



Evaluation of Knowledge and Awareness Concerning HPV Vaccination among Allied Health Science Students at an Academic Institution- A Descriptive study

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ABSTRACT: To determine the knowledge and awareness of allied health science students at an educational institution regarding the Human Papillomavirus (HPV) vaccination, a descriptive cross-sectional study was carried out. The purpose of the study was to assess participants' knowledge and awareness of HPV infection, its effects, and vaccination and other preventive measures. Data was gathered from 100 allied health science students chosen by simple random sampling using a standardized self-administered questionnaire. According to the findings, only 10% of the participants knew enough about HPV vaccine, 28% knew enough, and 62% knew nothing at all. The results emphasize the necessity of focused educational initiatives to raise future healthcare employee's comprehension and awareness of HPV vaccination.

Keywords: Human Papillomavirus, HPV Vaccination, Knowledge, Awareness, Allied Health Science Students

INTRODUCTION : Human Papillomavirus (HPV) is one of the most prevalent sexually transmitted infections (STIs) worldwide, with certain high-risk strains significantly associated with cervical, anogenital, and oropharyngeal cancers (World Health Organization [WHO], 2022). Among these, cervical cancer is particularly concerning, as nearly 99% of cases are linked to persistent HPV infection (WHO, 2022). HPV vaccination has emerged as a safe, effective, and cost-efficient strategy to prevent these malignancies and is globally recommended for adolescent girls and young women (Centers for Disease Control and Prevention [CDC], 2021; WHO, 2022). Despite national initiatives, including the introduction of the HPV vaccine by the Ministry of Health and Family Welfare (MoHFW) in India, vaccination coverage remains inadequate, especially in low- and middle-income regions (MoHFW, 2023; Bruni et al., 2023). This shortfall is largely attributed to poor awareness, prevailing misconceptions, and socio-cultural resistance toward the vaccine (Sankaranarayanan et al., 2021). Healthcare students, particularly those in allied health sciences, are future frontline health educators and are expected to play a crucial role in promoting public health measures, including vaccination. However, existing literature indicates persistent gaps in their knowledge and attitudes towards HPV and its vaccination (Raychaudhuri & Mandal, 2012; Patel et al., 2020). Recognizing this, the present study was undertaken to assess the knowledge and awareness of HPV vaccination among allied health science students, with the goal of informing educational strategies to improve future healthcare advocacy.

MATERIALS AND METHODS: A descriptive cross-sectional design was employed to assess the knowledge and awareness of HPV vaccination among allied health science students. The study was conducted from March 2025 to May 2025 in a selected institution. Ethical clearance was obtained from the Institutional Human Ethics Committee prior to the study. A total of 100 students aged 18–25 years from various allied health science

departments were selected using simple random sampling (lottery method). After obtaining informed consent, data were collected using a structured self-administered questionnaire comprising 30 items related to HPV infection, its complications, and vaccination. The scoring was categorized as:

- Adequate Knowledge: 75–100%
- Moderate Knowledge: 50–74%
- Inadequate Knowledge: <50%

Data were analyzed using descriptive and inferential statistics.

RESULTS: The results show the assessment of knowledge level on HPV Vaccination among participants. Table 1 shows the distribution of knowledge scores among the participants.

Inadequate knowledge	62%
Moderate knowledge	28%
Adequate knowledge	10%

Table 2 shows the distribution of knowledge scores among the participants

Level of Knowledge	Frequency (n=100)	Percentage (%)
Adequate Knowledge	10	10%
Moderate Knowledge	28	28%
Inadequate Knowledge	62	62%

Statistical analysis revealed a significant association between knowledge level and variables such as year of study ($p < 0.05$) but not with gender or department ($p > 0.05$).

DISCUSSION: The findings of the present study reveal that a significant proportion (62%) of allied health science students had inadequate knowledge regarding HPV vaccination. This aligns with the results of prior studies by Kebede et al. (2023) and Asha et al. (2024), which also highlighted low awareness and misconceptions among healthcare students about HPV and its vaccine. The low recognition of HPV as a primary causative agent of cervical cancer, as well as limited knowledge regarding vaccine eligibility, dosage schedule, and its role in cancer prevention, underscores a critical gap in health education. Such deficiencies in knowledge are particularly concerning given the role of allied health professionals as future healthcare educators and advocates. Similar studies conducted in low- and middle-income countries have attributed these gaps to insufficient integration of HPV-related content in academic curricula and a lack of structured awareness programs (Ogunwale et al., 2022; Raychaudhuri & Mandal, 2012). In addition, persistent myths and misconceptions about vaccine safety and side effects—identified among the participants of this study—mirror global trends, where cultural stigma and misinformation contribute to vaccine hesitancy (Patel et al., 2020; Ganczak et al., 2021). The observed lack of awareness among healthcare students suggests a missed opportunity in mobilizing an informed group capable of positively influencing public health behaviors. Research has consistently shown that the knowledge and attitudes of healthcare workers directly affect community-level vaccine acceptance and uptake (Bednarczyk et al., 2015). Therefore, incorporating comprehensive HPV education modules into the allied health curriculum could play a transformative role in not only improving students' own knowledge but also enhancing their capacity to advocate for vaccination in the broader community. These findings indicate the urgent need for multipronged strategies, including curricular revisions, targeted educational interventions, and stronger engagement through public health campaigns. Without proactive

efforts to address these gaps, the potential of HPV vaccination as a preventive tool against cervical cancer may remain underutilized, particularly in regions like India where disease burden remains high and vaccination coverage is suboptimal (WHO, 2022).

CONCLUSION: The findings of this study highlight a substantial gap in knowledge and awareness regarding HPV vaccination among allied health science students. Given their role as future healthcare providers and public health advocates, this lack of awareness is concerning and calls for immediate educational attention. Integrating structured educational interventions, targeted workshops, and awareness programs into the allied health curriculum is essential to enhance students' understanding of HPV and its vaccine. Strengthening their knowledge base and fostering positive attitudes towards HPV prevention will not only prepare them to make informed personal health decisions but also empower them to effectively promote vaccination and reduce the burden of HPV-related diseases within the community.

RECOMMENDATIONS

1. Incorporate HPV vaccination education into the allied health science curriculum.
2. Organize awareness programs and seminars on HPV infection and its prevention.
3. Include HPV vaccination counseling as part of community health postings.
4. Encourage students to participate in public health campaigns promoting HPV vaccination.

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