

Correlation between knowledge healthcare workers in doing Pap Smear and HPV Vaccination in Sampit City, Central Kalimantan

Wahyu Wikan Hamastuti ¹, Endyka Erye Frety ^{1,*} and Atika ²

¹ Midwifery Study Program, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia.

² Department of Public Health and Preventive Medicine, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia.

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Abstract

Background: GLOBOCAN data states that cervical cancer is the fourth leading cause of cancer death in women after breast, colorectal and lung cancer. The high number of cervical cancer cases in Indonesia has led WHO to place Indonesia as the country with the 2nd highest number of cervical cancer sufferers in the world. In Indonesia, there is still little research that discusses the relationship between knowledge of female health workers to perform Pap Smears and HPV vaccinations. The purpose of this study was to analyze the relationship between knowledge of health workers in performing Pap Smears and HPV vaccinations.

Method: quantitative analytical observational study using a cross-sectional study approach. The sample of this study was 104 female health workers working in Sampit City, Central Kalimantan with a purposive sampling technique. The independent variables are the knowledge of female health workers, the dependent variable is the behavior of implementing Pap Smears and HPV vaccines. The research instrument used was a questionnaire with Google Form and data analysis using the chi-square test with a significance of 5%.

Results: Most female health workers have good knowledge as many as 55 people (52.9%) and a small number of them have carried out Pap Smear examinations and HPV vaccination as many as 43 people (41.3%). The results of the statistical test of the relationship between knowledge and behavior $p = 0.304$ ($p > 0,05$).

Conclusion: knowledge is not related to the behavior of Pap Smear examinations and HPV vaccination.

Keywords: Cervical Cancer; Female Health Workers; Knowledge; Pap Smear; HPV Vaccine

1. Introduction

Cervical cancer is defined as a condition when cells in the cervical tissue grow abnormally, cells on the surface (epithelium) multiply and change their nature to become malignant. [1] GLOBOCAN data states that cervical cancer is the fourth leading cause of cancer death in women after breast, colorectal and lung cancer. [2] The high number of cervical cancer cases in Indonesia has led WHO to place Indonesia as the country with the 2nd highest number of cervical cancer sufferers in the world. The main cause of cervical cancer is infection with the oncogenic subtype HPV (Human Papilloma Virus), especially subtypes 16 and 18. There are several risk factors for cervical cancer, including sexual activity at a young age, having sex with multiple partners, smoking, having many children, low socioeconomic status, use of contraceptive pills (with negative or positive HPV), sexually transmitted diseases, and immune disorders.[3] Cervical cancer can be prevented by early examination because it is the only cancer that can be detected pre-cancer [4]. Cervical cancer prevention can be done in several ways, namely IVA (Visual Inspection with Acetic Acid), pap smear, cervical biopsy, and HPV vaccine.

* Corresponding author: Endyka Erye Frety

ACOG Guidelines recommend that women aged 21-29 and who are married to routinely undergo cervical cancer screening. In addition to screening, prevention will also be more effective if specific protection efforts are made with Human Papilloma Virus (HPV) vaccination. Cervical cancer prevention measures should be carried out, including by health workers. Female health workers who have more knowledge, as role models, educators, counselors should have better awareness than women who are not health workers to do pap smears and HPV vaccines. A preliminary study conducted by researchers at a health center in Sampit City by asking several health workers who had never done a pap smear and received the HPV vaccine. The reasons they put forward include costs, inadequate facilities, a feeling of not needing it yet, and fear of doing a pap smear. Because of this background, researchers want to conduct research on the relationship between knowledge of health workers in carrying out pap smears and HPV vaccinations in Sampit City, Central Kalimantan.

2. Material and methods

This study is an observational analytical quantitative study using a cross-sectional study approach. Researchers conducted observations on the relationship between knowledge of health workers in doing Pap Smears and HPV vaccination in Sampit City, Central Kalimantan. The population in this study involved all health workers working in 5 Health Centers in Sampit City in 2024. The sample in this study were female health workers working in Sampit City Health Centers who met the inclusion and exclusion criteria. The sample size of this study involved 104 health workers who were willing to be respondents in this study. The technique for selecting research subjects was non-probability sampling with a purposive sampling technique. Independent variable in this study is the knowledge of female health workers and the dependent variable is the behavior of implementing pap smears and HPV vaccination. The research instrument used was a questionnaire with Google Form. The research questionnaire has been tested for validity and reliability. Bivariate data analysis used the chi-square test with a significance of 5%.

3. Results and discussion

3.1. Univariate Analysis

Table 1 Knowledge of health workers about cervical cancer, Pap Smear and HPV vaccine

Knowledge	Frequency (f)	Percentage (%)
Good	55	52,9
Enough	28	26,9
Less	21	20,2
Total	104	100

The table shows that the majority of female health workers have a good level of knowledge, as many as 55 people (52.9%). The results of the study showed that out of 104 respondents, most health workers had a good level of knowledge about cervical cancer, early detection and prevention, namely 55 people (52.9%). In line with Rayhana's research which stated that 51.9% of women of childbearing age in Cipondoh District, Tangerang City had good knowledge. [5] A person's knowledge is obtained through the sense of hearing (ears) and the sense of sight (eyes). Knowledge of objects has different intensities or levels in each person. [6] According to researchers, knowledge is not only obtained through formal education, but can also be obtained from other things such as media, internet, seminars and counseling. The more knowledge you gain about cervical cancer and how to prevent it, the greater your motivation to take action. Other factors that may affect the knowledge of health workers include age, there are several correspondents who are over 50 years old who have forgotten the theory of Pap Smears and HPV vaccines. The lack of cases related to Pap Smears or HPV vaccines handled by health workers makes them rarely review the theory related to Pap Smears and HPV vaccines.

Table 2 Pap Smear or HPV vaccine behavior

Behavior	Frequency (f)	Percentage (%)
Ever	43	41,3
Pap Smear	27	
HPV vaccines	7	
Pap Smear dan HPV vaccines	9	
Never	61	58,7
Total	104	100

The table above shows that a small number of female health workers have had a Pap Smear or HPV vaccine, namely 43 people (58.7%). A total of 27 health workers have had a Pap Smear, 7 people have had HPV vaccination and 9 people have had both a Pap Smear and HPV vaccination.

The results of the study showed that out of 104 female health workers, only a small number had ever had a Pap Smear or HPV vaccine, namely 43 people (41.3%). In line with the research of Sumarmi et al it was found that as many as 81% of women in rural areas had never had a Pap Smear, 28% of them had never heard of cervical cancer and 33% did not know about Pap Smears. [7] In contrast to this study, the reason most respondents had not had a Pap Smear and HPV was because there was no time and opportunity for health workers to do it and the health facilities were not yet fully adequate. Health workers tend to want to do the procedure at private clinics or obstetrician-gynecologist's practices rather than at health centers because they feel embarrassed if examined by fellow colleagues. The high cost is also a reason for health workers to have a Pap Smear at an obstetrician-gynecologists. The same is true for HPV vaccination which requires relatively expensive costs and is not easily found in health centers or regular general hospitals.

Of the 43 respondents, 27 had only had a Pap Smear, 7 had only had an HPV test, and 9 had both a Pap Smear and HPV vaccination. Of the respondents who had had a Pap Smear, most had only had the test for the first time. In line with Sutresno's research, the reasons 7.63% of midwives had only had a Pap Smear were because the results were good and the cost was relatively expensive. [8] Some of the other respondents had had 2-4 tests. Respondents who had had a Pap Smear more than once mostly had a repeat test after a 3-year gap from the previous test. This is in accordance with WHO's direction that early detection of cervical cancer with a Pap Smear is recommended routinely at least once every 3 years. Most respondents who had had the HPV vaccination had received the full dose, namely 3 doses.

3.2. Bivariate Analysis

Table 3 Correlation between knowledge and Pap Smear or HPV vaccine behavior

Level of knowledge	Pap Smear or HPV vaccine behavior				Total		P value
	Ever		Never				
	f	%	f	%	f	%	
Good	20	36,3	35	63,7	55	100	0,304
Enough	15	53,6	13	46,4	28		
Less	8	38	13	62	21		
Total	43	41,3	61	58,7	104	100	

The table above shows that most respondents with good knowledge, as many as 35 people (63.7%), have never had a Pap Smear or HPV vaccine. The data was processed using the chi-square statistical test and obtained a P value of 0.304 (> 0.05), which means there is no statistically significant relationship between knowledge and behavior. Descriptively, the higher the level of knowledge, the greater the likelihood of respondents having positive behavior.

This study found that there was no statistically significant relationship between the knowledge of female health workers and the behavior of Pap Smear examinations and HPV vaccination. Increased knowledge will not always lead to changes

in behavior. Descriptively, it was found that the higher the level of knowledge, the greater the likelihood of health workers to carry out health behavior. In line with Martini's study which stated that knowledge did not have a significant relationship with Pap Smear behavior in fertile couples at the Sukawati II Health Center. [9] Fauziyah's study showed that there was no relationship between the level of knowledge and the interest in performing a Pap Smear. [10] The results of this study illustrate that a good level of knowledge about Pap Smears has not driven women's interest in performing Pap Smears. This is because the Pap Smear action is a preventive activity and does not have an immediate impact.

In this study, 63.7% of respondents with good knowledge had never had a Pap Smear or HPV vaccination. This shows that knowledge is not the only determining factor for someone to behave positively. Several respondents said that they did not get their husband's permission to have a Pap Smear and HPV vaccine. This shows that husband's support gives couples the strength to exercise their reproductive rights in maintaining cervical health. [11] On the other hand, if a woman does not get support from her husband, it will be difficult for her to make decisions for herself.

The source of information obtained by health workers is related to the knowledge that will be received. Based on the results of the study, sources of information through social media still dominate compared to scientific seminars or explanations from obstetrician-gynecologists.

Other reasons put forward by respondents in this study are in line with Sumarmi et al's research which showed that inhibiting factors for doing Pap Smears in women in rural areas include poor accessibility to health services, fear of painful procedures, fear that the results will not be as expected, shame and not wanting to show their female organs, especially to male doctors, and the costs incurred are quite expensive. [7] This is in accordance with the Health Belief Model theory refined by Becker et al. This theory is used to describe an individual's belief in healthy living behavior, so that individuals will carry out healthy behaviors that can be in the form of preventive behavior or use of health facilities. This theory reveals the reasons for individuals to want or not want to do healthy behavior. [12]

From this study, female health workers who have knowledge about health should be able to become educators, counselors and role models in conducting early detection and Pap Smear examinations and prevention of cervical cancer with HPV vaccination.

4. Conclusion

Most female health workers have good knowledge towards Pap Smear and HPV vaccination behavior. A small number of female health workers have had Pap Smear examinations and HPV vaccination. Knowledge is not related to Pap Smear examination behavior and HPV vaccination.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of ethical approval

This research has been approved by the Ethics Committee of the Faculty of Medicine, Airlangga University with number 198/EC/KEPK/FKUA/2024.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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