilloma virus (HPV). HPV is a group of more than 200 related viruses, of which more than 40 are spread through direct sexual contact. Among these, two HPV types cause genital warts, and about a dozen HPV types can cause certain types of cancer-cervical, anal, oropharyngeal, penial, vulvar, and vaginal.[5]

A cross-sectional study was condcted to assessment of knowledge and acceptance of human papilloma virus vaccination among the parents of adolescent girls of North Karnataka. In this study was conducted by using questionnaire among 240 parents. Result shows that only 49.6% of them had acceptance about HPV vaccinations for their daughters. 78.3% of them felt that vaccine could prevent infection and could be safe. 54.6% knew about cervical cancer. 34.2% of them felt that the vaccine is painful and may have side effects. 50.8% of them thought that their children are too young to get cervical cancer. 74.6% felt the protection from the vaccine is short lived. Despite the high efficacy rate of HPV vaccines, adolescent vaccine coverage is very poor due to lack of awareness of its efficacy and safety among parents of adolescent children.[6]

Globally, it is estimated that 620 000 new cancer cases in women and 70 000 new cancer cases in men were caused by HPV in 2019. Cervical cancer was the fourth leading cause of cancer and cancer deaths in women in 2022, with some 660 000 new cases and around 350 000 deaths worldwide. Cervical cancers account for over 90% of HPV-related cancers in women.[7]

MATERIALS AND METHODS

The descriptive cross-sectional design, To Assess the Knowledge and Awareness of Cervovac Hpv Vaccination Among the mothers of School Going Childrens Who Are Residing at Vidyagiri Bagalkot by Provide Information Guidesheet. Participants were 100 mothers of school going children at selected schools selected schools of Bagalkot. Data collection involved a structured and semi structured closed ended questionnaire, and the result were analysed using both descriptive and inferential statistical methods.

Study Design: The study design adopted for this study was Descriptive Non-experimental design.

Setting of the Study: Setting is the physical location and conditions in which data collection will occur. The present study conducted in Government high school navanagar Bagalkot.

Participants: Sample consists of subjects of units that comprise the population for the present study. In this study sample size is (n=100) mothers of school going childrens.

Instruments: The study was contucted using the structured items related to socio demographic data of mothers of school going childrens and knowledge and awereness, questionnaires regarding cervavac HPV vaccination among mothers of school going childrens.

Description of Data Collected Instruments:

PART I: Description of respondents according to their socio demographic variables.

PART II: Assessment of knowledge and awereness rearding cervavac HPV vaccination among mothers of school going childrens at various schools of Bagalkot.

Data Collection Procedures:

The main study was conducted for a period of 4 weeks between 15/10/2025 to 11/11/2025 at various selected school of Bagalkot. Data was collected from mothers of school going childrens by explaining the purpose of this study. Written consent was obtained from the study participants. According to the convenience of mothers of school going childrens.

Variables of the Study: Variables are a content that has measurable changing attributes. Variables are qualities, properties, or characteristics of persons, things, or situation that change or vary.

The variables studied in the present study are;

Variable-I: Socio demographic characteristics of mothers of school going childrens such as Age, Religion, type of family, Place of residence, Education, Occupation, Monthly income, Age of child, Gender of child, Have you heard about HPV virus before, Source of knowledge of HPV and Recived vaccination against HPV.

Variable-II: Assessment of knowledge and awareness among mothers of school going childrens

Statistical Analysis

The obtained data were statistically examined in terms of the objectives of the study using inductive statistics. A master sheet was prepared with responses given by the study participants. Frequencies and Percentage was used for the analysis of demographic data. The mean and standard deviation was used as inferential statistics. The Chi Square(x^2) test was used to

determine association between knowledge and awareness regarding cervovac HPv vaccination and with their selected socio demographic variables and the association between knowledge and awareness reagarding HPV vaccination.

Ethical Clearance: A certificate of ethical permission was obtained from ethical committee of the institution and written consent was taken from each participant.

Part-I: Description of Socio-Demographic Characteristics of Sample.

Table 6.1: Demographic characteristics of subjects

SI.NO	Socio-demographic variables	Frequency	Percentage
I	**Age in years**		
	28-32	39	39%
	b) 33-35	33	33%
	36-38	20	20%
	39-40	8	8%
II	**Religion**		
	a) Hindu	60	60%
	b)Muslim	30	30%
	Christian	9	9%
	Others	1	1%
III	**Types of family**		
	Nuclear family	61	61%
	Joint family	39	39%
IV	**Place of residence**		
	Urban	22	22%
	Rural	78	78%
V	**Education**		
	Primary education	31	31%
	Secondary education	31	31%
	PUC	25	25%
	Graduate	13	13%
VI	**Occupation**		
	House wife	53	53%
	Private employee	14	14%
	Govt employee	24	24%
	Others	9	9%
VII	**Monthly income**		
	<20,000	45	45%
	20,000-40,000	45	45%
	40,000-60,000	9	9%
	Above 60,000	1	1%
VIII	**Age of child**		
	9-11 year	41	41%
	12-13 year	37	37%
	14-15 year	22	22%
IX	**Gender of child**		
	Male	27	27%
	Female	73	73%
X	**Have you ever heard of the HPV before?**		
	Yes	32	32%
	No	68	68%
XI	**Source of knowledge of HPV vaccine?**		
	Doctor	21	21%
	Family or friends	16	16%
	Internet	12	12%
	Don’t know	51	51%
XII	**Received vaccination against HPV?**		
	Yes	25	25%
	No	75	75%

Part-II: Assessment of Knowledge and Awareness Regarding Cervavac HPV Vaccination.

Table 6.2: Frequency and Percentage wise distribution of mothers according to their knowledge on cervavac HPV vaccinination

SI NO	Interpritation	Score	Frequency	percentage
1	Inadequate knowledge	1-10	34	34%
2	Intermediate knowledge	11-20	46	46%
3	Adequate knowledge	21-30	20	20%

Percentage wise distribution of knowledge of mothers regarding cervavac HPV vaccine reveals that out of 100 mothers' highest percentage (46%) had intermediate knowledge, (34%) had inadequate knowledge and lowest percentage (20%) of mothers were had adequate knowledge. (Fig 6.13)

Table No 6.3: -Assessment of Mean, SD related to Knowledge regarding cervavac HPV vaccination.

Assessment	Mean	SD
Knowledge	13.61	5.85

Above table no.6.3 depicts knowledge regarding cervavac HPV vaccination score Mean was 13.61 with SD 5.85

H_1: There will be significant association between knowledge and awareness regarding cervavac HPV vaccination with their selected socio-demographic variables.

PART III: Finding Association Between and Awareness Regarding HPV Vaccination among Mothers of School Going Childrens with Their Selected Socio-Demographic Variables.

Table 6.4: Association between knowledge and awareness regarding HPV vaccination among mothers of school going childrens with their selected socio-demographic variables

SI.NO	Socio-demographic variables	DF	Chi-square	Table value	P value	Interpretation
1	Age	1	8.0709	3.84	0.232958	Not Significant
2	Religion	1	16.1595	3.84	0.00031	Significant
3	Types of family	1	1.5054	3.84	0.471101	Not Significant
4	Place of residence	1	0.4502	3.84	0.798422	Not Significant
5	Education	1	11.3715	3.84	0.077552	Not Significant
6	Occupation	1	11.1885	3.84	0.024525	Significant
7	Monthly income	1	9.2973	3.84	0.009575	Significant
8	Age of child	1	3.0589	3.84	0.54802	Not Significant
9	Gender of child	1	1.8163	3.84	0.40327	Not Significant
10	Have you ever heard of the HPV before?	1	6.0564	3.84	0.048404	Significant
11	Source of knowledge of HPV vaccine?	1	9.0589	3.84	0.170294	Not Significant
12	Received vaccination against HPV?	1	5.7543	3.84	0.056295	Not Significant

Chi-square calculated value for significant association between knowledge of mothers regarding cervavac HPV vaccination with their selected socio demographic variables reveals that, there is a significant association found between the religion (P value= 0.00031) with chi square value of 16.15 ,occupation (P value= 0.02) with chi square value of 11.18, monthly income (P value= 0.009) with chi square value of 9.29 and Information about hpv vaccine (P value= 0.04) with chi square value of 6.05 . And there is no association found between socio demographic variables like age, type of family, place of residence, education, age of child, gender of child, source of knowledge of HPV vaccine and received vaccination against HPV. The calculated Chi-square values for the Socio-demographic variables of mothers such as Age (X^2=8.07 P value= 0.23), Type of Family (X^2=1.50. P value =0.47), Place of residence (X^2=0.45 P value=0.79), Education (X^2=11.37. P value=0.07), Age of child (X^2= 3.05. P value=0.54), Gender of child (X^2=1.81. P value= 0.40), Source of knowledge of HPV vaccine (X^2= 9.05. P value=0.17), and Received vaccination against HPV (X^2= 5.75. P value=0.05).

PART VI: Testing Hypothesis

H_1: There is a significant relationship between the knowledge and awareness about Cervavac HPV vaccination and selected socio-demographic variables such as religion, occupation, monthly income, and Information about HPV. Therefore, (H_1) is accepted.

DISCUSSION

This study discusses the major findings of the study and reviews them in relation to findings from the results of the studies. The present study was conducted to assess The Knowledge and Awareness of Cervovac HPV Vaccination Among the mothers of School Going Childrens Who Are Residing at Vidyagiri Bagalkot in a view to provide information guidesheet. In order to achieve the objectives of the study Non-experimental design with descriptive cross-sectional design was

adopted in the study sample size is 100 mothers of school going childrens are selected with the help of non-random convenient sampling technique.

The Percentage wise distribution of knowledge of mothers of school going childrens regarding cervavac HPV vaccine reveals that out of 100 mothers' highest percentage (46%) had intermediate, (34%) had inadequate knowledge and lowest percentage (20%) of mothers were had adequate knowledge. The knowledge and awereness regarding cervavac HPV vaccination score Mean was 13.61 with SD 5.85

A cross-sectional study was conducted by Priyanka Shegokar, Urwala Ukey, Uday Narwade and Shamrel Barela in 2025 to assess awareness and attitudes regarding HPV vaccination among medical undergraduate students in Central India. The study included 524 participants selected through convenience sampling. Findings showed that most participants (75.95%) were between 18–24 years of age and the majority were female (68.7%). Awareness regarding HPV and its vaccine was found to be moderate, and many students lacked knowledge about HPV-related cancers and genital warts. Nearly 29% of participants were unaware of any HPV vaccine. High vaccine cost (50%) and limited awareness (20%) were identified as major barriers. The study concluded that better education and improved vaccine accessibility are required to promote HPV vaccination among medical students. (23 July 2025) [8].

LIMITATIONS

The study is limited to:

- The students are aged between 28 to 40 years.
- Sample size is 100 mothers of school going children who are attending parents' meetings in school.
- The mothers of school going childrens who are attending parents' meetings in selected schools in Bagalkot.
- Structured knowledge questionnariae are administered in mothers of school going childrens.

CONCLUSION

The study provides the assessment of knowledge and awareness regarding Cervavac HPV vaccination among mothers of school going childrens most of mothers of school going children have intermediate knowledge (46%) regarding cervavac HPV vaccination. Hence, more studies are need to be conduct with similar topic there was a lack of knowledge and awareness regarding cervavac HPV vaccination.

Declaration by Authors

Ethical Approval: Institutional ethical clearance has been approved.

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Conflict of Interest: The authors declare there is no conflict of interest.

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