

JPPIPA 10(6) (2024)

Jurnal Penelitian Pendidikan IPA

Journal of Research in Science Education



http://jppipa.unram.ac.id/index.php/jppipa/index

# Factors Affecting the Interest of Women of Reproductive Age Regarding Visual Inspection of Acetic Acid (IVA)

Maida Pardosi<sup>1\*</sup>, Melva Silitonga<sup>2</sup>

<sup>1</sup> Maida Pardosi, Department of Midwifery, Politeknik Kesehatan Kementerian Kesehatan Medan, Medan, Indonesia. <sup>2</sup> Melva Silitonga, Universitas Negeri Medan, Medan, Indonesia.

Received: September 15, 2023 Revised: April 07, 2024 Accepted: June 20, 2024 Published: June 30, 2024

Corresponding Author: Maida Pardosi maidapardosi1963@gmail.com

DOI: 10.29303/jppipa.v10i6.5326

© 2024 The Authors. This open access article is distributed under a (CC-BY License)

Abstract: Reproductive health is a multidimensional state of physical, mental, and social well-being, covering all aspects of the reproductive system, functions, and processes. Cervical cancer is abnormal cell growth and development, which can lead to abnormal function of the reproductive organs and generally affects women of reproductive age, so the impact on the family is very significant. This study aims to determine the factors between the level of knowledge, access to information, and husband/family support with low Acetic Acid Visual Inspection (IVA) visits. This type of research is survey research with an analytical approach cross-sectional. The samples taken were 67 respondents obtained by the technique of purposive Sampling. The instrument used is a questionnaire. The data obtained is processed using a test Chi Square with a degree of significance ( $\alpha$ ) = 0.05. The results showed that there was a significant influence between the factors associated with the low number of IVA visits, namely the level of knowledge, access to information, and husband/family support. In the statistical test, the p-value is 0.000. The conclusions of WUS researchers who are married should always pay attention to their reproductive health, one of which is the IVA examination.

**Keywords:** Acetic acid visual inspection (IVA); Cancer; Cervix; Reproduction; Mother

# Introduction

Reproductive health is a multidimensional state of physical, mental, and social well-being, covering all aspects of the reproductive system, functions, and processes. This involves being free from diseases and disabilities that can get in the way of optimal reproductive health (Gruskin et al., 2019; Muharrina et al., 2023). Several diseases, such as endometriosis, ovarian cancer, and menopause, can affect a woman's reproductive system. Cervical cancer is one of the most common cancers affecting women globally, according to (Kursani et al., 2017). In addition, female sexual dysfunction, infertility, and other reproductive systems disorders such as vulvovaginitis, pelvic inflammatory disease, myoma, bartholinitis, vaginal inflammation, vaginal discharge can negatively and impact reproductive health (Elektrina et al., 2020; Paremajangga et al., 2020; Yanti et al., 2022).

Despite advances in health care, cervical cancer continues to be a common problem for women globally, regardless of their country's development. Developed countries list cervical cancer as the 10th most common malignancy, even though this disease remains the leading cause of cancer-related deaths in developing countries like Indonesia (Oktari, 2018; Ramanda et al., 2021; Yatim, 2005).

The World Health Organization (WHO) reported in 2013 that cervical cancer is the second most common cancer in women worldwide. Unfortunately, more than 270.000 women die from this disease every year, with more than 85% of deaths occurring in developing countries. Indonesia has an alarming rate of cervical cancer, with more than 15.000 cases detected annually

How to Cite:

Pardosi, M., & Silitonga, M. (2024). Factors Affecting the Interest of Women of Reproductive Age Regarding Visual Inspection of Acetic Acid (IVA). *Jurnal Penelitian Pendidikan IPA*, 10(6), 3166–3175. https://doi.org/10.29303/jppipa.v10i6.5326

and around 8.000 deaths. In 2011, the incidence of cervical cancer reached 100 per 100,000 population, and this figure is expected to increase by 25% in the next decade if preventive measures are not implemented immediately (Rasjidi, 2012). Meanwhile, Central Java, according to the Indonesian Ministry of Health's Center for Data and Information (Infodatin) in 2013, was ranked second in cervical cancer with 19,734 cases after East Java (Kemenkes, 2015).

According to research conducted by Elmia in 2016, inadequate coverage of early detection is one of the main reasons for the increasing prevalence of cervical cancer. Reports show that more than 50% of women who are diagnosed with cancer never undergo early detection. At Cipto Mangunkusumo Hospital, a study of 6.7 cases showed that almost 69.4% of women diagnosed with cancer had never undergone early detection. As a result, by the time the cancer is detected, it has already reached an advanced stage, rendering treatment ineffective. The study highlights that education and knowledge are essential in encouraging women to choose early detection of cervical cancer (Kursani et al., 2017). Research shows that early sexual activity, significantly before age 18, can increase the risk of cervical cancer. This is because cervical cancer is believed to be linked to sexually transmitted infections. Evidence suggests a correlation between a history of sexual activity and disease. Women and their partners who engage in frequent sexual activity and start having sex at a young age are reportedly five times more likely to get cervical cancer (Kursani et al., 2017).

Indonesia is currently training health workers to develop an IVA test. The World Health Organization (WHO) has evaluated the effectiveness of IVA in India, Thailand, and Zimbabwe. The IVA test was first introduced by Hinselman in 1925. Although several developed countries have succeeded in reducing the incidence and severity of cervical cancer, Indonesia has experienced a spike in cases because more than 70% of patients arrive at an advanced stage in the hospital (Eldawaty, 2016; Imah et al., 2019; Rochwati et al., 2018; Sukmawati, 2018). Cervical cancer can be detected early through several methods, such as pap smear tests, colposcopy, cervicography, thin preparations, HPV testing, and VIA enlargement with gynecology (Boon et al., 2022; Hanifah et al., 2020; Rahayu, 2017). However, in developing countries like Indonesia, the IVA method is the most suitable choice because it is simple, affordable, high sensitivity, and accurate in detecting abnormalities cell or pre-cancerous stages. Unfortunately, the need for more awareness among Women of Childbearing Age (WCA) about the importance of early detection means that the potential benefits of IVA testing are often overlooked (Julaecha et al., 2019; Riya et al., 2023).

IVA has been shown to increase detection rates by 30%. Studies conducted in South Africa revealed that IVA identified more than 65% of pre-cancerous lesions, making it the recommended screening method for cytology (Adams et al., 2024; Sravani et al., 2023). In Zimbabwe, midwives using IVA screening achieved a sensitivity of 77% and a specificity of 64%, which surpasses the Pap smear's 43% sensitivity and 91% specificity. In India, trained nurses perform VIA screening with a sensitivity of 68% compared to a Pap smear of 62%. The 2006 WHO report highlights an average IVA sensitivity of 77% (with a range of 56-94%) and an average specificity of 86% (with a range of 74-94%) (Kemenkes, 2015).

According to a 2016 Ministry of Health report, only 1,623,913 women in Indonesia underwent IVA examinations from 2008 to 2016, or only 4.34% of the target of 37.5 million women. Until 2016, only 7% of the population in North Sumatra Province had undergone an IVA examination, namely 130,025 people. In Medan City, 2.493 people have been tested for IVA, with 110 of them testing positive-according to a 2016 Ministry of Health report (Kemenkes, 2016). According to the Health Office in 2017, Asahan Regency has a population of 677.876 people, of which 160.477 people are women of childbearing age. The district conducted IVA examinations on 33 people in 2015, followed by 51 in 2016 and 79 in 2017. During these three years, 163 people had undergone the examination.

In a preliminary study on March 26, 2018, researchers evaluated the working area of the Pulau Rakyat Community Health Center. The results of the study revealed that out of 3.665 WCA, only 35 underwent an Acetic Acid Visual Inspection (IVA) examination. This accounts for 18.3% of women in the age group. Pulau Rakyat Pekan had 2 cases, while Desa Baru, Rahuning, Desa Manis, Pulau Rakyat Tua, Orika, and Mekar Sari had no cases.

The problem was the low coverage of IVA examinations in Solok City (19%). This is caused by several factors, namely the lack of motivation for women of childbearing age (WUS) to check IVAs. From the data obtained, around 88% of WUS never went to the Puskesmas due to sufficient public knowledge (58%) (Sari et al., 2019). Research result Maesaroh et al. (2022) obtained an overview of knowledge about cervical cancer in the less category, namely as many as 17 respondents (48.6%), sufficient category 12 respondents (34.3%), and good category as many as six respondents (17.1%), results of statistical analysis of chi-square test, obtained a p-value of 0.000 which is smaller than the

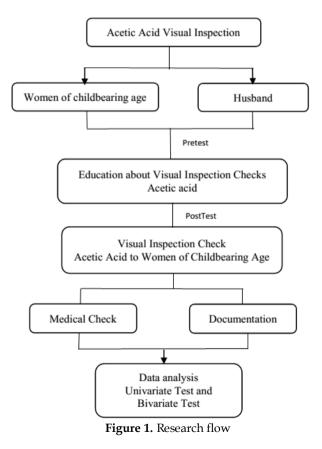
alpha value of 0.05. Research result Fauza et al. (2019) showed that more than half of the respondents had poor knowledge (56.4%) of cervical cancer and early detection using the IVA method. The lack of knowledge of WUS was evident from the respondents who needed help understanding the IVA examination stages at 83.6%. Based on the statistical test, it was obtained that the pvalue <0.05 indicated that there was a significant relationship between the level of knowledge and the participation of WUS in the early detection of cervical cancer using the IVA method. Results of data analysis from Jamilah et al. (2022) It was found that there was a relationship between knowledge and women of childbearing age in carrying out an IVA test at the Pasar Saturday UPT Health Center, Hulu Sungai Utara Regency, that 47 people (49%) had poor knowledge and did not carry out an IVA test.

The results showed that most husbands did not support WUS's participation in the early detection of cervical cancer through the IVA test (67.3%). There is a significant relationship between the husband's support and WUS participation in the IVA test with a p-value <0.05 (p-value 0.000) (Fauza et al., 2019). Based on research result Jamilah et al. (2022), the calculation of husbands who support and carry out IVA tests is 39 people (39%), while husbands who support and do not carry out IVA tests are 20 people (20%). Husbands who were not supportive and carried out IVA examinations were three people, and husbands who were not supportive and did not carry out IVA examinations were 38 people (38%). This shows that family support can be a reinforcing factor for someone to carry out an IVA examination. Families that support other family members in carrying out IVA can be a driving force for a woman to take part in an IVA examination.

Research result Fauza et al. (2019) Access to Information about Cervical Cancer and IVA Test from the Health Center The results showed that there was a significant relationship between access to information and WUS participation in the early detection of cervical cancer using the IVA method with a p-value of 0.000. Half of the respondents did not obtain information about cervical cancer and early detection of cervical cancer by the IVA method (50%). This is because not all people, especially WUS, have received information about the dangers of cervical cancer and early detection tests for cancer. Research results Trivuni (2020) showed that the percentage of respondents who did not carry out an IVA examination was greater for respondents who had access to poor information (72.6%) compared to respondents who had access to good information (51.6%). From the Chi-Square test results at the limit of a = 0.05 and df = 1, it was found that the p-value = 0.018 <  $\alpha$  = 0.05. From the analysis results, the OR value was also obtained: 2.489, meaning that mothers with access to information tended 2.000 times to have IVA checked at the puskesmas compared to respondents who did not have access to information.

Several factors cause the low rate of early detection of cervical cancer. These factors include lack of selfawareness, limited public knowledge about the risk of cervical cancer, inadequate access to information, and lack of family support. This study aims to determine the factors between the level of knowledge, access to information, and husband/family support with low Acetic Acid Visual Inspection (IVA) visits. The reason researchers conducted this research was because women of childbearing age were able to pay attention to their reproductive health through VIA examinations as an effort to prevent and treat cervical cancer as early as possible. According to Lawrence, Green identified three main influences on human behavior: predisposing factors (such as educational level and employment status), enabling factors (such as distance to health services), and reinforcing factors (such as family and community support).

#### Method



This research is a quantitative survey research study that is analytic with an observational research design with a cross-sectional approach. This research was carried out at the Pulau Rakyat Health Center, with the reason for choosing this location because the Pulau Rakyat Health Center is a type B Health Center with inpatient care and an emergency room. The number of WCA was 3.665, and only 35 (18.3%) carried out IVA examinations in 2017. This made it possible for the sample size to be fulfilled. The total population in this study was 3.665 people. The sampling technique used is *purposive Sampling* then a sample of 67 WCA was taken. The criteria of married women who have not done IVA, WCA aged between 20-50 years who are married, and women who do not have a husband/widow status. This study aims to determine the factors that influence the interest of WCA in the Acetic Acid Visual Inspection examination at the Pulau Rakyat Community Health Center, Pulau Rakyat District. The questionnaire instrument was used, and Chi-square was employed to determine the factors influencing WUS's interest in the IVA examination.

## **Result and Discussion**

#### Results

#### Knowledge

Based on data collection that has been carried out at the Pulau Rakyat Community Health Center, Pulau Rakyat District, Asahan Regency, result of the influence of knowledge of WCA on IVA, can be seen in the table 1

**Table 1.** Knowledge Distribution of Respondents Related to Acetic Acid Visual Inspection Examination (IVA)

Category based knowledge	Frequency	Percentage (%)
Not good	18	26.9
Enough	27	40.3
Good	22	32.8
Total	67	100

From Table 1, it can be seen that the number of respondents based on knowledge, namely: 18 people (26.9%) had poor knowledge, 27 people (40.3%) had sufficient knowledge, and 22 people (32.4%) had good knowledge %).

#### Access to Information

Based on data collection that has been carried out at the Pulau Rakyat Community Health Center, Pulau Rakyat District, Asahan Regency, the effect of access to information on WCA on IVA, the results of this study can be seen in the table below. **Table 2.** Distribution of Respondent Information AccessFactors Related to Acetic Acid Visual InspectionExamination (IVA)

Categories based on access	Frequency	Percentage (%)	
information			
Good	27	40.3	
Not good	40	59.7	
Total	67	100	

From Table 2 it is known that the categories are based on information access factors. There were 27 people (40.3%) with good access to information, while 40 people (59.7%) had poor access to information.

## Husband Support

Based on data collection that has been carried out at the Pulau Rakyat Community Health Center, Pulau Rakyat District, Asahan Regency, the influence of the support of husbands of WCA on visual inspection of acetic acid (IVA), the results of this study can be seen in the table below.

**Table 3.** Distribution of Respondent's Husband Support Factors Related with Acetic Acid Visual Inspection (IVA) Inspection

Category Based Support	Frequency	Percentage (%)
Husband		
Support	14	20.9
Does not support	53	79.1
Total	67	100

Table 3 shows that the assessment category is based on the husband's support factor. The Supporting Category was 14 people (20.9%), and the Not Supporting Category was 53 (79.1%).

#### Acetic Acid Visual Inspection Examination (IVA)

Based on the data collection that was carried out at the Pulau Rakyat Community Health Center, Pulau Rakyat District, Asahan Regency, for WCA who carried out a visual inspection of acetic acid (IVA), the results of this study can be seen in the table below:

**Table 4.** Frequency Distribution and Percentage of Women of Reproductive Age Who Performing an Acetic Acid Visual Inspection (IVA) Examination

Doing category VIA examination	Frequency	Percentage (%)
Do	13	19.4
Do not do	54	80.6
Total	67	100

From Table 4, it is known that the results of the assessment category are based on WCA who carry out IVA examinations. There were 13 people (19.4%)

conducting IVA examinations, and 54 people (80.6%) did not carry out IVA examinations.

#### **Bivariate** Analysis

The technique used to analyze the data obtained from the results of this study is the test techniques *Square* with a significant level of 5% to find out whether there is an effect of knowledge, access to information, and husband's support on WCA who carry out a visual inspection of acetic acid (IVA) at the Pualu Rakyat Community Health Center, Pulau Rakyat District, Asahan Regency, and the results of data processing in this study can be seen in the table below.

**Table 5.** The Influence of Knowledge Affecting the Interests of Women of Reproductive Age Against Acetic Acid Visual Inspection (IVA)

	VIA Examination						p-value
		Do	Do	not do		Total	_
Knowledge	Ν	%	Ν	%	Ν	%	
Not good	0	0.0	18	100	18	100	
Enough	0	0.0	27	100	27	100	0.001
Good	13	59.09	9	40.91	22	100	
Total	13	19.40	54	80.60	67	100	

Based on Table 5 above, of the 18 respondents who conducted the IVA examination, 0 respondents had less good knowledge, 18 of the 18 respondents who carried out the IVA examination had poor knowledge, and 0 respondents of the 27 respondents who carried out the IVA examination had sufficient knowledge, of the 27 respondents who did not carry out an IVA examination with sufficient knowledge of 27 respondents. Of the 22 respondents who did the IVA examination, 13 had good knowledge, and of the 22 respondents who did not carry out the IVA examination, 9 respondents had good knowledge. *Chi-Square* earned values.s (0.000) <  $\alpha$  (0.05), which means that there is a very significant influence between the knowledge of WCA on the Acetic Acid Visual Inspection (IVA) examination at the Pulau Rakyat Community Health Center, Pulau Rakyat District, Asahan Regency.

**Table 6.** The Influence of Access to InformationAffecting the Interests of Women of Reproductive AgeAgainstAceticAcidVisualInspection(IVA)Examination

LAummation							
Information			VIA Examination				Markp-
Access		Do	Do	not do	Total	value	
Knowledge	n	%	Ν	%	Ν	%	
Good	13	48.15	14	51.85	27	100	
Not good	0	0.0	40	100	40	100	0.000
	13	19.40	54	80.60	67	100	

Based on Table 6 above, it can be seen from the 27 respondents who conducted an IVA examination with good access to information, there were 13 respondents (48.15%) of the 27 respondents who did not carry out an IVA examination with good access to information, there were 14 respondents (51.85) and of the 40 respondents who did IVA examinations with poor access to information were 0 respondents (0.0%), out of 40 respondents who did not carry out IVA examinations with poor access to information were 40 respondents (100). Test results Square earned values.s (0.000) <  $\alpha$ (0.05), this means that there is a very significant influence between information access of WCA on Acetic Acid Visual Inspection (IVA) examinations at the Pulau Rakyat Community Health Center, Pulau Rakyat District, Asahan Regency

**Table 7.** The Influence of Husband's Support AffectingInterest in Women of Reproductive Age Against AceticAcid Visual Inspection (IVA) Examination

Acta visual inspection (IVA) Examination							
Information		VIA examination					
access		Do	Do not do			Total	value
Husband	n	%	Ν	%	Ν	%	
support							
Support	8	57.14	6	42.86	14	100	
Does not	5	9.43	48	90.57	53	100	0.000
support							
Total	13	19.40	54	80.60	67	100	

Based on Table 7 above, it can be seen from the 14 respondents who conducted an IVA examination with the support of their husbands, eight respondents (57.14%) of the 14 respondents who did not carry out an IVA examination with the support of their husbands, six respondents (42.86%). Moreover, of the 53 respondents who did an IVA examination with the support of their husbands, five respondents (9.43%) did not support it, and 48 respondents (90.57%) did not conduct an IVA examination with the support of their husbands. Test results Square earned values.s (0.000) <  $\alpha$  (0.05), this means that there is a very significant influence between the support of husbands of WCA on the Acetic Acid Visual Inspection (IVA) examination at the Pulau Rakyat Community Health Center, Pulau Rakyat District, Asahan Regency.

#### Discussion

The researcher's findings are told in narrative form in the discussion of this research. The discussion details the factors relevant to WCA undergoing IVA examinations.

#### Knowledge Factor

The results showed that out of 67 respondents, none had insufficient knowledge (0.0%) of WUS knowledge regarding the IVA examination. However, no respondents were categorized as having sufficient knowledge (0.0%), while 13 respondents (59.09%) had good knowledge. In addition, 100% of the 18 respondents who were previously categorized as having less knowledge were again categorized as having sufficient knowledge, and 27 respondents (100%) had sufficient knowledge. Furthermore, 40.91% of the nine respondents who initially had good knowledge were again categorized as having poor knowledge. These results indicate that WCA have limited knowledge about IVA examinations, so they are at risk of developing cervical cancer. So it can be concluded that women with good knowledge of IVA tend to screen for cervical cancer. On the other hand, women with poor knowledge of IVA are less likely to participate in cervical cancer screening tests.

Obtaining knowledge about IVA can foster a positive outlook and build the mother's confidence in the early detection of cervical cancer (Fauza et al., 2019; Nathalia, 2020; Ningrum, 2014; Nurfitriani, 2019). Based on the answers to the questionnaire, it turned out that most WUS needed to learn more about the IVA exam, including its definition, objectives, test requirements, and benefits. This inadequate knowledge highlights the need for increased understanding among WUS to increase awareness of the early detection of cervical cancer among mothers.

Behavior change starts with knowledge. If your goal is to encourage a mother to have a VIA examination, then the first step is to educate her about the importance of the examination. Disseminating information about the importance of a VIA examination is an effective way to increase the mother's knowledge and encourage her to undergo the procedure.

Khosidah et al. (2015), Siregar et al. (2021), and Sundari et al. (2018), it was suggested that a mother's awareness of cervical cancer would positively affect early detection. This is the second most important factor for early screening of cervical cancer. The knowledge possessed by WUS can increase a mother's confidence in identifying cervical cancer early.

The cognitive domain is critical in influencing a person's behavior. Behavior-based on knowledge is more conducive than behavior without it. Knowledge serves as a mental catalyst, increasing self-confidence and increasing morale. According to Notoatmodjo (2011), knowledge triggers action. A study Aris (2010) in East Semarang Regency (2010) revealed that most of the 68 respondents needed better knowledge about the IVA test and did not come for screening (57 respondents). In contrast, those with good knowledge had a higher screening rate, with 72.7% of respondents. Visited in the low category, and 27.3% visited in the high category. No respondents with poor knowledge were visited for IVA screening.

Individuals with a greater understanding of WUS tend to exhibit exemplary behavior during the IVA exam. Conversely, those with a lower knowledge level among WUS tend to show less optimal behavior during IVA examinations. Education is one of many sources of knowledge; one can also obtain knowledge from various sources such as training, counseling, brochures, and even friends. With so much information, individuals can broaden their knowledge base and improve their ability to perform IVA examinations (Dolang, 2020; Nopiyanti et al., 2021).

Similar to research Andriyani et al. (2015) at Klebakan Sentolo Kulon Progo Yogyakarta, this research highlights the importance of knowledge in improving health. Of the 36 WCA surveyed, 26 people (72.2%) met the criteria of sound knowledge, while 8 people (22.2%) had sufficient knowledge, and only 2 people (5.6%) had less knowledge. These findings indicate that knowledge is fundamental in implementing healthy behaviors, such as early detection of cervical cancer through IVA examination, which requires individual awareness and understanding.

In accordance with the assumptions of the researchers, most women did not know about the factors that prevented them from undergoing IVA at the Pulau Rakyat Health Center. This is primarily due to their inadequate understanding of IVA. The abundance of information available through modern communication tools such as smartphones with internet applications that can be accessed anytime and anywhere makes mothers' curiosity about VIA encourage them to seek more in-depth information about the examination.

## Information Access Factor

This study collected data from 67 participants, which revealed that female respondents of childbearing age who underwent an IVA examination had good access to information, with 13 people (48.15%) belonging to this category, while none had poor access. On the other hand, 14 respondents (51.85%) had good access to information, while 40 respondents (100%) had poor access to information. These findings highlight the importance of accessing WUS information for WCA seeking IVA screening.

Easy access to information is essential for promoting positive change in health behavior. For example, access to health information can facilitate early detection of cervical cancer through IVA examinations. These factors are known as supporting factors. Both print and electronic media can be used to disseminate health-related articles, news, and discussions. They can also be used to convey opinions and shape public opinion. The influence of the media on public opinion can, in turn, influence decision-making regarding changes in health behavior (Notoatmodjo, 2014).

The conclusion of this study is in line with Gustiana's (2014) research, which argued that access to information on mothers affects their ability to examine cervical cancer with IVA. Lack of public awareness of cervical cancer and prevention measures contributes to the low level of community participation in screening. Ultimately, this study found that exposure to health information at the individual level will increase health-conscious behavior.

#### Husband/Family Support

Adequate family support is rooted in solid bonds and interdependence, enabling the smooth functioning of families. A study involving 67 participants found that only eight husbands (57.14%) supported their wives in undergoing VIA examinations. At the same time, five WCA did not receive the same support from their husbands. On the other hand, 6 women who did not undergo the examination received support from their husbands, while 48 women did not. These findings indicate that husbands need to provide more support to their wives in obtaining IVA examinations.

Those who receive support from their families are more likely to undergo an IVA examination. This is because the influence of a partner or close family member motivates respondents to prioritize their health. The husband's role, mainly as a decision-maker, dramatically influences a woman's behavior toward VIA examinations. On the other hand, those from less supportive households tend not to choose IVA examinations (Nazarbegian et al., 2022; Widayanti et al., 2018).

Research result Wahyuni et al. (2019) revealed that the participation of WUS in IVA examinations was influenced by family support, especially by husbands. However, many of the respondent's husbands lacked knowledge and information about VIA examinations; as much as 90.57% of WUS admitted that they did not receive any encouragement or information from their husbands. This lack of knowledge can be attributed to the lack of participation of health workers in providing health education, including counseling. Interviews with MCH officers at the Pulau Rakyat Community Health Center who handled the IVA examination confirmed that there was no health education for WUS husbands by the puskesmas staff.

In terms of reproductive health, the husband, as the head of the household, can actively participate by providing support. This support can take many forms, such as accompanying his wife during the IVA exam. As noted (Adiyani et al., 2019; Nurhafni, 2017), the family unit, especially the husband, plays a vital role throughout the healthcare process, from health promotion and prevention to treatment and rehabilitation. In every stage of life, it is essential to have social and psychological accompaniment. As we go through different phases, we need more social support to navigate our challenges and triumphs.

In times of illness or hardship, the support of loved ones is critical. Studies Deska (2017), Feriyawati et al. (2018), and Okafor et al. (2023) revealed that husbands could be essential in promoting pap smear screening and educating men and women about cervical cancer and early detection. Consequently, not only should women be the main focus, but men can also be valuable targets for raising awareness.

## Conclusion

The level of knowledge, access to information, and husband/family support are related to the participation of WUS in the Acetic Acid Visual Inspection (IVA) visit at the Pulau Rakyat Community Health Center, Pulau Rakyat District, Asahan Regency. There is a relationship between the level of knowledge and the low number of Acetic Acid Visual Inspection (IVA) inspection visits seen from the chi-square test p-value (0.000) results. There is a relationship between access to information and low levels of Visual Inspection Visits for Acetic Acid (IVA) with the results of the chi-square test p-value (0.000). There is a relationship between the support of family members and the low number of visits to Visual Inspection for Acetic Acid (IVA) with the results of the chi-square test p-value (0.000). It is suggested to health workers at puskesmas to increase health promotion intensively on reproductive health using the IVA method for WUS and expand the target of health promotion to men or husbands of WUS in order to support and motivate couples to visit Acetic Acid Visual Inspection (IVA).

#### Acknowledgments

Thank you to the Politeknik Kesehatan Kementerian Kesehatan Medan for the support so that this research activity went well.

#### **Author Contributions**

The main first autor Maida Pardosi designing research, and writing research articles, conducted data analysis. The second autor Melva Silitonga conducting research, collecting data.

## Funding

This research was conducted through self-funding.

## **Conflicts of Interest**

The author declares that all authors have no conflict of interest. Thank You.

## References

- Adams, R. A., & Botha, M. H. (2024). Cervical cancer prevention in Southern Africa: a review of national cervical cancer screening guidelines in the Southern African Development Community. *Journal of Cancer Policy*, 100477. https://doi.org/10.1016/j.jcpo.2024.100477
- Adiyani, A., & Supatmi. (2019). Identifikasi Faktor-Faktor Yang Mempengaruhi Perilaku Deteksi Dini Kanker Serviks (Pap Smear) Pada Wanita Usia Subur (WUS) Di PARAHITA Diagnostic Center Sidoarjo [umsurabaya]. Retrieved from http://repository.um-

surabaya.ac.id/id/eprint/6020

- Andriyani, D., & Rohmah, F. (2015). Hubungan Pengetahuan pada Wanita Usia Subur dengan Partisipasi Deteksi Dini Kanker Serviks di Klebakan Sentolo Kulon Progo Yogyakarta Tahun 2015. STIKES' Aisyiyah Yogyakarta.
- Aris, S. (2010). Faktor-Faktor Yang Berhubungan Dengan rendahnya Kunjungan Inspeksi Visual Asam Asetat (IVA) Di Wilaya Kerja Puskesmas Halmahera Kecamatan Semarang Timur Tahun 2010. Semarang: Universitas Negeri Semarang.
- Boon, S. S., Luk, H. Y., Xiao, C., Chen, Z., & Chan, P. K. S. (2022). Review of the standard and advanced screening, staging systems and treatment modalities for cervical cancer. *Cancers*, 14(12), 2913. https://doi.org/10.3390/cancers14122913
- Deska, R. (2017). Analisis Faktor-Faktor Yang Mempengaruhi Pemeriksaan Deteksi Dini Kanker Leher Rahim Di Puskesmas Panjang Dan Puskesmas Sukaraja Kota Bandar Lampung. *Jurnal Kesehatan Panca Bhakti Lampung, V*(2), 17–30. Retrieved from https://ejournal.pancabhakti.ac.id/index.php/jk pbl/article/view/5
- Dolang, M. (2020). Pengetahuan dan Usia Menikah Pertama dengan Deteksi Dini Kanker Serviks. *Pasapua Health Journal*, 2(1), 8–13. https://doi.org/10.62412/phj.v2i1.25

Eldawaty, E. (2016). Hubungan Tingkat Pengetahuan

Wanita Usia Subur (Wus) dengan Sikap terhadap Pemeriksaan Inspeksi Visual Asam Asetat (Iva) di Lingkungan Jorong Sitiung Kabupaten Dhamasraya Tahun 2016. *Sporta Saintika*, 1(2), 116– 128. https://doi.org/10.24036/sporta.v1i2.36

- Elektrina, O., Bahri, S., & Dewi, O. (2020). Faktor-Faktor Yang Mempengaruhi Wanita Usia Subur (WUS) Melakukan Deteksi Dini Kanker Serviks Metode Pap Smear Di RSUD Arifin Achmad Pekanbaru Tahun 2018. *Ensiklopedia of Journal*, 2(3), 33-43. https://doi.org/10.33559/eoj.v2i3.459
- Fauza, M., Aprianti, A., & Azrimaidalisa, A. (2019). Faktor yang berhubungan dengan deteksi dini kanker serviks metode IVA di Puskesmas Kota Padang. Jurnal Promosi Kesehatan Indonesia, 14(1), 68–80. https://doi.org/10.14710/jpki.14.1.68-80
- Feriyawati, L., Anggraini, D. R., Fitrie, A. A., & Anggreini, R. N. (2018). Knowledge of cervical cancer, attitude and husband's support of Pap smear among multiparous women which have Pap's smear examination in Aviati clinic Padang Bulan Medan. *IOP Conference Series: Earth and Environmental Science*, 125(1), 012194. https://doi.org/10.1088/1755-1315/125/1/012194
- Gruskin, S., Yadav, V., Castellanos-Usigli, A., Khizanishvili, G., & Kismödi, E. (2019). Sexual health, sexual rights and sexual pleasure: meaningfully engaging the perfect triangle. *Sexual* and Reproductive Health Matters, 27(1), 29-40. https://doi.org/10.1080/26410397.2019.1593787
- Hanifah, L., & Sari, A. N. (2020). Karakteristik Kader Posyandu dalam Upaya Deteksi Dini Kanker Serviks. *Avicenna: Journal of Health Research*, 3(1), 133–140.

https://doi.org/10.36419/avicenna.v3i1.350

- Imah, N. D. N., & Sukmawati, E. (2019). Pendidikan Kesehatan tentang Kanker Servik dalam rangka Peningkatan Motivasi Wanita untuk Mencegah Kanker Servik. Jurnal Penelitian Kesehatan" SUARA FORIKES"(Journal of Health Research" Forikes Voice"), 10(2), 105–108. https://doi.org/10.33846/sf10206
- Jamilah, J., Rahmayani, D., & Palimbo, A. (2022). Faktor-Faktor yang Mempengaruhi Kesiapan Wanita Usia Subur dalam Pemeriksaan IVA Di UPT Puskesmas Pasar Sabtu. *Khatulistiwa Nursing Journal*, 4(2), 64– 72. https://doi.org/10.53399/knj.v4i0.184
- Julaecha, J., & Nurfitriani, N. (2019). Deteksi Dini Kanker Serviks dengan Pemeriksaan Serviks di Kelurahan Buluran Kenali Kota Jambi Tahun 2017. Jurnal Abdimas Kesehatan (JAK), 1(1), 56–60. https://doi.org/10.36565/jak.v1i1.20

- Kemenkes, R. I. (2015). *Laporan Survey Demografi Dan Kesehatan Indonesia*. Jakarta: Kementerian Kesehatan RI.
- Kemenkes, R. I. (2016). *Profil Kesehatan Indonesia Tahun* 2016. Jakarta: Kementerian Kesehatan RI.
- Khosidah, A., & Trisnawati, Y. (2015). Faktor-faktor yang mempengaruhi ibu rumah tangga dalam melakukan tes iva sebagai upaya deteksi dini kanker serviks. *Jurnal Ilmiah Kebidanan*, 6(2), 94– 105. Retrieved from https://rb.gy/q0ect7
- Kursani, E., & Rahmawati, D. (2017). Faktor-faktor yang Berhubungan dengan Keikutsertaan Wanita Usia Subur (WUS) dalam Metode Inspeksi Visual Asam Asetat (IVA) di Puskesmas Simpang Tiga Pekanbaru tahun 2016. *Bhamada: Jurnal Ilmu Dan Teknologi Kesehatan (E-Journal), 8*(2), 13. Retrieved from

https://ejournal.bhamada.ac.id/index.php/jik/a rticle/view/147

- Muharrina, C. R., Yustendi, D., Sarah, S., Herika, L., & Ramadhan, F. (2023). Kesehatan Reproduksi. *Jurnal Pengabdian Masyarakat Kebidanan*, 5(1), 26–29. https://doi.org/10.26714/jpmk.v5i1.11507
- Nathalia, I. K. (2020). Hubungan Pengetahuan dengan Sikap Wanita Usia Subur tentang Manfaat IVA Test untuk Deteksi Dini Kanker Serviks di Puskesmas Soreang. *Jurnal Ilmiah Bidan*, 5(2). https://doi.org/10.61720/jib.v5i2.82
- Nazarbegian, M., Averbach, S., Johns, N. E., Ghule, M., Silverman, J., Lundgren, R., Battala, M., Begum, S., & Raj, A. (2022). Associations between Contraceptive Decision-Making and Marital Contraceptive Communication and use in Rural Maharashtra, India. *Studies in Family Planning*, 53(4), 617–637. https://doi.org/10.1111/sifp.12214
- Ningrum, W. M. (2014). Faktor Faktor Yang Mempengaruhi Perilaku Ibu Dalammelakukan Deteksi Dini Kanker Servik Di Desa Cikunir Kecamatan Singaparna Kabupaten Tasikmalaya Tahun 2013. *Jurnal Kesehatan Bidkesmas Respati*, 2(5), 12–19. https://doi.org/10.48186/bidkes.v2i5.34
- Nopiyanti, N., & Ratnasari, F. (2021). Hubungan Pengetahuan Wanita Usia Subur (Wus) Tentang Pap Smear Dengan Keikutsertaan Melakukan Pemeriksaan Pap Smear. *Jurnal Health Sains*, 2(2), 216–223. https://doi.org/10.46799/jhs.v2i2.110
- Notoatmodjo, S. (2011). Kesehatan masyarakat ilmu dan seni. Jakarta: Rineka Cipta.
- Notoatmodjo, S. (2014). *Ilmu Perilaku Kesehatan*. Jakarta: Rineka Cipta.
- Nurfitriani, N. (2019). Gambaran Pengetahuan Dan Sikap Wus Dalam Upaya Pencegahan Kanker Serviks Melalui Tes IVA di Puskesmas Putri Ayu.

Jurnal Akademika Baiturrahim Jambi, 8(1), 66–77. https://doi.org/10.36565/jab.v8i1.104

- Nurhafni, N. (2017). Faktor-Faktor Yang Mempengaruhi Wus (Wanita Usia Subur) Dalam Pemeriksaan Pap Smear Di Puskesmas Selesai Tahun 2017. Jurnal Riset Hesti Medan Akper Kesdam I/BB Medan, 2(2), 142. https://doi.org/10.34008/jurhesti.v2i2.80
- Okafor, I. P., Kukoyi, F. O., Kanma-Okafor, O. J., & Izuka, M. O. (2023). Male involvement in female partners' screening for breast and cervical cancers in Southwest Nigeria. *PLOS ONE*, *18*(5), e0284141. https://doi.org/10.1371/journal.pone.0284141
- Oktari, V. O. V. (2018). Hubungan Antara Usia, Paritas Dan Pendidikan Ibu Tentang Pemeriksaan Pap Smear di Yayasan Kanker Indonesia Tahun 2017. *Jurnal Kebidanan: Jurnal Ilmu Kesehatan Budi Mulia*, 8(2).

https://doi.org/10.35325/kebidanan.v8i2.129

- Paremajangga, R. A., Ndoen, H. I., & Riwu, Y. R. (2020). Faktor Risiko yang Berhubungan dengan Kejadian Lesi Prakanker Serviks (IVA+) di Puskesmas Bakunase Kota Kupang Tahun 2019. Media Kesehatan Masyarakat, 2(1), 1–9. https://doi.org/10.35508/mkm.v2i1.2011
- Rahayu, S. (2017). Hubungan Tingkat Pengetahuan, Sikap dengan Perilaku Deteksi Dini Kanker Leher Rahim Metode IVA pada Wanita Usia Subur di Dusun Tempuran. *Health Science Growth (HSG) Journal*, 2(1), 74–84. Retrieved from https://journal.unsika.ac.id/index.php/HSG/art icle/view/1192
- Rale, M., Kisid, K. M., & Rizka, F. (2022). Hubungan Tingkat Pengetahuan Ibu Pus Tentang Kanker Serviks Dengan Pemeriksaan Iva. Jurnal Midwifery Update (MU), 4(2), 62. https://doi.org/10.32807/jmu.v4i2.130
- Ramanda, R., & Imronah, I. (2021). Faktor-faktor yang berhubungan dengan kurangnya keikutsertaan pasangan usia subur (pus) terhadap pemeriksaan test iva. *Journal of Community Health Issues*, 1(1), 20– 24. https://doi.org/10.56922/chi.v1i1.152
- Riya, R., & Rosida, R. (2023). Faktor-faktor yang Mempengaruhi Wanita Usia Subur (WUS) dalam Keikutsertaan Pemeriksaan Inspeksi Visual Asam Asetat (IVA) di Wilayah Kerja Puskesmas Muara Tembesi Kabupaten Batang Hari Jambi. *Jurnal Ilmiah Universitas Batanghari Jambi*, 23(1), 575–585. https://doi.org/10.33087/jiubj.v23i1.3221
- Rochwati, S., Jati, S. P., & Suryoputro, A. (2018). Pengetahuan Bidan Mempengaruhi Praktik Bidan dalam Konseling Pemeriksaan IVA pada Wanita Usia Subur. Jurnal Promosi Kesehatan Indonesia, 11(2), 84–99.

https://doi.org/10.14710/jpki.11.2.84-99

- Sari, R. P., & Abdiana, A. (2019). Upaya Peningkatan Cakupan Pemeriksaan Inspeksi Visual Dengan Asam Asetat (Iva) Di Dinas Kesehatan Kota Solok. Jurnal Kesehatan Andalas, 8(3), 635. https://doi.org/10.25077/jka.v8i3.1052
- Siregar, M., Panggabean, H. W., & Simbolon, J. L. (2021). Faktor-Faktor Yang Mempengaruhi Perilaku Pemeriksaan Iva Test Pada Wanita Usia Subur Di Desa Simatupang Kecamatan Muara Tahun 2019. *Jurnal Kesehatan Masyarakat Dan Lingkungan Hidup*, 6(1), 32–48. https://doi.org/10.51544/jkmlh.v6i1.1918
- Sravani, A. B., Ghate, V., & Lewis, S. (2023). Human papillomavirus infection, cervical cancer and the less explored role of trace elements. *Biological Trace Element Research*, 201(3), 1026–1050. https://doi.org/10.1007/s12011-022-03226-2
- Sukmawati, E. (2018). Pengaruh Pendidikan Kesehatan Tentang Kanker Servik Terhadap Peningkatan Motivasi Untuk Mencegah Kanker Servik. *Global Health Science*, 3(1), 5. https://doi.org/10.33846/ghs.v3i1.229
- Sundari, S., & Setiawati, E. (2018). Pengetahuan dan Dukungan Sosial Mempengaruhi Perilaku Deteksi Dini Kanker Servik Metode Iva. Indonesian Journal of Midwifery (IJM), 1(1). https://doi.org/10.35473/ijm.v1i1.34
- Triyuni, A., Rahmadhani, S. P., & Handayani, S. (2020). Hubungan Akses Informasi, Peran Petugas Kesehatan dan Dukungan Keluarga dengan Cakupan Pemeriksaan Inspeksi Visual Asam Asetat (IVA) pada Wanita Usia Subur (WUS) di Wilayah Kerja Puskesmas Kutaraya Kabupaten OKI Tahun 2020. *Jurnal Smart Ankes*, 4(2), 1–7. Retrieved from https://www.jurnalabdinusababel.ac.id/index.p hp/JSA/article/download/43/39
- Wahyuni, S., & Adiyasa, R. P. (2019). Hubungan Dukungan Suami Dengan Partisipasi Mengikuti Pemeriksaan Inspeksi Visual Asam Asetat (IVA) pada Wanita Usia Subur di RW 04 Kelurahan Terban Gondokusuman Yogyakarta Tahun 2018. *Jurnal Kesehatan*, 6(2), 129-141. https://doi.org/10.35913/jk.v6i2.123
- Widayanti, P. I., Tyastuti, S., & Hernayanti, M. R. (2018). Hubungan Dukungan Suami, Motivasi, Dan Sikap Dengan Perilaku Pemeriksaan Inspeksi Visual Asam Asetat (IVA) Pada Pasangan Usia Subur Di Wilayah Kerja Puskesmas Wirobrajan Kota Yogyakarta Tahun 2017. Poltekkes Kemenkes Yogyakarta.
- Yanti, N. L. G. P., & Citrawati, N. K. (2022). Hubungan dukungan keluarga dan petugas kesehatan dengan pemeriksaan iva pada wanita usia subur

(wus) di banjar tegal: The relationship of family and healthcare workers support with iva examination in women of childbearing age (wus) in banjar tegal. *Bali Medika Jurnal*, 9(2), 138–144. https://doi.org/10.36376/bmj.v9i2.305

Yatim, F. L. (2005). Penyakit kandungan: myoma, kanker rahim/leher rahim dan indung telur, kista, serta gangguan lainnya. Yayasan Obor Indonesia.