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# Awareness of Human Papilloma Virus (Hpv) Among Undergraduate Students

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**ABSTRACT**

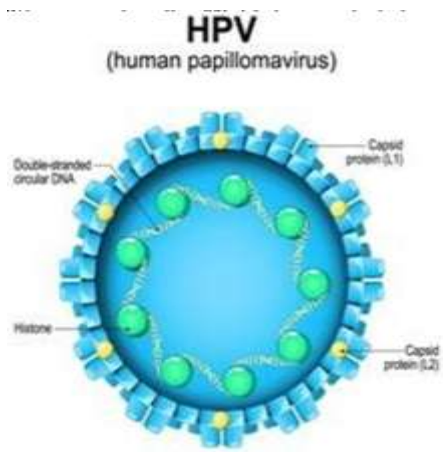
Human Papillomavirus(HPV)is a leading cause of cervical and several other cancers; however, vaccination coverage remains inadequate, particularly in resource-constrained settings. This study aimed to evaluate undergraduate students' knowledge, awareness, attitudes, and vaccination behaviors regarding HPV and its vaccine. Across-sectional online surve y was conducted among undergraduate students. The questionnaire explored participants' understanding of HPV-related cancers, awareness of vaccine availability and guidelines, vaccination status, perceived barriers, and their attitudes toward integrating HPV education into college curricula. Findings revealed a considerable gap between knowledge and practice. Although many students (70.9%) had a general awareness of HPV, only 48.1% knew that a vaccine exists, and merely17.7%couldcorrectlyidentifyHPV-related cancers beyond cervical cancer. Vaccine uptake was notably low at 3.4%. The most commonly reported barriers were lack of awareness (60.8%) and absence of healthcare professional recommendations (44.6%). Encouragingly, 65.8% expressed a willingness to get vaccinated if cost was not a factor, and 84.8% supported including HPV education in college health programs. The study underscores a critical deficiency in HPV awareness and vaccination among undergraduate students. Given the high willingness to vaccinate and the predominance of informational barriers, implementing structured HPV education and strengthening professional and institutional recommendations are essential measures to enhance vaccine acceptance and reduce the future burden of HPV related diseases in young adults.

**Keywords:** Human Papilloma virus, HPV, Vaccine Awareness, Undergraduate Students, Cervical Cancer, Vaccination Barriers

## I. INTRODUCTION

Human papillomavirus (HPV) is a groupofmorethan200relatedviruses, of which some types are known to cause various cancers, including cervical, anal, and or pharyngeal cancer, as well as genital warts. HPV infection is widespread, and while most infections resolve on their own, persistent infection with high-risk HPV types can lead to serious health problems.

The HPV vaccine is an anti-cancer vaccine protecting against the strains of HPV that cause the majority of HPV-related cancers, including cervical, vaginal, vulvar, anal, penile, and oropharyngeal cancers, as well as genital warts. Vaccination is recommended for people between the ages of 9 and 45, ideally before becoming sexually active. When given at the recommended age, the vaccine is over 90% effective.




In India, several vaccines are approved, including the indigenous quadrivalent vaccine (Cervavac) and importedvaccineslikeGardasil9.The Indian Academy of

Paediatrics (IAP) recommends a 2- dose

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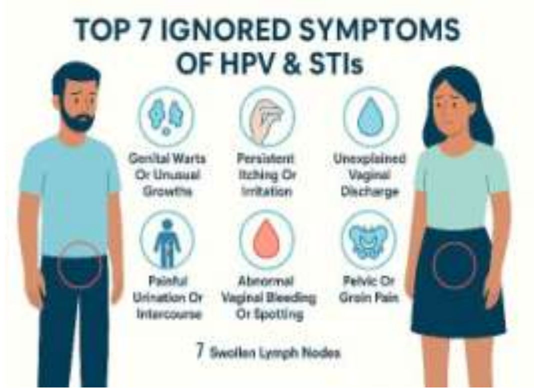
schedule for ages 9-14 and a 3- dose schedule for ages 15-26. Despite recommendations from the National Technical Advisory Group on Immunization (NTAGI) for inclusion in the Universal Immunization Programme (UIP), national rollout is still in phases, with some states like Sikkim and Bihar initiating their own programs.




Given that the undergraduate student population falls within the critical ”catch-up” vaccination window (15-26 years), their understanding and uptake of the vaccine are crucial. This study aimed to assess the knowledge, awareness, attitudes, and vaccination behaviours regarding HPV and its vaccine among undergraduate students.

## II. MATERIALS AND METHODS

### Study Design

This study utilized a descriptive, quantitative, cross-sectional survey design to assess awareness, knowledge, attitudes, and self- reported vaccination behaviours related to HPV among undergraduate students.

### Targeted Population and Sampling

The study targeted undergraduate students currently enrolled in colleges or universities. A total of 79 completed responses were included in the final data analysis. A non-probability convenience and/or snowball sampling method was employed via an online Google Form.

### Data Collection Instrument

Data was collected using a structured, self- administered questionnaire titled ‘Awareness of HPV Among Undergraduate Students’. The survey contained approximately 15 multiple-choice and multiple-select questions divided into sections: demographics, general awareness, knowledge and prevention, and attitude and perception.

### Data Collection Procedure

The online survey link was distributed electronically. Participation was voluntary, and submission of the completed form was considered implied consent. The data collection period was open for approximately four weeks.

### Data Analysis

Data were organized using Google Sheets. Descriptive statistics were used to calculate frequencies and percentages for all variables. Cross- tabulation analyses were conducted where appropriate.

## III. RESULTS

### Survey Demographics

The survey gathered responses from 79 undergraduate students. The majority of respondents were female (88.06%, n=59) and in their final two years of study (4th Year: 55.22%, n=37; 3rd Year: 29.85%, n=20). The predominant age group was 20 – 22 years (85.07%, n=57).

### Awareness and Knowledge of HPV

Overall awareness was high, with 70.9% (n=56) reporting they had heard of HPV. The primary sources of information were” School/College lectures” (75% of those aware)and ”Internet/Social media” (40.3%).

Knowledge of transmission was moderate; 63.3 % (n=50) correctly identified” Sexual contact” as the primary mode, but 32.9% (n=26) answered ”Don’t know”. Knowledge of associated health problems was limited. While 51.9% (n=41) identified cervical cancer, only 17.7% (n=14) identified throat cancer, and 34.2% (n=27) selected ”Don’t know” (Table 1).

Table1: Knowledge of Health Problems Caused by HPV(Multiple Selection, N=79)

| Health Problem | Responses(n) | Percentage(%) |
|---|---|---|
| Cervical cancer | 41 | 51.9 % |
| Genital warts | 32 | 40.5 % |
| Throat cancer | 14 | 17.7% |
| Don’t know | 27 | 34.2 % |
| Common cold | 4 | 5.1% |

**HPV Vaccine Awareness and Uptake**

Less than half of the students (48.1%, n=38) knew a vaccine for HPV was available. Consequently, vaccine uptake was extremely low, with only 3.4% (n=2) reporting having received all doses.

The primary reasons cited for not being vaccinated were ”Not aware of the vaccine” (60.8% of non-vaccinated)and”Notrecommendedby anyone”(44.6%).Costwasaless-cited barrier (6.8%).

**Perception of Vaccination Guidelines**

While 51.9% (n=41) correctly stated ”Both males and females,” 26.6% (n=21) believed it was ”Only females,” and 21.5% (n=17) ”Don’t know.”

Knowledge of the most effective age for vaccination was poor. The largest group (38.0%,n=30) answered ”Don’t know,” while only 25.4% (n=15) correctly identified ”Before sexual debut (9–14 years).”

**Attitudes towards Education and Cost**

There was strong support for institutional action. A nover whelming 84.8% (n=67)agreed that HPV-related education should be included in college health programs. Furthermore, 65.8% (n=52) stated they would be willing to get vaccinated if it were provided at low or no cost. A significant portion (39.2%, n=31) perceived socialstig main talking about HPV, while 44.3% (n=35)were ”Not sure.”

## IV. DISCUSSION

The results of this survey reveal a significant and persistent knowledge-to-practice gap regarding HPV and its vaccine among under graduate students in India, which is consistent with existing literature

The low vaccine uptake (3.4%) observed in this study, despite high general awareness of HPV(70.9%), underscores this gap. Our findings align with other Indian studies, which report up take rates from 0.6% to 11.9% [1]. This confirms a national challenge in translating awareness into vaccination. Crucially, the primary barriers identified were not financial but informational. The most common reasons for non-vaccination were lack of awareness of the vaccine’s existence (60.8%) and an absence of recommendation from a healthcare professional (44.6%). This finding is supported by other research highlighting that a strong provider recommendation is a key driver of vaccine acceptance[1].

The study also identified critical gaps in comprehensive knowledge. Less than half of the students knew a vaccine was available (48.1%), and very few (17.7%) were aware of HPV-related cancers beyond cervical cancer. This low awareness of other cancers (e.g., anal, or pharyngeal) and the misconception that the vaccine is only for females (held by 26.6%) limit the perceived utility of the vaccine, especially for males.

Despite these gaps, the potential for improvement is high. A large majority of students (65.8%) expressed willingness to be vaccinated if cost barriers were removed, and 84.8% supported the inclusion of HPV education in college health programs. This indicates that students are receptive to vaccination and that the barriers are largely practical and informational, not due to fundamental opposition. This finding presents a clear mandate for policymakers and educational institutions to integrate HPV education into health curricula.

**Limitations**

The use of a non-probability convenience sample, with a high percentage of female respondents, means the results may not be generalizable to the entire undergraduate population. The self-reported nature of the data may also be subject to recall bias.

## V. CONCLUSION

This study highlights a critical deficiency in HPV knowledge and vaccine uptake among undergraduate students. A persistent gap exists between general awareness of the virus and specific, actionable knowledge about the vaccine’s availability, benefits, and recommended guidelines. The primary barriers are informational, not financial or attitudinal.

Given the students ’high willingness to be vaccinated and their strong demand for institutional education, we recommend two key actions: 1) Integrating structured HPV education into college health programs to address knowledge gaps, and 2) Strengthening recommendations from healthcare professionals and institutions to drive vaccine acceptance. These measures are essential to improve vaccine uptake and reduce the future burden of HPV-related diseases in this key population.

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