



RESEARCH ARTICLE

AWARENESS REGARDING HUMAN PAPILLOMA VIRUS AND ITS VACCINE AMONG
POST-GRADUATE STUDENTS OF A NORTH INDIAN MEDICAL COLLEGE

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ABSTRACT

Introduction: Cervical cancer, caused by the human papillomavirus (HPV), is the fourth most common cancer in women worldwide and the second most common among Indian women. Two prophylactic vaccines are currently available and marketed in many countries which are directed against oncogenic genotypes. To communicate to the community regarding the new vaccine, it is important to understand the awareness and attitude among caregivers. The study envisaged to study the awareness and attitude of our medical college post-graduate students towards HPV and its Vaccine.

Methods: A cross sectional study was undertaken on a calculated sample size of 53 using a pre-designed semi-structured 20 point questionnaire.

Results: Majority of participants (24.5% each) scored 13 and 14 (65%-70% correct knowledge). The attitude towards introduction of vaccine in immunization schedule was negative among 20% of participants. Majority (97.9%) were of opinion that the term 'cancer vaccine' better suited rather than a vaccine against a sexually transmitted infection.

Conclusions: The incomplete knowledge about the epidemiology of infection and cancer and its preventive measure among doctors is alarming for the health system. A lack of knowledge about the threat of vaccine-preventable diseases, risks and benefits of vaccines, mistrust of government and health workers, poor service delivery and alternative health or religious beliefs play a role in lower uptake of some vaccines. Hence, there exists a need to implement aggressive health education programs, group discussions and targeting mainly the adolescent population. We should encourage medical students in group discussions, interactive sessions and forums where all the doubts and aspects of HPV and its association with cervical cancer can be highlighted and clarified which would ultimately culminate in lowering the burden of cervical cancer.

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INTRODUCTION

HPV is the most common viral infection of the reproductive tract and is the cause of a range of conditions in both females and males, including precancerous lesions that may progress to become cancerous. In women, persistent infection with specific oncogenic types of HPV (most frequently types 16 and 18) may lead to precancerous lesions which, if untreated, may progress to cervical cancer (World Health Organization, 2014). Based on a meta-analysis, the adjusted HPV prevalence worldwide among women with normal cytological findings was estimated to be 11.7% (95% confidence interval (CI): 11.6-11.7%) (Bruni et al., 2012). Cervical cancer is the fourth most common cancer in women, and the seventh overall,

with an estimated 5,28, 000 new cases worldwide in 2012 (<http://www.globocan.iarc.fr>, accessed August 2017). Two prophylactic vaccines are currently available and marketed in many countries worldwide for the prevention of HPV-related disease: a quadrivalent vaccine and a bivalent vaccine, both of which are directed against oncogenic genotypes. Both vaccines are intended to be administered if possible before the onset of sexual activity, i.e. before first exposure to HPV infection (World Health Organization, 2014). Experiences in some countries show that some people question the vaccine because it is new or because they believe vaccination will lead to increased sexual activity. In some countries, gynaecologists or religious leaders misunderstand the purpose or value of HPV vaccine (World Health Organization, 2013). HPV vaccine is different from other new vaccines that are targeted at infants. It is also the first vaccine targeted at a virus causing cancer. The HPV vaccine is recommended by the Indian Academy of Pediatrics and Federation of Obstetric and Gynecological Societies of India for all females who can afford the vaccine

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(Indian Academy of Pediatrics Committee on Immunization, 2008). To communicate the community regarding the new vaccine it is important to understand the awareness and attitude among caregivers. Hence the study looks at the awareness and attitude of our medical college students towards HPV and its Vaccine.

METHODS

The study was conducted on doctors who have completed their internship and entered in post graduation course. Taking population size as 96, expected frequency as 50% with 10% confidence limits and 10 % non-response rate, the sample size was calculated to be 53. The participants were assured of anonymity and confidentiality and were requested to complete a 20 point questionnaire regarding cervical malignancy, HPV infection and HPV vaccine.

The questionnaire developed for the study consisted of:

- Incidence of cervical cancer in India.
- HPV infection and its treatment.
- Relationship between HPV and cervical and other cancers.
- Spectrum of HPV vaccine and its efficacy.
- Myths and beliefs associated with the vaccine.

It was a multiple choice questionnaire with single answer for each question. Correct answer was scored as one, hence maximum score was 20.

RESULTS

A total of 53 participants were enrolled for the study. Mean age of participants were 27.5 ± 2.9 years with a range from 24 to 36 years. Majority of participants were males (66%). Two of the participants left before completing the survey and their scores are not included in analysis. Maximum score attained was 15 (75% correct knowledge) reported by 15.1% doctors. Majority of participants (24.5% each) scored 13 and 14 (65%-70% correct knowledge). Minimum score was 7 (35% of correct knowledge).

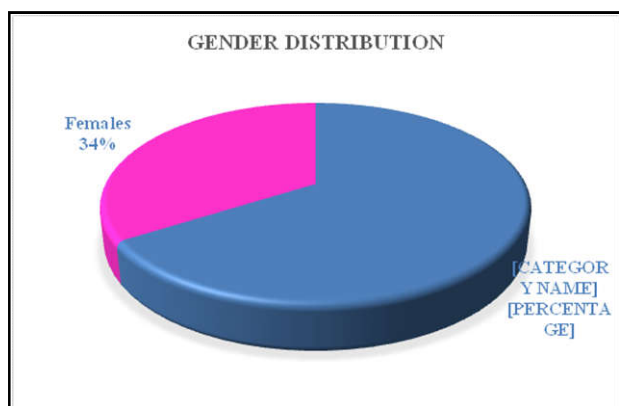


Figure 1. Gender distribution

Mean score ($\pm 2SD$) was $12.8 (\pm 2.8)$ and was higher among males as compared to females. The attitude towards introduction of vaccine in immunization schedule was negative among 20% of participants quoting promotion of sexual promiscuity as one of the reasons.

The exact cost was not known to any of the residents. However, 76% believed it was very costly and a hindrance for routine use. Almost all the residents (99.9%) believed that communication with community will increase the acceptability of vaccine with community. The residents were also asked about their opinion about terminology of the vaccine to be advertised among people. Majority (97.9%) were of opinion that the term 'cancer vaccine' better suited rather than a vaccine against a sexually transmitted infection.

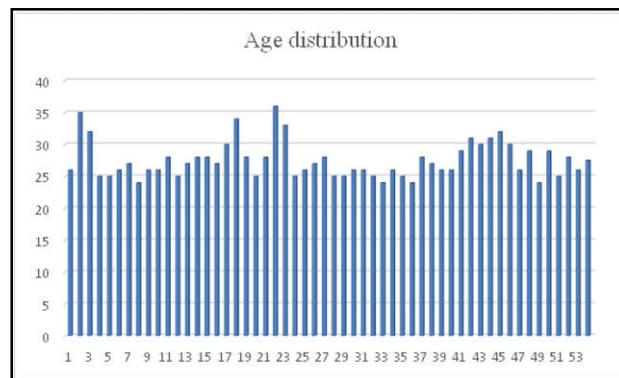


Figure 2. Age distribution

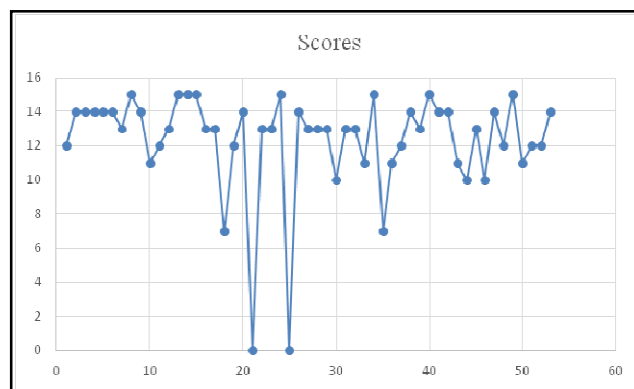


Figure 3. Individual scores

DISCUSSION

In the current analysis the mean correct knowledge among the doctors was 64% which was lower as compared to other studies on medical students from Delhi (Mehta et al., 2013). and Andhra Pradesh (Kamini et al., 2016) but higher than general population and nurses (Ramavath et al., 2013; Siddharthar et al., 2014). The knowledge among males was higher than females. The findings were in contrast to that reported by Mehta et al., Pandey et al., and Kamini et al. (2013); Pandey et al., 2012. Nine percent medical students from Delhi said that vaccine would promote sexual promiscuity if given to 11-12 year olds and 50% thought that vaccination induces false sense of security (Mehta et al., 2013). In our study a higher proportion agreed with vaccine promoting sexual promiscuity. The incomplete knowledge about the epidemiology of infection and cancer and its preventive measure among doctors is alarming for the health system. This also explains negative attitude among some. The misconceptions in the lay public would be even more and this could prove detrimental to the health of the society. Only when the vaccine is accepted by all it will lead to health benefits by decreasing morbidity and mortality associated with cervical cancer (Mehta et al., 2013).

The countries refer to the HPV vaccine as a “cancer vaccine”, rather than a vaccine against a sexually transmitted infection. This is sensible for many reasons. For one, people will know and fear cancer more than HPV (which they may have never heard about). If the perceived benefit is to prevent a cancer, the vaccine will probably awake more interest and demand. Secondly, the nomenclature is accurate as the main purpose of the vaccine from a public health standpoint is to prevent cervical cancer. Third, reference to a “cancer vaccine” may diminish concerns that the vaccine is linked to increased sexual activity or fertility. A lack of knowledge about the threat of vaccine-preventable diseases, risks and benefits of vaccines, mistrust of government and health workers, poor service delivery and alternative health or religious beliefs play a role in lower uptake of some vaccines (World Health Organization, 2013). This vaccine is likely to face such problems in our setting. Hence, there exists a need to implement aggressive health education programs, group discussions and targeting mainly the adolescent population. We should encourage medical students in group discussions, interactive sessions and forums where all the doubts and aspects of HPV and its association with cervical cancer can be highlighted and clarified.

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