

Attitude and Family Support Influenced Human Papilloma Virus Vaccination in Female Midwifery Students

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ABSTRACT

Background: In 2019 there were 13,078 cases of cervical cancer in East Java, and in 2018 the prevalence reached 2.2 per 1,000 population. However, the coverage of HPV (Human Papilloma Virus) vaccination as primary prevention of cervical cancer in Indonesia is still low. The purpose of this study was to analyze the influencing factors and the most influencing factors for female midwifery students in Human Papilloma Virus vaccination.

Subjects and Method: This was an observational analytic study with a cross sectional design. The study was conducted in East Java. The study population was midwifery students. A sample of 252 midwifery students in East Java was selected by consecutive sampling. The dependent variable was HPV vaccination. The independent variables are attitudes and family support. The data were collected by online questionnaire form and analyzed by a multiple logistic regression.

Results: Family support increased the likelihood of HPV vaccination in midwifery students (OR= 5.03; CI = 1.83 to 13.76; p= 0.002).

Conclusion: Family support increased the likelihood of HPV vaccination in midwifery students.

Keywords: Reproductive health care, HPV vaccination, attitudes, family support, midwifery student.

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BACKGROUND

Human Papilloma Virus (HPV) vaccination is the primary prevention of cervical cancer which is the largest cause of death in women besides breast cancer. Human Papilloma Virus (HPV), especially HPV types 16 and 18 which are stated by the World Health Organization (WHO) as a trigger for cervical cancer by 90%. According to data from GLOBOCAN (2020) it is stated that in 2020, there were 400 thousand new cases and 230,000 deaths in Indonesia declared by

WHO, and it is estimated that in 2025 there will be an increase in the number of sufferers (Sung et al., 2021). The number of cervical cancer in East Java in 2019 was 13,078 cases. In the Regulation of the Minister of Health No. 34 of 2015 concerning the Management of Breast and Cervical Cancer, the government stated that the HPV vaccine has an important role in preventing the infection of HPV virus that can cause cervical cancer (Law and Organization of Ministry of Health, 2015). The government's

efforts are still far from the target in reducing the incidence of cervical cancer (Ministry of Health, 2019). The main benefit of the HPV vaccine is to prevent the infection of HPV virus which causes cervical cancer by 95% (Ministry of Health, 2017).

There are currently 3 types of HPV vaccines, namely bivalent, tetravalent, and nonavalent which are able to provide protection from 9 types of HPV virus (Askandar, 2020). Bivalent and tetravalent vaccines have received marketing authorization since 2006, and are used in more than 200 countries. The Global Advisory Committee on Vaccine Safety (GACVS) obtained data from the first year it was circulated until 2014 that there were no safety issues that changed the recommendations for HPV vaccination by WHO (Ministry of Health, 2016). Based on secondary data from the Surabaya Health Service, in Surabaya the HPV vaccination which is part of the School Children Immunization Month (BIAS) program has reached 90% in 2018, however, this has not been comprehensive due to the decision of parents for their children to conduct HPV vaccination (Indriyani, 2020).

In carrying out HPV vaccination, there are several influencing factors such as predisposing factors, supporting factors, and driving factors. The knowledge, attitudes, and practices of a midwife affect the preventive measures with the HPV vaccine (Tchounga et al., 2014). The purpose of this study was to analyze the influencing factors and the most influencing factors for female midwifery students in the Human Papilloma Virus vaccination.

SUBJECTS AND METHOD

1. Study Design

This was an observational analytic study with a cross-sectional design. The study was conducted in East Java, from March to

December 2021.

2. Population and Sample

The population in this study were midwifery students in East Java. The sample used was 252 midwifery students in East Java who filled out a questionnaire in the form of a Google Form by fulfilling the inclusion criteria, which were midwifery students in East Java who were still actively studying, and were able to fill out the Google Form. While the exclusion criteria were female students who were infected by HPV.

3. Study Variables

The dependent variable was HPV vaccination. The independent variables were attitudes and family support.

4. Definition of Operational Variable

HPV Vaccination is a midwifery student who has conduct HPV vaccination.

Attitude is the reaction shown by the subject to the HPV vaccination.

Family Support is the support given by the family to the subject to carry out the HPV vaccination.

5. Study Instrument

The measurement of each variable uses a questionnaire in the form of a Google Form which has been tested for validity and reliability with strong and very strong reliability criteria. Subjects also gave informed consent on the first page before filling out the questionnaire.

6. Data Analysis

Data analysis was done through bivariate analysis by using Chi-Square test and multivariate using multiple logistic regression test with the help of SPSS software version 24.0 to determine the relationship between independent variables and dependent variables.

7. Study Ethic

Study ethics which include consent, anonymity, and confidentiality of the data provided by the subject as well as the risks in this study were applied to the Health

Research Ethics Committee, Faculty of Medicine, Universitas Airlangga and has obtained a Certificate of Ethics Eligibility No.170/EC/KEPK/FKUA/2021.

RESULTS

1. Sample Characteristics

Table 1 showed that the majority of subjects

Table 1. Sample Characteristic

Characteristic	Frequency (n)	Percentage (%)
Age		
≥ 20 years old	165	65.5
<20 years old	87	34.5
Status		
Not married	241	95.6
Married	11	4.4
Province Origin		
East Java	203	80.6
Outside East Java	49	19.4
Source of Information		
Social media	122	48.4
Lecturer	56	22.2
Health workers	32	12.7
Family	11	4.4
Friends	15	6.0
Government/Private health facilities	16	6.3

were 20 years old (65.5%). Almost all subjects were unmarried (95.6%). Subjects from East Java dominated the sample in this study (80.6%). Social media is a source of information that is widely used by subjects to find out about HPV vaccination (48.4).

2. Bivariat Analysis

Table 2 showed that the attitude factors shown by the subject and the support provided by the family affected the HPV

vaccination of female midwifery students in East Java. On the attitude factor, the $p = 0.005$, while the family support factor got the $p < 0.001$.

Table 2. Results of Chi-Square Analysis of Factors Affecting the Action of HPV Vaccination

Independent Variable	Vaccination Action		Total	p
	Not Vaccinated	Vaccinated		
Attitude				
Positive	107	24	131	0.005
Negative	113	8	121	
Family Support				
Supporting	104	27	131	<0.001
Not supporting	116	5	121	

3. Multivariate Analysis

In Table 3, a multivariate test was carried out on the attitude and family support factors, the results showed that the factor

that most influenced midwifery students in East Java in carrying out HPV vaccination was the parental support factor ($p = 0.002$).

Table 3. Results of Multiple Logistics Regression Analysis of Factors Influencing HPV Vaccination

Independent Variable	OR	95% CI		p
		Lower limit	Upper limit	
Attitude	2.32	0.97	5.54	0.059
Family	5.03	1.84	13.76	0.002

N observation= 252
log likelihood= 171.08
Nagelkarke R²= 14.8%

DISCUSSION

1. The Relationship between Attitude and HPV Vaccination in Midwifery Students

Attitude is a collection of symptoms in responding the objects that involve thoughts, feelings and attention (Notoatmodjo, 2012). Attitudes consist of 2 groups of components, the first includes beliefs, ideas, and concepts towards an object. The second is the emotional component or evaluation of the object, and the last is the tendency to act. Attitudes are divided into 4 actions, if someone is given information about something, a process will occur in him/her so that it will affect the attitude shown by the individual, namely accepting, responding, respecting, and being responsible. Attitudes can influence a person in forming an interest in an object in the form of acceptance or rejection. In the formation of attitudes, there is an influence from personal experience, the influence of the surrounding environment, culture and spirituality as well as emotions within (Fitri and Elviany, 2018).

In this study, it was stated that there was a relationship between attitudes and actions of HPV vaccination in midwifery students in East Java. Most of the subjects had a positive attitude towards HPV vaccination and had been conducted HPV vaccination. In accordance with the theory, midwifery students in East Java who have a positive attitude towards HPV vaccination will have strong will to conduct the vaccina-

tion compared to midwifery students who have a negative attitude towards HPV vaccination.

This is in line with the research conducted by Fitri and Elviany (2018) which stated that attitudes affect the interest of WUS to carry out HPV vaccination ($p=0.007$). Students who have a positive attitude towards HPV vaccination tend to be willing to conduct HPV vaccination and will suggest others to participate in the HPV vaccination (Khatiwada et al., 2021). Attitude factors have an important role in a person in responding to the stimulus obtained, if the stimulus obtained is positive then someone will also have a positive attitude and vice versa. The attitude shown by the subject is influenced by beliefs in the subject which can affect the belief to carry out the HPV vaccination. In some areas in Indonesia, trust in vaccines is still a problem that causes pros and cons, it is possible for the subject to have a negative or positive attitude towards the HPV vaccine. Midwifery students are in a supportive environment to improve their health, so there is a possibility that this can affect the attitude of midwifery students in carrying out HPV vaccination. The subjects in this study come from several areas outside East Java. Various cultures and beliefs are also the background of the attitudes shown by a person. Emotions and feelings of thinking can also affect attitudes in a person. Most of the subjects are midwifery students at the undergraduate level, who are expected to be

able to think critically in responding to a thing, from that critical thinking, the possibility of the emergence of attitudes from the subject also has differences compared to midwifery students at the diploma level. One experience is that if there is a family history of cervical cancer, it can also affect the attitude given by the subject to the HPV vaccination. According to the results of research that has been carried out and previous studies, it can be stated that the attitude factor can be one of the factors that influence female midwifery students in East Java in carrying out HPV vaccination.

2. Relationship between Family Support and HPV Vaccination for Midwifery Students in East Java

The support provided by the family can be an important factor because the role of the family influences the decision making of family members by conducting family deliberations. Family support can be in the form of financial support, information about the HPV vaccine, and suggestion to do the HPV vaccination. Families have some roles, one of them is maintaining family health by providing support for every family member to stay healthy. The support provided by the family is one of the important factors for a person to encourage himself/herself to behave in a healthy manner to maintain health (Sari and Firiani, 2014). The results obtained in this study showed that there is a strong relationship between family support and HPV vaccination in midwifery students in East Java. Students who have been vaccinated are those who get support from their families.

Research conducted in 2014 in the city of Kediri with the subject of women of reproductive age found that there was a strong relationship between family support and HPV vaccination by women of reproductive age (Sari and Firiani, 2014). Research conducted by Wulandari (2018) sta-

ted that the support provided by the husband had a very significant effect on HPV vaccination ($p < 0.001$). 76% of subjects who had been vaccinated received support from their families, and 84% of women who had not vaccinated did not receive support from their families. Other studies also mention that there is a direct influence of family support in making decisions to conduct HPV vaccination (Aslindah, 2020). Family support has a strong influence on women of reproductive age in carrying out HPV vaccination ($p = 0.011$) (Fitriani et al., 2018). In line with research conducted by Wantini and Indrayani (2020) stated that there is a relationship between instrumental support provided by the family and the readiness of young women to get HPV vaccination. Family support in the form of material or information can be one of the factors that influence people to improve their health status ($p = 0.012$) (Suariyani et al., 2019). Female adolescents in India want to get HPV vaccination because they get support from their parents who think that HPV vaccination is important (Degarege et al., 2018).

It can be concluded from the discussion above that the support provided by the family is one of the factors that influence people to improve their health which in this study is to do HPV vaccination. Family has a big role on the subject in making decisions. Student status on the subject can also be a factor that makes family support become a strong influence for HPV vaccination.

3. The Most Influencing Factors for HPV Vaccination in Midwifery Students in East Java

The data obtained from the subject through the Google Form was carried out with a multivariate test to determine the most influencing factors of HPV vaccination in midwifery students in East Java by performing the Multiple Logistics Regression test.

Multiple Logistics Regression Test was carried out with a 95% confidence value, and the factor that most influenced the action of HPV vaccination in midwifery students in East Java was family support. The support provided by the family can be obtained from parents or husbands. The support provided is in the form of materials, information, and advice given by the family to the subject for HPV vaccination. Support from the family, especially for material support, is very important because the costs needed to carry out HPV vaccination are quite expensive and the subject is still a student. Family support has a very strong influence on the action of HPV vaccination in midwifery students in East Java. Family support influences the subject's decision to conduct HPV vaccination.

Some of the subjects are under 20 years old and are still under their parents' responsibility because the subject are still single. This can affect the action of HPV vaccination because the family still has the right to make decisions that will be made by the subject. It can be concluded that the family has a large and very strong influence on the subject's decision to conduct HPV vaccination, therefore, it is hoped that the government and health workers can strengthen the attitude and support of the family to increase the coverage of HPV vaccination in Indonesia, especially for adolescents, pre-marital, and women in reproductive age as a primary measure of prevention against HPV infection.

AUTHORS CONTRIBUTIONS

In this study, Samsriyaningsih Handayani and Ilfinur Anissa Putri were collaborated to develop the conceptual framework and study methodology used. Ilfinur Anissa Putri conducted data collection. Samsriyaningsih Handayani, Ilfinur Anissa Putri and Brahmin Askandar were collaborated to

analyze the study data.

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This study used the researcher's personal funds.

CONFLICT OF INTEREST

There was no conflict of interest in this study.

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