

Original Research Article

Knowledge attitude and practice towards human papilloma virus vaccination among medical and paramedical students in a tertiary care teaching hospital in south Karnataka, India

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ABSTRACT

Background: Human papilloma virus infection is responsible for 75-80% of the cervical cancers worldwide. Human papilloma virus infection is a preventable disease, but precaution depends on the cognitive aspects of young women. Authors conducted a study to assess the knowledge, attitude and practices regarding human papilloma virus vaccination and to determine acceptance rate of human papilloma virus vaccination among medical and paramedical students.

Methods: Human papilloma virus infection is responsible for 75-80% of the cervical cancers worldwide. Human papilloma virus infection is a preventable disease, but precaution depends on the cognitive aspects of young women. Authors conducted a study to assess the knowledge, attitude and practices regarding human papilloma virus vaccination and to determine acceptance rate of human papilloma virus vaccination among medical and paramedical students.

Results: Out of 322 students, 114 medicals (35.4%), 106 pharmacy (32.9%) and 102 nursing students (31.7%) were included in this study. Ninety-one (79.8%) medical students, 64 (60.37%) pharmacy students, 43 (42.1%) nursing students were aware that human papilloma virus can cause cervical cancer. Seventy-three (64.03%) medical students, 64(60.37%) pharmacy students, 40(40.1%) nursing students were aware that there is vaccination for human papilloma virus infection, and it can prevent cervical cancer. Most of the students,78(68.4%) medical students, 57 (53.77%) pharmacy students and 46(45.09%) nursing students believe that more awareness required regarding risk factors of human papilloma virus infection and prevention of cervical cancer. Furthermore, around 66 (57.89%) medical students, 44 (41.05%) pharmacy students, 37(36.27%) nursing students were willing to accept the vaccine for themselves.

Conclusions: Majority of the students are lacking knowledge regarding HPV vaccination and cervical cancer prevention with least knowledge among paramedical students. More awareness programmes are required to increase the awareness and acceptability of HPV vaccination.

Keywords: Cervical cancer, Human papilloma virus, Vaccination

INTRODUCTION

Cervical cancer is the most common cancer among middle aged women.¹ It is the fifth most common cancer in humans and second most common cancer in woman.²

It is mainly caused by specific types of high-risk human papillomavirus (HPV) infection. HPV types 16 and 18 infections are considered responsible for about 75-80 per cent of cervical cancer worldwide.³ Human papilloma virus infection is a preventable disease, but precaution

depends on the cognitive aspects of young women.⁴ Early detection of cervical cell abnormalities by papanicolaou smear has reduced the risk of cervical cancer development by allowing timely response to abnormal changes in cervical cytology.⁵

Two prophylactic vaccines approved by the USFDA (US food and drug administration) are available for vaccination of adolescent girls. In India cervical cancer accounts for 74000 deaths per year.⁶ Prophylactic human papilloma virus vaccination can reduce the burden of cervical cancer in India by more than 75 per cent.⁷ The success and benefit of control and prevention of cervical cancer largely depend to a great extent on the level of awareness and knowledge about different aspects of the disease and the vaccine. It is therefore important to target immunizable young adult college-going girls.⁶ Unfortunately, young women lack sufficient knowledge, have misperceptions about their susceptibility and are unaware of the risk factors that increase the likelihood of Human papilloma virus infection.⁴

Educational awareness and intervention can positively influence the knowledge and awareness towards immunisation related practices. This study was taken up with objective to study the awareness regarding the HPV vaccination and to determine the acceptance rate of HPV vaccination among medical and paramedical students.

METHODS

An observational, cross sectional, questionnaire-based study, involving medical and paramedical students of Adichunchanagiri institute of medical sciences, B.G. Nagara, Karnataka, India. A 322 medical and paramedical students, study period was between 2 months from September 2018 to October 2018.

Inclusion criteria

- All female students of MBBS final year, final year pharmacy and final year nursing students who gave written consent and willing to participate in the study were included.

Exclusion criteria

- Students who were absent, not willing to participate and who have not given written consent were excluded.

After taking ethical committee clearance from the institution, students were explained about the study. Written consent was taken from students who are willing to participate in this study.

The confidentiality of participants was guaranteed. A proforma with 23 questions including 12-knowledge, 6-attitude and 5-practice based questions regarding HPV vaccination was first pretested with 20 students to assess

the clarity and reliability of the questions. The content of the proforma was reviewed and validated by general medicine, obstetrics and gynecology, dermatology, preventive and social medicine and microbiology senior faculties. Later the questionnaire was distributed to all students excluding students involved in pilot study. Students were asked to mark single response, Yes/No/Don't know options.

Statistical analysis

The data of responses to the questionnaire were compiled by using Microsoft Excel software and analysed using appropriate statistical techniques, which includes numbers and percentages.

RESULTS

Out of 322 students participated in this study, 114 were medical (35.4%), 106 were pharmacy (32.9%) and 102 were nursing students (31.7%). Eighty (70.1%) medical students, 59(55.6%) pharmacy students and 47(46.07%) nursing students were aware that cervical cancer is one of the most common cancers among women (Table 1). Eighty-five (74.56%) medical students, 65 (61.48%) pharmacy students, 40(40.1%) nursing students were aware that smoking is a risk factor for cervical cancer (Table 1). Regarding vaccination,73(64.03%) medical students, 64(60.37%) pharmacy students,40 (40.1%) nursing students were aware that there is vaccination for HPV infection and it can prevent cervical cancer (Table 1) and 66 (57.89%) medical students, 57 (53.77%) pharmacy students,37(36.2%) nursing students aware that HPV vaccination is available in India (Table 1). Most of the students 75 (65.7%) medical ,55 (51.88%) pharmacy ,43(42.1%) nursing, think that prevention of HPV infection is important and education regarding the same should be implemented in schools and colleges (Table 2). Majority,78(68.4%) medical students,57(53.77%) pharmacy students and 46(45.09%) nursing students think that more awareness programs should be conducted regarding risk factors of HPV infection in prevention of cervical cancer (Table 2).

Only 14 (12.28%) medical students, 8(7.54%) pharmacy students, 6(5.88%) nursing students have been screened for HPV infection (Table 3). None of the students have got vaccinated for HPV infection. Regarding acceptance,66 (57.89%) medical students, 44 (41.05%) pharmacy students, 37 (36.27%) nursing students were willing to accept the vaccine for themselves (Table 3) and around 68 (59.64%) medical students,46 (43.39%) pharmacy students, 38(37.25%) nursing students were willing to recommend the vaccine to their family, friends and relatives (Table 3).

Table 1, 2 and 3 explains the response obtained for knowledge, attitude, and practice towards HPV vaccination from participants.

Table 1: Questionnaire on knowledge.

Question	Medical students(n=114)	Pharmacy students (n=106)	Nursing students (n=102)
Cervical cancer is one of the most common cancers among women (yes)	80 (70.1%)	59 (55.6%)	47 (46.07%)
Smoking is a risk factor for cervical cancer (yes)	85 (74.56%)	65 (61.48%)	40 (40.1%)
HPV can cause cervical cancer (yes)	91 (79.8%)	64 (60.37%)	43 (42.1%)
Having multiple sexual partners increases the risk of HPV infection (yes)	82 (71.9%)	49 (46.22%)	41 (40.19%)
There is vaccination for HPV (yes)	73 (64.03%)	64 (60.37%)	40 (40.1%)
HPV vaccination available in India (yes)	66 (57.89%)	57 (53.77%)	37 (36.2%)

Table 2: Questionnaire on attitude towards high-risk human papillomavirus vaccination.

Question	Medical students (n=114)	Pharmacy students (n=106)	Nursing students (n=102)
Education on HPV infection should be implemented in schools and colleges	75 (65.7%)	55 (51.88%)	43 (42.1%)
More awareness programmes to be conducted regarding risk factors of HPV infection and prevention of cervical cancer	78 (68.4%)	57 (53.77%)	46 (45.09%)

Table 3: Questionnaire on practices.

Question	Medical students (n=114)	Pharmacy students (n=106)	Nursing students (n=102)
Have you ever been screened for HPV?	14 (12.28%)	8 (7.54%)	6 (5.88%)
Would you accept the vaccine for yourself?	66 (57.89%)	44(41.05%)	37(36.27%)
Would you recommend the vaccine to your friends and relatives	68 (59.64%)	46 (43.39%)	38 (37.25%)

DISCUSSION

This study stands among very few studies conducted in India to study the knowledge and practices regarding HPV infection and vaccination among medical and paramedical students who will be the backbone of future health care system. A study conducted by Pandey D et al, to evaluate awareness among medical graduates regarding HPV infection and vaccination reported that 89.2% of the students were aware regarding the aetiology of the cancer and 75.6% students were aware about the availability of vaccine.⁸ A cross-sectional study conducted among nursing staff in tertiary level teaching institute by Shekhar S et al, reported that only 26.7% were having adequate knowledge regarding cervical cancer and screening.⁹ In a study conducted by Saha A et al, in Kolkata revealed very low level of awareness among graduate and postgraduate students of premier colleges.¹⁰ In this study 79.8% medical students were aware about the aetiology of the cancer and 64.03% of students were aware about the availability of vaccine which is higher than the study conducted by Saha A et al, in Kolkata.¹⁰ In this study 46.07% of nursing students were aware of cervical cancer, 42.1% were aware regarding aetiology of cervical cancer and 40.01% nursing students were aware about the availability of

vaccine which is higher than study conducted by Shekhar S et al, majority of the participants in present study believe that education regarding HPV infection should be implemented in schools and colleges.⁹ As stated by Bhatla N et al, the major obstacles in HPV vaccination and prevention of cervical cancer include high cost, lack of knowledge and awareness, social stigmas and religious barriers.¹¹ In this study 68.4% of medical students, 53.77% of pharmacy students and 45.09% nursing students believe that more awareness programmed to be conducted in regarding risk factors of HPV infection and cervical cancer. Encouraging HPV vaccine administration should be a priority in developing countries as they contribute to major percentage of global cervical cancer burden.¹² Unfortunately none of the participants have got vaccinated. In this study 57.89% medical, 41.05% pharmacy and 36.27% nursing students were willing to accept the vaccine for themselves and 59.64% medical, 43.39% pharmacy and 37.25% nursing students would recommend the vaccine to their family and friends. Overall knowledge regarding HPV vaccination and prevention of cervical cancer is better among medical students compared to paramedical students with nursing students being the least. A recent study conducted among medical and nursing students regarding knowledge and attitude of HPV vaccination in tertiary care teaching

hospital by Ganju SA et al, concluded that there was enough knowledge regarding HPV vaccination but there were several gaps regarding its safety, efficacy and availability.¹³ Medical teaching has definitive impact in the awareness regarding HPV vaccination and prevention of cervical cancer. Students of only one institution were included in the study which is the major limitation of the study. Advantage of this study is being the inclusion of both medical and paramedical students who are part of health care system. Further studies on bigger scale may help in assessing awareness regarding cervical cancer and its prevention to decrease the disease burden in our country.

CONCLUSION

This study concludes that majority of the students are lacking knowledge regarding HPV vaccination and cervical cancer prevention with least knowledge among paramedical students. More awareness programmed are required to increase the awareness and acceptability of HPV vaccination. Bigger studies are required to assess the knowledge of varied health care professionals and inclusion of HPV vaccination in national immunization programmed can decrease the disease burden in future.

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