

# Investigation on HPV Vaccine Vaccination Intention and Behavior Among Adult Women and Analysis of Influencing Factors

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**Abstract:** **Objective:** To analyze the HPV vaccine vaccination behavior and intention of adult women, and evaluate the factors influencing HPV vaccine vaccination among adult women. **Methods:** A questionnaire survey was conducted among adult women in communities or residential areas around hospitals using electronic questionnaires to analyze their HPV vaccine vaccination behavior and intention. A total of 1,000 electronic questionnaires were distributed, and 956 valid questionnaires were recovered. The analysis was based on these 956 valid questionnaires. **Results:** According to the survey, among the 956 adult women surveyed, 243 had received the HPV vaccine, and 656 had the intention to be vaccinated. The survey showed that there were multiple factors influencing adult women's intention to receive the HPV vaccine, including educational level, whether they had received popular science publicity on cervical cancer and HPV, and age. **Conclusion:** There are many factors influencing adult women's intention to receive the HPV vaccine. Effective intervention measures should be taken in a timely manner to help adult women recognize the importance of HPV vaccination and actively receive the vaccine.

**Keywords:** Adult Women; HPV Vaccine; Vaccination Intention; Vaccination Behavior; Influencing Factors

## 1. Introduction

Cervical cancer is one of the most common types of cancer in women, with high risk and certain concealment. Most patients have no typical symptoms in the early stage of the disease, which is easily ignored by patients. When diagnosed, the disease is often already severe, and may even endanger the patient's life<sup>[1-2]</sup>. Vaccination against HPV to prevent

cervical cancer is currently the main clinical measure for cervical cancer prevention and an important part of protecting women's health. Active HPV vaccination among adult women can prevent cervical cancer and reduce its incidence<sup>[3-4]</sup>. However, in reality, under the influence of multiple factors, the intention of adult women to receive HPV vaccination is easily affected by various aspects, thereby reducing their vaccination behavior. This study mainly analyzed the HPV vaccine vaccination behavior and intention of adult women, and evaluated the factors influencing HPV vaccination among adult women.

## 2. Materials and Methods

### 2.1 General Data

A questionnaire survey was conducted among adult women in communities or residential areas around hospitals using electronic questionnaires to analyze their HPV vaccine vaccination behavior and intention. A total of 1,000 electronic questionnaires were distributed, and 956 valid questionnaires were recovered. The analysis was based on these 956 valid questionnaires.

### 2.2 Methods

Data collected in the survey were analyzed to count the vaccination intention and behavior of the respondents, and to identify the factors influencing adult women's HPV vaccination.

### 2.3 Observation Indicators

(1) Analysis of vaccination intention and reasons: The vaccination intention of the adult women surveyed was counted, and the reasons for their willingness (or unwillingness) to be vaccinated were summarized.

(2) Analysis of factors influencing vaccination behavior: Comprehensive analysis of the data of all respondents in the survey was conducted to

summarize the factors influencing vaccination behavior.

## 2.4 Statistical Methods

All data in the study were processed using SPSS 26.0. Enumeration data were expressed as percentages (%) and tested by chi-square test. A P value <0.05 was considered statistically significant.

## 3. Results

### 3.1 Analysis of Vaccination Intention and Reasons

Among the 956 recovered questionnaires, 243 respondents had received the HPV vaccine, 656 adult women expressed willingness to be vaccinated, and 300 adult women expressed unwillingness to be vaccinated, as shown in Table 1.

**Table 1. Analysis of Vaccination Intention and Reasons**

Illingness to Receive HPV Vaccination	Reason Type	Number of Cases	Proportion
Willing (656 cases)	Awareness of HPV infection risk and the role of vaccination in cervical cancer prevention	425	64.79%
	Acceptable price and preventive effect	405	61.74%
	Recommendation by family members or friends	215	32.77%
	Recommendation by hospital doctors	265	40.40%
	Effective publicity by communities, etc.	304	46.34%
	Family members or friends have vaccination experience	257	39.18%
Unwilling (300 cases)	Concerns about the safety of HPV vaccine	204	68.00%
	Belief that they will not be infected with HPV	198	66.00%
	Worry about failing to complete vaccination on time due to long vaccination cycle	125	41.67%
	Vaccine needs to be paid for by oneself	167	55.67%
	No acquaintances with HPV infection experience or lack of knowledge about related diseases	122	40.67%
	HPV vaccine has not been widely promoted	134	44.67%

### 3.2 Analysis of Factors Influencing Vaccination Behavior

Analysis of factors influencing vaccination behavior showed that there were multiple

factors affecting adult women's intention to receive HPV vaccine, including educational level, whether they had received popular science publicity on cervical cancer and HPV, and age, as shown in Table 2.

**Table 2. Analysis of Factors Influencing Vaccination Behavior**

Influencing Factors	Willing (656 cases)	Unwilling (300 cases)	t/x <sup>2</sup>	P
Educational Level				
Junior high school and below	200	121	12.245	<0.05
Senior high school and junior college	200	81		
Bachelor's degree and above	256	98		
Age (years)	34.44 ± 2.12	39.45 ± 2.05	21.052	<0.05
Whether received popular science publicity on cervical cancer and HPV				
Yes	430	122	17.052	<0.05
No	226	178		
Annual household per capita income (10,000 yuan)				
<5	354	175	27.052	<0.05
5~10	122	41		
10~15	122	32		
16~20	42	32		
>20	16	20		

## 4. Discussion

Cervical cancer is a major cancer threatening women's health. Due to the concealment of the disease, patients are likely to miss the best

treatment time. Although the early detection rate of cervical cancer has been greatly improved with the continuous promotion and development of cervical and breast cancer screening, HPV vaccination still plays an

extremely important role in more effectively preventing cervical cancer<sup>[5-6]</sup>. With the continuous development of HPV vaccine research and development, domestic HPV vaccines have become relatively mature, and HPV vaccination can prevent cervical cancer<sup>[7]</sup>. However, in reality, there are still certain difficulties in the promotion and vaccination of this vaccine.

According to the survey in this study, among the 956 adult women surveyed, 243 had received the HPV vaccine, and 656 had the intention to be vaccinated. The survey showed that there were multiple factors influencing adult women's intention to receive the HPV vaccine, including educational level, whether they had received popular science publicity on cervical cancer and HPV, and age. It can be seen that there are many factors influencing adult women's HPV vaccination. To ensure the smoother development of HPV vaccination work and improve the vaccination rate of adult women, interventions are needed at multiple levels. First, it is necessary to popularize knowledge about HPV vaccination. Community health service centers, hospitals, and other medical institutions should actively carry out various popular science activities to help women better understand knowledge related to HPV vaccination and clarify the role of HPV vaccination in preventing cervical cancer. At the same time, if conditions permit, it is more necessary to reduce the cost burden of women in HPV vaccination from the perspective of HPV price management, reduce their economic pressure during vaccination, and encourage women to participate more actively in HPV vaccination.

In conclusion, there are many factors influencing adult women's HPV vaccination. Effective measures should be taken in a timely manner based on these factors to increase adult women's understanding of HPV vaccines, enhance their intention to receive HPV vaccination, and improve the HPV vaccination rate.

## References

- [1] Wang Yuelin, Jiang Yunlan, Li Le, et al. Meta-analysis of the current status of HPV vaccine vaccination intention and its influencing factors among college students in China [J]. *Modern Preventive Medicine*, 2025, 52(18): 3424-3431.
- [2] Wang Qizhang, Ding Meihua, Yang Dandan, et al. Investigation on HPV vaccine vaccination intention and behavior among adult women in Pudong New Area and analysis of influencing factors [J]. *Maternal and Child Health Care of China*, 2025, 40(10): 1857-1861.
- [3] Wang Ruosi, Wang Yan, Na Chen, et al. Mothers' intention to have their minor daughters vaccinated against HPV and its influencing factors: an analysis based on Logistic regression and decision tree model [J]. *Chinese Journal of Women and Children Health Research*, 2025, 36(04): 15-23.
- [4] Yang Xinyi, Dang Le, Zhang Ping, et al. Analysis of HPV vaccine vaccination intention and influencing factors among adult women based on the Health Belief Model [J]. *Chinese Journal of Clinical Oncology and Rehabilitation*, 2025, 32(03): 170-181.
- [5] Li Yifan, Hu Yunqian, Liu Lirong. Influence of new media exposure behavior on college students' HPV vaccine vaccination intention — a study based on the Protection Motivation Theory [J]. *Journal of Contemporary Communication*, 2025, 33(02): 27-31.
- [6] Tang Li. Analysis of HPV cognition and influencing factors of vaccine vaccination intention among 1,803 college students [J]. *Preventive Medicine Tribune*, 2025, 31(01): 50-54+60.
- [7] Shi Jing, Zhao Chunyan, Sun Yuanjie, et al. Analysis of HPV vaccine vaccination intention and influencing factors among college students in Tongzhou District, Beijing [J]. *Chinese Journal of Preventive Medicine*, 2024, 25(10): 1278-1283.