Section: Obstetrics and Gynecology

Original Research Article

THE STUDY OF THE KNOWLEDGE, ATTITUDE AND PRACTICE ABOUT THE HPV VACCINE IN THE FEMALE DOCTORS

Navneet Kaur[1], Nupur Saini[2], Gaganpreet Kaur Gill[3]

[1]*Associate Professor, Department of Obstetrics and Gynecology, GMC Patiala, Punjab, India.*
[2]*Assistant Professor, Department of Obstetrics and Gynecology, Gian Sagar Medical College and Hospital, Ramnagar, Rajpura, Punjab, India.*
[3]*Assistant Professor, Department of Obstetrics and Gynecology, AIMSR, Bathinda, Punjab, India*

Received *: 12/03/2025*
Received in revised form *: 30/04/2025*
Accepted *: 19/05/2025*

Corresponding Author:
Dr. Gaganpreet Kaur Gill,
Assistant Professor, Department of Obstetrics and Gynecology, AIMSR, Bathinda, Punjab, India.
Email: gillgaganpreet90@gmail.com

DOI: 10.70034/ijmedph.2025.2.396

Source of Support: Nil,
Conflict of Interest: None declared

Int J Med Pub Health
2025; 15 (2); 2198-2203

ABSTRACT

Background: Cervical cancer is the second most common cancer among women worldwide. Bivalent, quadrivalent and nonavalent vaccines against HPV types 16/18, 6/11/16/18, and 6/11/16/18/31/33/45/52/58, respectively, have an acceptable safety profile and are highly efficacious against a number of infections with hrHPVs and associated precancers. **Aims and Objectives:** The aim was to study the knowledge, attitude and practice of HPV vaccine in female doctors. Inclusion criteria: All the (graduate or postgraduate {of any specialty}) female doctors of any age whether married or unmarried, with or without any gynecological complaint.

Material and Methods: This is a prospective online study which was conducted in 138 female doctors to study and understand their knowledge about the HPV vaccine, their attitude and practice about the vaccine. This was a questionnaire-based study and 31 questions were asked regarding the subject. The results were analyzed according to the responses obtained on the google drive.

Results: Out of the female doctors who responded, 123 were specialists and 86 were either postgraduates or were pursuing their degree in Obstetrics and Gynae. It was found that 122 (89.1%) women had the knowledge about the HPV vaccine. 132 (95.7%) women had the knowledge of the symptoms of the cervical cancer. 24(27.3%) women in our study had completed the full course of vaccination.

Conclusion: HPV vaccine is very important and effective for the prevention of the cancer cervix. Administration of vaccines is ideally done prior to sexual debut for both males and females for the greatest impact. Moreover, the vaccine should be introduced into the govt. hospitals free of cost so that the people of low economic status can also reach it.

Key Words: HPV, Cervical cancer, vaccination, knowledge, vaccine.

INTRODUCTION

Cervical cancer is the second most common cancer among women worldwide. Cancer of the uterine cervix is one of the leading causes of cancer death among women worldwide. About 500,000 women are diagnosed with cervical cancer contributing to around 270,000 deaths, across the globe every year. Out of these, the burden of 230,000 (85%) deaths is owned by developing countries, with bare minimal resources to cope with the situation.[1] In India alone there are an estimated 132,000 new cases and 74,000 deaths each year. The discovery that human papillomavirus (HPV) is responsible for virtually all cervical cancers. HPV is a common sexually transmitted infection, with HPV acquisition generally occurring soon after first sexual activity.[1] HPV16 and HPV18 are the commonest high-risk or oncogenic genotypes in cervical cancer and are responsible for approximately 50% of high-grade cervical dysplasia and 70% of cases of cervical cancer, the fourth most common cancer in females

globally. Most new HPV infections occur in adolescents and young adults. The Advisory Committee on Immunization Practices (ACIP)* routinely recommends HPV vaccination at age 11 or 12 years; vaccination can be given starting at age 9 years. The American Academy of Pediatrics (AAP) integrated the HPV vaccine into the standard immunization schedule for all girls at age 11-12 years and extended that recommendation to all boys at age 11-12 years in March 2012.

High-risk (hr) human papillomaviruses (HPVs) cause up to 9% and 1% of cancers in females and males. Bivalent, quadrivalent and nonavalent vaccines against HPV types 16/18, 6/11/16/18, and 6/11/16/18/31/33/45/52/58, respectively, have an acceptable safety profile and are highly efficacious against a number of infections with hrHPVs and associated precancers.[2] HPV vaccination could prevent more than 90% of these cancers from ever developing. Therapeutic vaccines are used to treat the HPV diseases and prophylactic is used to prevent the HPV infection. There are two types of prophylactic vaccines available in India- CERVARIX and GARDASIL.[3]

CERVARIX is a bivalent vaccine and is targeted against HPV 16, 18. Its manufacturer is Glaxo Smithkline company and the dosage is at 0, 1 and 6 months. Its given intramuscularly in dose of 0.5 ml. Recommended age is 10-12 years upto age of 26 years. It is effective against cervical cancer.

GARDASIL is a quadrivalent vaccine and is effective against HPV 6, 11, 16 AND 18. Dosage is 0.5 ml, given intramuscularly at 0, 2 and 6 months. Efficacy is 100% against CIN 2/3 and adenocarcinoma in situ. HPV is not recommended for use in pregnancy.

ACOG recommends routine vaccination with HPV vaccine for girls and boys. The target age for vaccination is 10-12 years for boys and girls.[10] Vaccine is recommended regardless of sexual activity or exposure to HIV. Even if the patient previously has had abnormal pap test, or history of genital warts, the vaccine is recommended. The HPV vaccine is important for prevention of cervical cancer and other HPV related infections.[4] For the greatest impact of these vaccines, the aim should be to vaccinate adolescent females prior to sexual debut and to gain high coverage of the target population. The US Centers for Disease Control and Prevention (CDC), through the Vaccine Adverse Event Reporting System, classified only 7% of adverse events as serious from over 90 million doses of HPV vaccines. Vaccination in children is being utmost importance. There is well developed system and norms for infrastructure, manpower, logistics, training of medical and paramedical workers and awareness for public. Despite of all this, the targets of vaccination in children are not achieved not only in developing countries but in developed countries as well. Barriers in terms of demographics/socioeconomical and educational for HPV in sexually active/ abused teenagers/adolescents and adults, need in depths study.

Aims and Objectives

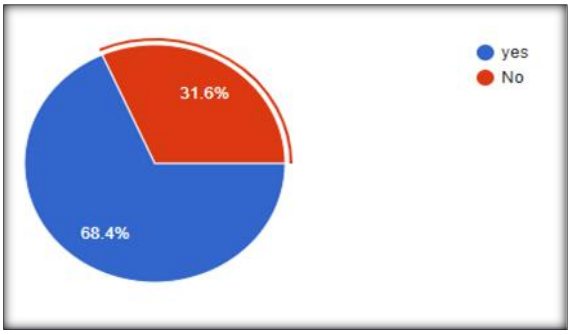
The aim was to study the knowledge, attitude and practice of HPV vaccine in female doctors. **Inclusion Criteria:** All the (graduate or postgraduate {of any specialty}) female doctors of any age whether married or unmarried, with or without any gynecological complaint

MATERIALS AND METHODS

This is a prospective online study which was conducted in 138 female doctors to study and understand their knowledge about the HPV vaccine, their attitude and practice about the vaccine. This was a questionnaire-based study and 30 multiple choice questions were asked regarding the subject. The questions were made on the google forms and results were analyzed according to the responses obtained on the google drive. The questions were asked regarding their knowledge about the symptoms of cancer cervix, pap smear, HPV tests, HPV vaccine etc. The consent was taken from all the participants before the start of the study. The participant was given an option to opt out of the study after knowing its type and the details. The answers and the data collected from the questionnaires helped us to find out the extent of knowledge the female doctors have about the cervical cancer, its screening and the problems faced by them related to the vaccine. The conclusions were drawn according to the data collected.

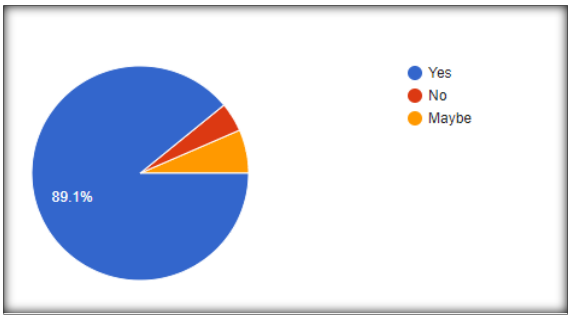
RESULTS

This was an online prospective questionnaire-based study conducted in 138 female doctors. A total of 30 questions were asked and most of results were obtained in form of yes, no, may be or in form of short text. No demographic or other personal information could be collected at the time of the questionnaire collection, therefore no summary statistics or analysis for these participants and the corresponding responses can be provided. All questionnaire responses were obtained on google drive and were transcribed in an Excel spreadsheet and descriptive statistics for the percentage of responses from each question were reported. According to the responses obtained, it was seen that 93 (68.4%) women were married and 43 (31.6%) were unmarried the time of study.



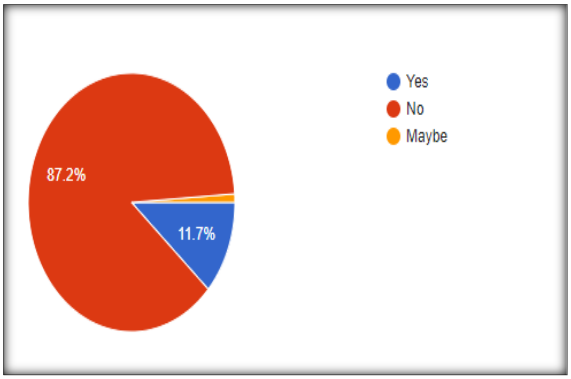
The maximum number of women who participated were from 21-30 years of age (37%) followed by 31-40 (32.6%) and then 41-50 (15.9%). [Figure 1]
Out of the female doctors who responded, 123 were specialists, 86 were either qualified Gynaecologists or were pursuing their degree in Obstetrics and Gynae. It was found that 122 (89.1%) women had the knowledge about the HPV vaccine, 6 (4.4%) had no knowledge and 9 (6.6%) were not sure about its dosages, mechanism of actions, side effects. [Table 1]

KNOWLEDGE ABOUT HPV VACCINE

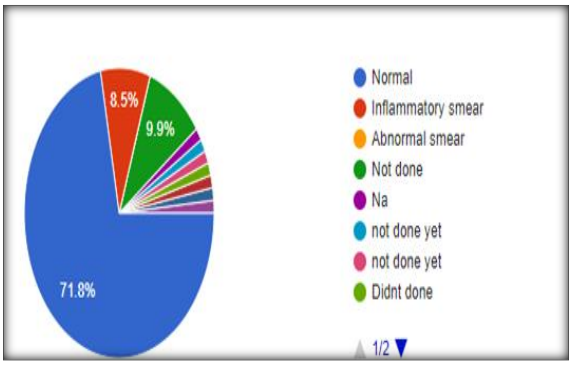


The pap smear is routinely indicated every 3 yearly from 21 – 65 years according to WHO. The age group 31-40 years had the highest number of pap smear done (59.5%) and 41-50 years had lowest number (19.1%). [Figure 2]
43(31.1%) women had the pap smear test done and out of them 82(87.2%) had no symptom, 11(11.7%) had symptoms and 1(1.1%) were not sure while the pap smear was taken. [Table 2]

SYMPTOMS WHEN PAP SMEAR WAS TAKEN

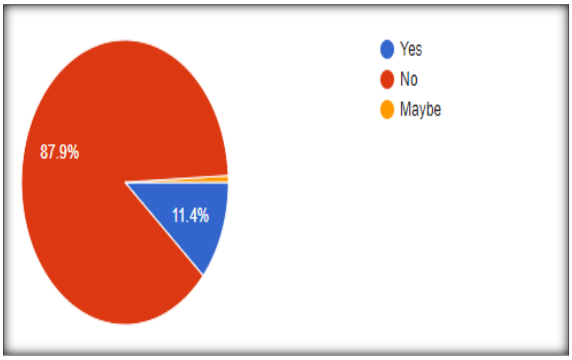


51(71.8%) had the normal pap smear report, 6(8.5%) had inflammatory report. Only one woman {1(1.4)} had abnormal pap smear report and 6(8.4%) haven't had any pap smear done. [Figure 3]

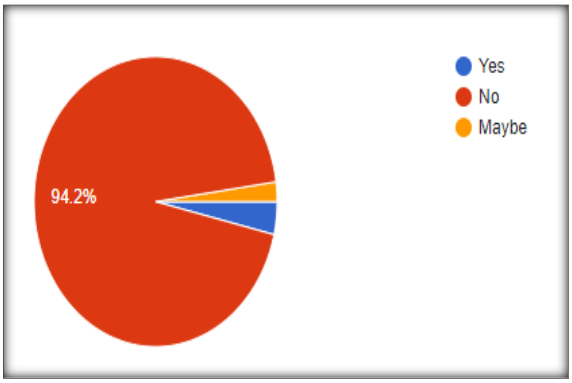


Regarding the HPV testing, only 15(11.4%) women had undergone HPV test. [Figure 4]

HPV TEST DONE



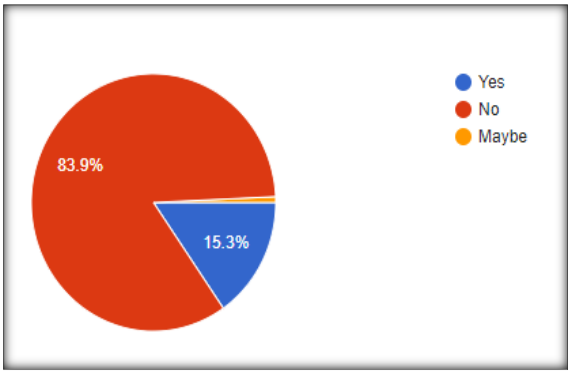
Cervical cancer is a type of cancer that occurs in the cells of the cervix. Various strains of the human papillomavirus (HPV), a sexually transmitted infection, play a role in causing most cervical cancer. Vaginal bleeding is the most common symptom of the cervical cancer.[5] 132 (95.7%) women had the knowledge of the symptoms of the cervical cancer while the 5(3.6%) had no idea about it and only one woman was unsure about its symptoms. 129(94.2%) women had no symptoms of cancer cervix. [Figure 5]



3(2.2%) women were not sure about any of above-mentioned symptoms. 7(5.2%) women had intermenstrual bleeding or excessive bleeding per

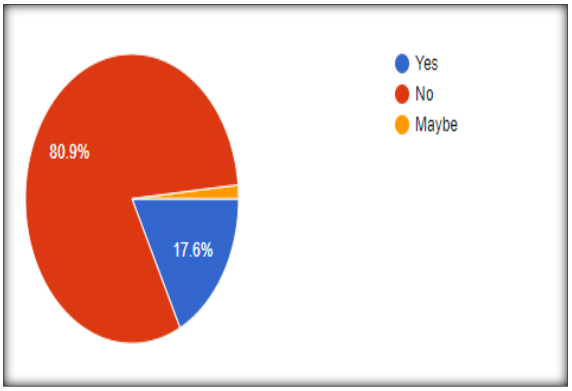
vaginum. Only 2(1.8%) women had post coital bleeding while 111(97.4%) women had no such complaint. Only 7(5.1%) women smoked or consumed alcohol when asked about it. 115(83.9%) women had no history of any cancer in the family and 21(15.3%) had the history of carcinoma of some organ. [Figure 6]

FAMILY HISTORY OF ANY CANCER



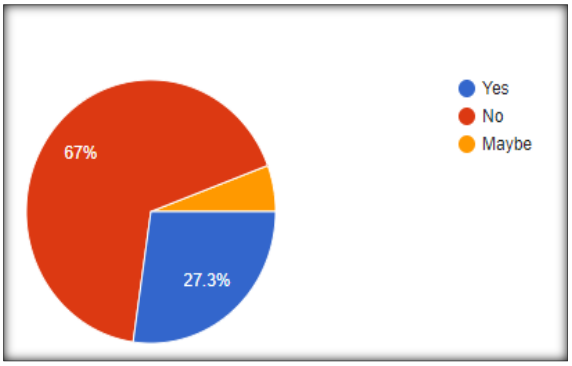
The hpv vaccine is indicated as early as 10-12 yrs of age. In our study, only 23(17.6%) women had hpv vaccination done, 106(80.9%) haven't had any hpv vaccination and 2(1.5%) were not sure about it. [Figure 7]

HPV VACCINE TAKEN

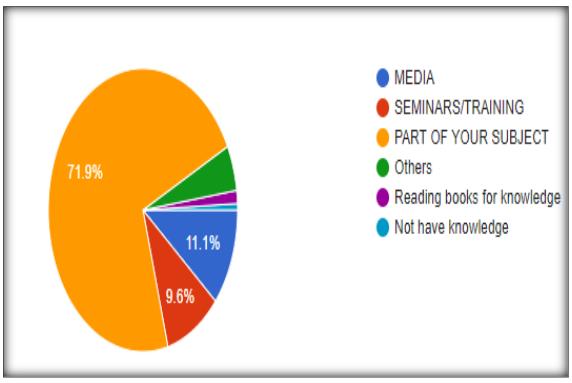


24(27.3%) women in our study had completed the full course of HPV vaccination. [Figure 8]

WOMEN COMPLETED FULL COURSE OF HPV VACCINE

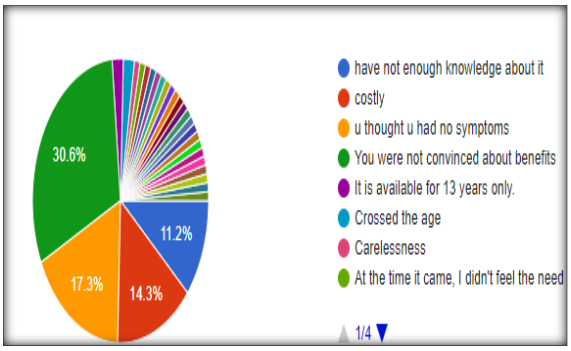


21-30 years of age group had highest number of HPV vaccination done (58.3%) followed by 31-40 years of age (29.2%) and then 41-50 years (8.3%). [Figure 9] 97(71.9%) women were aware of HPV vaccine as it was the part of their subject. 13(9.6%) have gathered the knowledge through seminars and trainings, 15(11.1%) knew about it via the media, 2(1.5%) had read the books about it while only 1(0.7%) had no knowledge about it. [Table 3]

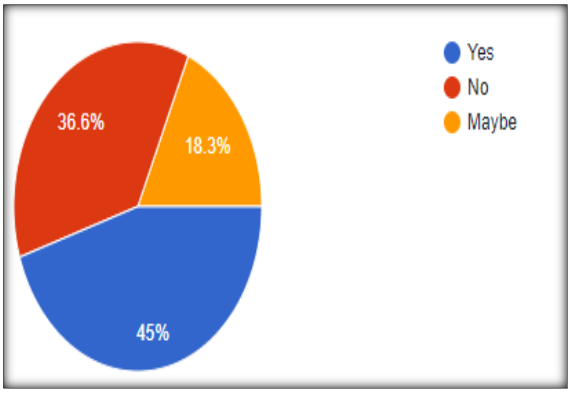


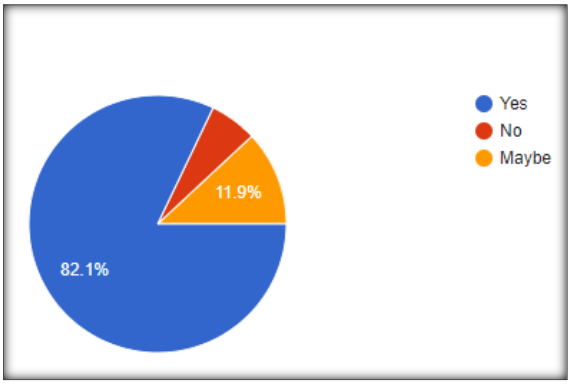
There were various reasons of women for not having the HPV vaccination done. 30(30.6%) women were not convinced about the benefits of the HPV vaccine. 17(17.3%) women thought they were not having any symptoms, so they didn't get vaccinated. 11(11.2%) women didn't have much knowledge about the vaccine, so they didn't get themselves vaccinated. 2(2%) women were convinced that it's available for 13 years only, 8(8%) have already crossed the age of vaccination. 3(3%) woman didn't get it done due to carelessness and 1(1%) didn't find it necessary. 1(1%) woman thought that it is to be given only upto 26 years of age. [Figure 10]

REASONS FOR NOT HAVING HPV VACCINATION



59(45%) women found the hpv vaccine very costly and 24(18.3%) were of no opinion regarding its cost status. [Figure 11]





7(10.3%) women were married at the time of the HPV vaccination. 120(88.2%) women agreed to the fact that HPV vaccine should be incorporated in the Govt. hospitals so that it should be freely available to the general population. 102(82.1%) women gave opinion that the HPV vaccination is important for the reproductive age group women. [Figure 12]

SHOULD WOMEN OF REPRODUCTIVE AGE GROUP HAVE HPV VACCINE

123(90.4%) women were of the opinion that the HPV vaccination prevents against the cervical cancer but still the women who had undergone it should be screened for cancer cervix. 117(86%) women thinks that HPV vaccine can be effective in prevention of cervical cancer and other related infections. [Figure 13]

Table 1: Age

Age Group	Number	Percentage
11-20	3	2.2%
21-30	51	37.0%
31-40	45	32.6%
41-50	22	15.9%
51-60	11	8.0%
61-70	5	3.6%
71-80	1	0.7%
Total	138	100.0%

Table 2: Age at which pap smear was done

Age Group	Number	Percentage
21-30	9	21.4%
31-40	25	59.5%
41-50	8	19.1%

Table 3: Age at which HPV vaccination done

Age Group	Number	Percentage
11-20	1	4.2%
21-30	14	58.3%
31-40	7	29.2%
41-50	2	8.3%
Total	24	100.0

DISCUSSION

This study was conducted to assess the knowledge, attitude and practice of the females towards the HPV vaccine. The HPV vaccine acts against cervical cancer and it can be used on regular basis in the young adults. This vaccine is not available in the Government Institutes in India and is only available with the private hospitals and practitioners. The knowledge of the cervical cancer and the vaccine, the hurdles faced in the vaccination can be known from this study. By this study, we can also reach the problems faced by the females related to the vaccine. Various studies and clinical trials are being conducted on HPV vaccination and they have concluded that it is necessary to have the teens and the young adults to be vaccinated to prevent the cervical cancers and HPV related infections. In a study by Wong and lee et al, explored the knowledge, attitude, practice and barriers to prescribe HPV among private primary care physicians in Hong Kong. A self-administered questionnaire survey was conducted by sending letters to doctors who had joined a vaccination program for school girls. Most agreed that HPV vaccination should be fully paid by the Government (68.3%) as an important public health strategy as in our study (88.3%) women agreed to this point.[6] In another study by Soon et al, a cross-sectional survey was administered to Hawaii pediatricians and family physicians from July 2012 to

September 2012 on their attitude, practices and barriers regarding HPV vaccination, 71% reported strongly recommending the HPV vaccine to girls 11-12 years which is almost similar to our study (86.1%).[7]

A study by Pandey and Vanya et al where a questionnaire based survey was conducted in MBBS doctors in the medical school in India, it was found that majority of participants (89.6%) were well aware of the preventable nature of cervical cancer.[8] Most of them (89.2%) knew that necessary factor responsible for cervical cancer is infection with high risk HPV which was similar to our study where (89.1%) doctors knew the importance of the HPV vaccine but still only 17.6% were vaccinated due to one or the other reasons.

CONCLUSION

HPV vaccine is very important and effective for the prevention of the cancer cervix. The HPV vaccination is of public health importance. Compliance with cervical Pap smear screening is low in India. The currently available vaccines are safe and efficacious. The Indian Academy of Pediatrics Committee on Immunization (IAPCOI) recommends offering HPV vaccine to all females who can afford the vaccine. Vaccination can be given to females as young as 9 years as well as in those aged 13–26 years who have not previously completed vaccination. Because protection is seen only when the vaccine is given before infection with HPV, the vaccine should be given prior to sexual debut.[9]

The predicted efficacy of the vaccine is >=93%. Despite having the knowledge of vaccine by the qualified doctors in our study, only 23(17.6%) had the HPV vaccination done and 24(27.3%) out of them completed the full course. So there is a need for generating the awareness to the doctors for the HPV vaccine. It can also be presumed that the general population may also not be having much information about it. Hence the people should be made aware of it through the newspapers, media etc and the further studies are required for the assessing the awareness in the general population also. Moreover, the vaccine should be introduced into the govt. hospitals free of cost so that the people of low economic status can also reach it.

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