

AWARENESS REGARDING CERVICAL CANCER AND VACCINATION: STUDENTS FROM HEALTH PROFESSIONAL COURSES, BHUBANESWAR, ODISHA, INDIA

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(Received on Date: 24th June 2016Date of Acceptance : 10th July 2016)**ABSTRACT**

In India, vaccination is an identified and well accepted tool for control and prevention of communicable viral and bacterial illnesses among children. The immunization drive intensified with the polio programme in 1995 and now several vaccines like pentavalent DPT and Rota are included in our governmental service basket with effect from 2015. However adult vaccination for the cohorts who have been unvaccinated in the past, still remains far from addressed. Under this, the cervical cancer vaccine ie Human Papilloma Virus(HPV) vaccine deserves a special mention as the Cancer registries in India report cervical cancer as the number one killer and cause for morbidity among cancers in women in Indian subcontinent. Given this scenario, this study made an attempt to assess the awareness regarding the disease ie cervical cancer among health professional students and also the knowledge and practice of vaccination among them. Results hinted at the knowledge to be best among the medical students, that too in the final years. The other students from nursing and dental, knowledge did not improve dramatically even in the final year. Grimly it brought out the fact that health providers who are to advocate for the vaccine are themselves not motivated to avail the vaccination. The cumulative cost of vaccine was cited as one of the major demotivators. Hence the study strongly brings about a need to conduct more awareness and vaccination drives among the health professionals who then can be best utilized as a bridge population to promote vaccination in the general population.

Key words: Cervical cancer, awareness, HPV vaccination

No: of Tables:2**No: of Figures : 2****No:of References:7**

Introduction

Every year in India, 122,844 women are diagnosed with cervical cancer and 67,477 die from the disease. India has a population of 432.2 million women aged 15 years and older who are at risk of developing cancer. India also has the highest age standardized incidence of cervical cancer in South Asia at 22, compared to 19.2 in Bangladesh, 13 in Sri Lanka, and 2.8 in Iran.(1) As the country braces towards evolving a feasible strategy for Cancer control in the country, the biggest challenge is to raise the awareness among people and in this case women. A recent qualitative study (2) reported a low level of knowledge on HPV and cervical cancer among children, parents, teachers, community leaders and even health service providers of four developing countries (India, Peru, Uganda and Vietnam). With this background the current study was planned among the students seeking professional health courses (medical, dental and nursing) in a premier deemed university of KIIT University, Bhubaneswar, state of Odisha, India. The study was a part of a vaccine trial on DPT being done in the Department of Preventive and Social Medicine in the medical institute which had been reviewed and approved by the Research and Ethical committees of the Medical school of the University. The study aims to offer a dipstick measure regarding the knowledge of the disease and vaccination besides also its acceptance by the participants which would form a very educated and informed cohort as compared to the general population.

Aims & Objectives of the study:

To assess the students of first and final year health professional courses (ie medical, dental and nursing) for their knowledge and practice of cervical cancer disease and vaccination

To analyze the sample for any significant difference in knowledge and practice between the groups

Methodology:

The study design was cross-sectional done at the 3 schools offering health courses ie medical, dental and nursing under the aegis of KIIT University. Students from first year and final year of medical, dental and nursing were enrolled in the study (convenient sampling) after due informed consent and willingness to participate, irrespective of gender as follows:

Course	1 st yr	2 nd yr
Total		
Medical	67/100	57/150
Dental	40/100	60/100
Nursing	25/50	36/50

Hence total 285 students participated in the study. The first year and final year from all three courses were taken up for the study, in order to assess any improvement in knowledge regarding disease and vaccination with ascent in course curricula. The study tool used was a self administered questionnaire adapted from studies (3) pretested and piloted before use. The questionnaire had sections on sociodemographic profile, questions to assess knowledge regarding disease, vaccine and then for the girls respondents if they have availed the vaccination.

The study took 2 months to complete (September – October 2015) as necessary permissions were sought from competent authorities and care was taken not to hamper the regular schedule of the students like exams and classes. The data

was collected, tabulated and analyzed on SPSS 16 for statistical significance.

Results:

A total of 285 students responded to the questionnaire. Table 1 below shows the socio demographic profile of students.

Table 1: Sample’s sociodemographic profile

parameters		Medical		Dental		Nursing		Total n=124
		1 st yr n=67	F yr n=57	1 st yr n=40	F yr n=60	1 st yr n=25	F yr n=36	
Residence	Odisha	25	40	18	29	20	29	161 (56.5)
	other states	42	17	22	31	05	07	124 (43.5)
Gender	male	27	32	20	32	03	02	116 (40.7)
	female	40	25	20	28	22	34	169 (59.3)
Father’s professionals	profession	38	40	10	28	06	08	130 (45.6)
	Buisness	20	15	26	22	13	14	110 (38.6)
Others		09	02	4	10	06	14	045 (15.8)
Cancer in family *	yes	15	23	5	11	03	07	64 (22.4)

Students from other states were well represented as 56.5% of respondents were from outside Odisha. More females le 59.3% took the questionnaire. Nearly 22% of the respondents were aware of any form of cancer affecting their first hand relatives.

Table 2 shows the cumulative knowledge regarding cervical cancer as reported by the students irrespective of the three professional courses , first years versus final years. HPV is a cause for cervical cancer

is the information which showed highest statistical significance with 96% of all students being able to answer it. As indicated above, there is marked improvement in knowledge of the

students from the year of entrance to exit; the final year improvement in knowledge is markedly because of medical while dental is 30% better and nursing 10%.

This significantly hints that common man is basically unaware about the disease.

Table 2: Knowledge of the first year vs final year students from the 3 professional courses.

Questions	1 st year= 132	Final yr= 153	(p values)
How common is cervical cancer among gynecological cancers			
least	22%	10%	
moderate	31%	09%	
Most	47%	81%	0.02
Causes of cervical cancer			
HPV	2%	96%	0.0001
Commonest Sxs			
vaginal bleeding	10%	87%	0.034
Risk factors			
Mutiple sexual partners	15%	95%	0.002
STI/RTI			
recurrent	6%	92%	0.0031
Obesity	71%	21%	0.01
Unhealthy diet	70%	12%	0.01
Source of info			
Relatives & TV	25%	-	
scientific digests and books	-	90%	
Curable			
no	Donot know- 90%	98%	

Figure 1 gives the awareness regarding a vaccination to protect from the disease. Interestingly knowledge regarding the vaccination was best in both final year medical and final year nursing. For medical students source was their curriculum. For Nursing, information was due to posting in immunization clinics. Dental students learnt it from friends and relatives. Fig 2 shows that only 42 girls out of 169 who participated were vaccinated for cervical cancer

completely with 3 doses; i.e. only 24.8% vaccination. More inferences drawn from the study were that those girls who had a history of cancer in first line blood relatives had OR 4.1 times likelihood to be vaccinated with the HPV vaccine. No significant difference was seen between the vaccination trends in Odisha girls and those coming from other states. If parents are professionals their girls were 2.3 times seen to taking vaccine compared other

Fig 1. Cervical cancer prevention- vaccine

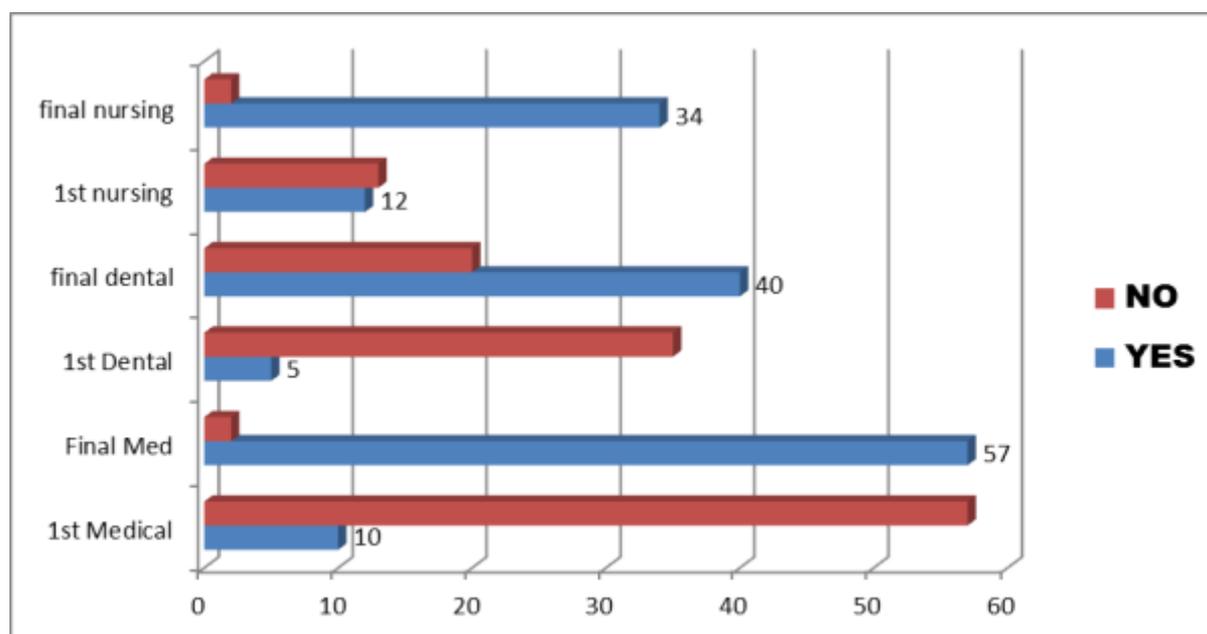
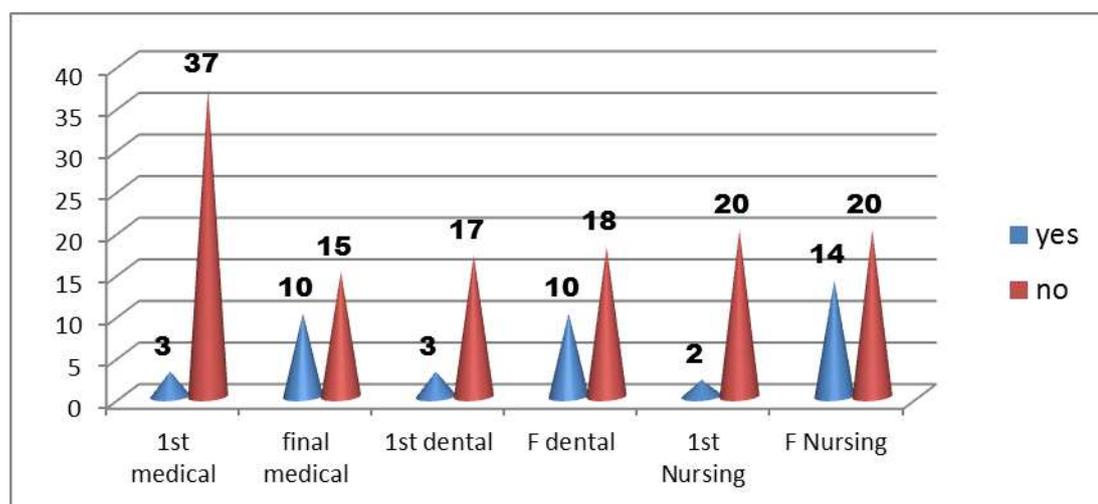


Figure 2. Practice of vaccination among girl students in study (n=169)



Conclusion and Discussion:

Knowledge regarding the cervical cancer disease improves among medical graduates as they advance in their course. Knowledge on appropriate vaccination does not improve proportionately among students from all three courses. Practice of vaccination among this sample is reported only 24.8%. Knowledge regarding Pap smear every 3 years after 40 years of age was not taken up in the study.

Another study done among general college students in Mangalore with only female participants reported that only 16.5% were aware that cervical cancer is the most common gynecological cancers in India, which is much less than 81% reported among our final year students. Awareness levels regarding various risk factors were as follows: Poor genital hygiene (n=154, 59.2%), multiple sex partners (n=85, 32.7%), multiple pregnancies (n=54, 20.8%) and early initiation of sexual activities (n=52, 20.0%). Forty-five (17.3%) of the students mentioned that they were aware of the presence of a vaccine. (4) The study does not report any practice.

A study done in Malaysia again among general students states that HPV vaccination acceptance among students was 22.3% which is similar to our finding of 24.8% and in the former study an association was found between knowledge of cervical cancer and HPV vaccination acceptance ($p < 0.05$). (5)

Another Indian study done among medical students reports an overall acceptance of 67.8%. (6); while a large study done at Nigeria (7) strongly brought out the fact that medical education, and awareness of cervical cancer were significant predictors of readiness to accept HPV vaccine.

Thus this study clearly shows a good knowledge yet limited practice among health care providers for HPV

vaccination. This reinforces the fact that general population are still bereft of needful information on the disease and vaccination. With the demographic transition and shift in public health concern from Communicable to Non-communicable diseases, it is a dire necessity that strategies may be coined for dissemination of factual information from health providers to general public and since cost of the vaccine is a concern, some cost effective strategies may be deliberated by government to optimize use and uptake of these vaccines.

REFERENCES:

ICO Information Centre on HPV and cancer (Summary Report 2014-08-22). Human Papillomavirus and Related Diseases in India. 2014

Bingham A, Drake JK, LaMontagne DS. Sociocultural issues in the introduction of human papillomavirus vaccine in low-resource settings. *Arch Pediatr Adolesc Med.* 2009;163:455-61. [PubMed]

A Saha et al: Awareness of cervical cancer among female students of premier colleges in Kolkata, India: *Asian Pac J Cancer Prev.* 2010; 11(4):1085-90.

Vaman Kulkarni, Darshan BB, Abhishek Tandon et al: Awareness and practice regarding cervical cancer prevention among female college students of Mangalore city, India. *Asian J Pharm Clin Res, Vol 8, Issue 2, 2015, 305-307.*

Rashwan H¹, Lubis SH, Ni KA : Knowledge of cervical cancer and acceptance of HPV vaccination among secondary school students in Sarawak, Malaysia. *Asian Pac J Cancer Prev.* 2011;12(7):1837-41.

Pandey D, Vanya V, Bhagat S, Binu VS, Shetty J. Awareness and attitude towards human papillomavirus (HPV) vaccine among medical students in a premier medical school in India. PloS one. 2012 Jul 31;7(7):e40619.

Iliyasu Z, Abubakar IS, Aliyu MH, Galadanci HS. Cervical cancer risk perception and

predictors of human papilloma virus vaccine acceptance among female university students in northern Nigeria. Journal of Obstetrics and Gynaecology. 2010 Nov 1;30(8):857-62.

