

Article

## Factors Affecting The Visual Inspection Of Acetic Acid Examination (Iva) In Padang City 2019

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### A B S T R A C T

*Cervical cancer is the fourth most common cancer in women with a mortality rate of 6.8% (WHO, 2015; Globocan, 2012). The incidence of cervical cancer ranks second after breast cancer in Southeast Asia and Indonesia. Based on data from the Republic of Indonesia Ministry of Health 2015, cervical cancer is the cancer with the highest prevalence of 0.8 per 1000 population (Ministry of Health Republic of Indonesia, 2015). The high prevalence of cancer in Indonesia requires prevention and early detection by health service providers. The purpose of this study was to determine the factors that influence the inspection of Acetic Acid Visual Inspection (IVA) in Padang City.*

*This type of research is quantitative with cross sectional design. The study was conducted at the Padang City Health Center in April-November 2019. The population was all women aged 30-50 years who were at the Padang City Health Center, amounting to 10,670 people, with a sample of 73 people taken by consecutive sampling technique. Data were collected by questionnaire and analyzed by univariate and bivariate analysis.*

*More than half (64.4%) of women of childbearing age (WUS) have never had an IVA examination, more than half (58.9%) of women have a risk age, less than half (39.7%) women have low levels of education, more than half (60.3%) WUS with working status, there was no relationship between the age of WUS with IVA examination ( $p$  value = 0.182), there was a relationship between WUS education level and IVA examination ( $p$  value = 0.031), there was no relationship between the status of WUS work and IVA examination ( $p$  value = 0.404). It is expected that officials and leaders of puskesmas will develop more attractive ways to be able to convince and increase awareness and concern of the WUS themselves in conducting IVA examinations.*

## I. INTRODUCTION

Cancer is a disease that arises due to abnormal cell growth, uncontrolled, continued to grow and can not die (Ministry of Health Republic of Indonesia, 2013). Based on data from the World Health Organization (WHO), cancer is the second largest cause of death in the world, one in six deaths caused by cancer (WHO, 2018). The number of deaths due to cancer increased from 2012, namely 8.2 million deaths to 8.8 million deaths in 2015, around 70% of cancer deaths occurred in low and middle income countries (Globocan, 2012; WHO, 2018).

One type of cancer that is often found in women in the world is cervical cancer. Cervical cancer is the fourth most common cancer in women and there are 14% of new cases in 2012 with a percentage of deaths of 6.8% (WHO, 2015; Globocan, 2012). Cervical cancer is the cause of death of 90% of women in developing countries (American Cancer Society, 2015).

The incidence of cervical cancer ranks second after breast cancer in Southeast Asia and Indonesia. Every hour a woman in Indonesia dies from cervical cancer (Tilong, 2012). Based on data from the Republic of Indonesia Ministry of Health 2015, cervical cancer is the cancer with the highest prevalence of 0.8 per 1000 population (Ministry of Health Republic of Indonesia, 2015). Cervical cancer is a malignant tumor that attacks the cervix due to infection with Human Papilloma Virus (HPV) which has a high enough prevalence as a cause of cervical cancer that is 99.7%. HPV types 16 and 18 are the cause of cervical cancer (WHO, 2015).

The high prevalence of cancer in Indonesia requires prevention and early detection by health service providers. Cancer cases found earlier will provide healing and longer life expectancy (RI Ministry of Health, 2015). The world health agency recommends vaccinating and screening for HPV, through a visual inspection program for acetic acid (IVA), a pap smear test, or HPV testing as a preventive measure for cervical cancer in low-income countries (WHO, 2018).

Early detection of cervical cancer is preferred by IVA because it is considered more effective, efficient in terms of time, method and cost. In addition, IVA examination has fulfilled the basic criteria for early detection (safe, practical, affordable, available) and can be used in areas with inadequate facilities and the results of the inspection can be known immediately (Juanda, 2015).

Visual inspection of acetic acid is a series of procedures to detect pre-cancerous lesions by observing changes in the cervix that are applied with acetic acid (Kumalasari, 2012). Early cervical cancer detection program in Indonesia was developed by the Ministry of Health in collaboration with related programs, local governments, NGOs, professional organizations, FCP, SIKIB, and OASE-KK. The target of this program is 50% of women aged 30-50 years (RI Ministry of Health, 2015).

Women of childbearing age (WUS) are women aged 15-49 years who are married and single or widowed (BKKBN, 2011). Women of childbearing age who are recommended to do early detection of cervical cancer are women aged 30-50 years at least 5 years, if possible it can be done 3 years (MOH RI, 2009). Data from the Republic of Indonesia Ministry of Health shows the low participation of women in Indonesia in early detection of cervical cancer, as evidenced from 2007-2016, only 5.15% of women in Indonesia conducted IVA examinations (Ministry of Health Republic of Indonesia, 2017).

Examination of IVA in West Sumatra Province in its implementation exceeded Indonesia's achievements of 7.16% (Ministry of Health of the Republic of Indonesia, 2016). The city of Padang, despite being one of the cities that experienced an increase in IVA examination coverage from 2014 amounted to 1.16%, 2015 amounted to 1.85%, and in 2016 amounted to

2.1% but has not yet reached the desired target (West Sumatra Provincial Health Office, 2015 ; 2016; 2017).

The coverage of IVA examinations in 2017 which is lower compared to other health centre in Padang City is found in Rawang Barat Health Center (1.88%), Kuranji Health Center (1.61%), LubukBegalung Health Center (1.51%), Pegambiran Health Center (1.45%), Anak Air Health Center (1.34%), and AirDingin Health Center (1.24%) (Padang City Health Office, 2017).

According to Ningrum (2012), there are several factors that influence WUS conducting IVA checks, namely knowledge, education level, and economic status. Another study by Pakkan (2017), which influences the actions of WUS to conduct IVA examinations is knowledge, work, and socio-economic. Based on the background of the problem above, the study aims to find out the factors that influence the inspection of the Visual Inspection of Acetic Acid (IVA) in Padang City.

## II. METHODS

This type of research used in this study is quantitative with cross sectional research design. The study was conducted from April to November 2019 at the Padang City Health Center. The population in this study were all women aged 30-50 years who were in the Padang City Health Center, totaling 10,670 people. Based on the formula used (Dahlan, S, 2009), the sample in this study amounted to 73 people. Sampling is done by consecutive sampling technique and meets the inclusion and exclusion criteria selected until the number of required subjects is met. This study uses a questionnaire as a data collection tool to obtain information about the data from each variable to be examined. Primary data in this study were obtained from the results of the answers to the questionnaire that had been distributed to respondents, while secondary data were obtained from the Padang City Health Office and data from the West Sumatra Province Health Office. Data were analyzed by univariate analysis (looking at the frequency distribution and percentage of each variable) and bivariate analysis (looking at two variables that were thought to have a relationship using the chi-square statistical test).

## III. RESULT

### The Visual Inspection of Acetic Acid Examination (IVA)

**Table 1. Frequency Distribution The Visual Inspection of Acetic Acid Examination (IVA) in Padang City 2019**

IVA Examination	f	%
Never Did	47	64,4
Ever Do	26	35,6
Total	73	100

Table 1.shows that of the 73 respondents, there were 47 respondents (64.4%) who had never conducted an IVA examination.

## Age

**Tabel 2. Frequency Distribution of WUS Age in Padang City 2019**

Age	f	%
Risk	43	58,9
No Risk	30	41,1
Total	73	100

Table 2.shows that of 73 respondents, there were 43 respondents (58.9%) who had a risky age.

## Level of Education

**Tabel 3. Frequency Distribution of WUS Level of Educationin Padang City 2019**

Level of Education	f	%
Low	29	39,7
High	44	60,3
Total	73	100

Table 3.shows that of 73 respondents, there were 29 respondents (39.7%) with low levels of education.

## Work Status

**Tabel 4. Frequency Distribution of WUS Work Status in Padang City 2019**

Work Status	f	%
Work	44	60,3
Doesn't work	29	39,7
Total	73	100

Table 4.shows that of 73 respondents, there were 44 respondents (60.3%) who worked.

## Relationship Between WUS Age and IVA Examination

**Tabel 5. Relationship Between WUS Age and IVA Examinationin Padang City 2019**

Age	IVA Examination				Total		<i>p value</i>
	Never Did		Ever Do		f	%	
	f	%	f	%			
Risk	25	58,1	18	41,9	43	100	0,182
No Risk	22	73,3	8	26,7	30	100	
Total	47	64,4	26	35,6	73	100	

Table 5.shows that of the 43 respondents with age at risk, there were 25 respondents (58.1%) who had never conducted an IVA examination. After the Chi-Square statistical test,  $p$  value =

0.182 ( $p > 0.05$ ) was obtained, meaning  $H_a$  was rejected and  $H_o$  was accepted, so it was concluded that there was no relationship between maternal age and IVA examination.

### Relationship Between WUS Level of Education and IVA Examination

**Table6. Relationship Between WUS Level of Education and IVA Examination In Padang City 2019**

Level of Education	IVA Examination				Total		$\rho$ value
	Never Did		Ever Do		f	%	
	f	%	f	%			
Low	23	79,3	6	20,7	29	100	0,031
High	24	54,5	20	45,5	54	100	
Total	47	64,4	26	35,6	73	100	

Table 6.shows that of the 29 respondents with low education, there were 23 respondents (79.3%) who had never conducted an IVA examination. After the Chi-Square statistical test obtained p value = 0.031 ( $p < 0.05$ ), it means that  $H_a$  is accepted and  $H_o$  is rejected, so it is concluded that there is a relationship between education and IVA examination.

### Relationship Between WUS Work Status and IVA Examination

**Table7. Relationship Between WUS Work Status and IVA Examination In Padang City 2019**

Work Status	IVA Examination				Total		$\rho$ value
	Never Did		Ever Do		f	%	
	f	%	f	%			
Work	30	68,2	14	31,8	44	100	0,404
Doesn't work	17	58,6	12	41,6	29	100	
Total	47	64,4	26	35,6	73	100	

Table 7.shows that of the 44 respondents who worked, there were 30 respondents (68.2%) who had never conducted an IVA examination. After Chi-Square statistical test, p value = 0.404 ( $p > 0.05$ ) was obtained, meaning  $H_a$  was rejected and  $H_o$  was accepted, so it was concluded that there was no relationship between work and IVA examination.

## IV. DISCUSSION

### Relationship Between WUS Age and IVA Examination

The results of the study in table 5 can be seen that, of the 43 respondents with age at risk, there were 25 respondents (58.1%) who had never conducted an IVA examination. After the Chi-Square statistical test, p value = 0.182 ( $p > 0.05$ ) was obtained, meaning  $H_a$  was rejected and  $H_o$  was accepted, so it was concluded that there was no relationship between maternal age and IVA examination.

The age of the individual counted from birth to birthday. The more mature a person is, the maturity level and strength of someone will be more mature in thinking and working (Huclok, 1998 in Henry 2010). Cervical cancer can occur at the age of 18 years (Baughman, Hackley, 2000). Screening for early detection of cervical cancer in Indonesia is recommended for all women aged 30 to 50 years. The highest cervical cancer cases occur at the age of 40 and 50 years, so the test must be done at the age where pre-cancerous lesions are more likely to be detected, usually 10 to 20 years earlier (MOH RI, 2009).

The results of this study are in line with the results of Rohmawati's (2010) study which found that there was no significant relationship between age and IVA check behavior. WUS should be aged  $\geq 40$  years where cervical cancer occurs most often, behaving IVA check is better than young (aged  $<40$  years). In this case age can not be used as an indicator / benchmark for someone in conducting routine IVA examination and on time. Another thing that is very influential is due to ignorance, no complaints, fear of receiving and knowing the worst possible results of the examination, shame about conducting an IVA examination, and also not yet assuming that an examination of the IVA is important to do.

Based on the research results obtained, researchers assume that age is not a reason for mothers in conducting IVA examinations, this can be seen from the results of research that both are in the risky age range or not at risk, most of the mothers do not do IVA examinations, this means that there are other factors that more influence the mother in conducting IVA examination.

### **Relationship Between WUS Level of Education and IVA Examination**

The results of the study in table 6. can be seen that, of the 29 respondents with low education, there were 23 respondents (79.3%) who had never conducted an IVA examination. After the Chi-Square statistical test obtained p value = 0.031 ( $p < 0.05$ ), it means that  $H_a$  is accepted and  $H_o$  is rejected, so it is concluded that there is a relationship between education and IVA examination.

Education is the process of developing one's skills in the form of attitudes and behaviors that apply in their society. Social processes where a person is influenced by a guided environment (especially in schools) so that he can achieve social skills and develop his personality (Good, Carter V, 1977).

The results of this study are not in line with studies conducted by Yuliwati (2012) who found that there was no significant relationship between education and WUS behavior in the early detection of cervical cancer IVA method with  $p > 0.05$ . However, the results of this study are consistent with Green's (1980) theory that sociodemographic factors in this case education have a big influence on health behavior.

Based on the research results obtained, researchers assume that there is a relationship between the level of education with the behavior to conduct IVA examination because there is a tendency for mothers with low education not to do IVA examination. The level of education influences a person's behavior in finding, receiving, absorbing and applying existing information. A person with low education tends not to want to find new information that is useful for himself, tend not to want to accept the information provided to him, tend to not be able to absorb well the information provided, and tend not to want to apply the information provided.

## Relationship Between WUS Work Status and IVA Examination

The results of the study in table 7. it can be seen that, of the 44 respondents who worked, there were 30 respondents (68.2%) who had never conducted an IVA examination. After the Chi-Square statistical test obtained  $p$  value = 0.404 ( $p > 0.05$ ), it means that  $H_a$  was rejected and  $H_o$  was accepted, so it was concluded that there was no relationship between work and IVA examination.

Jobs will affect one's economic level. The socioeconomic level that is too low will affect the individual so he does not pay attention to the messages conveyed because he is more concerned with other needs that are more pressing (EfendiNasrul, 1998).

The results of this study are in line with research conducted by Yuliwati (2012) which shows that there is no significant relationship between work and the behavior of WUS in the detection of cervical cancer IVA method. However, this study contrasts with research conducted by Sarini (2011) who found that there is a relationship between work and WUS behavior with IVA examination, because women who work more often leave the house and interact more often with others, so that the information obtained is more so that exposure to information about cervical cancer becomes more compared to non-working WUS who spend a lot of time at home. Based on the results obtained, the researcher assumes that there is no relationship between the status of WUS work and behavior to conduct IVA examination because a woman's busyness does not affect her desire to do IVA examination. It can be seen from the results of the study that more than half of the women who work and those who do not work do not do an IVA examination, meaning that working or not, the majority of women do not do an IVA examination, because there are other factors that more influence the behavior of women in conducting an IVA examination

## V. CONCLUSION

Based on the research that has been done, it can be concluded that more than half (64.4%) women of childbearing age (WUS) have never conducted an IVA examination in Padang City Health Center in 2019, more than half (58.9%) WUS have a risk age at Padang City in 2019, less than half (39.7%) WUS had a low level of education in Padang City in 2019, more than half (60.3%) WUS with working status in Padang City in 2019, there was no relationship between the age of WUS with the IVA examination at the Padang City Health Center in 2019, there was a relationship between the education level of the WUS with the IVA examination at the Padang City Health Center in 2019, and there was no relationship between the work status of the WUS with the IVA examination at the Padang City Health Center in 2019.

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