International Journal of Health, Economics, and Social Sciences (IJHESS)
Vol. 8, No. 3, 2026, pp. 1728~1736
DOI: 10.56338/ijhess.v8i3.11157
Website: https://jurnal.unismuhpalu.ac.id/index.php/IJHESS

Factors related to maternal awareness in administering the Human Papillomavirus (HPV) vaccine to children aged 9 - 14 years at the South City Health Center

Fadillah Amalia Yusuf[1], Laksmyn Kadir[2], Suardi[3]
Jurusan Kesehatan Masyarakat, Fakultas Olahraga dan Kesehatan Universitas Negeri Gorontalo, fadilay900@gmail.com
Jurusan Kesehatan Masyarakat, Fakultas Olahraga dan Kesehatan Universitas Negeri Gorontalo, asi_1403@ung.ac.id
Jurusan Kesehatan Masyarakat, Fakultas Olahraga dan Kesehatan Universitas Negeri Gorontalo, suardiners@ung.ac.id

*Author Correspondence: fadilay900@gmail.com

Article Info

Article history:
Received 11 Mar, 2026
Revised 14 May, 2026
Accepted 25 May, 2026

Keywords:
HPV vaccine, maternal awareness, access to information, role of health workers, family support

ABSTRACT

Cervical cancer is one of the leading causes of death in women, which is mostly caused by Human Papillomavirus (HPV) infection. The HPV vaccine is one of the effective prevention efforts, but maternal awareness in giving vaccines to children is still a challenge. This study aims to analyze the relationship between access to information, the role of health workers, and family support with maternal awareness of HPV vaccine administration to girls aged 9-14 years in the working area of the South City Health Center.

This study uses an observational analytical method with a cross sectional approach. The research population was 166 mothers with a sample of 117 respondents obtained using purposive sampling techniques. Data were collected using questionnaires and analyzed univariate and bivariate using the Chi-Square test.

The results showed that most of the respondents had good awareness (75.2%). Respondents' access to information was mostly in the poor category (65.8%), while the role of health workers (66.7%) and family support (56.4%) was in the good category. The results of the analysis showed that there was a significant relationship between access to information (p = 0.000), the role of health workers (p = 0.000), and family support (p = 0.000) and maternal awareness of HPV vaccine administration.

The conclusion of this study shows that access to information, the role of health workers, and family support are significantly related to maternal awareness of HPV vaccine administration.

INTRODUCTION

Infection *Human Papillomavirus* (HPV) is one of the health problems that are common in various countries because its transmission can occur through sexual intercourse and can infect both men and women. Most HPV infections do not show specific symptoms so infected individuals are often unaware of the condition. Although many infections can heal naturally, persistent infections, especially by high-risk types of HPV, can lead to abnormal cell changes that have the potential to develop into cervical cancer if not prevented early (Ministry of Health, 2023).

Cervical cancer is known to be closely related to HPV infections, specifically types 16, 18, 31, 45, and 52 which can trigger abnormal cell changes in the cervix. The risk of cervical cancer increases when HPV infection is accompanied by other factors such as sexual activity at an early age, risky sexual behavior, smoking habits, high number of births, low socioeconomic conditions, long-term use of oral contraceptives, history of sexually transmitted infections, and decreased immune conditions (Purwahyuni, 2019). According to *World Health Organization* (WHO), about 80% of individuals who have engaged in sexual activity will experience HPV infection

at some phase of their life. In 2022, there were approximately 660,000 new cases of cervical cancer and more than 350,000 deaths worldwide related to high-risk HPV infection (WHO, 2025).

In Indonesia, cervical cancer is still one of the serious health problems in women. Data from the Ministry of Health of the Republic of Indonesia shows that the number of new cases of cervical cancer reaches more than 36,000 cases every year and ranks second only to breast cancer (Ministry of Health, 2024). At the regional level, the prevalence of cervical cancer in Gorontalo Province is reported at 2.44%, so more optimal prevention efforts are needed to reduce the incidence of this disease (Gorontalo Provincial Health Office, 2017).

As a preventive measure against HPV infection, WHO recommends giving the HPV vaccine to adolescent girls aged 9–14 years before entering the phase of sexual activity. The Indonesian government began to introduce the HPV vaccine gradually since 2016 and included it in the National Immunization Program. Since 2023, HPV vaccination has been carried out nationally through the School Child Immunization Month (BIAS) program. The HPV vaccine has been shown to be effective in preventing high-risk HPV infection and is able to reduce the risk of cervical cancer by up to 90% (Khosyi et al., 2025).

Although the HPV vaccination program has been implemented nationally, vaccination achievements in Indonesia are still uneven. By 2025, the Ministry of Health of the Republic of Indonesia reports that only about 13 provinces will reach the target of at least 90% HPV vaccination coverage, while most other provinces are still below the national target (Ministry of Health of the Republic of Indonesia, 2025). In Gorontalo Province, the HPV vaccination achievement until early September 2025 is still in the range of 23%. In the work area of the South City Health Center, HPV vaccination coverage for junior high school students reaches around 46%, while for 5th grade elementary school students around 54% by 2025. These achievements show that some target groups have not received the HPV vaccine optimally.

The achievement of HPV vaccination that has not been optimal shows that the implementation of the HPV immunization program still faces various obstacles. The results of initial interviews with immunization officers at the South City Health Center show that there are still doubts from some parents about the administration of the HPV vaccine. In these conditions, health workers have an important role in providing health education and communication to the public to increase the acceptance of the HPV vaccine.

In addition to the role of health workers, family support, especially mothers, also has an important role in decision-making related to children's health, including the administration of HPV vaccine to girls aged 9-14 years. Mothers are generally the main decision-makers in the family and consider a variety of health information before deciding on what to do for the child. Therefore, the level of maternal awareness of HPV vaccine is an important factor in the success of the immunization program.

Several studies show that access to information and the role of health workers have an influence on the acceptance of the HPV vaccine. Research (Wantini & Indrayani, 2020) found that the quality of information received by parents was significantly related to the willingness to give the HPV vaccine to children. Research (Lestari et al., 2023) also stated that knowledge about HPV and its vaccination plays a role in shaping parents' positive attitudes towards immunization. In addition, the research (Miszka & Samaria, 2025) shows that active involvement of health workers through education, communication, and recommendations can increase HPV vaccine uptake in the elderly. However, research that examined simultaneously the relationship between information access, the role of health workers, and family support with maternal awareness of HPV vaccine administration in children aged 9-14 years is still limited, especially in the working area of the South City Health Center.

Based on these conditions, this study aims to analyze the relationship between access to information, the role of health workers, and family support with maternal awareness of the administration of *the Human Papillomavirus* (HPV) vaccine to girls aged 9-14 years in the working area of the South City Health Center. This study is expected to provide an overview of the factors that affect the low coverage of HPV vaccination and become the basis for health centers and health offices in developing more effective education and intervention strategies to increase HPV vaccination coverage and support efforts to prevent cervical cancer from an early age.

RESEARCH METHODS

This type of research is a quantitative research with an analytical survey method using a cross sectional approach. The research was carried out in the working area of the South City Health Center, Gorontalo City in January-February 2026. The population in this study is mothers or guardians of girls aged 9-14 years who are targeted by the HPV immunization program in the working area of the South City Health Center as many as 166 people. The number of samples in this study was 117 respondents obtained using *purposive sampling techniques*.

Data was collected using a questionnaire that has been tested for validity and reliability. The independent variables in this study included access to information, the role of health workers, and family support, while the dependent variable was maternal awareness of the administration of the HPV vaccine to girls aged 9-14 years. Data analysis was carried out univariate and bivariate using the Chi-Square test with a significance level of $\alpha = 0.05$ to determine the relationship between independent variables and dependent variables.

RESULTS

Respondent Characteristics

Characteristics of Respondents by Age

Table 1. Distribution of Respondent Characteristics by Age in the Working Area of the South City Health Center

Mother's Age (Year)	Frequency (n)	Percentage (%)
< 25 Years	4	3,4
25 - 34 Years	57	48,7
35 - 44 Years	52	44,4
> 45 Years	4	3,4
Total	**117**	**100**

Source : Primary Data, 2026

Based on Table 1, it shows that the most respondents are in the age group of 25-34 years as many as 57 people (48.7%), while the least are in the age group of <25 years and >45 years old as many as 4 people (3.4%) respectively.

Characteristics of Respondents Based on Recent Education

Table 2. Distribution of Respondent Characteristics Based on Last Education in the Working Area of the South City Health Center

Final Education	Frequency (n)	Percentage (%)
SD	6	5,1
Junior High School	17	14,5
High School/Vocational School	44	37,6
Diploma	11	9,4
Bachelor	39	33,3
Total	**117**	**100**

Source : Primary Data, 2026

Based on Table 2, it shows that the respondents have the most high school/vocational education as many as 44 people (37.6%), while the least is elementary education as many as 6 people (5.1%).

Characteristics of Respondents Based on Occupation

Table 3. Distribution of Respondent Characteristics Based on Work in the Work Area of the South City Health Center

Jobs	Frequency (n)	Percentage (%)
Housewives	61	52,1
Employees	18	15,4
Civil Servants/ASN	30	25,6
Self-employed	8	6,8
Total	**117**	**100**

Source : Primary Data, 2026

Based on Table 3, it shows that the respondents work the most as housewives as many as 61 people (52.1%), while the least work as self-employed as 8 people (6.8%).

Univariate Analysis

Frequency Distribution of HPV Vaccine Status

Table 4. Frequency Distribution of HPV Vaccine Status

Vaccine Status	Frequency (n)	Percentage (%)
Not yet	45	38,5
Already	48	41,0
Don't Know	24	20,5
Total	**117**	**100**

Based on Table 4, 48 respondents stated that 48 people (41.0%) had received the HPV vaccine, while 45 respondents (38.5%) said they had not received the vaccine. In addition, there were 24 respondents (20.5%) who did not know their child's HPV vaccination status.

Distribution of Frequency of HPV Vaccine Readiness

Table 5. Distribution of Frequency of HPV Vaccine Readiness

Vaccine Readiness	**Frequency (n)**	**Percentage (%)**
Doubt	19	27,5
No	16	23,2
Yes	34	49,3
Total	**69**	**100**

Source : Primary Data, 2026

Based on Table 5, it shows that of the 69 respondents whose children have not received the HPV vaccine or do not know their child's vaccination status, as many as 34 respondents (49.3%) stated that they are willing to give the HPV vaccine. Meanwhile, as many as 19 respondents (27.5%) expressed hesitation and 16 respondents (23.2%) stated that they were unwilling.

Frequency Distribution of Reasons for Respondents to Hesitate or Unwilling to Give the HPV Vaccine

Table 6. Frequency Distribution of Reasons for Respondents to Hesitate or Unwilling to Give the HPV Vaccine

Reason	Frequency (n)	Percentage (%)
Concerns about vaccine side effects	16	45,7
Lack of information about HPV vaccine	9	25,7
Children are considered to be easily ill after immunization	5	14,3
Not receiving family support	4	11,4
The influence of negative information (hoaxes)	1	2,9
Total	35	100

Source : Primary Data, 2026

Based on Table 6. shows that the most reason respondents are hesitant or unwilling to give the HPV vaccine is concern about vaccine side effects as many as 16 respondents (45.7%). In addition, there were 9 respondents (25.7%) who stated a lack of information about the HPV vaccine, 5 respondents (14.3%) considered that children get sick easily after immunization, 4 respondents (11.4%) did not receive family support, and 1 respondent (2.9%) was influenced by negative information or hoaxes**.**

Distribution of Frequency of Maternal Awareness of HPV Vaccine Administration

Table 7. Distribution of Frequency of Maternal Awareness of HPV Vaccine Administration

Awareness	**Frequency (n)**	**Percentage (%)**
Good	88	75,2
Less	29	24,8
Total	**117**	**100**

Source : Primary Data, 2026

Based on Table 7. showed that most of the respondents had a level of awareness in the good category, which was as many as 88 people (75.2%), while respondents with a low level of awareness were 29 people (24.8%).

Frequency Distribution of Access to Information on HPV Vaccine

Table 8. Frequency Distribution of Access to Information on HPV Vaccine

Access Information	Frequency (n)	Percentage (%)
Good	40	34,2
Less	77	65,8
Total	**117**	**100**

Source : Primary Data, 2026

Based on Table 8. showed that most respondents had access to information in the poor category, namely 77 people (65.8%), while respondents with good access to information were 40 people (34.2%).

Frequency Distribution of the Role of Health Workers in Providing HPV Vaccine Information

Table 9. Frequency Distribution of the Role of Health Workers in Providing HPV Vaccine Information

The Role of Health Workers	Frequency (n)	Percentage (%)
Good	78	66,7
Less	39	33,3
Total	**117**	**100**

Source : Primary Data, 2026

Based on Table 9. It shows that most of the respondents rated the role of health workers in the good category, namely 78 people (66.7%), while respondents who assessed the role of health workers in the poor category were 39 people (33.3%).

Distribution of Family Support Frequency for HPV Vaccine Administration

Table 10. Distribution of Family Support Frequency for HPV Vaccine Administration

Family Support	Frequency (n)	Percentage (%)
Good	66	56,4
Less	51	43,6
Total	**117**	**100**

Source : Primary Data, 2026

Based on Table 10. It shows that most respondents have family support in the good category, namely 66 people (56.4%), while respondents with less family support are 51 people (43.6%).

Bivariate Analysis

The Relationship between Access to Information and Maternal Awareness of HPV Vaccine Administration

Table 11 Relationship between Access to Information and Maternal Awareness of HPV Vaccine Administration

Access Information	Mother's Awareness						*p-value*
	Good		Less		Total		
	n	%	n	%	n	%	
Good	40	100,0	0	0,0	40	100,0	0,000
Less	48	62,3	29	37,7	77	100,0	
Total	88	75,2	29	24,8	117	100,0	

Source : Primary Data, 2026

Based on Table 11, it shows that all respondents with good access to information have a good level of awareness, which is as many as 40 people (100.0%). Meanwhile, among respondents with poor access to information, as many as 48 people (62.3%) had good awareness and 29 people (37.7%) had poor awareness. The

results of the Chi-Square test showed a p-value = 0.000 (p < 0.05), so there was a relationship between access to information and maternal awareness of HPV vaccine.

The Relationship between the Role of Health Workers and Maternal Awareness of HPV Vaccine Administration

Table 12 The Relationship between the Role of Health Workers and Maternal Awareness of HPV Vaccine Administration

The Role of Health Workers	Mother's Awareness						*p-value*
	Good		Less		Total		
	n	%	n	%	n	%	
Good	78	100,0	0	0,0	78	100,0	0,000
Less	10	25,6	29	74,4	39	100,0	
Total	88	75,2	29	24,8	117	100,0	

Source : Primary Data, 2026

Based on Table 12, it shows that all respondents who assessed the role of health workers in the good category had a good level of awareness, namely 78 people (100.0%). Among respondents who assessed the role of health workers as lacking, as many as 29 people (74.4%) had poor awareness and 10 people (25.6%) had good awareness. The results of the Chi-Square test showed a p-value = 0.000 (p < 0.05), so there was a relationship between the role of health workers and maternal awareness of HPV vaccine.

The Relationship between Family Support and Maternal Awareness of HPV Vaccine Administration

Table 13 Relationship between Family Support and Maternal Awareness of HPV Vaccine Administration

Family Support	Mother's Awareness						*p-value*
	Good		Less		Total		
	n	%	n	%	n	%	
Good	66	100,0	0	0,0	66	100,0	0,000
Less	22	43,1	29	56,9	51	100,0	
Total	88	75,2	29	24,8	117	100,0	

Source : Primary Data, 2026

Based on Table 13, it shows that all respondents with good family support have a good level of awareness, which is as many as 66 people (100.0%). Among respondents with less family support, as many as 29 people (56.9%) had poor awareness and 22 people (43.1%) had good awareness. The results of the Chi-Square test showed a p-value = 0.000 (p < 0.05), so there was a relationship between family support and maternal awareness of HPV vaccine.

DISCUSSION

Mother's Awareness of HPV Vaccine

The results of the study showed that the level of maternal awareness of the administration of the HPV vaccine in the working area of the South City Health Center was mostly in the good category. Of the 117 respondents, as many as 88 respondents (75.2%) had good awareness, while 29 respondents (24.8%) were in the poor category. These findings show that the majority of mothers have understood the importance of the HPV vaccine as an effort to prevent cervical cancer, although there are still some respondents whose level of awareness is not optimal.

The high proportion of good awareness shows that most mothers are aware of the benefits of the HPV vaccine and the importance of vaccinating girls aged 9-14 years. Theoretically, health awareness is influenced by knowledge, risk perception, and understanding of the benefits of health preventive measures. The better an individual's understanding of a health measure, the greater the individual's tendency to show a positive attitude towards health behaviors (Mumtazah et al., 2025).

The results of this study are in line with the research (Lestari et al., 2023) which showed a significant relationship between knowledge level and parental attitudes towards the HPV vaccine (p = 0.000). Research (Manoppo, 2019) It also shows that good knowledge is related to the willingness of parents to support the administration of the HPV vaccine to children.

However, there are still mothers with a lack of awareness. This condition shows that not all respondents have an optimal understanding of the benefits, safety, and urgency of the HPV vaccine. The difference in awareness level may be influenced by access to information, previous experience with immunization, and the level of health

literacy of respondents.

When associated with supporting data for the study, as many as 41.0% of children have received the HPV vaccine, 38.5% have not received the vaccine, and 20.5% of mothers do not know the vaccination status of their children. This condition shows that good awareness has not fully developed into real action in the administration of the HPV vaccine. In addition, in the group of mothers whose children have not been vaccinated or do not know the vaccination status, there are still respondents who are hesitant or unwilling to give the vaccine due to concerns about side effects, limited information, and lack of family support.

Based on these findings, the level of maternal awareness in the work area of the South City Health Center is relatively good, but there is still a need to strengthen health education and more consistent information delivery so that mothers' awareness can develop into real decisions in administering the HPV vaccine.

The Relationship between Access to Information and Maternal Awareness of HPV Vaccine Administration

The results of the bivariate analysis showed a significant relationship between access to information and maternal awareness of HPV vaccine administration with a p-value = 0.000 ($p < 0.05$). All mothers with access to information in the good category had a good level of awareness (100.0%). Meanwhile, in the group of mothers with less access to information, respondents were still found with a lack of awareness level of 37.7%.

These results show that access to information has an important role in shaping maternal awareness about the HPV vaccine. Information obtained through health workers, digital media, and the social environment can help mothers understand the benefits of the HPV vaccine as an effort to prevent cervical cancer.

Theoretically, access to information is one of the predisposing factors that affect health behavior. Information that is clear and comes from a trusted source will be easier for individuals to understand and internalize (Green & Marshall Kreuter, 2005). Therefore, the better the access to information received by mothers, the higher the level of awareness of HPV vaccine.

The findings of this study are in line with the research (Adnyana et al., 2023) which shows a significant relationship between knowledge about cervical cancer and interest in HPV vaccination ($p = 0.003$). Research (Sitaresmi et al., 2020) also shows that education about HPV can significantly increase parental knowledge and acceptance of the HPV vaccine.

However, this study also found that some mothers with less access to information still have good awareness. This shows that the formation of awareness is not only influenced by the frequency of information, but also the quality of information and trust in the sources of information received. Information that comes from health workers or trusted sources can have a stronger influence in shaping maternal beliefs.

In contrast, mothers with limited access to information tend to have a less than optimal understanding of the benefits and safety of the HPV vaccine. This condition can cause doubts in decision-making related to vaccination.

Based on these results, access to information has an important role in increasing maternal awareness of HPV vaccine. Therefore, a broader and sustainable health education strategy is needed so that information about the HPV vaccine can be received equally by the public.

The Relationship between the Role of Health Workers and Maternal Awareness of HPV Vaccine Administration

The results showed a significant relationship between the role of health workers and maternal awareness of HPV vaccine administration with a p-value = 0.000 ($p < 0.05$). All mothers who assessed the role of health workers in the good category had a good level of awareness of the HPV vaccine (100.0%). In contrast, in the group of mothers who rated the role of health workers as lacking, most had a low level of awareness.

These findings show that health workers have a major contribution to shaping maternal awareness of the importance of the HPV vaccine. Clear information delivery, education about the benefits of vaccines, and opportunities for mothers to discuss and ask questions can increase mothers' understanding of the HPV vaccine.

In this study, the role of health workers includes providing education, counseling, motivation, and recommendations regarding the HPV vaccine. Communicative and responsive health workers tend to be able to build maternal trust so that they can increase awareness of vaccination.

In theory of health behavior, health workers act as external reinforcers that influence health decision-making. Information delivered directly by trusted health workers will be easier to accept by the public and be able to reduce doubts about vaccination.

The results of this study are in line with the research (Warsini & Septiawan, 2021) which shows that counseling by health workers is significantly related to increasing the knowledge and readiness of parents in receiving HPV vaccination. Research (Tsani'ah et al., 2024) It also shows that direct recommendations from health workers are one of the main factors influencing parents' decisions to give the HPV vaccine to girls.

In addition, the research (Heyde et al., 2024) shows that clear communication and direct education from health workers can increase parental confidence in the safety and benefits of the HPV vaccine. This shows that it is not only the content of the information that is important, but also the way the information is conveyed.

Although most respondents had a good level of awareness, it tended to be lower in the maternal group who rated the role of health workers as lacking. This shows that the quality of communication and interaction in

health services greatly affects the formation of maternal awareness of the HPV vaccine.

Based on these findings, the role of health workers is an important factor in increasing maternal awareness of HPV vaccine. Therefore, it is necessary to improve the quality of health education and communication so that information about the HPV vaccine can be better understood by the public.

The Relationship between Family Support and Maternal Awareness of HPV Vaccine Administration

The results of the analysis showed a significant relationship between family support and maternal awareness of HPV vaccine administration with a p-value = 0.000 ($p < 0.05$). All mothers who had good family support were in the category of good awareness, while in the group of mothers with less family support, respondents were still found with a low level of awareness.

These results show that family support has an important influence in shaping maternal awareness of the HPV vaccine. Family support can be in the form of consent to immunization, involvement in health decision-making, and emotional and practical support in the vaccination process.

Mothers who receive support from their families tend to have stronger beliefs about the importance of the HPV vaccine. Conversely, a lack of family support can create doubt and influence a mother's decision to understand the benefits of vaccination.

This research is in line with research (Kurniawati, 2020) which showed a significant relationship between family support and adolescent girls' motivation to participate in HPV vaccination ($p = 0.001$). Research (Wantini & Indrayani, 2020) also showed that family support was related to willingness to get HPV vaccination.

Despite this, the study found that some mothers still have good awareness despite lack of family support. This suggests that awareness can also be influenced by other factors, such as information from healthcare professionals and personal experiences.

The family environment has an important role in the health decision-making process. Good communication in the family can help mothers gain moral support and confidence in making decisions regarding HPV vaccination.

Based on the results of the study, family support is one of the social factors that affect maternal awareness of the importance of the HPV vaccine. Therefore, family involvement in health education needs to be increased so that the decision to administer the HPV vaccine can be more supported by the family environment.

CONCLUSION

Based on the results of a study on factors related to maternal awareness of the administration of the Human Papillomavirus (HPV) vaccine to girls aged 9-14 years in the working area of the South City Health Center, it was concluded that there is a significant relationship between access to information, the role of health workers, and family support with maternal awareness of HPV vaccine administration. The results of the statistical test showed the p-value of each variable, namely access to information ($p = 0.000$), the role of health workers ($p = 0.000$), and family support ($p = 0.000$), so that all variables were stated to be related to maternal awareness of HPV vaccine administration.

ADVICE

It is hoped that health centers and health workers can increase education and dissemination of information about the HPV vaccine regularly and continuously so that mothers' awareness of the importance of the HPV vaccine increases. In addition, families are expected to provide support in making vaccination decisions. For future researchers, it is recommended to research other factors that can affect awareness and decisions to administer HPV vaccine with a wider research method and scope.

REFERENCES

Adnyana, I. G. H. E., Toemon, A. N., & Bayu, S. I. W. (2023). The Relationship between Cervical Cancer Knowledge Level and Interest in HPV Vaccination in Female Students of the Faculty of Economics, University of Palangka Raya. 1(2), 68–73.

Green, L. W., & Marshall Kreuter. (2005). Health Program Planning: An Educational And Ecological Approach.

Heyde, S., Osmani, V., Schauberger, G., Cooney, C., & Klug, S. J. (2024). Global Parental Acceptance , Attitudes , And Knowledge Regarding Human Papillomavirus Vaccinations For Their Children : A Systematic Literature Review And Meta- Analysis.

Ministry of Health, R. (2023). National Action Plan for Cervical Cancer Elimination 2023–2030. Jakarta: Ministry of Health.

Ministry of Health, R. (2024). Ministry of Health Affirms Commitment to Cervical Cancer Elimination: 36 thousand new cases are detected every year.

Khosyi, V. I., Suryawati, C., & Arso, S. P. (2025). Implementation of the program to increase the immunization coverage of Human Papillomavirus (HPV) Vania Intana Khosyi. 16(8), 299–303. doi: http://Dx.Doi.Org/10.33846/Sf16141

Kurniawati, A. P. (2020). The relationship between family support and motivation to carry out Human Papilloma Virus (HPV) vaccination in adolescent girls. 1–9.

Lestari, N., A, J. P., & Dewi, F. (2023). The Relationship of Knowledge with Parental Attitudes in Vaccinating Human Papilloma Virus (HPV) in Adolescent Girls of Junior High School X Jakarta. 4(1), 24–31.
Manoppo, I. J. (2019). Analysis of parental knowledge and risk perception of parents' willingness to allow children to receive HPV vaccination. Scholastic Journal of Nursing, 2, 142–151.
Miszka, N. Z., & Samaria, D. (2025). Factors Related To Female Adolescent Parents' Acceptance Of The Human Papillomavirus Vaccine. 11(April), 54–63.
Mumtazah, A. A., Budi, A. A. K. W., & Happy, R. E. (2025). How Knowledge Shapes Public Perception Of The Covid-19 Vaccine. https://doi.Org/10.37341/Interest.V12i2.723
Purwahyuni, N. I. M. (2019). Overview of Factors Inhibiting Adolescents from Vaccinating Human Papillom Virus (HPV) at SMA Negeri 1 Kediri.
Sitaresmi, M. N., Rozanti, N. M., Simangunsong, L. B., & Wahab, A. (2020). Improvement Of Parent's Awareness , Knowledge , Perception , And Acceptability Of Human Papillomavirus Vaccination After A Structured-Educational Intervention. 1–9.
Tsani'ah, R. P., Sukmanawati, D., & Nurasiah, A. (2024). The relationship between the level of knowledge and support of health workers about cervical cancer and the interest in implementing the human papilloma virus vaccine in wus. 15(1), 151–159. https://doi.Org/10.34305/Jikbh.V15i01.1053
Wantini, N. A., & Indrayani, N. (2020). The willingness to vaccinate against HPV in adolescent girls is reviewed from the parental factor. 213–222. https://doi.Org/10.26699/Jnk.V7i2.Art.P213
Warsini, & Septiawan, C. (2021). Factors Influencing the Decision-Making of Hpv Vaccination Decision. 11, 97–107.
WHO. (2025). Human Papillomavirus (HPV) And Cervical Cancer. https://www. Who.Int/News-Room/Fact-Sheets/Detail/Human-Papillomavirus-(Hpv)-And-Cervical-Cancer