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# Health Education of Visual Inspection of Acetic Acid using Audiovisual Toward Motivation of Childbearing Age Women To Do the Test : A Case Study in Jemawan Klaten

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**Abstract.** The cervical cancer remains one of the gravest threats to women's lives in the world . This cancer prevention effort can be improved by providing health education about early detection of cervical cancer using the Visual inspection of acetic acid (IVA) method. Health education media that is easily accepted to increase womens's motivation were by audiovisual. The purpose of the study was to determine the effect of providing health education with audiovisuals on the motivation of women of childbearing age to conduct IVA test. Research was conducted in Quasi Experiment with non-equivalent control group design. The sampling technique uses purposive sampling method with a total sample of 38 respondents divided into 19 respondents in the intervention group and 19 respondents in the control group. This study uses the Wilcoxon statistical test. The results of the pre-test and post-test on the provision of health education for the intervention group experienced an increase in motivation (strong) from 5.3% to 57.9%. The results of pre-test and post-test in the control group experienced a decrease in motivation (moderate) from 68.4% to 63.2%. The results obtained p-value of 0.001 for  $\alpha = 0.05$ . It was concluded that there was an effect of providing health education with audiovisuals on the motivation of women of childbearing age to carry out IVA test in Jemawan , Klaten

## 1. Introduction

The cervical cancer is the second most common disease among women around the world. World Cancer Statistical Data, explaining that the cervical cancer reports for 15% of all cancers in the world, while in Southeast Asia contributes 20-30% (Siegel, Miller, Jemal., 2015). Breast cancer (38 per 100,000 women) and cervical cancer (16 per 100,000 women) (Globocan / IARC, 2012), so cervical cancer is the most frequently cause of death among women. World Health Organization (WHO) (2014) states that Indonesia ranks first with the most cervical cancer sufferers in the world, the incidence and mortality are relatively high (11.78%), with the prevalence of cervical cancer (0.8 ‰) and breast cancer (0.5 ‰) (Riskesdas, 2013). In Central Java Province, the prevalence of cervical cancer reached 1.2% or 19,734 patients (Infodatin, 2013). It is estimated that more than 270,000 deaths due to cervical cancer each year, more than 85% occur in developing countries (WHO, 2014).



Cervical cancer is a threat to women. As per the data found, every day 40 women who were declared cervical cancer, 20 of them died. More than 92 thousand cases of cancer deaths occurred in women in Indonesia in 2014. As many as 10.3% were the number of death caused by cervical cancer (Riskesdas, 2013). WHO (2014) explained that the main cause of cancer is caused by Human Papilloma Virus (HPV) and the most common cause is type 16 and 18. The incidence of cervical cancer can be suppressed by primary prevention efforts such as increasing counseling activities to the community to adopt a healthy lifestyle, avoid risk factors for cancer, immunize with HPV vaccine and early detection of cervical cancer through Pap smear test or Visual Acetate Acid Inspection (IVA) (Septadina, 2015).

Several screening methods and early detection of cervical cancer, called pap smear test, IVA, cervical vision with ginescopy, colposcopy, cervicography, thin prep and HPV tests (Wilgin, 2011). WHO (2014) recommended the use of the down staging method for early detection of cervical cancer by increasing awareness and knowledge about cancer including visualization inspection using acetic acid (IVA). The results of Ngan's research (2011), stated that the IVA test has a high enough sensitivity and specificity to be used as a precancerous lesion screening method. Pradhan, Shrestha, Dangal, Bhattachan (2015) also showed that when compared with pap smears, IVA had a sensitivity of 100%, specificity of 98.4%, positive predictive value of 40% was negative predictive value of 100%.

The Indonesian Cancer Foundation (2014) describes the scope of "screening" early detection of cervical cancer in Indonesia through IVA is still very low (around 5%), while the scope of screening is effective in reducing morbidity and mortality due to cervical cancer is 85%. According to data obtained from the Klaten District Health Office 2015, the number of women in the 30-50 year age range showed positive IVA test results of 116 (3.36%) (Health Office, 2015) and in 2016 the Ministry of Health (MOH) of Klaten Regency explained women who had done of 2409 IVA Test, obtained positive IVA of 236. This incident occurred due to lack of understanding of prevention efforts.

Understanding prevention efforts can be improved if someone has sufficient knowledge so that they can perceive information according to psychological conditions (Putri, 2010). The one of way to increase knowledge is to provide health education (Apriana, 2016). The results of research conducted by Kurniawati (2015), stated that women with a low level of education did not get enough information about early detection of cervical cancer about the IVA method that can be accessed through information media such as searching the internet, reading books on cervical cancer and its prevention.

Cervical cancer screening innovations in health services especially health education can use health education media. One of the media that can concretize health education material is audiovisual media because the delivery of messages with audiovisuals is more realistic, and has several features that are very useful to be used in the process of delivering messages (Saraswati, 2011). The research conducted by Sulastri, Dyah, and I'ana (2014), shows that health education by lecture and audiovisual improves knowledge and supports increased attitudes and behavior in early detection of cervical cancer.

## 2. Methods

The research design was done in quasy experimental with non equivalent control group design. This research was carried out in Jemawan Klaten on 8-13 of May 2018

The population in this study was 137 women. The sampling technique used a purposive sampling. Researchers used samples in both intervention and control group as many as 19 respondents. The inclusion criteria for sampling were women of childbearing age who lived in Jemawan aged 20-45 years, married, had never received education about IVA test, could read and write, and willing to become respondents. While the exclusion criteria for this study were menopausal women, did not follow a complete research process and sick.

The instrument used in this study was a demographic data instrument, a motivational questionnaire conducted an IVA test as many as 24 items of statements and audiovisual videos about IVA test. Health education with audiovisual is given for 60 minutes after pre-test in the intervention group. Bivariate analysis in this study used a Wilcoxon statistical test

**3. Results**

The motivation of both groups stated with low, moderate, and high. The motivation was measured pre and post after the intervention as shown on table 4 as follows:

**Table 1.** Frequency Distribution of IVA Motivation in intervention group 2018 (n=19)

No	Motivation	Pre Test		Post Test	
		F	%	f	%
	Low	4	21,1	0	0
	Moderate	14	73,7	8	42,1
	High	1	5,3	11	57,9
	Total	19	100	19	100

Based on table 1 shows that IVA motivation in the intervention group when pre-test has a high motivation as much as 1 person (5.3%) and during post-test has increased to 11 people (57.9%) who have high motivation.

Motivation to do the IVA test was measured in control group pre and post as shown on table 5 as follows:

**Table 2.** Frequency distribution of IVA motivation in control group(n=19)

No.	Motivation	Pre Test		Post Test	
		f	%	f	%
	Low	5	26,3	6	31,6
	Moderate	13	68,4	12	63,2
	High	1	5,3	1	5,3
	Total	19	100	19	100

Based on table 2 shows that IVA motivation in the control group when pre-test had moderate motivation as many as 13 people (68.4%) and at post-test decreased to 12 people (63.2%) had moderate motivation. The IVA motivation analysis divided into before and after intervention. In both time, measured the median with maximum and minimum as shown on table 6 as follows:

**Table 3.** The results of IVA motivation analysis in intervention group (n=19)

	Median (Minimum-Maksimum)	Pvalue
Motivation before	2 (1-3)	0,000
Motivation after	3 (2-3)	

Based on table 3 shows the results of Wilcoxon analysis obtained p value 0.000,  $\alpha = 0.05$ , so it can be concluded that there is an effect of providing health education using audiovisual on the motivation of women to examine IVA in the intervention group.

The IVA motivation analysis divided into before and after in the control groups. In both time, measured the median with maximum and minimum as shown on table 7 as follows:

**Table 4.**The results of the IVA motivation analysis of the control group (n=19)

	Median (Minimum-Maksimum)	Pvalue
Motivation before	2 (1-3)	0,564
Motivation after	2 (1-3)	

Based on table 4 shown the results of Wilcoxon analysis obtained p value 0.564,  $\alpha = 0.05$ , so it can be concluded that there is no effect of the provision of health education using the newsletter on motivation to examine IVA in the control group

The results of analysis of the influence of health education with audiovisuals on the motivation of women to conduct IVA test as shown on table 8 as follows:

**Table 5.** Analysis of health education with audiovisuals toward the motivation of women in Jemawan 2018 (n=19)

	Median (Minimum-Maksimum)	Pvalue
Motivation after the intervention group	3 (2-3)	0,001
Motivation after the control group	2(1-3)	

Based on table 5 the results of Wilcoxon test obtained p value 0.001,  $\alpha = 0.05$ , which means that  $H_a$  was accepted thus showing the influence of health education about IVA with audiovisual on the motivation of women to conduct IVA test.

#### 4. Discussion

##### 4.1. Motivation to Conduct IVA test Before And After Given Health Education with Audiovisuals at women

*4.1.1. Intervention Groups.* Based on table 1, the motivation to do IVA test in the intervention group showed that women motivation had increased from strong motivation 5.3% to 57.9% after being given health education using audiovisual. The health motivation of women of childbearing age is a mental impulse that can grow from within a woman of her own childbearing age as well as from external stimuli which results in a person (woman of childbearing age) to act to fulfill her reproductive health needs (Evi Dwi Larasati<sup>1</sup>, Henny Dwi Susanti<sup>2</sup> & Yoyok Bakti Prasetyo, 2014) This is clarified by Sardiman (2014) that the function of motivation is to encourage humans to act, determine the direction of action and complete actions that are not useful for certain purposes.

Health education about cervical cancer is done to provide an understanding of early detection of cervical cancer to the public so that they get complete information and understand the benefits of the test. This is in accordance with the objectives of health education, that is, people want to do an early detection test of cervical cancer (Ministry of Health, 2015). Counseling can increase the knowledge of respondents from those who do not know to know and understand. Counseling can also change the mindset and perceptions of respondents about the importance of cancer prevention with IVA Test, it is proven and illustrated through increased motivation of respondents after counseling (Sawitri and Sunarsih, 2017).

Research has been carried out using audiovisual health education aids and this is in accordance with research conducted by Juliantara (2009) that effective health education is supported by the use of attractive media and more easily accepted, one of which uses audiovisual media. Audiovisual media involves all sensory devices including hearing and sight. This is seen from the sum between hearing through 11% and through vision 83%, so that the capture power using audiovisual media is 94% (Francis, 1978 in Ganjur, 2010).

Based on table 3 bivariate analysis in researchers conducted shows the value of 0.000,  $\alpha = 0.05$ , which means that health education using audiovisual is effective against motivation to do IVA test on women of childbearing age in Dukuh Jemawan, Jemawan Village, Jatinom District, Klaten. This research was supported by research conducted by Apriana, Arifah (2015) who examined the "Effect of Health Education with Audiovisual Media on the Motivation to Stop Smoking in Mechanical Engineering Students of Muhammadiyah University of Yogyakarta" showed a significant increase with the results of p value 0.001;  $\alpha = 0.05$ . Audiovisual media as a medium of discussion that is interesting and repeatable (Notoatmodjo, 2012). The media can influence changes in respondents' behavior to be positive, because it is based on the respondents' knowledge and life experience.

*4.1.2. Control Groups.* Based on table 2 showed that the results of IVA motivation in the control group did not experience significant changes seen from the results of IVA motivation pre test in the medium category 68.4% and in the post IVA motivation test in the medium category at 63.2%.

Respondent's motivation in the control group that does not experience change can be influenced by factors lack of respondents' knowledge about IVA test. This is in line with the research of Yankusuma, Ditya & Augustin Pramulya (2016), who explained that the respondents' lack of knowledge could be

due to low education or because they were less exposed to information about breast cancer detection. In the research conducted, it was proven by the results of filling in 19 respondents in demographic data on the questions that had received information about IVA that the respondents answered had never or had never received information about IVA.

Based on table 5 the analysis shows that p value is 0.564;  $\alpha = 0.05$  so  $H_a$  is rejected and  $H_o$  is accepted so that there is no effect of giving health education about IVA on the motivation of women to do an IVA examination which means even though the control group has given a leaflet about IVA but does not occur significant changes between the results of the pre test and post test. This is not in accordance with the theory according to Machfoed (2008) which states that health education can influence motivation, that is a process of change that aims to transform individuals, groups and society towards positive things planned through the learning process.

#### 4.2. *Effect of health education on IVA with audiovisuals on motivation to do IVA test*

The results of the last analysis listed in table 5 give health education with audiovisual influence on the motivation to do IVA test, using wilcoxon with p value 0.001;  $\alpha = 0.05$ . The motivation of women to examine IVA in the intervention group after being provided with audiovisual health education experienced an increase despite the highest number of respondents' education in the intervention group compared to the women motivation in the control group which decreased even though most respondents were in high school. This can be caused in the intervention group given health education to obtain knowledge about IVAs and in the control group only given leaflets about IVA. Saraswati's research, Lia Karisma (2011) explained that by providing health education interventions, it can increase the level of individual ability to an object. The better a woman understands about IVA, the more she wants to change her behavior and understand why IVA is needed.

In the experimental group health education uses audiovisual media. The use of audiovisual media involves all the senses of learning, so that the more sense devices involved to receive and process information, the more likely the content of information can be understood and maintained in memory (Juliantara, 2009). This is supported by the results of research conducted by Saraswati, Lia Karisma (2011), concluding that the lecture and audiovisual methods are more effective in increasing knowledge and changing attitudes in early detection of cervical cancer to reduce mortality.

## 5. Conclusion

Characteristics of respondents in this study were the average intervention group aged 34.79 years and the average control group aged 35.95 years with the age range of 20-45 years. Motivation to check IVA in the intervention group when the majority of pre-test was found to be 5.3% included in the strong motivation category, while the post-motivation category was strong at 57.9%. The motivation to do the IVA test of the control group when pre-test was included in the medium motivation category at 68.4%, while the post-test category was in the moderate category at 63.2%. The results of Wilcoxon test in the intervention group and the control group had a significant value p value = 0.001 ( $\alpha < 0.05$ ) which means that  $H_a$  was accepted by  $H_o$  refused so that there was an influence of health education about IVA with audiovisual on motivation to do IVA test.

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