

# Risk Factors Associated With Early Detection Of Cervical Cancer By The IVA Method In Women Of Childbearing Age In The City Of Ternate

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## Abstract.

*Background* : Cervical cancer is one of the main problems in women's health in the world, including Indonesia. According to the 2018 Global Cancer Observatory from the World Health Organization (WHO), the most common cancer cases in Indonesia are breast cancer, which is 58,256 cases or 16.7% of the total 348,809 cancer cases. Cervical cancer (neck of the womb) is the second most common type of cancer in Indonesia, with 32,469 cases or 9.3% of the total cases. *Objective*: To determine the risk factors associated with early detection of cervical cancer using Visual Inspection with Acetic Acid (IVA) ) in women of childbearing age in the Work Area of the Ternate City Health Center for Siko Treatment. *Methods*: This research is a quantitative analytic study with a cross sectional design. Data collection was carried out from December 2020 to January 2021. The population was all patients who underwent examinations at the Maternal and Child Health Polyclinic (KIA) at the Siko Care Health Center in Ternate City as many as 227 patients and a sample of 145 female patients of childbearing age from January to September 2020. Techniques sampling is simple random sampling. Data analysis used univariate and bivariate with chi-square test. The research variable consists of the dependent variable, namely early detection of cervical cancer, while the independent variables are knowledge, husband's support, access to information and culture. *Results*: Shows that age (46.9%), knowledge of VIA (50.3%), attitude (55.2%), husband's support (52.4%), access to information (62.1%), culture (51.7%), Support Officer (48.3%), early detection of cervical cancer IVA method (55.2%), while the bivariate results include: Age (0.000; OR=19,011; CI=8.095-44,647), knowledge (0.001; OR=2.86; CI=1.563-18.367), attitude (0.000; OR=215.524 CI=53,456-868.955), husband's support (0.002; OR=1.448 CI=1.688-11.933), access to information (0.000; OR=2,294; CI=1,574-15,976), culture (0,003; OR=2,202 CI=1,648-10,717), health worker support (0,000; OR=27,111 CI;11,023-66,680). *Conclusion*: There is a relationship between knowledge, husband's support, access to information and culture with early detection of cervical cancer against the IVA method. Based on the results of the study, it is recommended that the relevant agencies, namely the Siko Health Center, always improve health education to the community, especially mothers and husbands regarding early detection of cervical cancer through various media tools including leaflets, posters, flipcharts and other media. Through this counseling, it is hoped that the community will be more interested and understand the material presented more quickly

**Keywords:** Early Detection, Cervical Cancer, IVA.

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## I. INTRODUCTION

Cervical cancer is still a health problem for women in Indonesia due to its high incidence and mortality rate. The way to control cervical cancer is through early detection and treatment of precancerous lesions. Increasing the coverage of early

detection is very important in this control effort. Cervical cancer early detection program carried out in women aged 25 to 65 years, at least every 3 years until the age of 49 years and continued every 5 years thereafter can be estimated to reduce the mortality rate by around 80% [1]

According to data from the World Health Organization (WHO) in 2016 about 270,000 deaths from cervical cancer each year, and more than 90% occur in developing countries. In 2014, 265,672 women in the world died from cervical cancer (CFR=50.35%), of which 9 out of 10 cases died or 230,158 the number of women who died came from low-income countries, besides that 35,514 women or 1 out of 10 women died. 10 women come from high-income countries [2]. WHO data in February 2019, showed that the most common cancer cases in Indonesia were breast cancer, which was 58,256 cases or 16.7% of the total 348,809 cancer cases. Cervical cancer (neck of the womb) is the second most common type of cancer in Indonesia, with 32,469 cases or 9.3% of the total cases [3]. The incidence of cancer was 18.1 million new cases with a mortality rate of 9.6 million deaths in 2018 where 1 in 5 men and 1 in 6 women in the world had cancer and 1 in 8 men and 1 in 11 women died of cancer. . The incidence of cancer in Indonesia is 136.2/100,000 population, it is 8th in Southeast Asia, while in Asia it is 23rd. The incidence of breast cancer is 42.1/100,000 population with an average death rate of 17/100,000 population followed by cervical cancer. of 23.4/100,000 population with an average death rate of 13.9/100,000 population. Based on basic health research data (Risikesda) the prevalence of tumors/cancer in Indonesia shows an increase from 1.4/1000 population in 2013 to 1.79/1000 population in 2018 [4].

Examining the problem of cervical cancer prevention in Indonesia and the choice of methods that are easy to test in various fields, makes the method feasible to be chosen as an alternative screening method for cervical cancer. IVA is a new method of early detection of cervical cancer by applying acetic acid (vinegar) into the cervix. If a cancerous lesion occurs, there will be a slight whitish discoloration of the cervix being examined. The IVA method is easier, simpler, and able to be implemented so that screening can be carried out with a wider scope. It is hoped that the findings of early cervical cancer can be more due to the ability of IVA in early detection of cervical cancer [5]. Early detection of cervical cancer with VIA is a visual examination of the cervix using vinegar, which means looking at the cervix with the naked eye to detect abnormalities after applying acetic acid or vinegar (3-5%). The advantages of the Acetic Acid Visual Inspection (IVA) method are that it is easy, practical and very capable, can be carried out by health workers who are not gynecological doctors, can be carried out by midwives at every maternal health checkpoint, the tools needed are very simple, the VIA screening method is appropriate. for a simple service center. Cervical cancer screening by visual examination shows precise diagnostic accuracy when used for early detection of cervical lesions. This is a simple and easy method that

is introduced progressively in health insurance policies. In addition, various studies conducted by the International Agency for Research on Cancer (IARC) and WHO in India and Africa have proven that IVA has a higher test accuracy compared to pap smears. Average IVA sensitivity 77% (58% -94%) [6]

The cancer prevention program, WHO recommends the use of the down staging method in conducting early detection of cervical pre-cancer in developing countries, namely through increasing public awareness and knowledge about cancer, including visualization inspections using acetic acid (IVA test). The IVA test method has been widely used, such as in health centers, independent practice midwives, hospitals. The IVA method is easier, simpler, cheaper and able to be implemented, so that screening can be carried out with a wider scope and it is hoped that early cervical cancer findings will be more numerous [7]. The data shows that the number of patients who underwent cervical examination in 2017 was 1287 patients, an increase in 2018 which was 1419 patients, then decreased in 2019 which was only 699 patients [8]. While the number of patients who carried out cervical examinations in the Siko Health Center area in 2017 was 849 patients, an increase in 2018 which was 961 patients. This figure then decreased in 2019 which was only 476 patients and from January to September 2020 as many as 227 patients [9].

Cervical cancer is a malignancy originating from the cervix or cervix. Early detection of cervical cancer can be done through VIA examination. VIA examination is more effective and efficient in terms of time, method, and cost. Public awareness, especially for women of childbearing age (WUS), to conduct VIA examinations is still low. This happens because they feel ashamed, feel there are no symptoms of cervical cancer, and feel no need to get checked out. Knowledge affects the interest of women of childbearing age in participating in the VIA examination. Knowledge or cognitive is a very important domain for the formation of one's actions or overt behavior. Knowledge is influenced by intrinsic factors, namely education and age and extrinsic factors, namely environmental, socio-cultural and parity. Community participation in the IVA examination is influenced by access to information [10].

## II. METHODS

This research is a quantitative analytic study with the Cross-Sectional method, which is a study that studies the relationship between risk factors and effect factors, which makes observations or measurements of variables once and at the same time [11]. The study was conducted from December 2020 to January 2021 with 145 samples from a total population of 227, the sampling technique was simple random sampling, namely patients who came to the Siko Health Center from January to September 2020. Data analysis used univariate and bivariate with chi-square test on dependent and independent variables.

### III. RESULT AND DISCUSSION

Based on the results of the study, the following results were obtained:

**Table 1.** Analysis of Frequency Distribution with Knowledge, Husband's Support, Access to Information and Culture of Early Detection of Cervical Cancer with the VIA Method.

Variabel	n	%
<b>Age</b>		
Risky 35 Years	68	46,9
No Risk 45-54 Years	77	53,1
<b>Knowledge</b>		
Good	73	50,3
Less	72	49,7
<b>Attitude</b>		
Good	80	55,2
Less	65	44,8
<b>Husband Support</b>		
Good	76	52,4
Less	69	47,6
<b>Information access</b>		
Good	90	62,1
Less	55	37,9
<b>Culture</b>		
Good	75	51,7
Less	70	48,3
<b>Health Officer Support</b>		
Good	70	48,3
Less	75	51,7
<b>Cancer Early Detection</b>		
Good	80	55,2
Less	65	44,0
<b>Total</b>	145	100,0

**Table 1.** shows that based on the results of processing the research data, it can be seen from 145 respondents with Age Not at Risk 45-54 Years 77 (53.1%), lack of knowledge 72 (49.7%), less attitude 65 (44.8% ), husband's support is less 69 (47.6%), access to information is less 55 (37.9%), culture is less 70 (48.3%), support for health workers is less 75 (51.7) and early detection is less 65 (44.0%).

**Table 2.** Chi-square analysis of the relationship between knowledge, husband's support, access to information and culture of early detection of cervical cancer using the VIA method.

Variabel	Early detection				P-Value	OR 95% CI
	Good		Less			
	n	%	n	%		
Risky 35 Years	58	40,0	10	6,9	0.000	19,011 CI1; (8,095-44,647)
No Risk 45-54 Years	18	12,4	59	40,7		

<b>Knowledge</b>	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>		
Good	50	34,5	29	15,9	0,001	2,86; C1 ;(1,563-18,367)
Less	30	20,7	42	29,0		
<b>Attitude</b>						
Good	73	50,3	7	4,8	0,000	215,524 C1; (53,456-868,955)
Less	3	2,1	62	42,8		
<b>Husband Support</b>						
Good	51	35,2	25	17,2	0,002	1,448 C1;(1,688-11,933)
Less	29	20,0	40	27,6		
<b>Information access</b>						
Good	63	43,4	27	18,6	0,000	2,294; C1; (1,574-15,976)
Less	17	11,7	38	26,2		
<b>Culture</b>						
Good	50	34,5	25	17,2	0,003	2,202 C1;(1,648-10,717)
Less	30	20,7	40	27,6		
<b>Health Officer Support</b>						
Good	61	42,1	9	6,2	0,000	27,111 CI;(11,023-66,680)
Less	15	10,3	60	41,4		

**Table 2.** shows that there is a significant relationship between age (0.000), knowledge (0.001), attitude (0.000), husband's support (0.002, access to information (0.000), culture (0.003), health worker support (0.000) with early examination activities. cervical cancer by the IVA method.

**Relationship of Age with Early Detection of Cervical Cancer IVA Method.**

From the results of data management, it can be seen that respondents have an Age at Risk 35 Years 58 (40.0%). This means that the older a person is the more susceptible to cervical cancer, the level of immunity begins to decline, when immunity begins to decline, the HPV virus is easy to attack the body, but if the level of knowledge and maturity of one's thinking is not good, it is difficult for someone to act as recommended. The results of this study are relevant to the results of a study conducted in 2014 at the Jatinegara Health Center, Jakarta, that most of the positive VIA cases increased at the age of >35 years [12].

Increasing age should make it easier to adapt to the surrounding environment so that they can better understand the benefits of early detection of cervical cancer with the IVA method. The results of statistical tests obtained a value of 0.001 so that the Ha hypothesis is accepted, it can be concluded that there is a significant relationship between age and WUS participation in early detection of cervical cancer using the IVA method. This result is relevant to the study in 2020 which stated that, based on the Chi-square test, there was a significant relationship between age and the incidence of cervical pre-cancerous lesions with  $p = 0.037$  ( $p < 0.05$ ). The increased risk of cancer in the elderly is a combination of increasing and increasing the length of time exposure to carcinogens and the weakening of the immune system. Not to mention during this period health problems are replaced with pregnancy disorders, fatigue due to caring for

children and the demands of a career. Obesity, cancer, depression and certain serious illnesses begin to gnaw at this age [13].

Age >35 years has a higher risk of cervical cancer, the increased risk of cervical cancer in the elderly is caused by the increase and length of exposure to carcinogens and the weakening of the immune system due to age. When the age of 35 years, the location of the squamocolumnar junction epithelium which was previously in the inner cervix shifted to the outside of the uterine cervical canal, where the junctions between these epithelia tend to proliferate easily and if uncontrolled, cell dysplasia can occur which at one time can trigger malignancy [14]. Other risk factors that influence cervical cancer are age > 35 years, age at first marriage to have sexual intercourse, high sexual activity, multiple partners, parity, use of oral contraceptives and smoking. The older the age, the higher the risk of cervical cancer. The prevalence of cancer is quite high in the age group of 25-34 years, 35-44 years, 45-54 years. This age group is more at risk of developing cancer due to unhealthy behavior and eating patterns, less consumption of vegetables and fruit, proportion of the population who smokes, obesity, high fat consumption, consumption habits of burnt/baked food and consumption of animal foods with preservatives [4].

#### **Knowledge Relationship With Early Detection of Cervical Cancer IVA Method.**

From the results of data management, it can be seen that the respondents have good knowledge. This means that the respondents most likely have a desire to do cervical cancer screening with the IVA method. The results showed that most of the respondents had good knowledge (50.3%) regarding early detection of cervical cancer using the IVA method. These results are in line with research conducted [15], the data obtained from the questions most answered by respondents were about the classification of uterine cancer stages (85%), risk factors for uterine cancer (65%), the etiology of uterine cancer (50%) and the benefits of IVA. test (55%). After being given Communication, Information and Education (KIE) data can be obtained knowledge of the classification of uterine cancer stages (37.5%), risk factors for uterine cancer (47.5%), the etiology of uterine cancer (30%) and the benefits of the IVA test (57.5%). Based on this data, there was an increase in respondents' knowledge about cervical cancer. However, the benefits of the IVA test were still found 57.5% of respondents did not understand it, so that the KIE provided had not been able to change the knowledge of the respondents as a whole. Good knowledge about cervical cancer is needed by WUS in order to do early prevention. This shows that health promotion regarding early detection of cervical cancer with the IVA method is more optimized.

Knowledge is the result of knowing, and occurs after people sense certain objects. Sensing occurs through the five human senses, namely, the senses of sight, hearing, smell, taste and touch. Most of human knowledge is obtained through the eyes and ears. From experience and research it is evident that behavior based on knowledge will be more lasting than one that is not based on knowledge [16]. This is in line with Lawrence Green's theory, behavior is formed from 3 factors, one of which is

predisposing factors, which are manifested in knowledge [17]. Green explained that knowledge about health may be important before personal health action occurs. However, the expected health action will not be realized unless a person gets a strong impulse from himself which makes him act on the basis of the knowledge he has [18].

In general, behavior is not only influenced by knowledge factors, but can be influenced by other factors. Therefore, women who have a high level of knowledge do not necessarily carry out an IVA examination than women who have a low level of knowledge, besides this can also be due to a feeling of reluctance to be examined because of shame at the time of the examination, fear of the reality of the results of the examination that will be faced and fear of feeling sick at the time of examination [19] Knowledge is an important but not sufficient factor in shaping a person's health behavior change. In an effort to increase the level of knowledge of WUS, it is necessary to carry out regular promotions or counseling so that WUS and the wider community are more familiar with early detection of cervical cancer with the IVA method.

The results of the statistical test obtained a value of 0.001 so that the  $H_0$  hypothesis is accepted, it can be concluded that there is a significant relationship between the level of knowledge and the participation of WUS in the early detection of cervical cancer using the IVA method. This result is in line with research in 2018 which states that, based on statistical tests obtained a value of  $<0.05$ , it can be concluded that there is a significant relationship between the level of knowledge and the participation of WUS in the early detection of cervical cancer using the IVA method. This can be because the level of knowledge is a predisposing factor that facilitates or dispositions the occurrence of a person's health behavior, namely participation in early detection of cervical cancer using the IVA method [20].

Knowledge is very closely related to education, where it is hoped that with higher education, the person will have wider knowledge. However, it should be emphasized that it does not mean that someone with low education is absolutely low in knowledge. A person's knowledge of an object contains two aspects, namely positive aspects and negative aspects. These two aspects will determine a person's attitude, the more positive aspects and objects that are known, the more positive attitudes will be towards certain objects. One form of health object can be described by knowledge gained from own experience [21].

### **Relationship between Attitude and Early Detection of Cervical Cancer Method IVA**

Based on the results of the study showed that a good attitude towards early detection of cervical cancer with the IVA method was 80 (55.2%) good. These results are relevant to the study in 2020, which showed that the percentage of people who had never carried out an early detection examination of cervical cancer using the IVA test method had a good attitude (73.5%) [22]. This is because attitude is a reaction or

response that is still closed from a person to a stimulus or object. The manifestation of that attitude cannot be directly seen, but can only be interpreted beforehand from closed behavior. WUS must not only have a good level of knowledge regarding the early detection of cervical cancer using the IVA method, but it must also be reflected in attitudes. WUS with a positive attitude will affect the desire of WUS to want to carry out early detection of cervical cancer using the IVA method [20].

Factors that influence attitudes are: personal experience, influence other people who are considered important, cultural influences, mass media, educational institutions and religious institutions and emotional factors. Personal experience can be the basis for the formation of attitudes when the experience leaves strong impression. Attitudes will be more easily formed if personal experience This occurs in situations involving emotional factors. in women of childbearing age, all have had sexual intercourse which means they also have risk factors for cervical cancer [23]

The results of statistical tests obtained a value of 0.001 so that the  $H_a$  hypothesis is accepted, it can be concluded that there is a significant relationship between attitudes and WUS participation in the early detection of cervical cancer using the IVA method. These results are relevant to research in 2020 which states that, based on statistical tests, a p value of  $<0.05$  was obtained, which means that there is a significant relationship between attitudes and early detection of cervical cancer using the IVA test method [22]. An attitude has not automatically manifested in the form of practice. For the realization of an attitude to become a real action (practice), supporting factors or enabling conditions are needed. Attitude determines a person to be better. Efforts that can be made to shape this attitude can be realized through empowering health workers to provide an understanding of the importance of early detection of cervical cancer through the IVA method to the community on a regular basis. A positive attitude will bring up the behavior of women of childbearing age (PUS) that are good for early detection of cervical cancer through the IVA method [24].

### **Relationship of Husband's Support with Early Detection of Cervical Cancer Method IVA**

From the results of data processing, it can be seen that the respondents have good husband support. This means that the husband has a good understanding so that it is easier to build trust and provide motivation to the couple in making decisions, meaning that the higher the husband's support, the greater the desire of the couple to want to do an IVA cancer early detection examination. The results showed that most of the respondents received good husband support (52.4%) regarding early detection of cervical cancer with the IVA method.

This result is in line with research (Istiyannah Ayuningtiyas and Rospitasari, 2018) it can be seen that most of the respondents get 61% good husband support. Husbands who provide support to their wives will form good behavior. On the other hand, husbands who do not provide support to their wives will form unfavorable behavior. There are other factors that can affect the husband's lack of support such as



work, medical personnel and the environment. The husband is busy with his work, either work at work or household work, so there is a lack of knowledge and information about early detection of cervical cancer with the IVA method. There is still a shortage of medical personnel and there are regular promotions or counseling provided by medical personnel and the local Health Service to WUS regarding the IVA test, thus affecting the support given by the husband to perform the IVA test as an early detection of cervical cancer. Meanwhile, the environment plays a role in shaping a healthy lifestyle so that WUS wants to maintain reproductive health and there is a sense of shame and fear when doing the IVA test (Istiyannah Ayuningtiyas and Rospitasari, 2018)The lack of husband's support during the IVA test was due to the absence of counseling on reproductive health for couples of childbearing age who included their husbands. This makes husbands less concerned about the reproductive health of their partners, most husbands assume that the wife's reproductive health is a wife's needs, so that the wife tries to maintain her reproductive health by seeking information on her own through various media of information regarding reproductive health, especially in the VIA examination [26].

Statistical test results obtained value 0.002 so that the  $H_a$  hypothesis is accepted, it can be concluded that there is a significant relationship between husband's support and WUS participation in early detection of cervical cancer with the IVA method. These results are in line with research conducted in 2019 showing that there is a significant relationship between husband's support and VIA examination behavior, it can be seen from  $0.021 < 0.05$ . These results indicate that the more husbands support their wives to carry out VIA examinations, the more regular the behavior of VIA examinations on mothers will be. [27]Husband's support in the form of motivation, encouragement, information, empathy or assistance that can make other individuals feel more calm and secure. Husband's support can bring a sense of pleasure, security, satisfaction, comfort and make the individual concerned feel emotional support that can affect the welfare of the human soul. [28].

Husband's support is the most dominant factor influencing the participation of women of childbearing age in early detection of cervical cancer compared to knowledge, attitudes and access to information by women of childbearing age. Strong support from the closest people, including husbands, tends to make respondents motivated. The husband's role is very strong in providing support for women to carry out health checks. Apart from being a provider of funds, the husband also plays a role in making decisions about where to seek help and health treatment. Husband and family are the closest people to women of childbearing age to exchange ideas and information [28].Husband's support is one form of interaction in which there is a relationship of mutual giving and receiving of real assistance by the husband to his wife. Husband's support is one form of interaction in which there is a relationship that gives and receives real help, this assistance will place the individuals involved in the

social system which will ultimately be able to provide love, attention and a sense of attachment to both the social family. nor [26]

### **Relationship of Access to Information with Early Detection of Cervical Cancer Method IVA**

From the results of data management, it can be seen that respondents obtain information about early detection of cervical cancer, both from health workers and through the media, this is supported by a good level of understanding of respondents so that a person tends to have a greater desire for early detection of cervical cancer. The results showed that most of the respondents had good access to information (62.1%) regarding early detection of cervical cancer using the IVA method.

This result is not in line with research [29] which has less access to information 73.3% regarding the behavior of early detection of cervical cancer using the IVA method.

This is because not all WUS have not received information about the dangers of cervical cancer and cancer early detection tests. The lack of information from the puskesmas and health offices makes the public less understand and care less about the dangers of cervical cancer which can be prevented from an early age. In addition, WUS who do not understand become easily afraid of the test and tend to avoid being tested [29]. The statistical test results obtained a value of 0.000, so that the  $H_a$  hypothesis is accepted, it can be concluded that there is a significant relationship between access to information and WUS participation activities in early detection of cervical cancer with the IVA method. These results are in line with research [30] that can be seen from  $0.000 < 0.05$  then  $H_0$  is rejected and  $H_a$  is accepted so that it can be concluded that there is a significant relationship between information exposure in early detection of cervical cancer with the IVA method. This shows that the more WUS is exposed to information, the more it will encourage health behavior.

Information can be received through direct officers in the form of promotions or counseling, education and output devices through broadcasts of dasawisma groups or others through mass media, leaflets, broadcasts and others. In this case, the behavior of early detection of cervical cancer with the IVA method in WUS is also influenced by experience in obtaining information. To improve access to information received by WUS, apart from being done through print and electronic media, it can also be maximized by conducting promotions or counseling either formally (socialization) or informally such as social gathering, recitation groups for mothers. Therefore, it is necessary to intensify socialization regarding early detection of cervical cancer with the IVA method from all stakeholders so as to increase access to information [31].

Print media and electronic media as a means of communication to provide information related to health problems, one of which is the early detection of cervical cancer with the IVA method. Various forms of print and electronic media have a major influence in shaping public opinion and trust. Submission of information as the main task of health workers at the Siko Health Center in Ternate City. The existence of new

information about a matter provides a new constructive basis for the formation of attitudes and actions to shape health behavior.

### **Cultural Relationship With Early Detection Of Cervical Cancer IVA Method**

Culture begins with the ability of human reason and mind in reaching, responding to, and overcoming the challenges of nature and the environment in an effort to achieve the needs of their lives, with this reason humans form a culture. Before we elaborate further on the meaning of religious culture, we will first describe the definition of each word, because in the sentence "religious culture" there are two words namely "culture" and also "religious" [32].

Etymologically, culture can be plural, which means being culture. This word comes from the Sanskrit *budhayah*, which is the plural form of mind which means reason, or everything related to the human mind. Culture is all the creation of taste and human initiative in social life. In a broad sense, culture is everything on this earth whose existence was created by humans, as well as other terms that have the same meaning, namely culture which comes from the Latin "*colere*" which means to work or cultivate, so that culture or culture here can be interpreted as all human actions to process or do something [33]. A culture can be shaped into several things, namely artifacts, activities and systems of ideas or ideas. One example of culture in the form of artifacts is objects that are the result of human work, while activity culture can be translated in the form of dance, sports, social activities, and ritual activities. It is different from culture in the form of an ideal system or idea. This cultural system can be defined as a mindset that exists in the human mind [33].

From the results of data processing, it can be seen that the respondents have good cultural support. There is no prohibition on cervical cancer examination, this is also seen from the good level of education in the respondent's environment. This will make it easier for respondents to build confidence in doing cervical cancer screening with the IVA method at the Siko Health Center in Ternate city. The results showed that some respondents had a good culture (75%) regarding early detection of cervical cancer using the IVA method. This result is not in line with research [34] which has a social culture that does not support 65% regarding breast cancer and cervical cancer.

Behavior and values in society will shape the pattern of life of the community and this is known as culture. Culture develops thousands to hundreds of years because humans live together and exchange experiences in certain environments. Culture is constantly changing, sometimes slowly sometimes quickly as a result of the social relations between people and various cultures. A person's behavior is very dependent on that person's knowledge, where a person's behavior is strongly influenced by the social culture where he comes from. [35]. According to Walgito in Bauto 2014, humans will always be influenced by the circumstances around them, behavior and ways of thinking to respond to an event that occurs in their environment. After the researcher conducted the research, the researcher assumed that the knowledge of the people

around him greatly influenced the knowledge of the person. This is evidenced by the fact that some respondents were unable to answer question 71 during the interview because their environment never or rarely received this information. Respondents also argue that because they are in a non-health environment, they are less aware of their health so that their knowledge about health is minimal [32]. The results of statistical tests obtained a value of 0.003 so that the  $H_a$  hypothesis is accepted, it can be concluded that there is a significant relationship between culture and WUS participation activities in early detection of cervical cancer with the IVA method. This result is in line with research [35] which obtained a value ( $b = 0.15$ ;  $SE = 0.6$ ;  $0.020$ ) which indicates that culture influences health behavior in maintaining the cleanliness of the reproductive organs and preventing cervical cancer.

In this study, it was found that the culture believed by the research subjects had an effect on health behavior in maintaining the cleanliness of the reproductive organs and preventing cervical cancer. One culture that is believed to be the administration of the Human papilloma virus (HPV) vaccine specifically for married women. Culture is influenced by the surrounding community and parents. The strong eastern culture and customs in Indonesia have formed attitudes and perceptions that can be a barrier for women to open up to medical professionals who are able to protect reproductive health. Another study shows a relationship between culture and cervical cancer prevention behavior which tends to maintain a strong culture and language with traditional societies. These behaviors tend to influence lifestyle as well as beliefs and care practices [35]

The results of this study indicate that differences in culture, ethnicity, and race are not factors associated with cervical cancer prevention and control behaviors, such as HPV screening and vaccination. Differences in cultural backgrounds and needs and assets in a community are important things to consider in developing strategies to overcome obstacles and as motivation for successful interventions carried out in the community [35]. Women with the right beliefs about the causes of cervical cancer and its prevention will be a very good thing for him. One implication of these findings is that pre-existing programs may not take into account the influence of culture on health behavior and thus need a proper needs assessment before programs are designed and implemented. Educational programs should be designed to correct negative beliefs because to prevent the transfer of inappropriate knowledge into behavior.

### **Relationship between Health Officer Support and Early Detection of Cervical Cancer Method IVA**

From the results of data processing, it can be seen that most of the respondents received support from health workers in the good category (48.3%) regarding early detection of cervical cancer with the IVA method. The results of this study are relevant to research in 2019, namely the support of health workers with WUS behavior in the VIA examination (64.7%) [36].

The high support from health workers was caused by the active participation of health workers in providing information about VIA examinations and inviting WUS who visited the puskesmas for examinations. Health workers' support for VIA examinations will affect women's behavior in carrying out examinations because support is a factor that affects individual, group, or community health actions. The results of statistical tests obtained a value of 0.000 so that the  $H_a$  hypothesis is accepted, it can be concluded that there is a significant relationship between the support of health workers for early detection of cervical cancer with the IVA method. The results of this study are relevant to Dewi, Supriati with  $p$  value = 0.004 which indicates that there is a significant relationship between the support of health workers and early detection of cervical cancer with the IVA method [37]. The active role of health workers who are able to guide WUS in meeting health care needs, by providing an approach to WUS problems (assessment), so WUS can find solutions and make decisions in choosing health services recommended by health workers

The care and concern that is echoed by health workers and experts in their fields then leads to understanding and understanding that is understood within them. So, in this case they provide their respective understandings related to cervical cancer which has begun to spread among the community. Therefore, early treatment and public awareness are the most urgent triggers to do so that this form of disease is easily detected and known early [38].

#### IV. CONCLUSION

Based on the results of the research conducted, it can be concluded that there is a significant relationship between age, knowledge, attitude, husband's support, access to information, culture and support of health workers with early detection of cervical cancer using the IVA method in the Siko Health Center area of Ternate City.

#### V. ACKNOWLEDGMENTS

It is recommended to the Siko Care Health Center in this case the midwife to always expand the target of health promotion to the community, especially WUS and husbands so that they can support and motivate their partners to do early detection of cervical cancer through the IVA method.

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