

## ARTICLE

# Mother's knowledge and attitudes towards Visual Acetate Acid Inspection test in Surabaya

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## Abstract

**Background:** The incidence of cervical cancer in Indonesia is still high due to the poor awareness of married women about the necessity to check themselves with a pap smear/IVA test for early detection and possible cure. The implementation of the IVA examination still experiences obstacles due to lack of knowledge and fear.

**Design and Methods:** This study aims to determine the relationship between knowledge and attitudes of mothers with IVA test, using the analytical and cross-sectional study. Data were obtained from mothers that visited the family planning section of the Maternal and Child Health (MCH) Center. Out of a total of 184 mothers, 126 samples were chosen by purposive sampling technique.

**Results:** The results showed that 59.5% of respondents had scarce knowledge on IVA tests, 66.7% had unsupportive attitudes towards it, and 54.8% were not willing to carry out the tests. This study explains that there is a significant relationship between knowledge and attitude with a P-value of 0.000.

**Conclusions:** In conclusion, various factors influence the participation of IVA examination, namely lack of knowledge, inability to access information, and fear.

## Introduction

The human reproductive health is important for both genders, however, there are so many health problems related to it that are especially important for women, such as cervical cancer, which is the first female killer disease in the world.<sup>1</sup> According to the World Health Organization (WHO), cervical cancer is currently one of the main causes of death in women all over the world.<sup>2</sup> Its prevalence across the world has risen to 1.4 million, with 493,000 new cases and 273,000 deaths. According to this analysis, approximately 80% of the victims are from developing countries in South Asia, Southeast Asia, Africa, Central America, and South America.<sup>3</sup> In Indonesia, over 15,000 cases of cervical cancer are detected yearly. However, approximately 8,000 such cases lead to

death. In 2011 the incidence of cervical cancer in Indonesia rose to 100 per 100,000 population, and its spread is discovered to be accumulating in Java and Bali. This figure is expected to increase by 25% in the next 10 years, assuming preventive measures are not taken.

Cervical cancer is curable when detected early. Some techniques used to detect early symptoms include pap smears, pap net, cervicography, Visual Acetate Acid Inspection (IVA) tests, high-risk type (HPV) tests, colposcopy, and liquid-based cytology.<sup>4</sup> Acetic Acid Visual Inspection Method (IVA) is a screening test for cervical cancer conducted by visual inspection of the cervix with the application of acetic acid. This method has been widely used in Public health center, BPS, and Hospitals. The visual inspection methods are easier, and screening is conducted within a broader scope. Their effectiveness has been proven by various studies.<sup>5</sup> However, during the implementation of these methods, certain problems are encountered, such as the reluctance of mothers to be examined due to embarrassment, lack of knowledge, and fear of feeling ill during the examination despite the counseling services provided by the staff of the health center on a monthly basis.<sup>6</sup>

Subsequently, the data obtained from the Siwalankerto Public Health Center in Surabaya stated that the IVA Test examination program has been held since 2009 and remains functional, although there is no increase in the number of mothers that participate in this yearly program: 2-5 persons undergo this test per month, with a target of 10 people. The number of mothers that participated in the IVA tests in the Siwalankerto Health Center from January to November 2016 amounted to 65, while the target for the year is 120. Additionally, *awareness* (counseling) is conducted on a monthly basis to only 25 mothers. Therefore, it is expected that the number of mothers willing to participate in the early detection of cervical cancer using the IVA test increases after the awareness.<sup>7</sup>

## Design and Methods

This study uses the analytical and cross-sectional study to determine the relationship between knowledge and attitudes of

### Significance for public health

*The incidence of cervical cancer in Indonesia is still high due to the poor awareness of married women about the necessity to check themselves with a pap smear/IVA test for early detection and cure, as cervical cancer is curable when detected early. Some techniques used to detect early symptoms include pap smears, pap net, cervicography, Visual Acetate Acid Inspection (IVA) tests. This paper describes the relationship between knowledge and attitudes of mothers with IVA test.*

mothers with IVA test. Data were obtained from mothers that visited the family planning section of the Maternal and Child Health (MCH) Center. Out of a total of 184 mothers, 126 samples were chosen by purposive sampling technique. Chi-Square test was used in the analysis between variables.

## Results and Discussion

Table 1 shows that only a small proportion of the respondents (40.5%) had a good knowledge of the examination, and this is influenced by several factors such as age, education, occupation, income, religion, and marital status. For what concerns the age factor, respondents between the ages of 20-30 years had lesser knowledge. Subsequently, as many as 42 respondents (58.3%), aged between 30-40 years, had a good understanding of the IVA test while 30 (66.7%) lacked knowledge. Therefore, the theory of maturity offers sufficient individual strength to be more experienced in thinking and working. In addition, an increase in age is in accordance with higher experience and knowledge possessed by a person.<sup>8</sup>

In addition to the educational perspective, it was discovered that 42 of the respondents (60.9%) with lesser knowledge had high school education. Therefore, the researchers concluded that the higher a person's education, the easier it is to obtain information and the more knowledgeable they tend to be; conversely, when an individual's level of education is poor, it hinders the acquiring of information and the understanding of the new values that are introduced. However, from an economic perspective, the 24 respondents (57.1%) who had income > Rp. 2,000,000/month, had also good knowledge. Therefore, a person's economic status also determines the access to the facility/services needed to increase knowledge. The higher the level of a person's economic status, the more health facilities/services are discovered through information media such as magazines, television, and newspapers, and they even consult specialists or experts. Additionally, the ease of obtaining information helps to speed the person's ability to acquire new knowledge.<sup>9</sup>

Knowledge is being aware or perceptive, and this occurs once a person or group of people tends to sense a certain object.<sup>10</sup> The act of sensing occurs by the use of the five human organs namely sight, hear, smell, taste, and touch. Most human knowledge is acquired through the eyes and ears. Additionally, knowledge is an important domain in the formation of a person's behavior.<sup>11</sup>

The mother's knowledge includes everything, and they need to know on cervical cancer and IVA tests. A person's knowledge is not only obtained from formal education, it is also acquired through informal means, for example, the mass media, electronic media, the environment, and an individual's experience. Mothers need to have good knowledge of cervical cancer and IVA tests because it is the most common gynecological carcinoma. This aids them to take preventive measures and treatment for those diagnosed with cervical cancer.

It was discovered that 66.7% of the respondents had a supportive attitude towards the IVA examination. However, factors such as economic status, education, occupation, and culture tend to affect the knowledge about the IVA examination and the fear of being diagnosed with cervical cancer during the test. From a cultural perspective, it was discovered that it is the norm for most people to check their health status only when they are critically ill or when the disease is severe. It was discovered that this was common among mothers who never participated in the IVA test, so it became a norm in the community. Many respondents had little knowledge of the IVA test because only a few people know that it

is a uterine examination. Conversely, people need to know more about the test, where it is conducted, the conditions before the examination is carried out, and recommendations for conducting it within a certain timeframe. Unfortunately, some people are still not aware of the test despite lots of awareness.

The results from the studies conducted showed that 57 respondents (45.2%) were willing to participate in the IVA tests, while 69 mothers (54.8%) were not willing to be examined. Certain factors cause mothers not to participate in IVA examination, such as fear of being diagnosed with cervical cancer during the test. People's fear of being diagnosed with cervical cancer is quite reasonable because assuming it is ascertained to be true during the examination, it tends to have a lot of consequences, including psychological effects. Another factor that affects it is the support from the family, especially the husbands. The husband's support greatly influences the perception and behavior of the mothers and can strengthen their confidence to undergo the test. This support is either through motivation, ordering, delivering, and continuous reminder of its importance.<sup>12</sup>

Their participation is influenced by other factors, such as education.<sup>13</sup> Educational factors tend to cause people to participate in the test because an educated person is aware of its importance. Furthermore, highly educated people tend to have a good under-

**Table 1. Characteristics of respondents by age, education, occupation, and family income**

Variables		Frequency (f)	Percentage (%)
Age	<20 years old	9	7.1
	20-30 years old	72	57.1
	30-40 years old	45	35.7
Education	Junior High School	51	40.5
	Senior High School	69	54.8
	University	6	4.8
Working status	Not working	87	69
	Working	39	31
Income	500,000 – 1,000,00	24	19
	1,000,000 – 1,500,000	27	21.4
	1,500,000 – 2,000,000	33	26.2
	>2,000,000	42	33.3
Knowledge	Good	51	40.5
	Moderate	0	0
	Poor	75	59.5
Attitude	Support	42	33.3
	Not support	84	66.7
Participating IVA test	Join	57	45.2
	Not join	69	54.8

standing of the examination.<sup>14</sup> The results from the research

**Table 2. Relationship between mothers' Attitude and participation in the IVA test**

Variables	IVA Test				P-Value
	F	Join %	f	Not Join %	
<b>Knowledge</b>					
Good	51	100	0	0	P = 0.000
Moderate	0	0	0	0	
Poor	6	8	69	92	
<b>Attitude</b>					
Positive	39	92.9	3	7.1	P = 0.000
Negative	18	21.4	66	78.6	

showed that most of the respondents had a high school education.

In addition, participating in IVA tests is also influenced by income. The results from the analysis obtained showed that most of the respondents earned > 2,000,000IDR/month, therefore it is assumed that they tend to access information through the media easily. This proves that the information obtained by an individual has an influence on the person's behavior. The direct and indirect role of health workers is also influential in conveying real and accurate information concerning cervical cancer.

The results from the interview stated that most of the mothers who did not want to participate in the IVA test were mostly scared of being diagnosed with cancer. However, many of the unemployed mothers or housewives did not participate in the examination because their poor level of knowledge. It embodies the attitude of those that do not intend to be examined due to economic, educational, occupational, and socio-cultural factors and fear of being diagnosed with cervical cancer during the test.

According to Notoatmodjo, to manifest a real deed, a supporting factor or enabling condition is needed. Subsequently, YKI East Java stated that the actions of mothers who support the efforts to prevent cervical cancer are certainly observed in their bid to participate in the tests as an alternative means of prevention in addition to pap smears.<sup>14</sup> A person's knowledge is obtained from experience and various sources, for example, mass media, electronic media, health workers, posters, relatives, etc.<sup>15</sup>

According to the research conducted on 126 respondents at the health center, it was discovered that all the mothers that had good knowledge of the IVA test were examined while 69 respondents (92%) lacked the knowledge and did not participate. In this study, only a small proportion of respondents with good knowledge of the test were examined. The results obtained from the attitude of the 126 respondents stated that out of the 42 mothers with a positive attitude towards the test, only 39 (92.9%) participated while 3 (7.1%) did not participate. Subsequently, out of 84 mothers with negative attitudes, 18 were examined while 18 others did not participate. The statistical test results (Table 2) from the chi-square obtained a p-value of 0,000 therefore there is a significant relationship between the level of knowledge and attitudes of mothers towards participating in the IVA tests.

Respondents with good knowledge of cervical cancer and IVA examination tends to have greater awareness concerning their health status. They are more likely to undergo an IVA examination. However, being knowledgeable does not necessarily make a person participate in the test consciously. This is due to various factors, including certain cultural practices that consider examinations of the genital areas a taboo, and their fear of the possible outcome. Conversely, respondents with lesser knowledge of cervical cancer and IVA examination tend not to realize the dangers and the importance of early detection. Therefore it becomes an inhibiting factor for an individual to be examined.

Knowledge is important in the formation of behavior.<sup>16</sup> Basically having proper knowledge supports good behavior and the better decision making in every action, including participating in the tests. This is caused by certain conditions, such as the high flow of information received by the local community, people's lifestyles, geographical factors, and differences in population characteristics. The publics' little knowledge of the importance of the IVA test is also caused by a lack of awareness concerning cervical cancer as well as information on how to prevent and detect it. From observations, it was stated that the respondents with a supportive attitude towards the examinations are more likely to participate in the IVA test. Their attitude in accordance with other factors such as the availability of facilities and characters of the health personnel. Furthermore, respondents that do not support the examination of

cervical cancer using the IVA test refused to be examined.

Humans are not born with a certain attitude or feeling rather it forms through development. The existence of attitude causes humans to act in a specific way towards objects and situations.<sup>16</sup> Therefore, it is a process of socialization in which a person responds according to the stimuli received. It is impossible to detect an individual's attitude before they acquire information or respond to an object. Despite the fact that it is reported to precede action, it is not necessarily an active deed to act on certain objects such as components of cognition, affection, and conation.

Knowledge or cognitive is an important domain for the formation of a person's actions. Conversely, it was discovered from both experience and researches that behavior developed in accordance with knowledge tends to be more enduring compared to conduct that is not shaped based on knowledge and attitude is the readiness or willingness to act and a predisposition of a behavior. Assuming an individuals' attitude is supportive towards the examination, then that person makes an effort to prevent cervical cancer by participating in the IVA test.

## Conclusions

In conclusion, various factors influence the participation of IVA examination, namely lack of knowledge, inability to access information, and fear.

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