Predisposition factor Behavior of Early Detection of Cervical Cancer Using Visual Inspection with Acetic Acid Method In Kampung Melayu's Health Center 2018

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Abstract: Cervical cancer is cancer with the highest prevalence in Indonesia women. Early detection of cervical cancer using Visual Inspection with Acetic Acid (VIA) method is the government's priority prevention program in controlling cervical cancer, but the coverage of the examination still low. This study aims to identify factors related to early detection behavior of cervical cancer by the VIA method in women aged 30-50 years. A cross-sectional study was conducted between December 2017 to June 2018. The subjects of 180 women were selected from using systematic random sampling. Data was collected through interviews using questionnaires and analyzed using the chi-square test. The analysis result showed education (p= 0,026), knowledge (p= 0.001), and attitude (p= 0.021) was associated with early detection of cervical cancer VIA method. Routine socialization and spreading information should be done to increase knowledge and improve women who do early detection of cervical cancer with VIA method.

Keywords: early detection, cervical cancer, VIA method, knowledge

1   Introduction

Cancer is the second leading cause of death in the world after cardiovascular. According to the International Agency for Research on Cancer (IARC), in 2012, there were 14.1 million new cases of cancer and 8.2 million cancer deaths worldwide. Globally, almost 1 in 6 deaths are caused by cancer. [1]

Of all cancer in the world, poor countries and developing countries account for 57% of new cases of cancer and account for 65% of cancer deaths[2]. One of the deadly cancers in women is cervical cancer. Cervical cancer is a malignancy originating from the cervix caused by oncogenic sub-type HPV (Human Papilloma Virus), especially subtypes 16 and 18 [3]. Cervical cancer ranks second in the world, with an incidence rate of 16 per 100,000 women [4].

Cervical cancer is the second-highest prevalence of cancer in women in Indonesia after breast cancer. Meanwhile, the prevalence of cervical cancer in Indonesia is 0.8 per 1000 population[5]. According to the IARC in 2012, the estimated incidence of cervical cancer in Indonesia was 17 per 100,000 women [4]. The number of women with new cervical cancer ranges from 90-100 cases per 100,000 population, and every year there are 40 thousand cases of cervical cancer[6]. Early detection of cervical cancer is one of the preventive efforts [7].

Early detection of cervical cancer can be done with several tests such as pap smear tests, Visual Inspection with Acetic Acid, visual inspection of Lugol iodine, HPV DNA testing, and others [3].

The IVA test is a screening performed by trained health workers by applying 3-5% diluted acetic acid to the cervix. Then, it will be observed with the naked eye to detect abnormalities. Cervical indications have precancerous lesions if the abnormal area changes color to white (acetowhite) with firm boundaries [3]. According to WHO, coverage of early detection with VIA of at least 80% for five years will significantly reduce the incidence of cervical cancer [4].

The VIA test is an inexpensive, simple technology with appropriate technology so that this test is a priority program for the government in controlling cervical cancer [4]. The coverage of VIA examinations in Indonesia is still low, from 2007 to 2016, it is still 5.15% of women aged 30-50 years who have taken VIA tests [8]. In 2019, the target is 50% of women aged 30-50 years [9].

Although early detection of cervical cancer can reduce morbidity and mortality due to cancer, the scope of examination is still low. Various factors were found to influence the behavior of early detection of cervical cancer starting from individual factors, between individuals, and the environment, namely social demographic factors, knowledge and information, attitudes, practices, perceptions, economics, health status, support from husbands, support of friends, support of health workers, interactions with health services and service availability[2][10].

Green explains the behavior formed by predisposing factors, enabling factors, and reinforcing factors. Likewise, with the behavior of early detection of cervical cancer formed by these three factors. Predisposing factors, which facilitate or hinder a person's motivation to behave, include demographics, knowledge, attitudes, beliefs, and values. Knowledge is an important factor in early detection behavior, research conducted in the Maldives by Basu et al., (2014) states that women's knowledge about cervical cancer is still low so there is still little early detection. The study also mentioned that the higher the level of women's education, the better the knowledge[11]. According to research Aweke, Ayanto, &Ersado (2017) conducted in Ethiopia said that women who have a negative attitude about early detection of cervical cancer do not do early detection. This negative attitude is influenced by women's low knowledge about cervical cancer and early detection[12]. Research conducted by Gianfranco et al., (2015) proves that the level of education is related to the behavior of early detection of cervical cancer [13]. Angelina (2016) also found that occupational status is related to the early detection of cervical cancer VIA method [14].

2 Method

Cross-sectional study was conducted in the Kampung Melayu's Health Center 2018 from May to June 2018. The subjects of this study were women aged 30-50 years old. The sample size was calculated using a different proportion hypothesis test formula Lemeshow, which resulted in 161 subjects, and 10% percent drop rate was considered. The final sample size calculated was 180. Inclusion criteria include married women mothers aged 30-50 years old. The sampling was done by systematic random sampling. Dependent variables were early detection of cervical cancer using the VIA test, and the dependent variables were level of education, worker, knowledge, and attitude. It was measured by structured interviews using a questionnaire. Data were analyzed by using chi-square. The odds ratio and 95% confidence interval were calculated.

P-value <0.05 was considered to decide a statistically significant association between the independent and dependent variables.

3 Result

Table1. Frequency Distribution of Research Variables

Variable	Frequency (f)	Percentage (%)
VIA Test		
Yes	41	22.8
No	139	77.2
Education		
High	76	42.2
Low	104	57.8
Worker		
Not work	146	81.1
Work	34	18.9
Knowledge		
High	21	11.7
Low	159	88.3
Attitude		
Positive		11.1
Negative	20	88.9
	160	

Table 1 shows a small proportion of 22.8% of mothers who had VIA, 42.2% had low education, 57.8% not work, 88.3% had low knowledge of VIA test, and 88.9% had a negative attitude to VIA test.

Table 2. Relations of VIA test and Independent Variables

Variable	VIA Test						p-value	PR (95%CI)
	Yes		No		Sum			
	f	%	f	%	F	%		
Education							**0.026**	2.36
High	24	31,6	52	68.4	76	100		(1.16 – 4.8)
Low	17	16.3	87	83.7	104	100		
Worker							**1,000**	0.949
Not work	33	22.6	113	77.4	146	100		(0.39– 2.29)
Work	8	23.5	26	76.5	34	100		
Knowledge							**0,001**	7.6
High	13	61.9	8	38,1	21	100		(2.88 – 20.06)
Low	28	17.6	131	82.4	159	100		
Attitude							**0,021**	3.27
Positive	9	45	11	55	20	100		(1.25 – 8.56)
Negative	32	20	128	80	160	100		

Table 2 shows education, knowledge, and attitude showed association with VIA test, and work did not show association with VIA test. Analysis results show 31.6% of mothers with high education did VIA test, and 16.3% of mothers with low education did VIA test with PR = 2.36

(1.16 – 4.8). 22.6% of non-working mothers did VIA test, and 23.5% of working mothers did VIA test with PR = 0.949 (0.39– 2.29). 61.9% of mothers with high knowledge did VIA test, and 17.6% of mothers with low knowledge did VIA test with PR = 7.6 (2.88 – 20.06). 45% of mothers with positive attitude did VIA test, and 20% of mothers with negative attitude did VIA test with PR = 3.27 (1.25 – 8.56)

4. Discussion

Statistical analysis showed there was a significant relationship between level education with VIA test PR=2.36 (p=0.026). Women who had high-level education 2.36 times have the opportunity to do VIA test than women who had low-level education. This study is in line with research conducted by Silfia & Muliati, which states that the level of education is related to the behavior of early detection of cervical cancer. Women who have further education are more likely to conduct VIA examinations than WUS who have basic education [15]. This study is also in line with the study of Gianfranco et al. , which proves that the level of education is related to the behavior of early detection of cervical cancer [13]. Research conducted by Masturoh found that education level has a relationship with the behavior of cervical cancer detection examinations, where WUS with lower knowledge tend not to do early detection[16].

The level of education will affect the exposure of information, insights, and behavior of one's health. The higher the level of education, the better access to information, having good knowledge, and having a good relationship with health workers to seek treatment and obtain health information.

Statistical analysis showed there was a significant relationship between knowledge with VIA test PR=7.6 (p=0.001). Women who had a high knowledge of 7.6 times have the opportunity to do VIA tests than women who had low knowledge. It is in line with Omenge et al. finding that the level of knowledge related to the early detection behavior of cervical cancer [17]. Basu et al. reported that knowledge related to early detection behavior of cervical cancer; this study also mentioned that women's knowledge about cervical cancer is still low [11]. Silfia & Muliati mentioned that knowledge is related to the early detection behavior of cervical cancer, women who have high knowledge about cervical cancer and VIA test have the opportunity to behave early detection of cervical cancer 3.6 times greater than women with low knowledge [15].

Good knowledge of screening tests will increase the possibility of screening. Gu et al. reported that knowledge about cervical cancer and early detection of cervical cancer plays an important role in deciding on tests, increasing knowledge makes WUS motivated to do early detection [18]. Women who have good knowledge are more likely to have VIA examination than WUS with less knowledge [19]. The higher the level of knowledge, the higher the VIA screening behavior [20].

The low level of knowledge is one of the causes of the small number of WUS conducting VIA tests. It is possible because of a lack of understanding and a lack of WUS information about cervical cancer and VIA testing. Lack of understanding because there are still many WUS whose education level is low at 57.8%. The lack of information is due to the limited information obtained by WUS. This limited information can be intervened by conducting communication, information, and education related to cervical cancer and VIA tests. Providing information will

increase WUS knowledge about cervical cancer and VIA testing. The higher the level of one's knowledge, the ability to make decisions to make early detection of cervical cancer is also better.

Statistical analysis showed there was a significant relationship between attitude with VIA test PR=3.27 (p=0.021). Women who had a positive attitude 3.27 times have the opportunity to do VIA tests than women who had a negative attitude. This study is in line with other studies conducted by Aweke et al. in Ethiopia also found that there is a correlation between attitude and early cervical cancer detection behavior[12]. Research Masturoh, 2016 shows that there is a significant influence between attitude and WUS behavior in examining cervical cancer with VIA[16]. Research Yuliwati, 2012 Mothers who have a positive attitude are more likely to behave in VIA examination than mothers who have a negative attitude [21]. Research Dewi, et al. show that there is a tendency for WUS to have a good attitude, tend to conduct VIA examination rather than a WUS whose attitude is lacking[22].

Attitude cannot stand by itself. It must relate to other aspects. The attitude variable is not related to the early detection behavior of cervical cancer because most WUS has a low level of knowledge about cervical cancer and VIA tests. WUS feels that it has no possibility of suffering from cervical cancer. This is not true that every woman who has had sexual intercourse has a risk of suffering from cervical cancer. In addition, WUS also feels that the cost of VIA tests is expensive, so they do not want to do VIA tests, even though the VIA test is free, it is covered by health insurance. Counseling about the procedure for examining VIA is important to give to WUS. Many WUS think that the VIA test is scary, sick, and uncomfortable. Providing information regarding the free VIA examination fee that has been borne by BPJS is also very important. Many WUS think that the cost of examining VIA test is expensive, and the examination is not free. This makes WUS don not want to do VIA test.

5 Conclusion

Women who had good knowledge tend to do early detection of cervical cancer. It is necessary to increase understanding and eliminate the limitations of information obtained by women. Routine socialization, spreading information through health promotion media, print media, online media, social media, should be done to increase knowledge and improve women who do early detection of cervical cancer with VIA method.

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