

Knowledge and Acceptance of HPV Vaccine among Urban Parents

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Abstract: ***Aims:** Cervical cancer is the leading cause of cancer death among women in India. HPV is now a well established cause of cancer cervix and type 16 and 18 are responsible for about 70% of cervical cancer cases of world wide. The introduction of HPV vaccine will effectively reduce the burden of cervical cancer in coming decade. So to determine parent's knowledge and attitudes regarding HPV vaccination in their adolescent children and to develop a HPV vaccination program here we need to understand HPV and cervical cancer awareness and willingness to get vaccination. **Methods:** It is a cross sectional study. Face to face interview with open ended questions. The population of interest are parents/guardians of adolescent girls. Participants recruited sporadically in capital city of Odisha. We interviewed a convenience sample of 200 women and men. **Results:** Few participants (25%) had heard of HPV, cervical cancer and HPV vaccine. None of the parents were aware about the cancer causing HPV types and name of the HPV vaccine. However after researchers explained the purpose of the vaccine nearly all said they would be willing HPV vaccinating for their daughters if it available and strongly recommended by physician. **Conclusion:** Despite low awareness on HPV, interest in vaccination was nearly universal in our study. Parental vaccine acceptance is high. Physician to parent's vaccine education is important. Focus should not only be on providing information but also on existing beliefs and attitudes towards cervical cancer and vaccination in general.*

Keywords: Human Papilloma Virus, Cervical Cancer, HPV Awareness, HPV Vaccine

1. Introduction

Morbidity and mortality from cervical cancer is posing health issues affecting women in all over the world. It is the leading cause of cancer death amongst women in India. There are 453.02 million women who are at risk of cervical cancer. In India 122.84 number of new cases are diagnosed annually and 67, 474 number of deaths due to cancer cervix. HPV which is the most common STI is now a well established cause of cancer cervix and there is a growing evidence that HPV is a relevant factor in many other anogenital cancers. HPV type 16 and 18 are responsible for about 70% of all cervical cancer cases worldwide. Introduction of HPV vaccine that prevent against HPV 16 and 18 infection are now available and have the potential to reduce the incidence of cervical cancer. Despite the availability of vaccine to prevent the disease the vaccination rate is very poor. Recommendations from healthcare professionals are key to HPV vaccine acceptability. In our society parents play the key role regarding vaccinating their children even at adolescent age group therefore this study provides insight into attitude and knowledge among urban parents. Interestingly physicians do not rank the HPV vaccines as important when compared to other vaccines and often discuss about it last during patients visits. None of the parents were aware about the cancer causing HPV types and name of the vaccine. Which reflects that they have very limited knowledge and understanding of the disease. It was also observed that in spite of belonging to well educated and affluent class families the percentage of girls who get vaccinated were very low. This is alarming because even after almost a decade of introduction of HPV vaccines which are available in India since 2008 not many parents got their daughters vaccinated. So it is important to explore the acceptability of HPV vaccine among the guardians and parents of adolescent girls. Better understanding of their may help to improve communication of HPV information

between parents, guardians, adolescents and health care providers. As a result there will be a real possibility of primary prevention of cervical cancer cause by HPV.

2. Methods and Measures

The setting was a cross sectional quantitative study analysis carried out in a urban city of an eastern state of India. Participants were recruited sporadically. The main outcome measures were awareness of HPV assessed using a questionnaire that asked participants whether they have ever heard of HPV. The response options were yes or no. The study mainly focussed on two parts. The first part to explore the knowledge and awareness on HPV infections and cervical cancer. The second part informed how well those parents and guardians retained the knowledge and their willingness to vaccinate their adolescent girls. Questioners consisted of two parts. A preliminary written questionnaire included questions regarding socio demographic profile, literacy status of parents followed by knowledge about cervical cancer and HPV awareness. Then a proper health briefing on HPV is given by the researchers. Next participants were given second questionnaires. This included whether they have understood the terms used in health talk, discussions were relevant or not, information given on HPV infections and vaccine created adequate awareness or not. After providing right knowledge we evaluated those participants regarding the willingness for vaccination. The population of interest were parents and guardians with at least one daughter of aged 0 to 25 years regardless of their HPV vaccination status. A written consent was taken from all participants before including them in study. Assuming prevalence of acceptance of HPV vaccine among urban women as 24% (Basu and Mittal, 2011) with absolute precision 6% and 95% confidence interval, the sample size was calculated as 195. However we have included 200 participants all women in our study.

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3. Data Analysis and Result

Table 1: Socio demographic characteristics of the women respondents (n=200)

Variable	Number (%)
<35	58(29.0)
35-45	90(45.0)
>45	52(26.0)

Number of children

Variable	Number (%)
One	76(38.0)
Two	81(40.0)
>two	43(21.5)

Education status

Variable	Number (%)
Under graduate	94(47.0)
Graduate	65(32.5)
Post graduate	41(20.5)

Occupation

Variable	Number (%)
Home maker	148(74.0)
Outside job /business	51(26.0)

Monthly income of family

Variable	Number (%)
<20000	58(29.0)
20000 –40000	78(39.0)
>40000	64(32.0)

Knowledge and attitude of women respondents about various aspects of cervical cancer and vaccination (n=200)

Heard about cervical cancer

Variable	Number (%)
No	130(65.5)
Yes	70(35.0)

Heard about Human Pappiloma Virus(HPV)

Variable	Number (%)
No	149(76.0)
Yes	51(25.5)

HPV can cause cervical cancer

Variable	Number (%)
No	152(76.0)
Yes	48(24.0)

HPV is sexually transmitted

Variable	Number (%)
No	154(77.0)
Yes	46(23.0)

Vaccination prevents HPV infection

Variable	Number (%)
No	150(75.0)
Yes	50(25.0)

Sources of information (multiple responses)

Variable	Number (%)
Media	18(21.9)
Friends/Relatives	27(32.9)
Health care providers	37(45.1)
Nil	137(68.5)

Table 3: Acceptance of the cervical cancer vaccine before and after awareness and knowledge programme

Acceptance of vaccine	Before	After
	Number (%)	(%)
Agreed to vaccinate	37(18.5)	129(64.5)
Refused/Undecided	163(81.5)	71(35.5)

McNemar (with continuity correction) = 90.001, df=1, p<0.001

Table 4: Reasons of refusing the cervical cancer vaccine even after awareness and knowledge on subject (n=71)

Reasons for refusal	Number (%)
Cost of vaccine is high	29(40.8)
Doubt about safety of vaccine	8(11.3)
Should govt make the vaccine Compulsory	15(21.1)
No need to take the vaccine at an earlier age	12(16.9)
Others	07(9.8)

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