



The effect of screening to the perception of needs and desires following visual inspection with acetic acid as detection of cervical cancer

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Abstract

Background: Target of Visual Inspection with Acetic Acid (VIA) test is 10% per year. This study aimed to analyze the effect of screening on the needs and desires of mothers to carry out VIA tests.

Methods: This research is analytic observational. The study was conducted from February to March 2017. Analysis of the data used in this study was a linear regression analysis with $p < 0.05$.

Results: Mothers who said there had never been a screening of 71.9% had a low need and desire for VIA examinations. The result of data analysis showed that screening had significant to the perception of need and desire to follow VIA test = 17.2% ($P = 0.000$; $\beta = 0.172$). It indicates that the lower the screening and desire for VIA examination.

Conclusion: Screening has a significant and positive influence on the needs and desires of mothers to carry out VIA test.

Keywords: cervical cancer, perception of needs and desire, screening

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INTRODUCTION

Cervical cancer is a severe and potentially life-threatening illness with adverse effects on the physical and psychological well-being of patients (Widyastuty, et al. 2019). Cervical cancer is a disease whose cases continue to increase from year to year. Cervical cancer can also be prevented because the process of development is slow, which is about 10 years. The stages of the development of pre-cancerous lesions before eventually becoming invasive may be recognized through a cytology screening program. The cure rate of cervical cancer is relatively high if it is diagnosed before developing into cancer (Mishra, et al. 2011). The development of abnormal cells in the cervix (uterine neck) is cervical cancer. More than 92,000 deaths in the female population due to cervical cancer were reported in agreement with WHO. The number of cervical cancer deaths is 10.3 percent in total (Fajriani, et al. 2019). 158,000 new cervical cancer cases have been reported, and 95,766 have been reported in Southeast Asia. Cervical cancer is the most prevalent disease in Indonesia among women 0,8 0/00 (Zuardin et al. 2019).

Cervical cancer is the most easily cured if it is known from the beginning of its growth. The sooner it is detected, the elimination of cancer seeds will be easier. The morbidity and mortality rate caused by cervical

cancer must be reduced. Therefore, prevention efforts need to be implemented, one of them is early detection. The first screening is recommended within the first 3 years after being sexually active (Kementrian et al. 2013; Mahbub, et al. 2017). In certain countries, cervical cancer screening services are not available and, in some, cervical cancer prevalence and mortality have not been substantially decreased. In spite of their scarce health services and other overlapping health interests, the facilities and expertise required for cytology screening remain beyond the scope of many high-risk developing countries. For high-risk low-resource environments, a simple, effective, and low-cost alternative to cervical cytology is urgently needed to prevent cervical cancer (Basu et al. 2003).

The public can access early cervical cancer detection services in all Public Health Center in Surabaya. The method at the Public Health Center is Visual Inspection with Acetic Acid (VIA) conducted by trained midwives. VIA examination has been covered by Social Insurance Administration Organization (BPJS). People who already have a BPJS card can check

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themselves through VIA for free. People who do not have a BPJS card can get VIA services at the Public Health Center by paying IDR11,500.00/check. Not all women aged 30-50 years old in Surabaya city have accessed the VIA examination services available at the Public Health Center so the amount of VIA examination coverage at the primary health care is still low (Mahendradhata et al. 2017). The early detection of cervical cancer through VIA method is one of the performance indicators in the Non-Communicable Disease control program. The basis of VIA is that a 'naked-eye' examination after the use of acetic acid shows most preinvasive and invasive cervical lesions. The insertion of a vaginal speculum, and 3-5% acetic acid solution is used using a cotton swab, followed by a halogen-lamp check of the cervix after a one-minute wait. The test results can be perceived as having positive acetowhitening (VIA positive) and negative acetowhitening (VIA negative) (Mustafa, Jindal, and Singh 2010).

VIA examination as early detection of cervical cancer is one of the women's reproductive health services. Lack of socialization about the importance of reproductive health and difficult access to reach health services for women, especially impoverished families, are the main causes of the low access to reproductive health services. Information about how to maintain health at a low cost is also limited. The varied knowledge of cervical cancer found in worldwide studies indicate that it is important to enhance education in cervical cancer prevention (Feriawati et al. 2018). Knowledge is the product of a process of human need to source information and the intensity of individual perception as per context, is very influential to the processing of knowledge. One's knowledge about a topic contains negative and positive aspects that determine attitude (Idris & Palutturi 2019). This study aimed to analyze the effect of screening on the needs and desires of mothers to carry out VIA tests.

MATERIALS AND METHODS

This type of research was analytical operational design using cross-sectional design. The population in this study were all married women aged <50 years who were in the work area of 63 health centers in the city of Surabaya in 2016. Sampling at selected health centers was done by means of multistage random sampling of 183 people in 2 health centers in the city of Surabaya. The sample in this study as that part of the population were married women and aged <50 years in the working area of the selected healthcare centers in Surabaya and were willing to be interviewed with the exclusion criteria, never check for early detection of cervical cancer in addition to the VIA method, and never check VIA check more than once, and already menopause.

Table 1. Screening Activities According to Mothers in the Work Areas of Two Surabaya Health Centers in 2017

Screening	Frequency (n)	Percentage %
Screening Existence		
Ever existed	69	37.7
Never Existed	114	62.3
Screening Organizer		
Public Health Center	64	92.8
Hospital	5	7.2

The independent variable in this study was screening, while the dependent variable in this study was the perception of the needs and desires of VIA services. Analysis of the data used in this study was a linear regression analysis with $p < 0.05$ to determine the effect of screening variables on the needs and desires of VIA services.

RESULTS

Characteristics of Respondents

Most of the mothers were in the age range of the risk group (30-50 years) of 79.2%. Women aged 30-50 years are the main targets of VIA inspection. This is because women at that age are most at risk for cervical cancer compared to other age groups. Mothers of two Public Health Centers in this study were in the age group at risk of cervical cancer. They mostly had high and low education levels, i.e., 70.3% of senior high school graduates and 15.2% of junior high school graduates. Most mothers (89.6%) in the two work areas of the Public Health Centers in Surabaya city worked as housewives.

Screening

Screening in this study was the implementation of early detection of cervical cancer using the VIA method conducted outside the main service building, for example, held in the village/neighborhood or workplace. Screening activities are usually carried out in the form of social services or special holidays.

Table 1 shows that 37.7% of mothers say they had followed the screening method. That means screening activities were still in the poor category. The Public Health Center conducted the existing 92.8% screening. Based on these data, it concludes that the Public Health Center and other health service facilities, such as hospitals, were still not optimal in carrying out VIA inspection activities outside the main service facility building.

Based on **Table 2**, mothers who never knew about screening activities in the surrounding environment tended to have a low need and desire for VIA inspection compared to mothers who knew there was screening. As many as 71.9% of mothers stated there was no screening, so the need and desire to take VIA inspection was low. Moreover, those who knew the existence of screening were 58.0%, so the needs and desires of the checkup were high.

Table 2. Screening for the Needs and Desires to follow VIA Inspection by Mothers who Work Areas of Two Surabaya Health Centers in 2017

Screening	The Perception of Needs and desire to follow VIA inspection				Total	
	Low		High		(n)	%
	(n)	%	(n)	%		
Never Existed	82	71.9	32	28.1	114	62.3
Ever Existed	29	42.0	40	58.0	69	37.7
Total	111		72		183	100

Table 3. The Perception of Needs and Desires to Follow VIA Inspection by Mothers who work Areas of Two Surabaya Health Centers in 2017

The Perception of Needs and Desires to join VIA Inspection		Frequency (n)	Percentage %
The Perception of Needs to join VIA Inspection			
a. No need		57	31.1
b. Need it		126	68.9
Total		183	100
The Desires to Join VIA Inspection			
a. Do not want it		54	42.9
b. Want it		72	57.1
Total		126	100
Desired service facilities as a place to get VIA services			
a. Public Health Center		41	56.9
b. Medical specialist		3	4.2
c. Midwife practice		14	19.4
d. Hospital		12	19.4
Total		72	100

Table 4. The Perception of Needs and Desires to Check the Utilization of VIA Services by Mothers who Work Areas of Two Surabaya Health Centers in 2017

The Perception of Needs and Desires to join VIA Inspection	Frequency (n)	Percentage (%)
Low (they need it but do not want to join)		
Never Join the Inspection	49	90.7%
Ever Join the Inspection	5	9.3%
High (they need it and want to join)		
Never Join the Inspection	6	8.3%
Ever Join the Inspection	66	91.7%

The Perception of Needs and Desire to Check Up

The perception of needs and desire to join medical checkup was the perception or response of mothers to take VIA inspection to maintain their reproductive health, which is to prevent cervical cancer, including the service facilities desired by the mother as a place to check.

Based on **Table 3**, 68.9% of mothers needed to do an VIA inspection. It means that their needs to use VIA were adequate, but of 126 mothers who need the examination, 42.9% do not want to take VIA. Based on these data, it concludes that the needs and desires of mothers to conduct VIA examinations were still low.

Table 4 indicates mothers who have low needs and desires to do inspection tend not to utilize VIA services. This is evidenced by the data that 90.7% of mothers with low VIA needs and desires have never used VIA services, while of mothers with high needs and desires to examination, 91.7% had used VIA.

DISCUSSION

Based on the theory, the first stage in accessing services is the perception of need and desire to join the health examination. Two dimensions from the service provider side and the target community side influence the needs and desire to take the medical checkup. In this

study, the need and desire to join VIA inspection as early detection of cervical cancer is perceived as an initial stage before they utilize VIA services. Perception of mothers of the need and desire for VIA examination is the result of interaction from the promotion and screening from the service providers and their perception about the risk of cervical cancer (Levesque, et al. 2013). Development, etiology, symptoms, risk factor and stage of cervical cancer are the knowledge level of cervical cancer, as described in respondents' self-report using the open question and the structured objectives through questionnaires. In addition, the Nigerian study also found that increasing education is significantly linked to cervical cancer knowledge. (Feriyawati et al. 2018).

In the previous study, VIA was significantly higher than in cytology (range 30-77%) and ranged from 63 percent to 77 percent. However, VIA's specificity is low (44-73%) compared to cytology's specificity (99-99.8%). Although VIA is a suitable alternative to cytology in low resource environments, it has to be carefully monitored to ensure that injury positivity and the rates of detection remain satisfactory. VIA can be performed with limited facilities and can be performed by auxiliary health workers and in field conditions. The same aspect was seen in a report where gynecologists measure VIA's test

output in comparison with paramedical workers (Mustafa et al. 2010).

VIA is an alternative method of Pap smears because they are easily carried out at a cost cheap. Pap smear examination requires a doctor pathologist and to find out the results of the examination, the patient must come again to doctor examiner one until two weeks later. VIA examination can perform by general practitioners, nurses or midwives trained, and do not need a pathologist. If test Negative VIA results obtained, patients can find out immediately without must go back to the doctor to find out the results. Patients who live in remote areas can directly find out the results of the VIA examination without having to visit the health facility again. Screening method using the VIA technique is suitable for remote areas. VIA has a role in cervical cancer screening in underdeveloped countries and becomes alternative techniques for screening because it's simple, easy, treat it fast, effective, inexpensive, and the results are quickly known (Mastutik et al. 2015).

Based on the results of the study, it found that 62.3% of mothers stated they had never known any VIA screening activities in the neighborhood around their residence. Mothers who said there had never been a screening of 71.9% had a low need and desire for VIA examinations. Based on statistical test results, it indicated screening had a significant and positive influence on the needs and desires of mothers on VIA inspection. Health education about VIA can increase the

motivation of fertile women in cervical cancer detection. Cervical cancer will have an impact on issues of sexuality and quality of life. The act of early detection also can be influenced by individual values. A qualitative study shows that women assume that they always feel healthy despite having been married for 15 years influence not to do early detection (Trihartini et al. 2019).

Therefore, more people are concerned in taking care of cervical cancer and the Pap smear test for prevention, including husbands who have to be aware that women's health often comes under their obligations because they are also engaged in sexual health for their spouses (Feriyawati et al. 2018). The lack of screening activities causes low need and desire to VIA inspection. This research is limited to measuring only how the implementation of VIA service screening to the perception of needs and desires of the community.

CONCLUSION

Screening has a significant and positive influence on the needs and desires of mothers to check themselves using the VIA method as early detection of cervical cancer.

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